40

1984 - 2024

Interactive Catalogue

2025/26 CATALOGUE

01-26_I2E

making connections, powering tomorrow

Electrification and Automation for Over 40 Years

Whether you are new to ElectroMechanica or have been a valued partner over the past four decades, we are grateful to be able to serve you. Our steadfast commitment is to empower industry through safe and innovative solutions underpinned by a tradition of reliability and excellence.

We extend our appreciation to those who have trusted us over the years. Your loyalty has been instrumental in shaping our progress and success. For our new and future customers, we look forward to collaborating and supporting your growth, turning challenges into opportunities with products and services that drive success.

We are dedicated to more than just delivering products; we are committed to forging lasting connections that will power tomorrow's industrialisation.

40 EM 1984 - 2024

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A Motor Control & Motors

B Power Distribution & Protection

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F Power Quality

G Monitoring & Control

H Enclosures & Climate Control

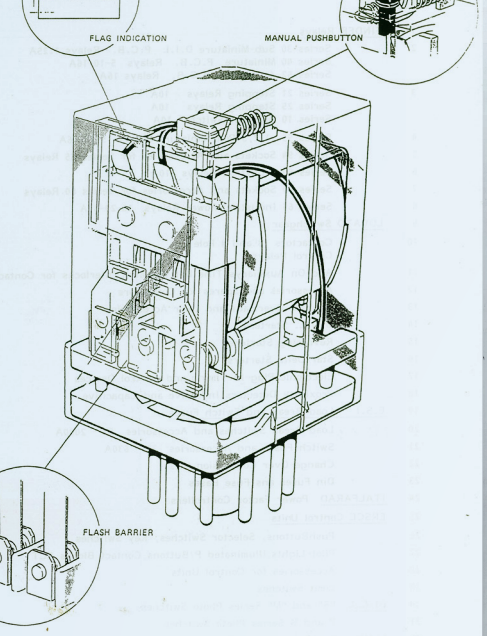
I Plugs & Sockets

J Timers & Control Relays

K Field Switching, Sensing & Safety

L Termination & Wiring

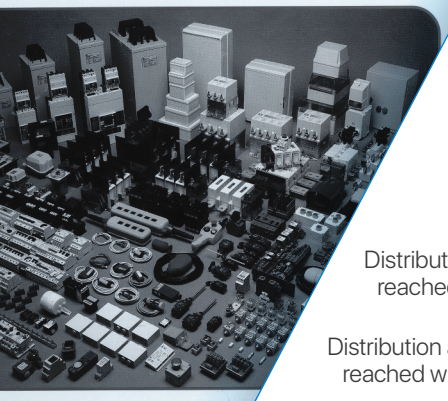
M Cable & Testing Tools



relé finder

1994

1995



Specialist suppliers of Motor C
and Electrical Automatic

nechanica (Pty) Ltd
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980, Booysens 2016
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(011) 493-2352

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44 Freeway Park
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P O Box 287
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1997/98

ectrical Automation Compone

(Kwazulu Natal)
17 Mc Donald Rd, Congella
P O Box 17317, Congella 401
Telephone: (031) 25-1571
Telefax: (031) 25-1625

06/97

1989
Anchor reseller agreement established in Harare

1990
Branch established in Durban

1988
Registered name changed to ElectroMechanica

Distribution agreement reached with Hager

1991
Power Factor design and assembly established

1986
Anchor reseller agreement established in Pretoria

1994
Branch established in Cape Town

1984
Distribution agreement reached with Lovato

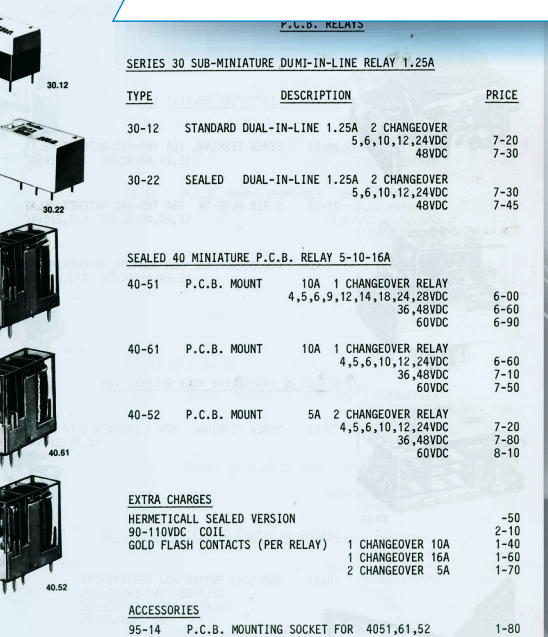
Distribution agreement reached with Finder

Company was established as "Finvato"

1996
Anchor reseller agreement established in Gqeberha

Distribution agreement reached with Scame

1998
Distribution agreement reached with DF Electric



P.C.B. RELAYS

SERIES 30 SUB-MINIATURE DUMI-IN-LINE RELAY 1.25A

TYPE	DESCRIPTION	PRICE
30-12	STANDARD DUAL-IN-LINE 1.25A 2 CHANGEOVER 5,6,10,12,24VDC	7-20
	48VDC	7-30
30-22	SEALED DUAL-IN-LINE 1.25A 2 CHANGEOVER 5,6,10,12,24VDC	7-30
	48VDC	7-45

SEALED 40 MINIATURE P.C.B. RELAY 5-10-16A

40-51	P.C.B. MOUNT	10A 1 CHANGEOVER RELAY 4,5,6,9,12,14,18,24,28VDC	6-00
		36,48VDC	6-60
		60VDC	6-90
40-61	P.C.B. MOUNT	10A 1 CHANGEOVER RELAY 4,5,6,10,12,24VDC	6-60
		36,48VDC	7-10
		60VDC	7-50
40-52	P.C.B. MOUNT	5A 2 CHANGEOVER RELAY 4,5,6,10,12,24VDC	7-20
		36,48VDC	7-80
		60VDC	8-10

EXTRA CHARGES

HERMETICALL SEALED VERSION		-50
90-110VDC COIL		2-10
GOLD FLASH CONTACTS (PER RELAY)	1 CHANGEOVER 10A	1-40
	1 CHANGEOVER 16A	1-60
	2 CHANGEOVER 5A	1-70

ACCESSORIES

95-14	P.C.B. MOUNTING SOCKET FOR 4051,61,52	1-80

CATALOGUE 20

Electromechanica is a dedicated supplier

lectroMechanica

CATALO

2016

Established Distribution Centre in Johannesburg

2017

Pump panel design and assembly established

2018

Branch established in Nelspruit

2019

Mechatronics academy launched in joint venture

Branch established in Bloemfontein

2021

Branch established in Gqeberha

2022

20th edition EM catalogue released

2024

Distribution agreement reached with Techtop

Celebrating 40 years of empowering the industry

2015

Branch established in Boksburg

2011

Distribution agreement reached with Ezi Canal

2006

Distribution agreement reached with Delta

2000

Distribution agreement reached with Socomec

Technology partners worldwide, market leaders in their respective fields.

Germany

SEIFERT · wieland · wöhner · JOKARI original · MBS Made in Germany · REMA · WISKA make power smile · DEHN · ELECTRONICON · GLW Crimping Technology

Italy

SCAME · REER · Lovato electric · SIRENA · MICOEL · finder · CEMBRE · Fandis · MATIC · TEKNO MEGA · TER · DATASENSING

China

TECHTOP

Japan

Panasonic

Taiwan

DELTA · LEFOO · HONTKO

Türkiye

Klemsan · ERGUN ELEKTRİK

South Africa

electrodev · EZI CANAL electrical cable ducting · POLAR MONITORING

Technology Partners: The Numbers Behind Us

>$20 billion
Total Annual Revenue

>$1.5 billion
Annual R&D Investment

>120,000
Skilled & Dedicated Workforce

>100
Global Manufacturing Facilities

What's New

Contactors AC/DC control

A1

Lovato Electric has expanded the BF Series, introducing new contactors for AC-3 applications at 400V, along with 450A, 500A, and 600A for AC-1. These contactors feature an electronically controlled AC/DC coil for low power consumption and reliable performance under varying voltage conditions.

- Space-efficient design at 140mm wide
- Low power consumption and wide voltage range
- Versatile wiring options: both top and bottom coil configurations

See page A-2...7

Soft Starters

A1

Lovato Electric ADXT soft starters designed for outstanding performance, reliability and durability, making it ideal for heavy-load operations like running crushers, fans, and conveyors. Advanced features minimise energy consumption in variable and constant-speed applications.

- Integrated bypass relay minimises energy consumption
- Allows for in-line or inside-delta connections
- Voltage ranges from 380 to 690 VAC

See page A-14

Electric Motors

A3

The range of Techtop IE3-rated electric motors engineered for superior energy efficiency and regulatory compliance, making it ideal for modern industrial demands. Delivering cost-effective performance across various industrial applications, from manufacturing to heavy-duty processing.

- Suitable for use with VFDs (class H insulation)
- Conforms to SANS/IEC 60034-2-1
- 2, 4 and 6-pole from 0.75 - 355 kW

See page A-37...40

Air Circuit Breakers

B2

The Hager hw+ series features compact ACBs and Switch Disconnectors tailored for use across residential, commercial, and industrial applications. This line offers superior protection and seamless integration, blending cutting-edge technology with unparalleled reliability to meet the highest safety standards.

- Fixed/draw-out versions with vertical/horizontal connections
- Secure, user-friendly Sentinel LSIG trip unit
- Customisable with a wide range of accessories

See page B-27...30

VTScada

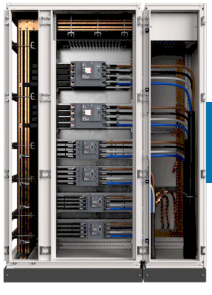
Supervisory Control and Data Acquisition Systems

G

VTScada an award-winning system for real-time monitoring and control of industrial operations, brought to you by Trihedral, a Delta Group Company. User-friendly interface and advanced visualisation make it ideal for all users ensuring operational excellence across industries.

- Integrated, configurable historian
- Built-in redundancy and failover
- Real-time and historical data visualisation

See page G-6



Modular Floor Standing Distribution Board System

H

The Hager quadro evo range is the latest innovation in main distribution boards, providing advanced solutions for projects up to 4000A. Fully compliant with IEC 61439-1&2, it offers multiple safety classes and easy configuration to meet the demands of any project.

- High performance up to 4000A (Icw 85kA) with robust structure
- New design offers more space for easier wiring and maintenance
- Quick and easy assembly with configurable components

See page H-7...12

Explore the full range of over **1000+** new products in this catalogue, and discover how EM is committed to driving your success with cutting-edge technology.

Variable Frequency Drives

A2

Delta VP3000 series is designed to meet rigorous demands of HVAC and water treatment applications, providing exceptional performance and state-of-the-art features. The range is crafted to integrate seamlessly with IM, PM, and high-efficiency SynRM motor control modes.

- Built-in EMC filter compliance EN61800-3 C2, C3
- Built-in Safe Torque Off (STO) SIL3
- Supports BACnet, Modbus, EtherNet, Profinet, and CANopen communication protocols

See page A-28

Pump Panels

A2

The Electron "Lite" series presents a pump panel system featuring pre-set parameters and a user-friendly interface with LED display and built-in potentiometer. Housed in a compact metal enclosure. Suited for various applications, including irrigation, boreholes, booster pumps, and water storage tanks.

- Pre-configured parameters for irrigation applications
- Constant pressure control using a pressure transmitter
- Ready-to-install and cost-efficient

See page A-33

Photovoltaic Load Break Switches

B3

Socomec INOSYS LBS range is designed for DC high-performance power switching in a compact frame, ensuring safe and reliable operation in harsh environments. With a modular design for flexible configuration, easy to install and ideal for various industrial high-voltage DC applications.

- Breaking capacity of 1500 VDC in just two poles
- Conforms to DC-PV2, DC-21B and IEC 60947-3
- Single switch poles 160 - 630A, Double 800 - 1600A

See page B-34

Servo Drives & Motors

C

The Delta A3 servo range is designed to meet the stringent requirements of precise motion control. Delivering high-speed motion control for a wide range of applications. The compact design and advanced control algorithms ensure optimal performance.

- High-precision motion control with a 3.1 kHz frequency response
- 16,777,216 pulses/turn for extremely accurate positioning
- Energy-efficient operation with real-time auto-tuning capabilities
- Compact design offering flexible installation options

See page C-19...21

Photoelectric Sensor with Onboard Processing

K

The Datasening SMART-VS+ system is powered by advanced machine learning algorithms, enabling precise object classification. Its innovative design eliminates the need for programming or threshold setting, ensuring a seamless and user-friendly setup.

- Machine learning assistance for automatic sensor setup
- 50 - 150mm operating distance and electronic focus control
- TEACH button and comprehensive UI with 5 status LEDs

See page K-14

Safety Light Curtains with Muting

K

The Reer Safegate Type 4 range offers robust protection for high-risk industrial applications, especially those requiring seamless integration of muting functions. Designed for reliability, Safegate ensures perfect integration of all muting sensors, directly connecting them to the access control barrier.

- Integration of muting sensors with the access barrier
- Flexible hardware and software configurations
- Integrated end-cap LED for real-time operational status diagnostics

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Motor Control and Motors

Interactive Catalogue

Motor Control & Motors

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Need help navigating the interactive catalogue?
Scan the QR code for a short tutorial video.

Mini contactors AC & DC control

BG0901A

Three-pole mini contactors (Ui 690V)

type	rated current (AC1)	rated current (AC3)	kW rating (AC3) 400V	control	description	auxiliary contacts	price
BG0610A...	16A	6A	2.2 kW	AC	3-pole mini contactor	1NO	**390.00**
BG0910A...	20A	9A	4.0 kW	AC	3-pole mini contactor	1NO	**460.00**
BG0901A...	20A	9A	4.0 kW	AC	3-pole mini contactor	1NC	**460.00**
BG1210A...	20A	12A	5.7 kW	AC	3-pole mini contactor	1NO	**525.00**
BG1201A...	20A	12A	5.7 kW	AC	3-pole mini contactor	1NC	**525.00**
BG0910D...	20A	9A	4.0 kW	DC	3-pole mini contactor	1NO	**615.00**
BG0901D...	20A	9A	4.0 kW	DC	3-pole mini contactor	1NC	**615.00**

BG09T4D

Four-pole mini contactors (Ui 690V)

type	rated current (AC1)	rated current (AC3)	kW (AC1) 230V	kW (AC1) 400V	control	description	main contacts	price
BG09T4A...	20A	9A	8	14	AC	4-pole mini contactor	4NO	**578.00**
BG09T2A...	20A	9A	8	14	AC	4-pole mini contactor	2NO + 2NC	**586.00**
BGP09T4A...	20A	9A	8	14	AC	PCB mount contactor	4NO	**1 130.00**
BG09T4D...	20A	9A	8	14	DC	4-pole mini contactor	4NO	**1 390.00**
BG09T2D...	20A	9A	8	14	DC	4-pole mini contactor	2NO + 2NC	**1 460.00**

Standard coil voltages (add to part number): ***AC*** - 024/048/110/230/400
DC - 012/024/048/060/110/220

Control relays / AC control circuit

Control relays are used where additional contacts are required to switch low-level current loads such as pilot lights, motor starters, or other relays.

BGX1020

BG0040A...	10A	–	–	–	AC	mini control relay	4NO	**538.00**
BG0031A...	10A	–	–	–	AC	mini control relay	3NO + 1NC	**538.00**
BG0022A...	10A	–	–	–	AC	mini control relay	2NO + 2NC	**538.00**

Standard coil voltages (add to part number): ***AC*** - 024/048/110/230/400

Auxiliary contact blocks for above mini contactors 10A Ith / Ui 690V

BGX1040

BGX1020	10A	clip-on auxiliary contact	–	for BG contactors	2NO	**320.00**
BGX1011	10A	clip-on auxiliary contact	–	for BG contactors	1NO + 1NC	**320.00**
BGX1002	10A	clip-on auxiliary contact	–	for BG contactors	2NC	**320.00**
BGX1040	10A	clip-on auxiliary contact	–	for BG contactors	4NO	**558.00**
BGX1022	10A	clip-on auxiliary contact	–	for BG contactors	2NO + 2NC	**558.00**
BGX1004	10A	clip-on auxiliary contact	–	for BG contactors	4NC	**558.00**

Accessories *for above mini contactors*

G324

BGX8000	modular shroud to raise the front degree of protection to IP40		**70.00**
BGX5000	mechanical interlock	for BG contactors	**276.00**
G324	paralleling links *(2-pole)*	for BG contactors	**167.00**
G326	paralleling links *(4-pole)*	for BG contactors	**180.00**

Thermal overload relays for above mini BG contactors

BGX5000

RF12 series - Mini thermal overload relays

General features:
- Compensated, differential single-phase protection
- Incorporating test button facility and mechanical trip indication
- Adjustable range: 0.10 - 12.50A
- Selectable automatic or manual reset
- NO + NC auxiliary contacts
- Phase failure sensitive

RF12...

type	kW rating AC3 (400V)	description	adjustable range	for contactors	price
RF120016	–	thermal overload relay	0.10 - 0.16A	BG6/9/12	**734.00**
RF120025	–	thermal overload relay	0.16 - 0.25A	BG6/9/12	**734.00**
RF120040	0.06 kW	thermal overload relay	0.25 - 0.40A	BG6/9/12	**734.00**
RF120063	0.12 kW	thermal overload relay	0.45 - 0.63A	BG6/9/12	**734.00**
RF120080	0.18 kW	thermal overload relay	0.55 - 0.80A	BG6/9/12	**734.00**
RF120100	0.25 - 0.37 kW	thermal overload relay	0.75 - 1.00A	BG6/9/12	**734.00**
RF120160	0.55 kW	thermal overload relay	1.10 - 1.60A	BG6/9/12	**734.00**
RF120250	0.75 kW	thermal overload relay	1.80 - 2.50A	BG6/9/12	**734.00**
RF120400	1.10 - 1.50 kW	thermal overload relay	2.90 - 4.00A	BG6/9/12	**734.00**
RF120630	2.2 kW	thermal overload relay	4.50 - 6.30A	BG6/9/12	**734.00**
RF121000	4.0 kW	thermal overload relay	7.20 - 10.00A	BG6/9/12	**734.00**
RF121250	5.5 kW	thermal overload relay	9.00 - 12.50A	BG6/9/12	**734.00**

Above ZAR prices do not include VAT. E&OE

BF0910A

BF2600A

BF5000A

New

AC
DC
BF23000E...

BF26500E

New

BF265T4E

BF series - Contactors

- Distinct contact status indication
- Quick connect - snap-on accessory mounting
- Mechanical interlock without overall dimensions increasing
- Rigid connection kits for fast wiring without mistakes *(see contactors accessories)*
- AC/DC coil with electronic control - Wide operating range

type	rated current (AC1)	rated current (AC3)	kW rating (AC3) 400V	control	description	auxiliary contacts	price
Three-pole contactors (Ui 690V) / AC control circuit							
BF0910A...	25A	9A	4.2 kW	AC	3-pole contactor	1NO	**580.00**
BF0901A...	25A	9A	4.2 kW	AC	3-pole contactor	1NC	**580.00**
BF1210A...	28A	12A	5.7 kW	AC	3-pole contactor	1NO	**690.00**
BF1201A...	28A	12A	5.7 kW	AC	3-pole contactor	1NC	**690.00**
BF1810A...	32A	18A	7.5 kW	AC	3-pole contactor	1NO	**930.00**
BF1801A...	32A	18A	7.5 kW	AC	3-pole contactor	1NC	**930.00**
BF2510A...	32A	25A	12.5 kW	AC	3-pole contactor	1NO	**1 300.00**
BF2501A...	32A	25A	12.5 kW	AC	3-pole contactor	1NC	**1 300.00**
BF2600A...	45A	26A	13.0 kW	AC	3-pole contactor	–	**1 400.00**
BF3200A...	56A	32A	16.0 kW	AC	3-pole contactor	–	**1 990.00**
BF3800A...	56A	38A	18.5 kW	AC	3-pole contactor	–	**2 350.00**
Three-pole contactors (Ui 1000V) / AC and AC/DC control circuit							
BF4000A...	70A	40A	18.5 kW	AC	3-pole contactor	–	**2 900.00**
BF5000A...	90A	50A	22 kW	AC	3-pole contactor	–	**3 040.00**
BF6500A...	100A	65A	30 kW	AC	3-pole contactor	–	**3 980.00**
BF8000A...	115A	80A	45 kW	AC	3-pole contactor	–	**4 580.00**
BF9400A...	115A	95A	55 kW	AC	3-pole contactor	–	**5 540.00**
BF9500A...	140A	95A	55 kW	AC	3-pole contactor	–	**5 800.00**
BF11500A...	160A	115A	55 kW	AC	3-pole contactor	–	**6 730.00**
BF15000A...	165A	150A	75 kW	AC	3-pole contactor	–	**7 590.00**
BF16000E...	250A	160A	75 kW	AC/DC	3-pole contactor	–	**9 710.00**
BF19500E...	275A	195A	90 kW	AC/DC	3-pole contactor	–	**10 700.00**
BF23000E...	350A	230A	110 kW	AC/DC	3-pole contactor	–	**13 600.00**
BF26500E...	450A	265A	132 kW	AC/DC	3-pole contactor	–	**18 000.00**
BF33000E...	500A	330A	160 kW	AC/DC	3-pole contactor	–	**21 200.00**
BF40000E...	600A	400A	200 kW	AC/DC	3-pole contactor	–	**27 300.00**
B50000...	700A	520A	290 kW	AC/DC	3-pole contactor	–	**41 900.00**
B63000...	800A	630A	335 kW	AC/DC	3-pole contactor	–	**51 600.00**
B125024...	1250A	–	(AC1) 830 kW	AC/DC	3-pole contactor	–	**153 000.00**
B160024...	1600A	–	(AC1) 950 kW	AC/DC	3-pole contactor	–	**160 000.00**

type	rated current (AC1)	rated current (AC3)	kW (AC1) 230V	kW (AC1) 400V	control	description		price
Four-pole contactors / AC control circuit								
BF09T4A...	25A	9A	9.5	16	AC	4-pole contactor	–	**1 200.00**
BF12T4A...	28A	12A	10	18	AC	4-pole contactor	–	**1 550.00**
BF18T4A...	32A	18A	12	21	AC	4-pole contactor	–	**1 880.00**
BF26T4A...	45A	26A	17	30	AC	4-pole contactor	–	**2 660.00**
BF38T4A...	56A	38A	21	36	AC	4-pole contactor	–	**5 520.00**
Attachable **4th pole** - for above 3-pole contactors ***BF26...150***								
BFX42	56A	–	attachable 4th pole for 3-pole contactors				BF26...38A	**1 390.00**
BFX43	115A	–	attachable 4th pole for 3-pole contactors				BF40...94A/E	**2 420.00**
BFX44	165A	–	attachable 4th pole for 3-pole contactors				BF95...150A/E	**2 930.00**
Four-pole contactors (Ui 1000V) / AC/DC control circuit								
BF160T4E...	250A	160A	95	165	AC/DC	4-pole contactor	–	**18 600.00**
BF195T4E...	275A	175A	104	181	AC/DC	4-pole contactor	–	**20 500.00**
BF230T4E...	350A	230A	132	230	AC/DC	4-pole contactor	–	**26 200.00**
BF265T4E...	450A	265A	170	296	AC/DC	4-pole contactor	–	**31 700.00**
BF330T4E...	500A	330A	189	329	AC/DC	4-pole contactor	–	**37 100.00**
BF400T4E...	600A	400A	227	395	AC/DC	4-pole contactor	–	**45 100.00**
B500400...	700A	520A	252	438	AC/DC	4-pole contactor	–	**65 400.00**
B630400...	800A	630A	288	500	AC/DC	4-pole contactor	–	**110 000.00**

"A" *standard coil voltages:* ***AC*** *- 024/048/110/230/400 (others available on request)*

"E" *standard voltage coils:* ***BF160...400E*** *AC/DC -* ***024*** *(24-60V)/****110*** *(60-130V)/****230*** *(100-250V)/****400*** *(250-500V)*
B500...630 *AC/DC - 110/220/400* ***B125024...160024*** *AC/DC - 110/220*

BF0910D

BF1810L...

BF9400E

BF23000E...

BF15000E + BFX44

type	rated current (AC1)	(AC3)	kW rating (AC3) 400V	control	description	auxiliary contacts	price
Three-pole contactors (Ui 690V) - DC control circuit							
Permanent magnet types (Ui 690V) - DC control circuit *(low consumption coil 5.4 watts)*							
BF0910D...	25A	9A	4.2 kW	DC	3-pole contactor	1NO	**980.00**
BF1210D...	28A	12A	5.7 kW	DC	3-pole contactor	1NO	**1 130.00**
BF1810D...	32A	18A	7.5 kW	DC	3-pole contactor	1NO	**1 480.00**
BF2510D...	32A	25A	12.5 kW	DC	3-pole contactor	1NO	**2 080.00**
BF2600D...	45A	26A	13.0 kW	DC	3-pole contactor	–	**3 080.00**
BF3200D...	56A	32A	16.0 kW	DC	3-pole contactor	–	**3 180.00**
BF3800D...	56A	38A	18.5 kW	DC	3-pole contactor	–	**3 870.00**
Extra-low consumption coil 2.4 watt *(ideal for direct PLC interfacing)*							
BF0910L...	25A	9A	4.2 kW	DC	3-pole contactor	1NO	**1 230.00**
BF1210L...	28A	12A	5.7 kW	DC	3-pole contactor	1NO	**1 360.00**
BF1810L...	32A	18A	7.5 kW	DC	3-pole contactor	1NO	**1 710.00**
BF2510L...	32A	25A	12.5 kW	DC	3-pole contactor	1NO	**2 390.00**
BF3200L...	56A	32A	16.0 kW	DC	3-pole contactor	–	**3 500.00**
BF3800L...	56A	38A	18.5 kW	DC	3-pole contactor	–	**4 200.00**

AC/DC electronically controlled coil

The contactor coil is controlled electronically it can therefore be used either as AC or DC supply. These contactors have an electronically controlled AC/DC coil for greatly reduced consumption and a wide nominal voltage range *(e.g. just one coil for 100…250V AC/DC)*. Coils have 4 power terminals permitting cables to be terminated to the coil from top or bottom of the contactor.

- Wide operating range
- No chattering in the event of irregular voltage
- Low consumption during in-rush and in service
- Built-in surge suppression

BF4000E...	70A	40A	18.5 kW	AC/DC	3-pole contactor	–	**3 610.00**
BF5000E...	90A	50A	22 kW	AC/DC	3-pole contactor	–	**3 830.00**
BF6500E...	100A	65A	30 kW	AC/DC	3-pole contactor	–	**4 890.00**
BF8000E...	115A	80A	45 kW	AC/DC	3-pole contactor	–	**5 670.00**
BF9400E...	115A	95A	55 kW	AC/DC	3-pole contactor	–	**6 460.00**
BF9500E...	140A	95A	55 kW	AC/DC	3-pole contactor	–	**7 170.00**
BF11500E...	160A	115A	55 kW	AC/DC	3-pole contactor	–	**8 200.00**
BF15000E...	165A	150A	75 kW	AC/DC	3-pole contactor	–	**9 040.00**
BF16000E...	250A	160A	75 kW	AC/DC	3-pole contactor	–	**9 710.00**
BF19500E...	275A	195A	90 kW	AC/DC	3-pole contactor	–	**10 700.00**
BF23000E...	350A	230A	110 kW	AC/DC	3-pole contactor	–	**13 600.00**
BF26500E...	450A	265A	132 kW	AC/DC	3-pole contactor	–	**18 000.00**
BF33000E...	500A	330A	160 kW	AC/DC	3-pole contactor	–	**21 200.00**
BF40000E...	600A	400A	200 kW	AC/DC	3-pole contactor	–	**27 300.00**

*Lager sizes available - see page **A-2** AC/DC contactors*

Attachable **4th pole** - for above 3-pole contactors ***BF26...150***

BFXD42	56A	attachable 4th pole for 3-pole contactors	BF26...38D/L	**1 390.00**
BFX43	115A	attachable 4th pole for 3-pole contactors	BF40...94A/E	**2 420.00**
BFX44	165A	attachable 4th pole for 3-pole contactors	BF95…150A/E	**2 930.00**

type	rated current (AC1)	(AC3)	kW (AC1) 230V	400V	control	description		price
Four-pole contactors (Ui 690V) - DC control circuit								
Permanent magnet types (Ui 690V) - DC control circuit								
BF09T4D...	25A	9A	9.5	16	DC	4-pole contactor	–	**2 540.00**
BF18T4D...	32A	18A	12	21	DC	4-pole contactor	–	**3 450.00**
Four-pole contactors (Ui 1000V) / AC/DC control circuit								
BF265T4E...	450A	265A	170	296	AC/DC	4-pole contactor	–	**31 700.00**
BF330T4E...	500A	330A	189	329	AC/DC	4-pole contactor	–	**37 100.00**
BF400T4E...	600A	400A	227	395	AC/DC	4-pole contactor	–	**45 100.00**

*Lager sizes available - see page **A-2** AC/DC contactors*

***"D"** standard coil voltages: **DC** - 012/024/048/060/110/220*

***"L"** standard coil voltages: **DC** - 024/048*

***"E"** standard voltage coils: **BF40...150E** AC/DC - **024** (24-60V)/**110** (60-130V)/**230** (100-250V)*
***BF160...400E** AC/DC - **024** (24-60V)/**110** (60-130V)/**230** (100-250V)/**400** (250-500V)*

Above ZAR prices do not include VAT. E&OE

Special configuration contactors AC & DC control

BF00...

type	rated current (AC1)	(AC3)	kW rating 230V	400V	control	description	main contacts	price
Special configuration contactors / AC control circuit - 024/048/110/230/400V								
BF09T2A...	25A	9A	9.5	16	AC	4-pole contactor	2NO+2NC	**1 740.00**
BF18T2A...	32A	18A	12	21	AC	4-pole contactor	2NO+2NC	**2 130.00**
BF26T2A...	45A	26A	17	30	AC	4-pole contactor	2NO+2NC	**3 610.00**
BF38T2A...	56A	38A	21	36	AC	4-pole contactor	2NO+2NC	**6 670.00**
BF18T0A...	32A	18A	12	21	AC	4-pole contactor	4NC	**2 130.00**
Special configuration contactors / DC control circuit								
BF18T2D...	32A	18A	12	21	DC	4-pole contactor	2NO+2NC	**3 540.00**
BF26T2D...	45A	26A	17	30	DC	4-pole contactor	2NO+2NC	**5 070.00**
BF38T2D...	56A	38A	21	36	DC	4-pole contactor	2NO+2NC	**8 600.00**
BF80T2E...	115A	80A	43	76	AC/DC	4-pole contactor	2NO+2NC	**17 100.00**
BF18T0D...	32A	18A	12	21	DC	4-pole contactor	4NC	**3 540.00**
BF26T0D...	45A	26A	17	30	DC	4-pole contactor	4NC	**4 650.00**
Control relays / AC control circuit - 024/048/110/230/400V								
BF0040A...	10A	–	–	–	AC	control relay	4NO	**747.00**
BF0031A...	10A	–	–	–	AC	control relay	3NO+1NC	**747.00**
BF0022A...	10A	–	–	–	AC	control relay	2NO+2NC	**747.00**
BF0004A...	10A	–	–	–	AC	control relay	4NC	**747.00**
Control relays / DC control circuit *(extra-low consumption coil 2.4 watt)*								
BF0040L...	10A	–	–	–	DC	control relay	4NO	**2 160.00**
BF0031L...	10A	–	–	–	DC	control relay	3NO+1NC	**2 160.00**
BF0022L...	10A	–	–	–	DC	control relay	2NO+2NC	**2 160.00**
BF0004L...	10A	–	–	–	DC	control relay	4NC	**2 160.00**

BFK1810A...

Capacitor switching contactors

AC control circuit - 230/400V

Contactors for PFC with AC control circuits equipped with early-make limiting resistors limiting in-rush currents initially before making contact. Resistors are disconnected from the circuit when contactor closing operation is complete.

type	kvar 400V	kvar 440V	rated current	control	description	auxiliary contacts	price
BFK1210A...	12.5	14	18A	AC	capacitor switching contactor	1NO	**1 410.00**
BFK1810A...	15	17	23A	AC	capacitor switching contactor	1NO	**1 600.00**
BFK2600A...	20	22	30A	AC	capacitor switching contactor	–	**2 590.00**
BFK3200A...	25	27.5	36A	AC	capacitor switching contactor	–	**3 020.00**
BFK3800A...	30	33	43A	AC	capacitor switching contactor	–	**3 300.00**
BFK5000A...	40	41	58A	AC	capacitor switching contactor	–	**4 740.00**
BFK8000A...	50	56	75A	AC	capacitor switching contactor	–	**5 250.00**
BFK11500A...	75	85	115A	AC	capacitor switching contactor	–	**9 780.00**
BFK15000A...	100	115	144A	AC	capacitor switching contactor	–	**11 600.00**

BFK11500A...

Kit to assemble BFK contactors from standard BF contactors		for contactor	
G460	kit to assemble standard contactors for capacitor switching	BF09…38A	**844.00**
BFX10K3	kit to assemble standard contactors for capacitor switching	BF50…94A	**1 520.00**
BFX10K4	kit to assemble standard contactors for capacitor switching	BF95…150A	**1 890.00**

Thyristor switching modules

Suitable for dynamic *(fast)* PFC

DCTL series thyristor modules are ideal for dynamic power factor correction. Zero cross switching guarantees very short switching times, reducing current peaks generated by capacitor insertion without voltage peaks on disconnection. Integrated current transformers permit complete monitoring and protection of capacitor banks.

- Prevents high in-rush currents at capacitor switching
- Operational voltage: 400…480 VAC *(690V available on request)*

Advanced communication functions:
- NFC connectivity for programming via smart devices
- Optical port for frontal connection to a PC via USB or WiFi via **CX01** or **CX02**
- Optional RS-485 card ***(EXC1042)*** for connection to **DCRG8F** controller

DCTLA...

type	kvar 400V	kvar 480V	rated current	description	dimensions (mm) (H)	(W)	(D)	price
DCTLA4800180	15	18	22A	thyristor switching module	218	75	172	**18 800.00**
DCTLA4800360	30	36	43A	thyristor switching module	218	75	172	**19 600.00**
DCTLA4800600	50	60	72A	thyristor switching module	226	95	182	**27 200.00**
DCTLA4801200	100	120	144A	thyristor switching module	301	212	216	**40 800.00**

Snap-on installation

BFX1011

BFX1040

G48421

BFX12...

G481...

BFX10C01

G280

G485...

BFX42

General accessories for contactors

- Snap-on installation: Quick and easy installation to fit and remove an auxiliary contact without a tool
- Rigid connection kits: Available in reversing, changeover or line-star-delta connecting kits
- Mechanical interlock: Side, top, horizontal and vertical options are available, see contactor accessories
- Attachable 4th pole: Side mount attachable 4th pole can be snapped on a 3-pole contactor
- Pneumatic delay blocks: On-delay, delay-on de-energisation
- Spare voltage coils: Spare coils compatible with all contactors, see contactor accessories

type	mounting	description	terminal	contacts	price
Clip-on auxiliary contact blocks					
For contactors BF09...150 - 10A Ith / Ui 690V					
BFX1020	top *(centre)*	auxiliary contact block	screw	2NO	**292.00**
BFX1011	top *(centre)*	auxiliary contact block	screw	1NO + 1NC	**235.00**
BFX1002	top *(centre)*	auxiliary contact block	screw	2NC	**292.00**
BFX1040	top *(centre)*	auxiliary contact block	screw	4NO	**469.00**
BFX1031	top *(centre)*	auxiliary contact block	screw	3NO + 1NC	**582.00**
BFX1022	top *(centre)*	auxiliary contact block	screw	2NO + 2NC	**550.00**
BFX1004	top *(centre)*	auxiliary contact block	screw	4NC	**582.00**
BFX1220	side	auxiliary contact block	screw	2NO	**457.00**
BFX1211	side	auxiliary contact block	screw	1NO + 1NC	**368.00**
BFX1202	side	auxiliary contact block	screw	2NC	**457.00**
G48430	top *(centre)*	auxiliary contact block	screw	3NO	**536.00**
G48421	top *(centre)*	auxiliary contact block	screw	2NO + 1NC	**431.00**
G48412	top *(centre)*	auxiliary contact block	screw	1NO + 2NC	**536.00**
G48403	top *(centre)*	auxiliary contact block	screw	3NC	**536.00**
G41810	top *(side)*	auxiliary contact block	screw	1NO	**205.00**
G41810A	top *(side)*	auxiliary (early make)	screw	1NO	**254.00**
G41801	top *(side)*	auxiliary contact block	screw	1NC	**254.00**
G41801D	top *(side)*	auxiliary (late break)	screw	1NC	**254.00**
G48120	top *(side)*	auxiliary contact block	push-on	2NO	**318.00**
G48111	top *(side)*	auxiliary contact block	push-on	1NO + 1NC	**318.00**
G48102	top *(side)*	auxiliary contact block	push-on	2NO	**318.00**
G218	top *(side)*	auxiliary contact block	push-on	1NO (or) 1NC	**222.00**
For contactors BF160...400 - 10A Ith / Ui 690V					
BFX10C10	top	auxiliary contact block	screw	1NO	**275.00**
BFX10C01	top	auxiliary contact block	screw	1NC	**275.00**
BFX12C02	side	auxiliary contact block	screw	2NC	**592.00**
BFX12C11	side	auxiliary contact block	screw	1NO + 1NC	**592.00**
BFX12C20	side	auxiliary contact block	screw	2NO	**592.00**
For contactors B500...630 - 16A Ith / Ui 690V					
G354	side	auxiliary contact	push-on	1NO + 1NC	**860.00**
G350	side	auxiliary contact	push-on	2NO + 1NC	**1 060.00**
G370	adaptor	adaptor for push-on to screw terminal for		G350/354	**90.00**
Accessories for above auxiliary contact blocks					
G280	side	side mount adaptor for auxiliary		G218	**89.00**
G419	side	side mount adaptor for auxiliary		G418	**101.00**
G483	side	side mount adaptor for auxiliary		G481	**112.00**
G358	adaptor	to fit **BFX10/G484...7** auxiliaries to		B500...B630	**579.00**
Pneumatic delay blocks BF09...150					
G4856	on-delay pneumatic timer contact block		6sec	1NO + 1NC	**2 090.00**
G48560	on-delay pneumatic timer contact block		60sec	1NO + 1NC	**2 260.00**
G485120	on-delay pneumatic timer contact block		120sec	1NO + 1NC	**2 830.00**
G4866	delay-on de-energisation timer contact block		6sec	1NO + 1NC	**2 050.00**
G48660	delay-on de-energisation timer contact block		60sec	1NO + 1NC	**2 210.00**
G486120	delay-on de-energisation timer contact block		120sec	1NO + 1NC	**2 770.00**
G487	delay-on de-energisation timer contact block		70msec	1NO + 1NC	**1 310.00**

Attachable 4th pole for contactors BF26...150A/E *(fully rated)*

- Add following attachable 4th pole to above 3-pole contactors to make up a 4-pole contactor

BFX42	56A	attachable 4th pole for contactors	BF26...38A	**1 390.00**
BFXD42	56A	attachable 4th pole for contactors	BF26...38D/L	**1 390.00**
BFX43	115A	attachable 4th pole for contactors	BF40...94A/E	**2 420.00**
BFX44	165A	attachable 4th pole for contactors	BF95…150A/E	**2 930.00**

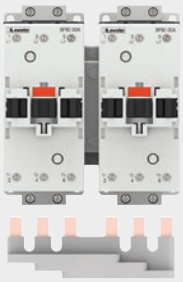
Above ZAR prices do not include VAT. E&OE

BFX5001

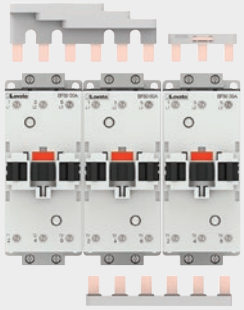
BFX5500

BFX5002

G454


BFX3401
Reversing contactor rigid connecting kit

BFX3461
Changeover rigid connecting kit


BFX3431
Lline-star-delta rigid connecting kit

General accessories for contactors

type	mounting	description	for contactor	price
Mechanical interlocks between two contactors				
BFX5000	side	side mount mechanical interlock	BF09...38	**481.00**
BFX5001	side	mechanical interlock with 2NC contacts	BF09...38	**482.00**
BFX5002	top *(side)*	economy *(low profile)* mech. interlock	BF09...38	**195.00**
BFX5003	top *(side)*	top mount mechanical interlock	BF09...38	**601.00**
BFX5300	side	side mount mechanical interlock	BF40...94A/E	**496.00**
BFX5301	side	mechanical interlock with 2NC contacts	BF40...94A/E	**741.00**
BFX5303	top *(side)*	top mount mechanical interlock	BF40...94A/E	**601.00**
BFX5400	side	side mount mechanical interlock	BF95...150A/E	**495.00**
BFX5401	side	mechanical interlock with 2NC contacts	BF95...150A/E	**741.00**
BFX5403	top *(side)*	top mount mechanical interlock	BF95...150A/E	**601.00**
BFX5500	horizontal	side mount mechanical interlock	BF160…400	**669.00**
BFX5503	vertical	vertical mech. interlock *(interaxis 305 - 345 mm)*	BF160…400	**1 640.00**
G355	horizontal	side mount mechanical interlock	B500...630	**545.00**
G3564	vertical	vertical mech. interlock *(interaxis 345 - 385 mm)*	B500...630	**1 770.00**
G3565	vertical	vertical mech. interlock *(interaxis 390 - 425 mm)*	B500...630	**1 810.00**
Mechanical latch blocks *(electric or hand reset)*				
G222...		mechanical latch mechanism *(electrical/hand reset)*	BF09...38	**1 770.00**
G272...		mechanical latch mechanism *(electrical/hand reset)*	BF40…94	**1 770.00**
BFX641...		mechanical latch mechanism *(electrical/hand reset)*	BF95...150	**1 770.00**
G454		mechanical latch mechanism *(hand set/reset)*	BF09...38	**811.00**
G455		mechanical latch mechanism *(hand set/reset)*	BF40…94	**811.00**
BFX642		mechanical latch mechanism *(hand set/reset)*	BF95...150	**811.00**
Standard coil voltages (add to part number): ***AC*** *- 024/048/110/220/380* ***DC*** *- 012/024/048/110/220*				
Connection accessories for large frame contactors BF160…400				
BFX805	phase barrier	for large frame contactors *(4-piece set)*	BF160...230	**629.00**
BFX806	phase barrier	for large frame contactors *(4-piece set)*	BF265…400	**692.00**
Captive nut support - to support the connection nut *(for ease of installation)*				
BFX8508	captive nut support	for large frame contactors *(8-piece set)*	BF160...230	**1 120.00**
BFX8608	captive nut support	for large frame contactors *(8-piece set)*	BF265…400	**1 490.00**
BFX3592	2-pole paralleling link	for large frame contactors	BF160...230	**696.00**
BFX3692	2-pole paralleling link	for large frame contactors	BF265…400	**836.00**
BFX3593	3-pole paralleling link	for large frame contactors	BF160...230	**723.00**
BFX3693	3-pole paralleling link	for large frame contactors	BF265…400	**877.00**

Accessories for contactors BF09...400 *(with interlock)*

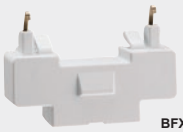
type	description	mech. interlock	for contactor	price
BFX3101	reversing contactor rigid connecting kit	BFX5002/5003	BF09...25	**397.00**
BFX3102	reversing contactor rigid connecting kit	BFX5000/5001	BF09...25	**397.00**
BFX3201	reversing contactor rigid connecting kit	BFX50	BF26...38	**435.00**
BFX3301	reversing contactor rigid connecting kit	BFX5303	BF40…94	**512.00**
BFX3401	reversing contactor rigid connecting kit	BFX5403	BF95…150	**841.00**
BFX3501	reversing contactor rigid connecting kit	BFX5500	BF160…230	**4 280.00**
BFX3601	reversing contactor rigid connecting kit	BFX5500	BF265…400	**6 600.00**
BFX3361	changeover rigid connecting kit *(3-pole)*	BFX5300/5301	BF40…94	**295.00**
BFX3461	changeover rigid connecting kit *(3-pole)*	BFX5400/5401	BF95…150	**463.00**
BFX3561	changeover rigid connecting kit *(3-pole)*	BFX5500	BF160…230	**2 390.00**
BFX3661	changeover rigid connecting kit *(3-pole)*	BFX5500	BF265…400	**3 960.00**
BFX3371	changeover rigid connecting kit *(4-pole)*	BFX5300/5301	BF40…94	**420.00**
BFX3471	changeover rigid connecting kit *(4-pole)*	BFX5400/5401	BF95…150	**619.00**
BFX3571	changeover rigid connecting kit *(4-pole)*	BFX5500	BF160…230	**3 870.00**
BFX3671	changeover rigid connecting kit *(4-pole)*	BFX5500	BF265…400	**5 350.00**
BFX3131	line-star-delta rigid connecting kit	–	BF09...25	**453.00**
BFX3231	line-star-delta rigid connecting kit	–	BF26...38	**598.00**
BFX3232	line-star-delta rigid connecting kit	(L / Δ) BF26...38	(Y) BF09...25	**598.00**
BFX3331	line-star-delta rigid connecting kit	–	BF40…94	**666.00**
BFX3432	line-star-delta rigid connecting kit	(L / Δ) BF95...150	(Y) BF40...94	**961.00**
BFX3431	line-star-delta rigid connecting kit	–	BF95…150	**961.00**
BFX3531	line-star-delta rigid connecting kit	–	BF160…230	**3 960.00**
BFX3631	line-star-delta rigid connecting kit	–	BF265…400	**7 590.00**

BFX80

BFX8901

BA135

BA435


BFX77...

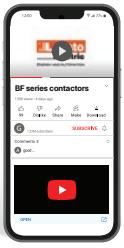
BFX91...

G...

General accessories for contactors

type	description			for contactor	price
Accessories for contactors BF09...400 / B500...630					
BFX80	sealing cover		for contactors	BF09...38	**73.00**
BFX8901	universal screw mounting base		for contactors	BF09...38	**74.00**
BFX8902	screw fixing brackets *(2 pcs)*		for contactors	BF09...38	**55.00**
BFX835	3-pole	terminal cover	for contactors	BF160...230	**616.00**
BFX836	3-pole	terminal cover	for contactors	BF265...400	**678.00**
BFX845	4-pole	terminal cover	for contactors	BF160...230	**822.00**
BFX846	4-pole	terminal cover	for contactors	BF265...400	**903.00**
BA135	2-pole	paralleling links	for contactors	BF09...25	**66.00**
BA235	2-pole	paralleling links	for contactors	BF26...38	**82.00**
BFX3592	2-pole	paralleling links	for contactors	BF160...230	**696.00**
BFX3692	2-pole	paralleling links	for contactors	BF265...400	**836.00**
BA435	3-pole	paralleling links	for contactors	BF95...150	**448.00**
BFX3593	3-pole	paralleling links	for contactors	BF160...230	**723.00**
BFX3693	3-pole	paralleling links	for contactors	BF265...400	**877.00**
BA1846	3-pole	star connecting bar	for contactors	B500...630	**804.00**
BFX3583	3-pole	spreader links	for contactors	BF160...230	**2 170.00**
BFX3683	3-pole	spreader links	for contactors	BF265...400	**2 560.00**
BFX3584	4-pole	spreader links	for contactors	BF160...230	**2 730.00**
BFX3684	4-pole	spreader links	for contactors	BF265...400	**3 330.00**
G371	adaptor for push-on to screw terminal *(coil)*			B500...630	**300.00**
G231	1-pole enlarged terminal *(1 x 6 mm²)*		for contactors	BF09...25	**163.00**
G232	1-pole enlarged terminal *(1 x 16 mm²)*		for contactors	BF26...38	**191.00**
BFX30	blank label for self-labelling *(orange)*		for contactors	BF09...150	**30.50**
Surge suppressors for contactors BF09...150 *(quick connect)*					
BFX77048	≤ 48 VAC/DC	varistor	for contactors	BF09...150A	**313.00**
BFX77125	48-125 VAC/DC	varistor	for contactors	BF09...150A	**313.00**
BFX77240	125-240 VAC/DC	varistor	for contactors	BF09...150A	**313.00**
BFX79415	240-415 VAC	resistor-capacitor	for contactors	BF09...150A	**385.00**
Spare coils for all contactors					
BFX91A...	AC	spare coil only	for contactors	BF09...25A	**486.00**
BFX92A...	AC	spare coil only	for contactors	BF26...38A	**591.00**
BFX93A...	AC	spare coil only	for contactors	BF40...94A	**1 060.00**
BFX94A...	AC	spare coil only	for contactors	BF95...150A	**1 740.00**
Standard coil voltages: ***AC*** *- 024/048/110/230/400*					
BFX93E...	AC/DC	spare coil only	for contactors	BF40...94E	**2 800.00**
BFX94E...	AC/DC	spare coil only	for contactors	BF95...150E	**4 250.00**
BFX95E...	AC/DC	spare coil only	for contactors	BF160...230E	**5 250.00**
BFX96E...	AC/DC	spare coil only	for contactors	BF265...400E	**8 770.00**
BA1796...	AC/DC	spare coil only	for contactors	B500...B630	**17 100.00**
Standard coil voltages: AC/DC - ***024*** *(24-60V),* ***110*** *(60-130V),* ***230*** *(100-250V),* ***400*** *(250-500V)*					
Spare contact sets *(fixed and moving)* **per three-pole set**					
BFX99040T	3-pole	main contact set *(fixed and moving)*		BF40	**2 370.00**
BFX99050T	3-pole	main contact set *(fixed and moving)*		BF50	**2 800.00**
BFX99065T	3-pole	main contact set *(fixed and moving)*		BF65	**3 580.00**
BFX99080T	3-pole	main contact set *(fixed and moving)*		BF80	**4 390.00**
BFX99095T	3-pole	main contact set *(fixed and moving)*		BF95	**5 590.00**
BFX99115T	3-pole	main contact set *(fixed and moving)*		BF115	**6 390.00**
BFX99150T	3-pole	main contact set *(fixed and moving)*		BF150	**7 060.00**
BFX99195T	3-pole	main contact set *(fixed and moving)*		BF195	**9 900.00**
BFX99230T	3-pole	main contact set *(fixed and moving)*		BF230	**12 700.00**
G525	3-pole	main contact set *(fixed and moving)*		B500	**34 800.00**
G526	3-pole	main contact set *(fixed and moving)*		B630	**75 600.00**

Scan the QR Code
for easy access to tutorials on the Lovato Contactor range



Above ZAR prices do not include VAT. E&OE

RF38...

RF82...

RF200...

RFE45...

RFX3804

RFX3802

type	motor rating AC3 (400V)	description	adjustment range	for contactor	price
RF38 series *(phase failure sensitive)*					
Motor protection relay, phase failure/single-phase sensitive. Three-pole (three-phase), manual or automatic resetting.					
• Selectable manual or automatic reset • Direct mounting on **BF09...38** contactors					
RF380016	–	thermal overload	0.10 - 0.16A	BF09...38	**870.00**
RF380025	0.06 kW	thermal overload	0.16 - 0.25A	BF09...38	**870.00**
RF380040	0.09 kW	thermal overload	0.25 - 0.40A	BF09...38	**870.00**
RF380063	0.12 - 0.18 kW	thermal overload	0.40 - 0.63A	BF09...38	**870.00**
RF380100	0.25 kW	thermal overload	0.63 - 1.00A	BF09...38	**870.00**
RF380160	0.37 - 0.55 kW	thermal overload	1.00 - 1.60A	BF09...38	**870.00**
RF380250	0.75 kW	thermal overload	1.60 - 2.50A	BF09...38	**870.00**
RF380400	1.1 - 1.5 kW	thermal overload	2.50 - 4.00A	BF09...38	**870.00**
RF380650	2.2 kW	thermal overload	4.00 - 6.50A	BF09...38	**870.00**
RF381000	3.0 - 4.0 kW	thermal overload	6.30 - 10.0A	BF09...38	**870.00**
RF381400	5.5 kW	thermal overload	9.00 - 14.0A	BF09...38	**870.00**
RF381800	7.5 kW	thermal overload	13.0 - 18.0A	BF09...38	**990.00**
RF382300	11 kW	thermal overload	17.0 - 23.0A	BF09...38	**990.00**
RF382500	11 kW	thermal overload	20.0 - 25.0A	BF09...38	**990.00**
RF383200	15 kW	thermal overload	24.0 - 32.0A	BF09...38	**1 220.00**
RF383800	18.5 kW	thermal overload	32.0 - 38.0A	BF09...38	**1 510.00**
RF82 series *(phase failure sensitive)*					
• Manual resetting - direct mounting on **BF40...94** contactors					
RF824200	15 - 18.5 kW	thermal overload	28 - 42A	BF40…94	**2 080.00**
RF825000	22 kW	thermal overload	35 - 50A	BF40…94	**2 360.00**
RF826500	22 - 30 kW	thermal overload	46 - 65A	BF40…94	**2 360.00**
RF828200	37 - 45 kW	thermal overload	60 - 82A	BF40…94	**2 710.00**
RF829500	45 kW	thermal overload	70 - 95A	BF40…94	**2 940.00**
RF110 series *(phase failure sensitive)*					
• Manual resetting - direct mounting on **BF95...150** contactors					
RF110095	45 kW	thermal overload	70 - 95A	BF95...150	**3 000.00**
RF110110	55 kW	thermal overload	90 - 110A	BF95...150	**3 360.00**
RF200 series *(phase failure sensitive)*		req. links **RFX20035/RFX20036** to attach to contactors			
• Manual or automatic resetting - direct mounting of **BF160...400** contactors					
RF200150	51 - 80 kW	thermal overload	90 - 150A	BF160...400	**6 340.00**
RF200200	75 - 100 kW	thermal overload	120 - 200A	BF160...400	**6 560.00**
RF420 series *(phase failure sensitive)*		req. links **RFX42035/*RFX42036** to attach to contactors			
RF420250	92 - 132 kW	thermal overload	150 - 250A	BF160...400	**8 150.00**
RF420300*	100 - 162 kW	thermal overload	180 - 300A	BF160...400	**8 370.00**
RF420420*	129 - 198 kW	thermal overload	250 - 420A	BF160...400	**8 600.00**
RFE series - Electronic overload relays *(self-powered by main circuit)*					
The RFE... electronic thermal overload relays for BF series contactors are characterised by a wide current adjustment range and high reliability and accuracy of tripping.					
RFE electronic thermal overload relays are suitable for all types of motor starting thanks to the possibility to select several tripping classes. A single front push button is used to select the reset function, manual or automatic, and to activate or deactivate the STOP function.					
RFE450200	0.12 - 0.75 kW	electronic overload	0.4 - 2A	BF09...38	**2 130.00**
RFE450800	0.75 - 3.0 kW	electronic overload	1.6 - 8A	BF09...38	**2 130.00**
RFE453200	3 - 15 kW	electronic overload	6.4 - 32A	BF09...38	**2 130.00**
RFE454500	4 - 22 kW	electronic overload	9 - 45A	BF09...38	**3 560.00**
Accessories for RF series overloads					
RFX20035	set of links for mounting RF200 overload relays onto contactor			BF160...230	**785.00**
RFX20036	set of links for mounting RF200 overload relays onto contactor			BF265...400	**810.00**
RFX42035	set of links for mounting RF420 overload relays onto contactor			BF160...230	**815.00**
RFX42036	set of links for mounting RF420 overload relays onto contactor			BF265...400	**1 080.00**
RFX3804	separate mounting adaptor	*(surface / DIN-rail mount)*		RF38/RFE45	**267.00**
G270	separate mounting adaptor	*(surface / DIN-rail mount)*		RF82/110	**922.00**
G228220	electrical reset mechanism for overloads (220VAC)			RF82/110	**1 000.00**
RFX3801	lead sealing device for overloads			RF38/200/420	**95.00**
G233	lead sealing device for overloads			RF82/110	**76.00**
RFX3802	protection cover for **RF38** on contactor assembly			BF09...25	**73.00**
RFX3803	protection cover for **RF38** on contactor assembly			BF26...38	**73.00**

SM1P...

SM1R...

SM2R5000

SM3R...

SM series - Motor protection circuit breakers

The SM series motor protection circuit breakers have been completely updated across all ranges of rated current, from 0.1 to 100A. The series includes three sizes: SM1, with a range-extended up to 40A *(available versions: with buttons or with rotary knob for motor protection)* SM2 from 34 to 63A and SM3 from 55 to 100A, both with rotary knobs.

*(Type 2 co-ordination with contactors – see **Annex-2**)*

General features:

- Temperature compensation
- Thermal and magnetic protection
- Rated insulation voltage Ui 690V
- For safety lockout hasps refer to **category K**
- High fault level *(type 2 co-ordination with contactors)*
- Differential single-phase protection *(phase failure sensitive)*
- Snap-on auxiliary contacts, shunt trip and undervolt release
- 3 sizes, from 0.1 to 100A, with pushbutton and rotary versions
- Trip-test facility/indication of trip condition overload *(or)* short circuit *(SM1R series)*

type	motor rating 230V	motor rating 400V	thermal trip adj.range	description	short circuit capacity Icu 400V	price
SM1P series		**Icu 100 to 10kA**	*(H) 90 x (W) 45 x (D) 75 mm (inc. buttons)*			
• Pushbutton control - padlockable in OFF position						
SM1P0016	–	–	0.1 - 0.16A	manual motor starter	100 kA	**870.00**
SM1P0025	–	–	0.16 - 0.25A	manual motor starter	100 kA	**870.00**
SM1P0040	–	–	0.25 - 0.4A	manual motor starter	100 kA	**870.00**
SM1P0063	–	0.18 kW	0.40 - 0.63A	manual motor starter	100 kA	**870.00**
SM1P0100	0.12 kW	0.25 kW	0.63 - 1A	manual motor starter	100 kA	**890.00**
SM1P0160	0.25 kW	0.37 - 0.55 kW	1 - 1.6A	manual motor starter	100 kA	**890.00**
SM1P0250	0.37 kW	0.75 kW	1.6 - 2.5A	manual motor starter	100 kA	**890.00**
SM1P0400	0.55 - 0.75 kW	1.1 - 1.5 kW	2.5 - 4A	manual motor starter	100 kA	**890.00**
SM1P0650	1.1 - 1.5 kW	2.2 kW	4 - 6.5A	manual motor starter	100 kA	**890.00**
SM1P1000	1.5 - 2.2 kW	4.0 kW	6.3 - 10A	manual motor starter	100 kA	**998.00**
SM1P1400	3.0 kW	5.5 kW	9 - 14A	manual motor starter	25 kA	**998.00**
SM1P1800	4.0 kW	7.5 kW	13 - 18A	manual motor starter	25 kA	**998.00**
SM1P2500	5.5 kW	11.0 kW	20 - 25A	manual motor starter	15 kA	**1 420.00**
SM1P3200	7.5 kW	15.0 kW	24 - 32A	manual motor starter	10 kA	**1 770.00**
SM1P4000	11 kW	18.5 kW	30 - 40A	manual motor starter	10 kA	**3 250.00**
SM1R series		**Icu 100 to 20kA**	*(H) 90 x (W) 45 x (D) 91 mm (inc. knob)*			
• Rotary selector control - padlockable in OFF position • Thermal and magnetic trip indication						
SM1R0016	–	–	0.1 - 0.16A	manual motor starter	100 kA	**1 090.00**
SM1R0025	–	–	0.16 - 0.25A	manual motor starter	100 kA	**1 090.00**
SM1R0040	–	–	0.25 - 0.4A	manual motor starter	100 kA	**1 090.00**
SM1R0063	–	0.18 kW	0.40 - 0.63A	manual motor starter	100 kA	**1 090.00**
SM1R0100	0.12 kW	0.25 kW	0.63 - 1A	manual motor starter	100 kA	**1 190.00**
SM1R0160	0.25 kW	0.37 - 0.55 kW	1 - 1.6A	manual motor starter	100 kA	**1 190.00**
SM1R0250	0.37 kW	0.75 kW	1.6 - 2.5A	manual motor starter	100 kA	**1 190.00**
SM1R0400	0.55 - 0.75 kW	1.1 - 1.5 kW	2.5 - 4A	manual motor starter	100 kA	**1 190.00**
SM1R0650	1.1 - 1.5 kW	2.2 kW	4 - 6.5A	manual motor starter	100 kA	**1 190.00**
SM1R1000	1.5/2.2 kW	4.0 kW	6.3 - 10A	manual motor starter	100 kA	**1 300.00**
SM1R1400	3.0 kW	5.5 kW	9 - 14A	manual motor starter	100 kA	**1 300.00**
SM1R1800	4.0 kW	7.5 kW	13 - 18A	manual motor starter	100 kA	**1 300.00**
SM1R2500	5.5 kW	11.0 kW	20 - 25A	manual motor starter	50 kA	**1 700.00**
SM1R3200	7.5 kW	15.0 kW	24 - 32A	manual motor starter	50 kA	**2 120.00**
SM1R4000	11 kW	18.5 kW	30 - 40A	manual motor starter	20 kA	**3 870.00**
SM2R series		**Icu 50kA**	*(H) 140 x (W) 55 x (D) 145 mm (inc. knob)*			
• Rotary selector control - padlockable in OFF position • Thermal and magnetic trip indication						
SM2R5000	15.0 kW	22.0 kW	34 - 50A	manual motor starter	50 kA	**5 750.00**
SM2R6300	18.5 kW	30.0 kW	45 - 63A	manual motor starter	50 kA	**5 750.00**
SM3R series		**Icu 50kA**	*(H) 165 x (W) 70 x (D) 170 mm (inc. knob)*			
• Rotary selector control - padlockable in OFF position • Thermal and magnetic trip indication						
SM3R7500	22.0 kW	37.5 kW	55 - 75A	manual motor starter	50 kA	**6 630.00**
SM3R9000	25.0 kW	45.0 kW	70 - 90A	manual motor starter	50 kA	**7 070.00**
SM3R9900	30.0 kW	55.0 kW	80 - 100A	manual motor starter	50 kA	**7 510.00**

Above ZAR prices do not include VAT. E&OE

SM1X1211

SM1X1311

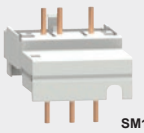
SM2X16230

SM1X1120

SM2X16400

SM2X18200R

SM1X18S


SM1X3241P

SM1Z1701P

SM1X1740P

SM1X1745P

General accessories for motor protection circuit breakers

Accessories include left, right, and front auxiliary blocks, shunt trips, undervoltage releases, mounting accessories, and special enclosures, providing versatility and convenience for various applications.

type	config.	mount position	description	for starter	price
Auxiliary contacts					
SM1X1211	1NO + 1NC	left side	add-on auxiliary contact block	SM1P/R	**220.00**
SM1X1220	2NO	left side	add-on auxiliary contact block	SM1P/R	**220.00**
SM1X1311	1NO + 1NC	left side	trip indication auxiliary contact block	SM1P/R	**578.00**
SM1X1111	1NO + 1NC	front	add-on auxiliary contact block	SM1P/R	**180.00**
SM1X1120	2NO	front	add-on auxiliary contact block	SM1P/R	**196.00**
SM2X1211	1NO + 1NC	left side	add-on auxiliary contact block	SM2/3R	**293.00**
SM2X1220	2NO	left side	add-on auxiliary contact block	SM2/3R	**293.00**
SM2X1311	1NO + 1NC	left side	trip indication auxiliary contact block	SM2/3R	**578.00**
SM2X1111	1NO + 1NC	front	add-on auxiliary contact block	SM2/3R	**293.00**
SM2X1120	2NO	front	add-on auxiliary contact block	SM2/3R	**293.00**
Shunt trip release *(permits remote tripping of the motor protection circuit breakers)*					
SM1X16024	24 VAC	right side	add-on shunt trip release unit	SM1P/R	**968.00**
SM1X16110	110 VAC	right side	add-on shunt trip release unit	SM1P/R	**968.00**
SM1X16230	230 VAC	right side	add-on shunt trip release unit	SM1P/R	**796.00**
SM1X16400	400 VAC	right side	add-on shunt trip release unit	SM1P/R	**796.00**
SM2X16024	24 VAC	right side	add-on shunt trip release unit	SM2/3R	**814.00**
SM2X16110	110 VAC	right side	add-on shunt trip release unit	SM2/3R	**814.00**
SM2X16230	230 VAC	right side	add-on shunt trip release unit	SM2/3R	**814.00**
SM2X16400	400 VAC	right side	add-on shunt trip release unit	SM2/3R	**814.00**
Undervoltage release					
• Opens the MPCB when mains voltage fails and prevents unexpected starting when power is restored					
• Equipped with integrated normally open early make contacts					
SM1X14230	230 VAC	right side	add-on undervoltage release	SM1P/R	**796.00**
SM1X14400	400 VAC	right side	add-on undervoltage release	SM1P/R	**796.00**
SM2X14230	230 VAC	right side	add-on undervoltage release	SM2/3R	**814.00**
SM2X14400	400 VAC	right side	add-on undervoltage release	SM2/3R	**814.00**
Door interlocking handle		*(for SM1/2/3R rotary type starters)*			
SM1X18200R	red/yellow		door interlock handle (IP65) and 200 mm shaft	SM1R	**1 230.00**
SM2X18200R	red/yellow		door interlock handle (IP65) and 200 mm shaft	SM2/3R	**1 230.00**
SM1X18S	support		optional shaft support for	SM1R	**212.00**
Mounting accessories					
BFX8901	universal		base for screw fixing motor protection	SM1P/R	**74.00**
SM1X3040P	3Ph rigid		rigid connection between SM1P and contactor	BG mini	**209.00**
SM1X3141P	3Ph rigid		rigid connection between SM1P and contactor	BF09...25A	**280.00**
SM1X3241P	3Ph rigid		rigid connection between SM1P and contactor	BF26...38A	**316.00**
SM1X3040R	3Ph rigid		rigid connection between SM1R and contactor	BG mini	**209.00**
SM1X3141R	3Ph rigid		rigid connection between SM1R and contactor	BF09...25A	**280.00**
SM1X3241R	3Ph rigid		rigid connection between SM1R and contactor	BF26...38A	**316.00**
Bridge bars for SM1P/R motor protection circuit breakers					
SMX9032	insulated		3-phase bridge bar to connect	2 units *(45 mm)*	**188.00**
SMX9033	insulated		3-phase bridge bar to connect	3 units *(45 mm)*	**230.00**
SMX9034	insulated		3-phase bridge bar to connect	4 units *(45 mm)*	**274.00**
SMX9035	insulated		3-phase bridge bar to connect	5 units *(45 mm)*	**296.00**
With spacing to accommodate side-mounted auxiliaries or releases					
SMX9042	insulated		3-phase bridge bar to connect	2 units *(54 mm)*	**452.00**
SMX9043	insulated		3-phase bridge bar to connect	3 units *(54 mm)*	**569.00**
SMX9044	insulated		3-phase bridge bar to connect	4 units *(54 mm)*	**601.00**
SMX9045	insulated		3-phase bridge bar to connect	5 units *(54 mm)*	**650.00**
SMX9030	25 mm²		3-phase busbar supply block	*(enlarged terminal)*	**185.00**
Enclosures for motor protection circuit breakers - IP65					
Robust plastic enclosures for rotary and button-controlled motor protection circuit breakers up to 40A.					
SM1Z1701P	surface		mount enclosure for starters	135 x 80 x 101 SM1P	**507.00**
SM1Z1715R	surface		mount enclosure for starters	154 x 100 x 138 SM1R	**748.00**
Flush mount enclosure - *(IP65)*		*panel cutout (H) 115.5 x (W) 70.5 mm*			
SM1Z1705P	flush		mount enclosure for starters	133 x 87 x 86 SM1P	**459.00**
SM1X1745P	IP65		button membrane protection cover for enclosure	SM1P	**168.00**
SM1X1740P			emergency stop *(twist release)* pushbutton assembly for enc.	SM1P	**680.00**

M2P...

M1N

M3N

M3PA

Enclosed direct-on-line starters

The **M series** by Lovato Electric offers a straightforward and economical solution for starting and stopping induction motors in various industrial and commercial applications.

DOL starters, like those in the MxP series, are preferred in settings where precise control over motor speed or gradual acceleration is not necessary. It provides reliable motor control without the complexity or cost of more advanced systems like soft starters or variable frequency drives.

- Supplied complete with thermal overload and start stop/reset pushbuttons
- Suitable for IE3 premium efficiency motors

M series - Standard DOL starters *(with BF contactors)* — IP65

- Insulated IP65 polycarbonate enclosure: M1P *(H)202 x (W) 88 x (D)156 mm*; M2P *(H)234 x (W)110 x (D)170 mm*

type	motor rating AC3 (400V)	overload range	description	housing	price
M1P00912A4	0.25 kW	0.63 - 1.0A	direct-on-line starter	PC / IP65	**2 100.00**
M1P00912A5	0.55 kW	1.0 - 1.6A	direct-on-line starter	PC / IP65	**2 100.00**
M1P00912A6	0.75 kW	1.6 - 2.5A	direct-on-line starter	PC / IP65	**2 100.00**
M1P00912A7	1.5 kW	2.5 - 4.0A	direct-on-line starter	PC / IP65	**2 100.00**
M1P00912A8	2.2 kW	4.0 - 6.5A	direct-on-line starter	PC / IP65	**2 100.00**
M1P00912A9	4.0 kW	6.3 - 10A	direct-on-line starter	PC / IP65	**2 100.00**
M1P00912B0	5.5 kW	9 - 14A	direct-on-line starter	PC / IP65	**2 300.00**
M1P01812B1	7.5 kW	13 - 18A	direct-on-line starter	PC / IP65	**2 590.00**
M2P02512B2	11.0 kW	17 - 23A	direct-on-line starter	PC / IP65	**3 330.00**
M2P03212B4	15.0 kW	24 - 32A	direct-on-line starter	PC / IP65	**4 400.00**
M2P03812B5	18.5 kW	32 - 38A	direct-on-line starter	PC / IP65	**5 020.00**

Supplied standard with 400V coils - other voltages available on request
Larger sizes available on request

With mounted on-load isolator *(extra charges)*

- Padlockable in OFF position, interlocked in ON position

I16*	with padlockable interlocking isolator *(in M2P enclosure)*	0.25 - 7.5 kW	**550.00**
I40*	with padlockable interlocking isolator *(in M2P enclosure)*	11.0 - 18.5 kW	**600.00**

* *Add part number to end of starter part number i.e **M1P00912A4I16***

Accessories *for above M series DOL starters*

M1PA	empty housing with start-stop/reset pushbuttons (IP65)	BF09...18A	**658.00**
M2PA	empty housing with start-stop/reset pushbuttons (IP65)	BF09...32A	**987.00**
M3PA	empty housing with start-stop/reset pushbuttons (IP65)	BF40...94A	**2 040.00**
M1N	empty housing without external pushbuttons (IP65)	202 x 88 x 135 mm	**576.00**
M2N	empty housing without external pushbuttons (IP65)	234 x 110 x 149 mm	**823.00**
M3N	empty housing without external pushbuttons (IP65)	280 x 233 x 170 mm	**990.00**
M24N	housing no external pushbuttons (IP65) with chassis plate	210 x 175 x 99 mm	**816.00**
M25N	housing no external pushbuttons (IP65) with chassis plate	210 x 175 x 149 mm	**903.00**
MX31	metal chassis/mounting plate	*(for M25N enclosures)*	**374.00**
MX30	metal chassis/mounting plate	*(for M3N enclosures)*	**254.00**
MX21P	fixing adaptor for pushbutton contact blocks	*(for M1/2/25 enclosures)*	**48.00**
MX11P	stop/reset button extension rod	*(for M1 enclosures)*	**33.00**
MX12P	stop/reset button extension rod	*(for M2/25 enclosures)*	**33.00**

RM series - Reversing DOL starters *(enclosed)* — IP65

RM series, reversing DOL starters provide basic motor control functionality with the added capability of changing the direction of motor rotation, making it suitable for various industrial and commercial applications requiring bidirectional motor operation.

- Supplied complete with thermal overload and "forward-stop-reverse" pushbuttons

RM25 starters — mounted into M25N enclosure — (H) 210 x (W) 175 x (D) 165 mm

RM25P09A5	0.37 kW	0.1 - 1.6A	enclosed reversing starter	PC / IP65	**4 700.00**
RM25P09A6	0.75 kW	1.6 - 2.5A	enclosed reversing starter	PC / IP65	**4 700.00**
RM25P09A7	1.5 kW	2.5 - 4.0A	enclosed reversing starter	PC / IP65	**4 700.00**
RM25P09A8	2.2 kW	4.0 - 6.5A	enclosed reversing starter	PC / IP65	**4 700.00**
RM25P09A9	4.0 kW	6.3 - 10A	enclosed reversing starter	PC / IP65	**4 700.00**
RM25P12B0	5.5 kW	9 - 14A	enclosed reversing starter	PC / IP65	**4 950.00**
RM25P18B1	7.5 kW	13 - 18A	enclosed reversing starter	PC / IP65	**5 530.00**
RM25P25B2	11.0 kW	17 - 23A	enclosed reversing starter	PC / IP66	**6 260.00**

Larger sizes available on request

With mounted on-load isolator *(extra charges)*

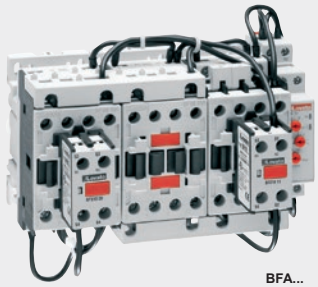
I16*	with padlockable interlocking isolator	0.35 - 7.5 kW	**550.00**
I40*	with padlockable interlocking isolator	11 kW	**600.00**

* *Add part number to end of starter part number i.e **RM25P09A5I16***

Above ZAR prices do not include VAT. E&OE

JDY18/P

JD09/M2


BFA...

Star-delta motor starters

The JDY series of enclosed star-delta starters offers a reliable and effective solution for reducing the starting current and torque of three-phase induction motors. Its IP65 rating makes it ideal for use in harsh environments, provides durability and reliability in challenging operating conditions.

Suitable for IE3 premium efficiency motors.

Supplied with:
- Start, stop/reset pushbuttons *(pilot light can be incorporated)*
- Thermal overload relay *(phase failure sensitive)*
- Integral control terminals for ease of wiring
- Coil voltage 400 VAC unless other specified *(024/110/230V - on request)*

type	motor rating	overload range (x 0.58 of full load)	description	dimensions (mm) (H)	(W)	(D)	price
JDY series - Enclosed star-delta starters			**IP65**				
ABS enclosure M3N *(hinged door 180° opening)*							
JDY09/P	7.5 kW	6.3 - 10A	enclosed star-delta starter	280	233	187	**7 130.00**
JDY12/P	11.0 kW	9 - 14A	enclosed star-delta starter	280	233	187	**7 720.00**
JDY18/P	15.0 kW	13 - 18A	enclosed star-delta starter	280	233	187	**8 090.00**
JDY25/P	18.5 kW	17 - 23A	enclosed star-delta starter	280	233	187	**8 920.00**
JDY26/P	22.0 kW	24 - 32A	enclosed star-delta starter	280	233	187	**9 590.00**
JDY38/P	30.0 kW	32 - 38A	enclosed star-delta starter	280	233	187	**12 200.00**
Extra charge for mounted on-load isolator							
• Padlockable in OFF position, door interlocking in ON position							
I040*	isolator		with padlockable door interlocking isolator	up to	18.5 kW		**600.00**
I063*	isolator		with padlockable door interlocking isolator	up to	30.0 kW		**1400.00**
* *Add part number to end of starter part number*							
Sheet metal enclosure - *Grey (RAL7035) - Orange (RAL2000) on request*							
JDY09/M2	7.5 kW	6.3 - 10A	enclosed star-delta starter	450	300	220	**8 060.00**
JDY12/M2	11.0 kW	9 - 14A	enclosed star-delta starter	450	300	220	**8 290.00**
JDY18/M2	15.0 kW	13 - 18A	enclosed star-delta starter	450	300	220	**9 030.00**
JDY25/M2	18.5 kW	17 - 23A	enclosed star-delta starter	450	300	220	**9 980.00**
JDY26/M2	22.0 kW	24 - 32A	enclosed star-delta starter	450	300	220	**10 700.00**
JDY38/M2	30.0 kW	32 - 38A	enclosed star-delta starter	450	300	220	**13 300.00**
JDY50/M4	37/45 kW	35 - 50A	enclosed star-delta starter	650	450	270	**17 500.00**
JDY65/M4	55 kW	46 - 65A	enclosed star-delta starter	650	450	270	**19 500.00**
JDY80/M4	75 kW	60 - 82A	enclosed star-delta starter	650	450	270	**21 900.00**
Larger sizes available on request							
Extra charge for mounted on-load isolator							
• Padlockable in OFF position, door interlocking in ON position							
I040*	isolator		with padlockable door interlocking isolator	up to	18.5 kW		**600.00**
I063*	isolator		with padlockable door interlocking isolator	up to	30 kW		**1400.00**
/PL*			pilot light “trip” or “run” indication incorporated into pushbuttons				**380.00**
/AM*			with ammeter mounted on enclosure door *(48 x 48 direct max. 40A)*				**490.00**
/VM*			with voltmeter mounted on enclosure door *(48 x 48)*				**470.00**
* *Add part number to end of starter part number*							
BFA series - Open type pre-assembled star-delta starters							
The BFA series of open type pre-assembled star-delta starters are typically used in industrial applications.							
• Fully assembled and wired with mounted star-delta timer and thermal overload relay							
BFA009.10	7.5 kW	6.3 - 10A	open frame complete star-delta starter				**4 900.00**
BFA012.14	11.0 kW	9 - 14A	open frame complete star-delta starter				**5 130.00**
BFA018.18	15.0 kW	13 - 18A	open frame complete star-delta starter				**5 860.00**
BFA025.23	18.5 kW	17 - 23A	open frame complete star-delta starter				**6 770.00**
BFA026.32	22.0 kW	24 - 32A	open frame complete star-delta starter				**7 410.00**
BFA038.38	30.0 kW	32 - 38A	open frame complete star-delta starter				**9 960.00**
BFA050.50	37.5 - 45 kW	35 - 50A	open frame complete star-delta starter				**12 500.00**
BFA065.65	55 kW	46 - 65A	open frame complete star-delta starter				**14 500.00**
BFA080.82	75 kW	60 - 82A	open frame complete star-delta starter				**16 800.00**
BFA095.110	90 kW	90 - 110A	open frame complete star-delta starter				**21 900.00**
BFA115.125	110 kW	75 - 125A	open frame complete star-delta starter				**26 800.00**
BFA150.150	132 kW	90 - 150A	open frame complete star-delta starter				**28 600.00**
Larger sizes available on request							

Soft starters application guide

	2 Ph control		3 Ph control
Heavy loads			ADXT 34...554A
Standard loads		ADXL 18...320A	
Light/standard loads	ADXN 6...45A		

ADXN series - Compact soft starters *(two-phase control)*

ADXN soft starters are a simple, compact *(only 45 mm width)* and fast-to-configure products for the gradual control of the starting and stopping of motors. The versatility makes it suitable for several applications for the control of pumps, fans, conveyor belts, compressors. Available with rated currents from 6 to 45A.

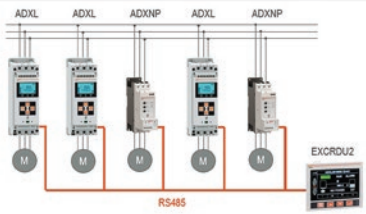
- Economical soft starters for motors up to 22kW (400 VAC)
- Rated operational voltage: 208...600 VAC
- Integrated bypass relay disabling the thyristors once the starting ramp has concluded
- Ready to use - factory set configurations for quick and simple commissioning
- Suitable for IE3 premium efficiency motors

Integrated protection functions include: Soft starter thermal protection with integrated temperature sensor, line frequency/voltage out of tolerance, line voltage not present, phase loss, incorrect phase sequence.

ADXNB...

ADXNP...

EXCRDU2



type	rated current Ie	rated power (400V)	description	dimensions (mm) (H)	(W)	(D)	price
ADXNB series - Basic version			*(requires external overload protection)*				
Ideal solution for a soft starter with basic functions that are extremely simple to configure for gradually starting and stopping motors. Their versatility makes them adaptable to various applications, including pump, fan, conveyor and compressor control.							
Just three parameters, configurable with the front panel potentiometers:							
- Initial voltage step: 30-80%U							
- Deceleration ramp: 0-20sec			- Acceleration ramp: 1-20sec				
Auxiliary supply Us 100...240 VAC							
ADXNB006	6A	2.2 kW	basic industrial soft starter	139	45	113	**5 200.00**
ADXNB012	12A	5.5 kW	basic industrial soft starter	139	45	113	**6 200.00**
ADXNB018	18A	7.5 kW	basic industrial soft starter	139	45	113	**7 300.00**
ADXNB025	25A	11.0 kW	basic industrial soft starter	159	45	128	**7 950.00**
ADXNB030	30A	15.0 kW	basic industrial soft starter	159	45	128	**9 990.00**
ADXNB038	38A	18.5 kW	basic industrial soft starter	159	45	128	**13 200.00**
ADXNB045	45A	22.0 kW	basic industrial soft starter	159	45	128	**15 600.00**
Auxiliary supply Us 24 VAC/DC							
ADXNB00624	6A	2.2 kW	basic industrial soft starter	139	45	113	**5 640.00**
ADXNB01224	12A	5.5 kW	basic industrial soft starter	139	45	113	**6 860.00**
ADXNB01824	18A	7.5 kW	basic industrial soft starter	139	45	113	**7 970.00**
ADXNB02524	25A	11.0 kW	basic industrial soft starter	159	45	128	**8 540.00**
ADXNB03024	30A	15.0 kW	basic industrial soft starter	159	45	128	**10 900.00**
ADXNB03824	38A	18.5 kW	basic industrial soft starter	159	45	128	**14 000.00**
ADXNB04524	45A	22.0 kW	basic industrial soft starter	159	45	128	**16 400.00**
ADXNP series - Advanced version			*(includes overload protection)*				
Parameter configuration via front potentiometers or NFC connectivity via smart devices with the LOVATO NFC App *(available for Android and iOS)*.							
Provides electronic thermal overload protection of the motor via integrated current transformers, permitting management of starting ramps with current limiting, automatically adapted to follow load variations with configurable separate thermal classes for starting and stopping. Offering protection against locked rotor, current asymmetry, low load, starter timeout.							
• Optional RS-485 *(Modbus-RTU)* module for integration into a control and supervision network - **CX04**							
• Factory set thresholds, reconfigurable via NFC							
Auxiliary supply Us 100...240 VAC							
ADXNP012	12A	5.5 kW	advanced industrial soft starter	139	45	113	**6 200.00**
ADXNP018	18A	7.5 kW	advanced industrial soft starter	139	45	113	**7 300.00**
ADXNP025	25A	11.0 kW	advanced industrial soft starter	159	45	128	**7 950.00**
ADXNP030	30A	15.0 kW	advanced industrial soft starter	159	45	128	**9 990.00**
ADXNP038	38A	18.5 kW	advanced industrial soft starter	159	45	128	**13 200.00**
ADXNP045	45A	22.0 kW	advanced industrial soft starter	159	45	128	**15 600.00**
Auxiliary supply Us 24 VAC/DC							
ADXNP01224	12A	5.5 kW	advanced industrial soft starter	139	45	113	**6 860.00**
ADXNP01824	18A	7.5 kW	advanced industrial soft starter	139	45	113	**7 970.00**
ADXNP02524	25A	11.0 kW	advanced industrial soft starter	159	45	128	**8 540.00**
ADXNP03024	30A	15.0 kW	advanced industrial soft starter	159	45	128	**10 900.00**
ADXNP03824	38A	18.5 kW	advanced industrial soft starter	159	45	128	**14 000.00**
ADXNP04524	45A	22.0 kW	advanced industrial soft starter	159	45	128	**16 400.00**

Accessories for ADXN and ADXL soft starters

SM1X3150R	rigid con. kit for direct mnt ADXN 6-38A to SM1R motor protection circuit breakers	**250.00**
CX01	USB connects PC to ADXNP for programming, download and diagnostics	**4 160.00**
CX02	Wi-Fi connect PC/smartphone to ADX/NP/XL for programming and monitoring	**10 400.00**
CX04	RS-485 comm. module for ADX/NP/XL, Modbus-RTU, 24 VAC/DC aux supply	**3 410.00**
EXC1042	RS-485 communication plug-in board for ADXL...	**2 200.00**
EXCRDU2	remote display unit for motor starters *(connects up to 32 devices)*	**8 090.00**

Above ZAR prices do not include VAT. E&OE

ADXL series

ADXL series - Soft starters *(two-phase control)*

ADXL series soft starters feature a backlit LCD icon display and NFC connectivity for convenient configuration, accessible even from smartphones and tablets. Ideal for both straightforward "plug and play" setups and demanding applications requiring precise control and protection during motor startup and operation. Incorporating two-phase control during motor starting and stopping torque control during operation, they effectively reduce thermal power dissipation.

General features:

- Auxiliary supply: 100...240 VAC
- Rated operational voltage: 208...600 VAC
- Programming, data download and diagnostics via incorporated optical port with **CX01/02**
- Voltage ramp startup, torque control, kick start, limited maximum starting current
- Selectable default application: Centrifugal pump, fire pump, conveyor belt, fan, mixer and general purpose
- Optional RS-485 communication with **EXC1042**
- Indicating: - Voltage - current L1/L2/L3 - torque - active power - PF - motor thermal status
  - Soft starter temperature - active energy - motor hour counter - startup counter

ADXL...

type	rated current Ie	rated power 400V	description	dimensions (mm) (H)	(W)	(D)	price
ADXL series *(two-phase control, integrated bypass facility)*							
ADXL0018600	18A	7.5 kW	industrial soft starter	218	75	172	**15 000.00**
ADXL0030600	30A	15.0 kW	industrial soft starter	218	75	172	**17 300.00**
ADXL0045600	45A	22.0 kW	industrial soft starter	218	75	172	**22 000.00**
ADXL0060600	60A	30.0 kW	industrial soft starter	218	75	172	**24 900.00**
ADXL0075600	75A	37.0 kW	industrial soft starter	226	95	182	**27 600.00**
ADXL0085600	85A	45.0 kW	industrial soft starter	226	95	182	**30 400.00**
ADXL0115600	115A	55.0 kW	industrial soft starter	226	95	182	**36 400.00**
ADXL0135600	135A	75.0 kW	industrial soft starter	301	212	216	**43 000.00**
ADXL0162600	162A	90.0 kW	industrial soft starter	301	212	216	**48 200.00**
ADXL0195600	195A	110.0 kW	industrial soft starter	486	212	216	**58 500.00**
ADXL0250600	250A	132.0 kW	industrial soft starter	486	212	216	**64 300.00**
ADXL0320600	320A	160.0 kW	industrial soft starter	486	212	216	**70 000.00**

ADXT...

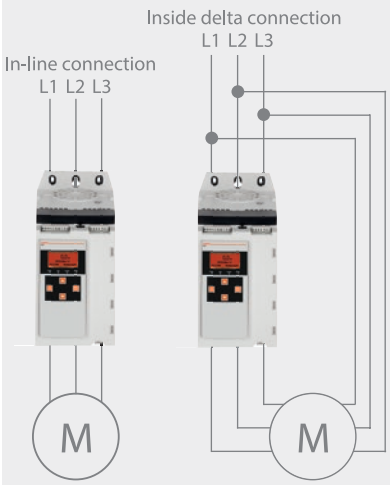
ADXT... series - Advanced heavy-duty soft starters *(three-phase control)*

ADXT... soft starters for applications requiring high performance, reliability and robustness. Incorporate advanced features with integrated motor and starter protection, provide accurate control of motor starting and stopping, reducing energy consumption for constant speed applications.

Mainly used for control of heavy loads due to high torque availability during starting, overcoming the inertia of applications such as crushers, fans, vertical/inclined conveyors, screw compressors, centrifuges, propellers, mills, band/circular saws, shredders and many others. The integrated or external bypass contactor disabling the thyristors once motor starting is completed, reducing energy consumption, generated heating and power dissipation.

- Auxiliary supply voltage 110...120 / 220...240 VAC *(available with 24 VAC/DC supply)*
- Rated operational voltage 380...690 VAC
- Built-in bypass contactor

ADXT soft starters can be installed with traditional in-line connection or inside delta connection *(six-wire connection)* with thyristors connected in series to each motor winding. In this configuration, requiring six-wire motors, the soft starter is only crossed by the phase current, which is significantly lower than the line current. This permits the use of a smaller starter, resulting in cost savings, and simplifies the replacement of star-delta starters since the existing wiring is retained.



type	rated current Ie	in-line (400V)	inside Δ (400V)	description	dimensions (mm) (H)	(W)	(D)	price
ADXT0034	34A	18.5 kW	22 kW	heavy-duty soft starter	336	152	233	**23 800.00**
ADXT0060	60A	30 kW	45 kW	heavy-duty soft starter	336	152	233	**34 300.00**
ADXT0084	84A	45 kW	55 kW	heavy-duty soft starter	336	152	233	**44 100.00**
ADXT0104	104A	55 kW	75 kW	heavy-duty soft starter	336	152	233	**48 900.00**
ADXT0126	126A	55 kW	90 kW	heavy-duty soft starter	336	152	233	**65 200.00**
ADXT0139	139A	75 kW	110 kW	heavy-duty soft starter	482	216	244	**68 900.00**
ADXT0165	165A	90 kW	132 kW	heavy-duty soft starter	482	216	244	**75 800.00**
ADXT0187	187A	90 kW	160 kW	heavy-duty soft starter	482	216	244	**87 200.00**
ADXT0230	230A	132 kW	160 kW	heavy-duty soft starter	482	216	244	**93 200.00**
ADXT0311	311A	160 kW	250 kW	heavy-duty soft starter	482	216	243	**112 000.00**
ADXT0410	410A	220 kW	355 kW	heavy-duty soft starter	482	216	243	**127 000.00**
ADXT0506	506A	280 kW	400 kW	heavy-duty soft starter	482	216	243	**149 000.00**
ADXT0554	554A	315 kW	450 kW	heavy-duty soft starter	482	216	243	**166 000.00**

Accessories *(for ADXT soft starters)*

ADXTRTU	RS485 communication card for ADXT, Modbus-RTU protocol	**3 400.00**
ADXTTCP	Ethernet communication card for ADXT, Modbus-TCP protocol	**11 900.00**
ADXTC01KIT	remote keypad kit for ADXT (IP65)	**6 460.00**

Several functions in one device

New

ME070RD024

ME024RSD024

SIL 3

Electronic motor starters

Electronic motor starters

ME... series electronic motor starters are extremely compact *(22.5 mm width)* ideal for applications requiring a very high number of starts with electronic thermal protection incorporated.

Employing hybrid technology, combining advantages of extremely long working life of a wear-free semiconductor device with the robustness of a mechanical relay and low consumption.

Direct-on-line and Reversing starters for motors up to 3 kW with rated voltage up to 500VAC.

Electronic motor thermal protection incorporated in all models and are also available with built-in STO *(Safe Torque Off)* emergency stop function.

Functionality:

- Direct-on-line and Reversing starters
- Rated motor current 2.4 or 7A (AC3, AC53)
- Operational voltage Ue ≤500 VAC
- Auxiliary and control supply voltage 24 VDC
- Potentiometer for the adjustment of the rated motor current Ie
- Integrated electronic motor thermal protection with tripping class 10A
- Versions with STO (Safe Torque Off) emergency stop with Safety Integrity Level SIL3 (IEC/EN 61508) and Performance Level "PL e" (ISO 13489)

General benefits

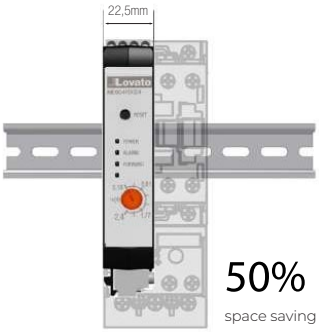
- 4 digital inputs / 3 integrated digital outputs
- 4 status LEDs on front for diagnostics
- Motor thermal protection against overload / phase loss / phase imbalance

Typical applications:

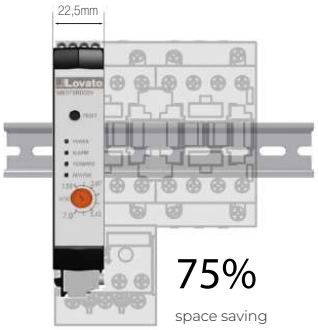
- Conveyors
- Packaging machines
- Automatic doors
- Escalators
- Sorting equipment
- Access control systems

type	rated power (400VAC)	rated current Ie AC-53a	adjustment range	STO *(safe torque off)*	description	price
Direct-on-line starters with integrated motor thermal protection						
Overall, the **ME series** of DOL electronic starters with integrated motor thermal protection offer reliable motor control while ensuring the safety and longevity of the connected motors, making them suitable for a wide range of applications across different industries.						
Particularly beneficial in applications where motors are subjected to varying loads or operating conditions which may lead to overheating if not adequately monitored and protected.						
ME024FD024	0.75 kW	2.4 A	0.18 - 2.4 A	–	direct-on-line starter	**4 880.00**
ME070FD024	3.0 kW	7.0 A	1.5 - 7.0 A	–	direct-on-line starter	**4 880.00**
ME024FSD024	0.75 kW	2.4 A	0.18 - 2.4 A	•	direct-on-line starter	**5 530.00**
ME070FSD024	3.0 kW	7.0 A	1.5 - 7.0 A	•	direct-on-line starter	**5 530.00**
Reversing starters with integrated motor thermal protection						
The **ME series** reversing starters with integrated motor thermal protection provide a comprehensive solution for starting, stopping, and reversing induction motors while safeguarding them against overheating in various industrial and commercial applications.						
ME024RD024	0.75 kW	2.4 A	0.18 - 2.4 A	–	reversing starter	**5 330.00**
ME070RD024	3.0 kW	7.0 A	1.5 - 7.0 A	–	reversing starter	**5 330.00**
ME024RSD024	0.75 kW	2.4 A	0.18 - 2.4 A	•	reversing starter	**5 970.00**
ME070RSD024	3.0 kW	7.0 A	1.5 - 7.0 A	•	reversing starter	**5 970.00**

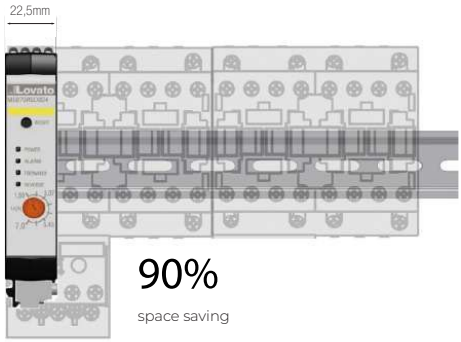
Compact dimensions



DOL starter with motor thermal protection



Reversing starter with motor thermal protection



Reversing starter with motor thermal protection and emergency stop

Above ZAR prices do not include VAT. E&OE

Advanced electronic motor protection and control

WDH-31-530 advanced motor management system provides detailed multifunctional monitoring, control, protection and communication as an integral solution for management of 3-phase AC motors. Offering high-performance, reliable, accurate motor protection and control in harsh industrial applications

Potential motor fault situations anticipated via predictive analysis, avoiding dreaded unexpected disruptions. and downtime in important processes, increasing productivity and reducing downtime by providing detailed fault reporting with self-diagnosis, installation monitoring and statistics of all necessary information.

WDH-31-533-5

Predefined, selectable motor control protection modes incorporated into the controller:

A Direct start	starting of non-reversing motors
B Bi-directional start	starting of reversing motors
C Two-speed start	2-speed starting of motors *(Dahlander, pole changer)*
E Star-delta start	star-delta starting of motors
H Autotransformer start	autotransformer starting
K Overload	monitoring of motors not managed by the controller
R Soft-starter start	Soft start with starting control
P VFD starter	Starting control with frequency converter
V Electric valve start	Starting of electric valves

Measurement / metering functions (RMS values):

Three-phase current - Current imbalance - Temperature - Residual current - Three-phase voltage - Frequency - Active/Reactive power - Power factor - Active/Reactive energy - Resistance input

WDH-31-53X

Protection functions *with configurable trip and starting delays*

- Overload inverse time protection
- Start acceleration timeout protection
- Starting overcurrent protection
- Operating overcurrent protection
- Short circuit protection
- Current imbalance / open phase protection
- Under load (current or power)
- Overvoltage protection
- Undervoltage protection
- Residual current *(grounding)* 0.3Ie~8.0Ie
- Residual current *(leakage)* 50mA~5000mA
- External fault protection *(process interlock)*
- tE time protection *(increased safety motor)*
- Under power protection
- Phase sequence protection
- Temperature protection
- Analog input protection *(process interlock)*
- Voltage imbalance

Rated voltage:	400V / 690 VAC
Rated current:	0.1...800A - Internal Current Transformers up to 100 A *(by external CT's up to 800A)*
Control voltage:	80…270VAC/DC
Communication:	RS-485, Modbus-RTU communication *(others on request)*
Trip classes:	10A-10-20-30 (IEC 947-4-1)
Logic inputs:	5 (customisable)
Relay logic outputs:	4 - 1NC+3NO *(customisable)*
Analog output:	1 - DC 4-20mA *(programmable)*

WDH-31-53XC

Optional HMI display unit for reading, displaying, diagnostics, and modifying monitored parameters.

type	current range	motor rating (400V)	inbuilt CT hole Ø	description	dimensions (mm) (H)	(W)	(D)	price
Advanced motor management controller								
• DIN-rail mounting, compact design • Integrated current transformers and residual current transformer • PTC / NTC thermistor input for motor temperature monitoring and protection								
WDH-31-533-5	0.2-5 A	0.13 - 2 kW	10.5mm	motor protection	90	70	130	**7 270.00**
WDH-31-533-25	2.5-25 A	2 - 11 kW	10.5mm	motor protection	90	70	130	**7 270.00**
WDH-31-533-100	10-100 A	11 - 55 kW	18.0mm	motor protection	90	90	121	**7 270.00**
Above 100A - use 5A unit with 3 x 5A secondary Current Transformers								
Display units *for (above) controllers* *IP65* External HMI LCD display and control keypad dedicated to WDH motor controllers for: configuration, operation, monitoring and displaying of controller parameters, faults and alarms. • Panel mounting: 61 x 98 mm display - *(cut-out 91.5 x 55 mm)* • IP protection: IP65 *(front panel)* • USB port for up/download of parameters and logic *(only WHD-31-50XC)* • Supplied with cable for connection to WDH controller *(1 meter)*					61	98	27	
WDH-31-53X	HMI			external HMI LCD display and control keypad				**3 000.00**
WDH-31-53XC	HMI			external HMI TFT *(full colour)* display and control keypad				**6 840.00**
Controller with integrated LCD display *(as above WDH-31-533 but with LCD display)*								
WDH-31-531-5	0.2 - 5A	0.13 - 2 kW	10.5 mm	motor protection	90	70	130	**10 300.00**
WDH-31-531-25	2.5 - 25A	2 - 11 kW	10.5 mm	motor protection	90	70	130	**10 300.00**
WDH-31-531-100	10 - 100A	11 - 55 kW	18.0 mm	motor protection	90	90	121	**10 300.00**
Above 100A - use 5A unit with 3 x 5A secondary Current Transformers								

WDH-31-531-100
with built-in CTs

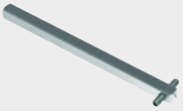
GA016A

GA125A

GAX42040A

GAX61

GAX63



GAX7200

GAX...N

GLX00

GAX60B

GA series - Three-pole load-break switches 16A - 160A

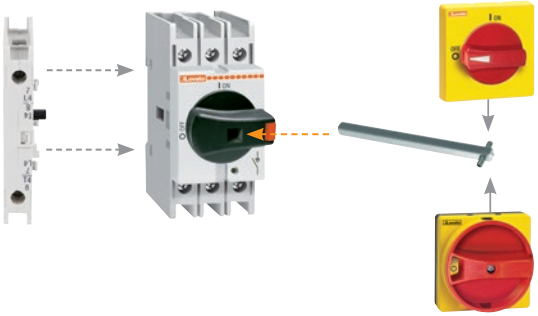
GA series load break switches *(also referred to as switch disconnectors)* are manufactured in robust, heavy-duty ABS materials, ensuring durability in diverse environments. With their modular DIN-rail mountable design and comprehensive range of accessories, these switches are versatile components suitable for various applications.

Whether installed in industrial panels, machinery, electrical distribution systems, renewable energy installations, or power generation facilities, the GA series provides reliable manual control, isolation, and switching of electrical circuits, contributing to safe and efficient operations across different industries.

- Modular design DIN-rail mountable, supplied with direct mounted padlockable handle
- Door interlocking handle and shaft *(to be ordered separately)*

type	AC-23A ≤ 400V	AC-23A ≤ 415V	poles	description	dimensions (mm) (H)	(W)	(D	price
GA016A	16A	7.5 kW	3-pole	Isolator/load-break switch	78	36	75	**328.00**
GA025A	25A	11.0 kW	3-pole	Isolator/load-break switch	78	36	75	**375.00**
GA032A	32A	15.0 kW	3-pole	Isolator/load-break switch	78	36	75	**433.00**
GA040A	40A	18.5 kW	3-pole	Isolator/load-break switch	78	36	75	**481.00**
GA063SA	45A	22.0 kW	3-pole	Isolator/load-break switch	78	36	75	**676.00**
GA063A	63A	30 kW	3-pole	Isolator/load-break switch	100	70	75	**967.00**
GA080A	80A	45 kW	3-pole	Isolator/load-break switch	100	70	75	**1 140.00**
GA125A	125A	55 kW	3-pole	Isolator/load-break switch	100	70	75	**1 370.00**
GA160A	160A	55 kW	3-pole	Isolator/load-break switch	100	70	75	**1 600.00**
Attachable 4th pole *(for above 3-pole switches)*								
GAX42040A	40A	–	1-pole	attachable 4th pole for switches		GA016...40A		**159.00**
GAX42063SA	63A	–	1-pole	attachable 4th pole for switches		GA063SA		**257.00**
GAX42080A	80A	–	1-pole	attachable 4th pole for switches		GA063...80A		**579.00**
GAX42125A	125A	–	1-pole	attachable 4th pole for switches		GA125A		**375.00**
GAX42160A	160A	–	1-pole	attachable 4th pole for switches		GA160A		**461.00**
GAX41040A	40A	–	1-pole	early make 4th pole for switches		GA016...40A		**175.00**
GAX41125A	125A	–	1-pole	early make 4th pole for switches		GA063...125A		**415.00**
Handles *(external front operation)* **IP65**								
• External door interlocking handles padlockable *(3 padlocks)* in "OFF" position								
GAX61	red/yellow			door interlocking handle 65 mm² *(screw fixing)*		GA016...160A		**174.00**
GAX63	red/yellow			door interlocking handle 65 mm² *(ring fix Ø 22 mm)*		GA016...160A		**277.00**
GAX63B	black			door interlocking handle 65 mm² *(ring fix Ø 22 mm)*		GA016...160A		**277.00**
GAX64	red/yellow			as above - defeatable 65 mm² *(ring fix Ø 22 mm)*		GA016...160A		**410.00**
GAX68	red/yellow			door interlocking handle 48 mm² *(screw fixing)*		GA016...40A/63SA		**170.00**
GAX66N*	red/yellow			door interlocking pistol grip handle - *(defeatable)*		GA063...160A		**798.00**
GAX66NB*	black			door interlocking pistol grip handle - *(defeatable)*		GA063A...160A		**798.00**
* *Requires **GAX60B** adaptor (below) and 7 mm² extension shaft*								
GAX60B				adaptor to accommodate 7 mm² shaft required for handles		GAX66N/NB		**88.00**
GLX00	–			shaft alignment ring for pistol grip handles		GAX66N/NB		**255.00**
Extension shafts *(for above handles)*								
GAX7200	200 mm		☐ 5 mm²	extension shaft for handles		GAX61...8		**79.00**
GAX7300	300 mm		☐ 5 mm²	extension shaft for handles		GAX61...8		**111.00**
GAX7200AN	200 mm		☐ 7 mm²	extension shaft for handles		GAX66N/NB		**251.00**
GAX7300AN	300 mm		☐ 7 mm²	extension shaft for handles		GAX66N/NB		**287.00**

GA series - Switch disconnector / Accessories



Scan to watch video

Above ZAR prices do not include VAT. E&OE

GAX67B

GAX6000

GAX1011A

GAX391

GAX83

GA025C

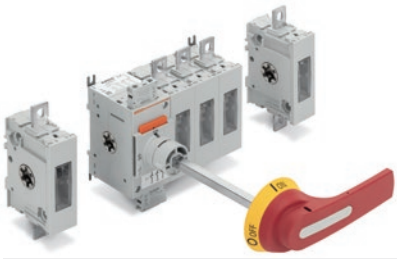
GA080C

type	contact / pole		description	for switch	price
Changeover and parallel *attachments for switches* **16A - 160A**					
Changeover attachment					
• To mechanically interlock two switches side-by-side to make up a changeover switch					
GAX5000	I-O-II		changeover mechanism between two switches	GA016...40A/63SA	**641.00**
GAX5001	I-O-II		changeover mechanism between two switches	GA063...160A	**854.00**
GAX67B	black		door interlocking handle *(I-O-II)* for above changeover mechanisms		**324.00**
Parallel attachment					
• Combine two switches side-by-side to make up a 6/8 pole switch					
GAX6000	I-O		6/8 pole conversion kit between two switches	GA016...40A/63SA	**643.00**
GAX6001*	I-O		6/8 pole conversion kit between two switches	GA063...125A	**772.00**
* *Requires* ***GAX66N/NB*** *handles,* ***GAX60B*** *adaptor and 7 mm² extension shaft (see pg* ***A-17****)*					
Auxiliary contact blocks *(Ith 10A)*					
Auxiliary contact blocks are used to operate auxiliary circuits and control circuits in standard industrial environments.					
• NO + NC contacts					
• Clipping onto the right- and/or left-hand side of the switches					
GAX1011A	1NO + 1NC	auxiliary	contact for DIN-rail mounting switches	GA016...160A	**304.00**
GAX1110EA	1NO	auxiliary	for DIN-rail mount switches *(early-break)*	GA016...40A/63SA	**356.00**
GAX1210EA	1NO	auxiliary	for DIN-rail mount switches *(early-break)*	GA063...160A	**356.00**
Three-pole fuse holder for load-break switches **16 - 32A**					
Three-pole fuse holder can be directly mounted onto 16 - 32A switch disconnectors to provide a single compact unit.					
• For cylindrical 10 x 38 mm fuses					
• Access to the fuses can only be made with the isolator in the OFF position					
GAX391	10 x 38		3ph fuse holder *(attaches onto switches)*	GA016...032A	**637.00**
Terminal shrouds *for switches* **16 - 160A**					
Three-pole terminal covers					
GAX83	terminal	3-pole	protection shroud *(set of 2 pcs)*	GA016...40A/63SA	**139.00**
GAX84	terminal	3-pole	protection shroud *(set of 2 pcs)*	GA063...160A	**227.00**
Single-pole terminal covers *(for 4th pole)*					
GAX81	terminal	1-pole	protection shroud *(set of 2 pcs)*	GA016...40A/63SA	**83.00**
GAX82	terminal	1-pole	protection shroud *(set of 2 pcs)*	GA063...160A	**134.00**

Direct door mounting switches *(rear access terminals) with shaft*

type	AC-21A ≤ 690V	AC-23A ≤ 415V	poles	description	dimensions (mm) (H)	(W)	(D)	price
GA025C	25A	11.0 kW	3-pole	direct mnt load-break switch	78	36	73	**424.00**
GA040C	40A	18.5 kW	3-pole	direct mnt load-break switch	78	36	73	**527.00**
GA080C	80A	45.0 kW	3-pole	direct mnt load-break switch	100	70	70	**1 230.00**
GA125C	125A	55.0 kW	3-pole	direct mnt load-break switch	100	70	70	**1 470.00**

Accessories for *(above)* **direct door-mounted switches**					
Attachable 4th pole					
GAX42040C	40A	18.5 kW	1-pole	attachable 4th pole for switch	GA025...40C	**200.00**
GAX42125C	125A	55 kW	1-pole	attachable 4th pole for switch	GA080...125C	**467.00**
Handles for *(above)* direct door-mounted switches *(IP65)*					
• External handles padlockable *(3 padlocks)* in "OFF" position					
GAX61	red/yellow		door interlocking handle 65 mm² *(screw fixing)*	GA025...125C	**174.00**
GAX68	red/yellow		door interlocking handle 48 mm² *(screw fixing)*	GA025...40C	**170.00**
GAX63	red/yellow		door interlocking handle 65 mm² *(ring fix Ø 22 mm)*	GA025...40C	**277.00**
GAX63B	black		door interlocking handle 65 mm² *(ring fix Ø 22 mm)*	GA016...160A	**277.00**
Auxiliary contact blocks *(Ith 10A) (for above door mount switches)*					
GAX1011C	1NO + 1NC	auxiliary	for direct door mount switches	GA025...125C	**321.00**



GL0315C1

GL1000C1

GLX61B

GLX61D

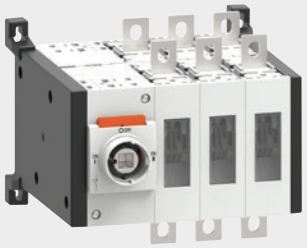
GLX550

type	AC-23A ≤ 400V	AC-23A ≤ 415V	poles	description	dimensions (mm) (H)	(W)	(D)	price
GL series - Three-pole load-break switches					**160A - 1000A**			
• Compact design - chassis mount or DIN-rail mountable *(up to 315A)*								
• Visible contacts - Maximum security Window on individual power poles clearly indicates switch status								
• Easy shaft mount and removal *(snap-on with front-mounted release lever)*								
• Door interlocking handle and shaft *(to be ordered separately)*								
GL0160C1	160A	90 kW	3-pole	Isolator/load-break switch	155	162	91	**2 450.00**
GL0200C1	200A	110 kW	3-pole	Isolator/load-break switch	155	162	91	**2 630.00**
GL0250C1	250A	140 kW	3-pole	Isolator/load-break switch	155	162	91	**3 560.00**
GL0315C1	315A	160 kW	3-pole	Isolator/load-break switch	155	162	91	**4 080.00**
GL0400C1	400A	200 kW	3-pole	Isolator/load-break switch	188	204	112	**5 190.00**
GL0500C1	500A	250 kW	3-pole	Isolator/load-break switch	188	204	112	**5 670.00**
GL0630C1	630A	355 kW	3-pole	Isolator/load-break switch	260	231	112	**6 000.00**
GL0800C1	800A	450 kW	3-pole	Isolator/load-break switch	250	284	148	**12 200.00**
GL1000C1	1000A	560 kW	3-pole	Isolator/load-break switch	388	314	148	**20 000.00**
Attachable 4th pole *(for above 3-pole switches)*								
GLX420315	315A	–	1-pole	attachable 4th pole for switches	GL0160...315C1			**1 320.00**
GLX420400	400A	–	1-pole	attachable 4th pole for switches	GL0400C1			**2 500.00**
GLX420630	630A	–	1-pole	attachable 4th pole for switches	GL0500...630C1			**3 530.00**
GLX420800	800A	–	1-pole	attachable 4th pole for switches	GL0800C1			**5 060.00**
GLX421000	1000A	–	1-pole	attachable 4th pole for switches	GL1000C1			**7 360.00**
Handles *(external front operation)*					**IP65**			
• External door interlocking handles padlockable *(3 padlocks)* in "OFF" position								
GLX61	red/yellow			door interlocking pistol grip handle *(125 mm)*	GL0160...315C1			**497.00**
GLX61B	black			door interlocking pistol grip handle *(125 mm)*	GL0160...315C1			**497.00**
GLX62	red/yellow			door interlocking pistol grip handle *(175 mm)*	GL0400...630C1			**553.00**
GLX62B	black			door interlocking pistol grip handle *(175 mm)*	GL0400...630C1			**553.00**
GLX63	red/yellow			door interlocking pistol grip handle *(175 mm)*	GL0800...1000C1			**1 160.00**
GLX63B	black			door interlocking pistol grip handle *(175 mm)*	GL0800...1000C1			**1 160.00**
GLX00	–			shaft alignment ring for pistol grip handles	GLX61...3/B			**255.00**
Extension shafts *(for above handles)*								
GLX7200S10	200 mm	☐ 10 mm²		extension shaft for handles	GLX61...2/B			**216.00**
GLX7300S10	300 mm	☐ 10 mm²		extension shaft for handles	GLX61...2/B			**237.00**
GLX7400S10	400 mm	☐ 10 mm²		extension shaft for handles	GLX61...2/B			**339.00**
GLX7500S10	500 mm	☐ 10 mm²		extension shaft for handles	GLX61...2/B			**617.00**
GLX7200S12	200 mm	☐ 12 mm²		extension shaft for handles	GLX63/B			**575.00**
GLX7300S12	300 mm	☐ 12 mm²		extension shaft for handles	GLX63/B			**657.00**
GLX7400S12	400 mm	☐ 12 mm²		extension shaft for handles	GLX63/B			**902.00**
GLX7500S12	500 mm	☐ 12 mm²		extension shaft for handles	GLX63/B			**1 620.00**
Handles *(direct switch mounted)*								
GLX61DB	black			direct switch mount internal handle	GL0160...315C1			**644.00**
GLX61D	red/yellow			direct switch mount internal handle	GL0160...315C1			**644.00**
GLX62DB	black			direct switch mount internal handle	GL0400...630C1			**740.00**
GLX63DB	black			direct switch mount internal handle	GL0800...1000C1			**888.00**
Auxiliary contact blocks *(Ith 10A)*								
• Snap-on auxiliary contact blocks mounted on the main switching actuator								
GLX1010EA	1NO		auxiliary	contact for GL switches *(early break)*	GL0160...1000C1			**174.00**
GLX1001	1NC		auxiliary	contact block for GL switches	GL0160...1000C1			**295.00**
Terminal shrouds for switches 160 - 1000A								
GLX800	1-pole		terminal	protection shroud *(set of 3 pcs)*	GL0160...315C1			**711.00**
GLX802	1-pole		terminal	protection shroud *(set of 3 pcs)*	GL0400...630C1			**1 010.00**
GLX804	1-pole		terminal	protection shroud *(set of 3 pcs)*	GL0800...1000C1			**1 220.00**
Phase barriers *(required for voltage > 500V)*								
GLX900	3-pole		barrier	phase barrier *(set of 6 pcs)*	GL0160...315C1			**1 020.00**
GLX902	3-pole		barrier	phase barrier *(set of 6 pcs)*	GL0400...630C1			**1 590.00**
GLX904	3-pole		barrier	phase barrier *(set of 6 pcs)*	GL0800C1			**1 750.00**
Captive nuts								
GLX550	1 terminal			captive nuts for switch terminals *(set of 8 pcs)*	GL0160...315C1			**1 210.00**
GLX551	1 terminal			captive nuts for switch terminals *(set of 8 pcs)*	GL0400...630C1			**277.00**
GLX552	1 terminal			captive nuts for switch terminals *(set of 8 pcs)*	GL0800C1			**1 760.00**
GLX553	1 terminal			captive nuts for switch terminals *(set of 8 pcs)*	GL01000C1			**1 930.00**

Above ZAR prices do not include VAT. E&OE

GA025ET6

GAZ025 ET6


GLC0200C1

GLX00

GLX61DB

GLX201

type	AC-21A ≤ 690V	AC-23A ≤ 415V	poles	description	dimensions (mm) (H)	(W)	(D)	price
GA series - Three-pole changeover switches					**IP65**			
• Direct operating handle and door coupling version • Modular design DIN-rail mountable supplied with direct mounted padlockable handle • Door interlocking handle and shaft *(to be ordered separately - see below)* • Attachable 4th pole available for all switches								
GA025ET6	25A	11.0 kW	3-pole	changeover switch	78	72	89	**1 510.00**
GA040ET6	40A	18.5 kW	3-pole	changeover switch	78	72	89	**1 660.00**
GA063SAET6	63A	30 kW	3-pole	changeover switch	78	72	89	**1 780.00**
GA080ET6	80A	45 kW	3-pole	changeover switch	100	140	89	**2 640.00**
GA125ET6	125A	55 kW	3-pole	changeover switch	100	140	89	**3 930.00**
GA160ET6	160A	55 kW	3-pole	changeover switch	100	140	89	**6 040.00**
GA series - Enclosed changeover switches					**IP65**			
• Enclosure material: Polycarbonate • Possibility of fitting: 2 contact blocks both on the right and left side for **GAZ...ET6** types								
GAZ025ET6	25A	11.0 kW	3-pole	enclosed changeover switch	210	175	184	**2 980.00**
GAZ040ET6	40A	18.5 kW	3-pole	enclosed changeover switch	210	175	184	**3 190.00**
GAZ080ET6	80A	45.0 kW	3-pole	enclosed changeover switch	280	220	208	**4 670.00**
GAZ125ET6	125A	55.0 kW	3-pole	enclosed changeover switch	280	220	208	**5 110.00**
*Add attachable **4th** pole to the above switches*								
GLC series - Changeover switches					IEC/EN, 60947-6-1			
• Operating handle and shaft *(to be ordered separately)* • Visual contacts *(window on individual power poles clearly indicates switch status)* • Easy shaft mount and removal *(snap-on with front-mounted release lever)* • Clip-on auxiliary contact *(up to 8 per switch)*								
GLC0160C1	160A	90 kW	3-pole	changeover switch	141	186	192	**7 400.00**
GLC0200C1	200A	110 kW	3-pole	changeover switch	141	186	192	**8 880.00**
GLC0250C1	250A	140 kW	3-pole	changeover switch	141	186	192	**10 800.00**
GLC0315C1	315A	160 kW	3-pole	changeover switch	141	186	192	**12 500.00**
GLC0400C1	400A	200 kW	3-pole	changeover switch	159	237	231	**16 200.00**
GLC0500C1	500A	250 kW	3-pole	changeover switch	159	237	231	**19 100.00**
GLC0630C1	630A	355 kW	3-pole	changeover switch	260	264	231	**23 100.00**
GLC0800C1	800A	450 kW	3-pole	changeover switch	200	340	326	**30 500.00**
GLC1000C1	1000A	560 kW	3-pole	changeover switch	388	370	326	**44 300.00**
GLC0160T4C1	160A	90 kW	4-pole	changeover switch	141	221	192	**9 040.00**
GLC0200T4C1	200A	110 kW	4-pole	changeover switch	141	221	192	**10 600.00**
GLC0250T4C1	250A	140 kW	4-pole	changeover switch	141	221	192	**15 000.00**
GLC0315T4C1	315A	160 kW	4-pole	changeover switch	141	221	192	**22 600.00**
GLC0400T4C1	400A	200 kW	4-pole	changeover switch	159	282	231	**24 800.00**
GLC0500T4C1	500A	250 kW	4-pole	changeover switch	159	282	231	**36 500.00**
GLC0630T4C1	630A	355 kW	4-pole	changeover switch	260	318	231	**40 600.00**
GLC0800T4C1	800A	450 kW	4-pole	changeover switch	200	405	326	**58 000.00**
GLC1000T4C1	1000A	560 kW	4-pole	changeover switch	388	445	326	**84 300.00**
Handles for changeover switches *(external front operation)*					**IP65**			
• External door interlocking handles padlockable *(3 padlocks)* in "OFF" position								
GAX67B	black	I-O-II	door interlocking handle 65 mm² *(screw fixing)*		GA025...160ET6			**324.00**
GLX61CB	black	I-O-II	door interlocking pistol grip handle *(125 mm)*		GLC0200...315C1			**1 020.00**
GLX62CB	black	I-O-II	door interlocking pistol grip handle *(175 mm)*		GLC0400...630C1			**1 350.00**
GLX63CB	black	I-O-II	door interlocking pistol grip handle *(175 mm)*		GLC0800...1000C1			**1 390.00**
GLX00	black		shaft alignment ring for all above handles		GLX61...3CB			**255.00**
For extension shafts *see **A-17***								
Direct switch-mounted handles for changeover switches								
GLX61DB	black	I-O-II	direct switch mount internal handle		GLC160...315C1			**644.00**
GLX62DB	black	I-O-II	direct switch mount internal handle		GLC0400...630C1			**740.00**
GLX63DB	black	I-O-II	direct switch mount internal handle		GLC0800...1000C1			**888.00**
Bridging bars for changeover switches								
GLX201	3-pole	bridge bars	terminal bridging bars *(set of 3 pcs)*		GLC160...315C1			**1 150.00**
GLX206	3-pole	bridge bars	terminal bridging bars *(set of 3 pcs)*		GLC0400...630C1			**1 560.00**
GLX208	3-pole	bridge bars	terminal bridging bars *(set of 3 pcs)*		GLC0800...1000C1			**2 100.00**
GLX202	4-pole	bridge bars	terminal bridging bars *(set of 4 pcs)*		GLC160...315C1			**1 530.00**
GLX207	4-pole	bridge bars	terminal bridging bars *(set of 4 pcs)*		GLC0400...630C1			**2 080.00**
GLX209	4-pole	bridge bars	terminal bridging bars *(set of 4 pcs)*		GLC0800...1000C1			**2 810.00**

GAZ025

GAZM016EM

GAZM160EM

GAX42063SA

GLX420800

Enclosed Isolators

GA series enclosed switch disconnectors are supplied in robust, heavy-duty enclosures in an IP65 execution. The enclosures incorporate a red/yellow operating handle mechanically interlocked with cover in the "ON" position and padlockable *(3 padlocks)* in the "OFF" position.

General features:

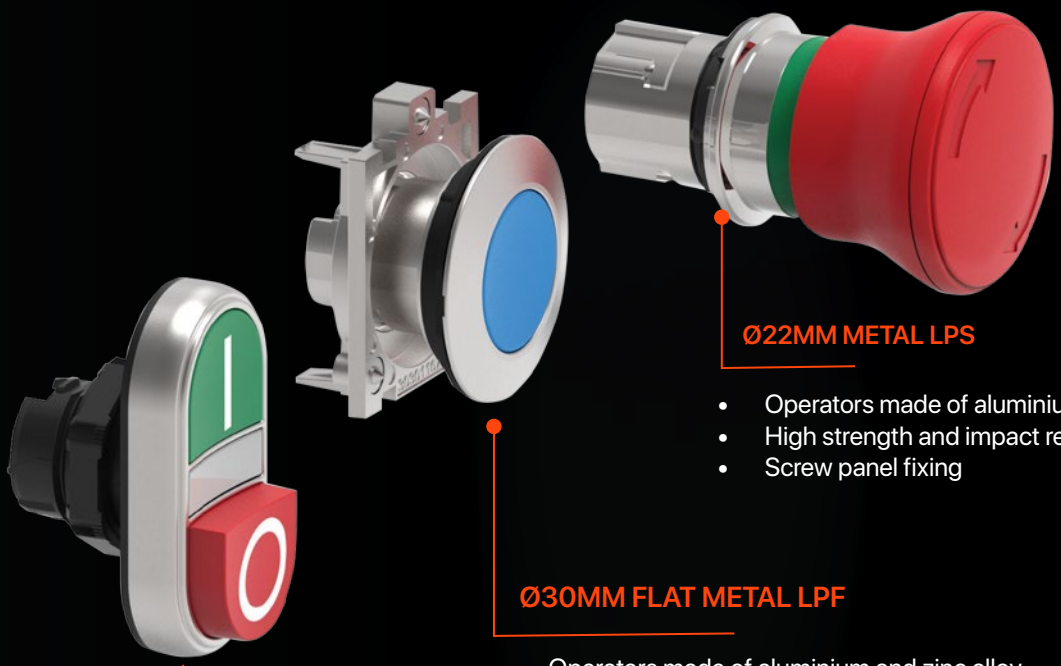
- Manual operated
- IP rating: IP65
- Attachable 4th pole available for all switches
- Padlockable handles *(3 padlocks)* in OFF position
- Red/Yellow handle, interlocked with front cover in ON position
- Available in plastic (ABS), metal *(sheet metal)* and stainless steel

type	AC-21A ≤ 690V	AC-23A ≤ 415V	poles	description	dimensions (mm) (H)	(W)	(D)	price
Plastic ABS enclosed isolators				**IP65**				
GAZ016	16A	7.5 kW	3-pole	enclosed load-break switch	160	100	120	**685.00**
GAZ025	25A	11.0 kW	3-pole	enclosed load-break switch	160	100	120	**747.00**
GAZ032	32A	15.0 kW	3-pole	enclosed load-break switch	160	100	120	**809.00**
GAZ040EM	40A	18.5 kW	3-pole	enclosed load-break switch	160	100	120	**950.00**
GAZ063EM	63A	22.0 kW	3-pole	enclosed load-break switch	160	100	120	**1 140.00**
GAZ080EM	80A	45.0 kW	3-pole	enclosed load-break switch	210	175	122	**2 020.00**
GAZ125EM	125A	55.0 kW	3-pole	enclosed load-break switch	210	175	122	**2 240.00**
GAZ160EM	160A	55.0 kW	3-pole	enclosed load-break switch	210	175	122	**2 460.00**
*Attachable **4th** pole to the above switches (see below)*								
Empty ABS plastic enclosures only *(with red/yellow handle and extension shaft)*								
GAZ1				enclosure - supplied with handle and shaft	160	100	97	**498.00**
GAZ2				enclosure - supplied with handle and shaft	210	175	99	**936.00**
GAZ3				enclosure - supplied with handle and shaft	280	220	170	**1 800.00**
Metal enclosed isolators				**IP65**				
GAZM series 16 - 160A								
GAZM016EM	16A	7.5 kW	3-pole	enclosed load-break switch	200	150	120	**2 020.00**
GAZM025EM	25A	11.0 kW	3-pole	enclosed load-break switch	200	150	120	**2 060.00**
GAZM032EM	32A	15.0 kW	3-pole	enclosed load-break switch	200	150	120	**2 120.00**
GAZM040EM	40A	18.5 kW	3-pole	enclosed load-break switch	200	150	120	**2 170.00**
GAZM063EM	63A	22.0 kW	3-pole	enclosed load-break switch	200	150	120	**2 360.00**
GAZM080EM	80A	45.0 kW	3-pole	enclosed load-break switch	200	150	120	**2 800.00**
GAZM125EM	125A	55.0 kW	3-pole	enclosed load-break switch	300	200	120	**3 880.00**
GAZM160EM	160A	55.0 kW	3-pole	enclosed load-break switch	300	200	120	**4 100.00**
GLZ series 200 - 1000A								
GLZM0200EM	200A	110 kW	3-pole	enclosed load-break switch	400	300	220	**5 420.00**
GLZM0250EM	250A	132 kW	3-pole	enclosed load-break switch	400	300	220	**6 320.00**
GLZM0315EM	315A	140 kW	3-pole	enclosed load-break switch	400	300	220	**6 820.00**
GLZM0400EM	400A	200 kW	3-pole	enclosed load-break switch	000	000	000	**7 960.00**
GLZM0630EM	630A	355 kW	3-pole	enclosed load-break switch	000	000	000	**9 440.00**
GLZM0800EM	800A	450 kW	3-pole	enclosed load-break switch	000	000	000	**15 800.00**
GLZM1000EM	1000A	560 kW	3-pole	enclosed load-break switch	000	000	000	**24 200.00**
*Add attachable **4th** pole to the above switches*								
Stainless steel (AISI 304) enclosed isolators available on request								
Attachable 4th pole for above switches								
GAX42040A	40A	18.5 kW		attachable 4th pole for above switches	GAZ/M016...40EM			**159.00**
GAX42063SA	63A	22.0 kW		attachable 4th pole for above switches	GAZ/M063EM			**257.00**
GAX42125A	125A	55.0 kW		attachable 4th pole for above switches	GAZ/M080...125EM			**375.00**
GAX42160A	160A	55.0 kW		attachable 4th pole for above switches	GAZ/M160EM			**461.00**
GAX41040A	40A	18.5 kW		early-make attachment for switches	GAZ/M016...40EM			**175.00**
GAX41125A	125A	55.0 kW		early-make attachment for switches	GAZ/M080...125EM			**415.00**
GLX420315	315A	132 kW		attachable 4th pole for above switches	GLZM0200...315EM			**1 320.00**
GLX420400	400A	200 kW		attachable 4th pole for above switches	GLZM0400EM			**2 500.00**
GLX420630	630A	355 kW		attachable 4th pole for above switches	GLZM0500...630EM			**3 530.00**
GLX420800	800A	450 kW		attachable 4th pole for above switches	GLZM0800EM			**5 060.00**
GLX421000	1000A	560 kW		attachable 4th pole for above switches	GLZM1000EM			**7 360.00**

Above ZAR prices do not include VAT. E&OE

PLatinum

PUSHBUTTONS AND SELECTORS



Ø22MM METAL LPS

- Operators made of aluminium and zinc alloy
- High strength and impact resistance
- Screw panel fixing

Ø30MM FLAT METAL LPF

- Operators made of aluminium and zinc alloy
- Actuator profile of only 4mm
- High strength and impact resistance
- Ergonomic and functional
- Screw panel fixing

Ø22MM CHROMED PLASTIC LPC

- Operators made of polyamide with external chrome ring
- Snap-on fast installation of the mounting base and contact elements
- Panel fixing by threaded ring

Refer to Category D

Lovato electric

Scan the QR to download the brochure

Variable frequency drives - Selection chart

Series			ME300 Series												MS300 Series							
			single-phase					three-phase							single-phase					three-phase		
Model number VFD-__ME/MS/E			1A6	2A8	4A8	7A5	11A	1A5	2A7	4A2	5A5	9A0	13A	17A	1A6	2A8	4A8	7A5	11A	13A	2A7	4A2
Frame size			A	A	B	C	C	A	A	B	C	C	D	D	A	A	B	C	C	D	A	B
Max. applicable motor output		kW	0.2	0.4	0.75	1.5	2.2	0.4	0.75	1.5	2.2	3.7	5.5	7.5	0.2	0.4	0.75	1.5	2.2	5.5	0.75	1.5
Output rating																						
Rated output capacity	NORMAL DUTY heavy duty	kVA	0.7	1.2	1.9	3.2	4.8	1.4	2.3	3.5	5	8	12	15.6	0.7	1.2	1.9	3.2	4.8	9.9	2.3	3.5
Rated output current		A	1.8	3.2	5	8.5	12.5	1.8	3	4.6	6.5	10.5	15.7	20.5	1.8	3.2	5	8.5	12.5	15.7	3	4.6
Output frequency		Hz	0.0 - 599Hz												0.0 - 599Hz							
Carrier frequency		kHz	2 - 15kHz												2 - 15 kHz (default 4)							
Rated output capacity	HEAVY DUTY super heavy duty	kVA	0.6	1.1	1.8	2.9	4.2	1.1	2.1	3.2	4.2	6.9	9.9	13	0.6	1.1	1.8	2.9	4.2	9.9	2.1	3.2
Rated output current		A	1.6	2.8	4.8	7.5	11	1.5	2.7	4.2	5.5	9	13	17	1.6	2.8	4.8	7.5	11	13	2.7	4.2
Carrier frequency		kHz	2 - 15kHz												2 - 15kHz (default 4)							
Input rating																						
Input current (heavy duty)		A	3.4	5.9	10.1	15.8	23.1	1.7	3	4.6	6.1	9.9	14.3	18.7	3.4	5.9	10.1	15.8	23.1	14.3	3.7	5.8
Input current (normal duty)		A	3.8	6.7	10.5	17.9	26.3	2	3.3	5.1	7.2	11.6	17.3	22.6	3.8	6.7	10.5	17.9	26.35	17.3	4.2	6.4
Rated voltage		V	1-phase 200-240V (-15 to +10%)					3-phase AC 380V - 480V (-15 to +10%)							1-phase 200-240V (-15 to +10%)			3-phase AC 380V - 480V 50/60Hz				
Operating voltage range		V	170 - 265V					323 - 528V							170 - 264V							
Frequency range		Hz	47 - 63Hz ± 5%												47 - 63Hz ± 5%							
Cooling method			convection			fan		convection			fan cooling				conv.	fan cooling				fan cooling		
Braking chopper			built-in												built-in							
DC reactor			optional												optional							
Control method			V/F, SVC												V/F, SVC,							
Starting torque		%	up to 150% at 3 Hz including auto-torque/slip												up to 150% at 3.0Hz including auto-torque/slip compensation							
Max. output frequency		Hz	0.00–599.00 Hz												0.00–599.00 Hz							
Frequency output accuracy			–												–							
Frequency setting resolution		Hz	0.01Hz												0.01Hz							
Overload tolerance *(normal duty, heavy duty)*			120% of rated output current for 60 seconds; 150% for 3 seconds												120% of rated output current for 60 seconds; 150% for 3 seconds							
Overload tolerance *(heavy duty, super heavy duty)*			150% of rated output current for 60 seconds; 200% for 3 seconds												150% of rated output current for 60 seconds; 200% for 3 seconds							
Frequency setting signal			0 - 10V / 4(0)-20mA, PWM pulse width input (1kHz), pulse input (10kHz)												0 – +10 V / -10 V – +10 V, 4 - 20 mA / 0 ~ +10 V, 1 pulse input (33 kHz), 1 pulse output (33 kHz)							
Accel./decel. Time			0.1 - 600 sec. *(2 settings accel/decel time)*												0.1 - 600 sec. *(2 independent settings accel/decel time)*							
Main control functions			2 independent motor parameter settings, fast run, deceleration energy back (DEB) function, fast deceleration function, selectable master and auxiliary frequency source, momentary power loss ride through, speed search, over-torque detection, 16-step speed accel/decel timer, S-curve accel/decel, JOG frequency, upper/lower limits frequency ref, DC injection braking at start and stop, PID control, simple positioning function, Modbus integrated as standard												Multiple motor switches (max. 4 independent motor parameter settings), fast run, deceleration energy back (DEB) function, wobble frequency function, fast deceleration function, master and auxiliary frequency source selectable, momentary power loss ride thru, speed search, over-torque detection, 16-step speed (max.), accel/decel time switch, S-curve accel/decel, 3-wire sequence, JOG frequency, upper/lower limits for frequency reference, DC injection braking at start and stop, PID control, built-in PLC (2k steps), simple positioning function, Modbus is integrated as standard							
Fan control			fan control												fan control							
Motor protection			electronic thermal relay and phase failure protection												over/under-volt/current, external fault, overload, IGBT short circuit, PTC							
Over-current protection			yes												yes							
Over-voltage protection			yes												yes							
Over-temperature protection			yes												yes							
Stall prevention			Stall prevention during acceleration, deceleration and running independently												Stall prevention during acceleration, deceleration and running independently							
Re-start after momentary power off			yes												yes							
Ground current protection			yes												yes							
EMI filter			no												no							
Dimensions (H) x (W) x (D)	H	mm	128	128	142	157		128	128	142	157		207		128	128	142	157		128	128	142
	W	mm	68	68	72	87		68	68	72	87		109		68	68	72	87		68	68	72
	D	mm	78	107	127	136		113	127	127	136		138		96	143	143	179		129	143	143
Weight		kg	0.4	0.5	0.8	1		0.55	0.7	0.8	1		2		0.65	0.95	0.95	1.24		0.76	0.81	1
Optional accessories			DIN-rail mount adaptor												DeviceNet, Ethernet/IP, Profibus DP, Modbus TCP, CANopen, Ethercat communication cards, external 24 VDC power supply card, DIN-rail mount adaptor, cable for remote mounting of digital keypad							

MS300 Series (IP66)	C2000+ Series

| three-phase | | |

Conveyor | Fan | Machine Tool | Motors

ME300 / MS300 series - Vector control compact drive

ME300 / MS300 range of compact vector controlled drives offer standard essential built-in functionality including multi-pump control, built-in brake chopper, RS-485 (Modbus). For both IM and PM motors.

Common features include:

- Built-in PID feedback control
- Easy to navigate keypad with LED display and potentiometer
- Pre-configured parameters for most commonly used applications
- High-efficiency cooling and compact design *(for side-by-side installation)*
- Multi motor control for operating more than one motor from the same drive
- Multiple digital outputs MS300 *(1x relay, 2x transistor)* ME300 *(1x relay, 1x transistor)*
- Dual rating chart for ME / MS300 drives - normal and heavy duty applications *(see **Annex-4**)*
- Overload capabilities: 150% of rated output current for 60 sec, 200% for 3 seconds *(heavy duty)*
- Overcurrent, overvoltage, overload, over-temperature and phase failure protection incorporated
- Enhanced PCB coatings ***(IEC 60721-3-3 class 3C2 standard)*** ensures drive operation in harsh environments
- Default drive rating: Heavy duty

VFD1A6ME21ANN

VFD4A8ME21ANN

VFD4A8MS21ANS

VFD32AMS43ANS

type	motor rating	rated current	description	frame size	dimensions (mm) (H)	(W)	(D)	price
ME300 series - Basic ultra-compact AC motor drives - *(VF/SVC open-loop control)*								
• High starting torque *(up to 150% rated starting torque at 3 Hz)*								
• Supports side-by-side installation, with operating temp -20 to +40ºC								
• Supports high speed pulse and PWM (10kHz) frequency input signals								
• Ultra compact frame sizes, up to 60% reduction compared to previous VFD-EL								
• Front fascia 4 digit LED display, frequency adjustment knob and direction - run/stop function keys								
Single-phase input 200-240V 50/60Hz *(three-phase output voltage 230VAC)*								
VFD1A6ME21ANN	200 W	1.6A	1-ph AC motor drive	A1	128	68	78	**3 980.00**
VFD2A8ME21ANN	400 W	2.8A	1-ph AC motor drive	A3	128	68	107	**4 070.00**
VFD4A8ME21ANN	750 W	4.8A	1-ph AC motor drive	B2	142	72	127	**4 240.00**
VFD7A5ME21ANN	1.5 kW	7.5A	1-ph AC motor drive	C1	157	87	136	**5 610.00**
VFD11AME21ANN	2.2 kW	11A	1-ph AC motor drive	C1	157	87	136	**6 480.00**
Three-phase input 380-480V 50/60Hz								
VFD1A5ME43ANN	400 W	1.5A	3-ph AC motor drive	A4	128	68	113	**5 680.00**
VFD2A7ME43ANN	750 W	2.7A	3-ph AC motor drive	A6	128	68	127	**5 940.00**
VFD4A2ME43ANN	1.5 kW	4.2A	3-ph AC motor drive	B1	142	72	127	**6 470.00**
VFD5A5ME43ANN	2.2 kW	5.5A	3-ph AC motor drive	C1	157	87	136	**7 690.00**
VFD9A0ME43ANN	3.7 kW	9.0A	3-ph AC motor drive	C1	157	87	136	**8 790.00**
VFD13AME43ANN	5.5 kW	13A	3-ph AC motor drive	D1	207	109	138	**10 700.00**
VFD17AME43ANN	7.5 kW	17A	3-ph AC motor drive	D1	207	109	138	**12 800.00**
MS300 series - Standard compact AC motor drives *(VF/SVC open-loop control)*								
Essential functions built-in as standard includes: PLC for simple programming needs, communication slots for various communication cards, support for both IM and PM motor controls, STO function ensuring worry-free operation and protection.								
• Built-in PLC functionality *(2K steps)*								
• Supports high speed pulse (33kHz) frequency input signal								
• High starting torque *(up to 200% rated starting torque at 0.5 Hz)*								
• Built-in slot for optional communication modules *(see accessories for ME/MS drives)*								
• Integrated Safe Torque Off (STO) SIL2/PLd compliance, offers high safety machine stop								
• USB port for simplicity of data uploads and downloads *(supports PC program via USB)*								
• Removable 5 digit LED keypad with function keys and frequency adjustment knob								
Single-phase input 200-240V 50/60Hz *(three-phase output voltage 230VAC)*								
VFD1A6MS21ANS	200 W	1.6A	1-ph AC motor drive	A1	128	68	96	**5 570.00**
VFD2A8MS21ANS	400 W	2.8A	1-ph AC motor drive	A3	128	68	125	**5 650.00**
VFD4A8MS21ANS	750 W	4.8A	1-ph AC motor drive	B2	142	72	143	**6 100.00**
VFD7A5MS21ANS	1.5 kW	7.5A	1-ph AC motor drive	C1	157	87	152	**7 060.00**
VFD11AMS21ANS	2.2 kW	11A	1-ph AC motor drive	C1	157	87	152	**9 550.00**
Three-phase input 380-480V 50/60Hz								
VFD1A5MS43ANS	400 W	1.5A	3-ph AC motor drive	A4	128	68	129	**7 000.00**
VFD2A7MS43ANS	750 W	2.7A	3-ph AC motor drive	A5	128	68	143	**7 170.00**
VFD4A2MS43ANS	1.5 kW	4.2A	3-ph AC motor drive	B1	142	72	143	**7 790.00**
VFD5A5MS43ANS	2.2 kW	5.5A	3-ph AC motor drive	C1	157	87	152	**8 950.00**
VFD9A0MS43ANS	3.7 kW	9.0A	3-ph AC motor drive	C1	157	87	152	**10 400.00**
VFD13AMS43ANS	5.5 kW	13A	3-ph AC motor drive	D1	207	109	154	**13 800.00**
VFD17AMS43ANS	7.5 kW	17A	3-ph AC motor drive	D1	207	109	154	**16 500.00**
VFD25AMS43ANS	11 kW	25A	3-ph AC motor drive	E1	250	130	185	**19 400.00**
VFD32AMS43ANS	15 kW	32A	3-ph AC motor drive	E1	250	130	185	**25 000.00**
VFD38AMS43ANS	18.5 kW	38A	3-ph AC motor drive	F1	300	175	192	**30 300.00**
VFD45AMS43ANS	22 kW	45A	3-ph AC motor drive	F1	300	175	192	**35 500.00**

See accessories for ME/MS drives

Above ZAR prices do not include VAT. E&OE

Conveyor | Fan | Machine Tool | Motors

MS300 series - Vector control compact drive

MS300 range of compact vector controlled drives offer standard essential built-in functionality including - multi-pump control, built-in brake chopper, RS-485 (Modbus) supporting both IM and PM motors.

- High starting torque *(up to 200% rated starting torque at 0.5 Hz)*
- Overload capabilities: 150% of rated output current for 60 seconds, 200% for 3 seconds
- Integrated Safe Torque Off (STO) SIL2/PLd compliance offers high-safety machine stop
- Built-in PLC functionality *(2K steps),* supports high-speed pulse *(33kHz)* frequency input signal
- Default drive rating: Heavy duty *(break resistor chart, see **Annex-3**)*

VFD3A0MS53ANS

type	motor rating	rated current	description	frame size	dimensions (mm) (H)	(W)	(D)	price
MS300 series - 575V compact AC motor drives *(VF/SVC open-loop control)*								
Modbus Communications Built-in. Options for CANopen, Profinet ModbusTCP, Ethernet/IP and EtherCAT communications								
Three-phase input 525-600V 50/60Hz								
VFD1A7MS53ANS	750 W	1.7A	3-ph AC motor drive	A5	128	68	143	**11 000.00**
VFD3A0MS53ANS	1.5 kW	3.0A	3-ph AC motor drive	B1	142	72	143	**12 700.00**
VFD4A2MS53ANS	2.2 kW	4.2A	3-ph AC motor drive	C1	157	87	152	**14 500.00**
VFD6A6MS53ANS	3.7 kW	6.6A	3-ph AC motor drive	C1	157	87	152	**18 800.00**
VFD9A9MS53ANS	5.5 kW	9.9A	3-ph AC motor drive	D1	207	109	154	**24 600.00**
VFD12AMS53ANS	7.5 kW	12.2A	3-ph AC motor drive	D1	207	109	154	**27 800.00**

IP66 New

VFD2A8MS21MNS

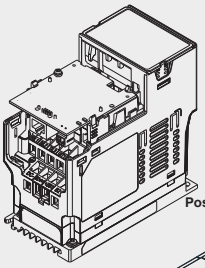
MS300 series IP66 - AC motor drives *(VF/SVC open-loop control)*								
IP66 / NEMA4X water-proof and dust-proof design enables stable operation under harsh environments. Quick installation without a control cabinet saves cost.								
Single-phase input 200-240V 50/60Hz *(three-phase output voltage 230 VAC)*								
VFD2A8MS21MNS	400 W	2.8A	1-ph AC motor drive	A1	230	160	151	**11 300.00**
VFD4A8MS21MNS	750 W	4.8A	1-ph AC motor drive	A1	230	160	151	**12 200.00**
VFD7A5MS21MNS	1.5 kW	7.5A	1-ph AC motor drive	A2	230	160	167	**14 600.00**
VFD11AMS21MNS	2.2 kW	11A	1-ph AC motor drive	B	280	175	193	**19 100.00**
Three-phase input 380-480V 50/60Hz								
VFD1A5MS43MNS	400 W	1.5A	3-ph AC motor drive	A1	230	160	151	**14 500.00**
VFD2A7MS43MNS	750 W	2.7A	3-ph AC motor drive	A1	230	160	151	**14 800.00**
VFD4A2MS43MNS	1.5 kW	4.2A	3-ph AC motor drive	A2	230	160	167	**16 100.00**
VFD5A5MS43MNS	2.2 kW	5.5A	3-ph AC motor drive	A3	230	160	190	**18 500.00**
VFD9A0MS43MNS	3.7 kW	9.0A	3-ph AC motor drive	B	280	175	193	**21 400.00**
VFD13AMS43MNS	5.5 kW	13A	3-ph AC motor drive	C	300	195	193	**28 300.00**
VFD17AMS43MNS	7.5 kW	17A	3-ph AC motor drive	C	300	195	193	**33 900.00**

MKM-HUB01

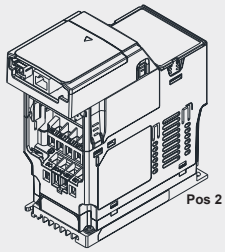
IFD6500

Accessories for ME/MS300 series drives					
MKM-DRB	DIN-rail	mounting kit for frame A and B		ME/MS300 drives	**151.00**
MKM-DRC	DIN-rail	mounting kit for frame C		ME/MS300 drives	**190.00**
EMM-BPS01❖	24 VDC	external DC power supply card		for MS300 drives	**4 050.00**
KPC-CC01❖	keypad	panel mount LCD		for MS300 drives	**1 930.00**
KPMS-LE01	keypad	removable LED keypad		for MS300 drives	**490.00**
MKM-HUB01	adaptor	daisy chain - RJ-45 to screw connector		ME/MS300 drives	**254.00**
EG1010A	cable	to remotely mount keypad	1 met	for MS300 drives	**405.00**
EG2010A	cable	to remotely mount keypad	2 met	for MS300 drives	**470.00**
EG3010A	cable	to remotely mount keypad	3 met	for MS300 drives	**535.00**
UC-PRG030-02A	USB (B to A)	programming cable PC-VFD	3 met	for MS300 drives	**242.00**
IFD6500	RS-485 to USB	converter *(no ext. power supply required)*			**1 080.00**

❖ *Applicable to MS300 IP66*



Pos 1



Pos 2

Fieldbus modules for MS series drives						
CMM-EIP02	Ethernet/IP	Modbus TCP plug-in com. card	1 port	for MS300 drives		**1 630.00**
CMM-EIP03	Ethernet/IP	Modbus TCP plug-in com. card	2 port	for MS300 drives		**1 630.00**
CMM-EC02	EtherCAT	plug-in communication card	2 port	for MS300 drives		**2 350.00**
CMM-PN02	Profinet	plug-in communication card	2 port	for MS300 drives		**3 260.00**
CMM-COP02	CANopen	plug-in communication card	2 port	for MS300 drives		**868.00**
***Note:* CBM-CCxxA** *required when using above communication card*						
Cables for above communication cards				frame	Pos.*	
CBM-CL01A	cable for	CMM-DN/EIP/PD/COP	145 mm	A,B	1	**431.00**
		CMM-EC02		A	2	
CBM-CL02A	cable for	CMM-DN/EIP/PD/COP	250 mm	C,D,E,F	1	**477.00**
		CMM-EC02		B,C,D	2	
CBM-CC01A	cable for	CMM-DN/EIP/PD/COP	145 mm	A	2	**522.00**
CBM-CC02A	cable for	CMM-DN/EIP/PD/COP	250 mm	B,C,D	2	**568.00**

* ***Pos 1*** *- compact mounting, communication card installed back to front*

* ***Pos 2*** *- right side up mounting, with extra additional cover (adds to frame size depth)*

Milling Machine | Cranes | Compressor | Motors

C2000+ series - High performance vector control drive

C2000+ series features precise speed, torque and position control, suitable for both sensor and sensorless types of synchronous and asynchronous motors. With a higher overload capacity the C2000+ provides the best performance and stability for a variety of heavy duty and constant torque applications in refrigeration, mining, crains/hoists, crushers, compressors etc.

- Speed/torque/position control mode
- Accepts various PG *(encoder)*, I/O extension, relay extension and communication cards
- Integrated Safe Torque Off *(STO)* SIL2/PLd compliance, offers high safety machine stop
- Dual rating design - heavy duty / super heavy duty. Built-in PLC function *(10k steps capacity)*
- Overload capabilities: C2000+ 150% of rated output current for 1min, 180% for 3sec *(heavy duty)*
- Enhanced PCB coatings ***(IEC 60721-3-3 class 3C3 standard)*** ensures drive operation in harsh environments
- Built-in Modbus and CANopen (up to 30kW) high-speed communication interface *(optional cards for others)*
- Default drive rating: Heavy duty *(break resistor chart, see **Annex-3**)*

VFD150C4EA-21

VFD220C4EA-21

VFD370C63B-21

type	motor rating 400V	rated current	description	frame size	dimensions (mm) (H)	(W)	(D)	price
C2000+ - Three-phase input **380-480V 50/60Hz**								
VFD007C4EA-21	0.75 kW	3.0A	3-ph AC motor drive	A	250	130	170	**14 400.00**
VFD015C4EA-21	1.5 kW	4.0A	3-ph AC motor drive	A	250	130	170	**15 500.00**
VFD022C4EA-21	2.2 kW	6.0A	3-ph AC motor drive	A	250	130	170	**17 000.00**
VFD040C4EA-21	4.0 kW	10.5A	3-ph AC motor drive	A	250	130	170	**22 000.00**
VFD055C4EA-21	5.5 kW	12A	3-ph AC motor drive	A	250	130	170	**22 900.00**
VFD075C4EA-21	7.5 kW	18A	3-ph AC motor drive	B	320	190	190	**25 700.00**
VFD110C4EA-21	11 kW	24A	3-ph AC motor drive	B	320	190	190	**29 900.00**
VFD150C4EA-21	15 kW	32A	3-ph AC motor drive	B	320	190	190	**37 200.00**
VFD185C4EA-21	18.5 kW	38A	3-ph AC motor drive	C	400	250	210	**46 200.00**
VFD220C4EA-21	22 kW	45A	3-ph AC motor drive	C	400	250	210	**52 100.00**
VFD300C4EA-21	30 kW	60A	3-ph AC motor drive	C	400	250	210	**59 700.00**
VFD370C43S-00	37 kW	73A	3-ph AC motor drive	D0-1	500	280	255	**55 300.00**
VFD450C43S-00	45 kW	91A	3-ph AC motor drive	D0-1	500	280	255	**63 300.00**
VFD550C43A-00	55 kW	110A	3-ph AC motor drive	D1	550	330	275	**84 500.00**
VFD750C43A-00	75 kW	150A	3-ph AC motor drive	D1	550	330	275	**117 000.00**
VFD900C43A-00	90 kW	180A	3-ph AC motor drive	E1	589	370	300	**136 000.00**
VFD1100C43A-00	110 kW	220A	3-ph AC motor drive	E1	589	370	300	**157 000.00**
VFD1320C43A-00	132 kW	260A	3-ph AC motor drive	F1	800	420	300	**180 000.00**
VFD1600C43A-00	160 kW	310A	3-ph AC motor drive	F1	800	420	300	**214 000.00**
VFD1850C43A-00	185 kW	370A	3-ph AC motor drive	G1	1000	500	397	**284 000.00**
VFD2000C43A-00	200 kW	395A	3-ph AC motor drive	G1	1000	500	397	**294 000.00**
VFD2200C43A-00	220 kW	460A	3-ph AC motor drive	G1	1000	500	397	**345 000.00**
VFD2500C43A-00	250 kW	481A	3-ph AC motor drive	G1	1000	500	397	**366 000.00**
VFD2800C43A-00	280 kW	550A	3-ph AC motor drive	H1	1435	700	398	**461 000.00**
VFD3150C43A-00	315 kW	616A	3-ph AC motor drive	H1	1435	700	398	**503 000.00**
VFD3550C43A-00	355 kW	683A	3-ph AC motor drive	H1	1435	700	398	**538 000.00**
VFD4000C43A-00	400 kW	770A	3-ph AC motor drive	H1	1435	700	398	**582 000.00**
VFD4500C43A-00	450 kW	866A	3-ph AC motor drive	H1	1435	700	398	**681 000.00**
VFD5000C43A-00	500 kW	930A	3-ph AC motor drive	H1	1435	700	398	**739 000.00**
VFD5600C43A-00	560 kW	1094A	3-ph AC motor drive	H1	1435	700	398	**865 000.00**

Frames A, B, C - built-in braking chopper, EMI filter and CANopen communication
Frames D,E,F,G,H - DC reactor built-in

type	motor rating at 525V	rated current	description	frame size	dimensions (mm) (H)	(W)	(D)	price
C2000 - Three-phase input **525-600V** *(up to 15kW)* **525-690V** *(from 22kW)* **50/60Hz**								
VFD037C53A-21	3.7 kW	6.7A	3-ph AC motor drive	A	250	130	170	**17 300.00**
VFD055C53A-21	5.5 kW	9.9A	3-ph AC motor drive	B	320	190	190	**23 900.00**
VFD075C53A-21	7.5 kW	12.1A	3-ph AC motor drive	B	320	190	190	**27 500.00**
VFD110C53A-21	11 kW	18.7A	3-ph AC motor drive	B	320	190	190	**34 800.00**
VFD150C53A-21	15 kW	24.2A	3-ph AC motor drive	B	320	190	190	**43 400.00**
VFD300C63B-21	22 kW	36A	3-ph AC motor drive	C	400	250	210	**82 700.00**
VFD370C63B-21	30 kW	45A	3-ph AC motor drive	C	400	250	210	**83 000.00**
VFD450C63B-00	37 kW	54A	3-ph AC motor drive	D1	550	330	275	**103 000.00**
VFD550C63B-00	45 kW	67A	3-ph AC motor drive	D1	550	330	275	**114 000.00**
VFD750C63B-00	55 kW	86A	3-ph AC motor drive	E1	589	370	300	**148 000.00**
VFD900C63B-00	75 kW	104A	3-ph AC motor drive	E1	589	370	300	**163 000.00**
VFD1320C63B-00	90 kW	150A	3-ph AC motor drive	E1	589	370	300	**232 000.00**
VFD1600C63B-00	132 kW	180A	3-ph AC motor drive	F1	800	420	300	**257 000.00**
VFD2000C63B-00	160 kW	220A	3-ph AC motor drive	F1	800	420	300	**310 000.00**
VFD2500C63B-00	185 kW	290A	3-ph AC motor drive	G1	1000	500	397	**379 000.00**
VFD3150C63B-00	250 kW	350A	3-ph AC motor drive	G1	1000	500	397	**518 000.00**

Default 525/690 rating: *Light duty* ***Control modes:*** *V / F , V / F+PG , SVC control modes only*
*(see **Annex-3** for detailed derating chart for different duties and voltages)*
Frame A, B, C built-in braking chopper (frames D,E,F,G,H) DC reactor built-in)

Above ZAR prices do not include VAT. E&OE

HVAC Fan Pump Motors

VP3000 series - Open-loop variable-torque standard drive

The Delta **VP3000** series provides new advanced features for a seamless and robust customer experience with predictive maintenance for key components, lower harmonics, reduced dimensions and a lower carbon footprint

VP3000 is ideal for variable-torque applications such as blowers, pumps, HVAC, water treatment and supply systems. With built-in support for **BACnet**, the drives are easily integrated with Building Management Systems.

Power ranges from 0.75 to 630 kW with reduced frame sizes for optimal space usage and easier maintenance.

General features:

- Custom development platform: Built-in PLC with 20k steps
- Functional safety: Built-in Safe Torque Off (STO) SIL3
- Built-in EMC filter: In compliance with **(EN61800-3 C2, C3)**
- High-speed network: Supports various industrial comm. protocols
- Enhanced PCB coating: In compliance with (IEC 60721-3-3 class 3C3)
- Energy efficiency: IM, PM, and high-efficiency SynRM motor control modes
- Micro SD: Parameter backup, PLC program backup, firmware updates
- Compact size: Slim design, optimising panel space and cable configuration
- Lower harmonics: EN 61000-3-12 standard harmonics reach min. 35% *(from 22 kW)*
- PdM: Monitors key component's service life for stable equipment operation
- Built-in USB-C port: Facilitates drive setting, updating, real-time monitoring and system tuning

VFD011VP43BFTAA

VFD110VP43BFTCA

VFD866VP43SHTCA

type	motor rating	rated current	description	frame size	dimensions (mm) (H)	(W)	(D)	price
VP3000 series - Three-phase input **380-480V 50/60Hz**								
VFD3A0VP43BFTAA	0.75 kW	3.0A	3-ph AC motor drive	A2	300	110	147	**11 100.00**
VFD4A2VP43BFTAA	1.5 kW	4.2A	3-ph AC motor drive	A2	300	110	147	**12 100.00**
VFD5A6VP43BFTAA	2.2 kW	5.6A	3-ph AC motor drive	A2	300	110	147	**13 100.00**
VFD7A2VP43BFTAA	3.0 kW	7.2A	3-ph AC motor drive	A2	300	110	147	**13 200.00**
VFD011VP43BFTAA	4.0 kW	11A	3-ph AC motor drive	A2	300	110	147	**16 300.00**
VFD013VP43BFTAA	5.5 kW	13A	3-ph AC motor drive	B2	300	110	167	**18 100.00**
VFD018VP43BFTAA	7.5 kW	18A	3-ph AC motor drive	B2	300	110	167	**19 700.00**
VFD025VP43BFTAA	11.0 kW	25A	3-ph AC motor drive	C2	380	142	213	**23 000.00**
VFD032VP43BFTAA	15.0 kW	32A	3-ph AC motor drive	C2	380	142	213	**26 100.00**
VFD038VP43BFTAA	18.5 kW	38A	3-ph AC motor drive	C2	380	142	213	**32 600.00**
VFD045VP43BFTCA	22 kW	45A	3-ph AC motor drive	D2	460	175	221	**38 100.00**
VFD062VP43BFTCA	30 kW	62A	3-ph AC motor drive	D2	460	175	221	**43 500.00**
VFD073VP43BFTCA	37 kW	73A	3-ph AC motor drive	E2	489	190	226	**50 400.00**
VFD090VP43BFTCA	45 kW	90A	3-ph AC motor drive	E2	489	190	226	**57 300.00**
VFD110VP43BFTCA	55 kW	110A	3-ph AC motor drive	F2	595	190	255	**73 300.00**
VFD150VP43BFTCA	75 kW	150A	3-ph AC motor drive	G2	660	199	310	**93 000.00**
VFD180VP43BFTCA	90 kW	180A	3-ph AC motor drive	H2	710	262	310	**112 000.00**
VFD220VP43BFTCA	110 kW	220A	3-ph AC motor drive	H2	710	262	310	**139 000.00**
VFD260VP43BFTCA	132 kW	260A	3-ph AC motor drive	I2	783	260	341	**173 000.00**
VFD310VP43BFTCA	160 kW	310A	3-ph AC motor drive	I2	783	260	341	**189 000.00**
VFD370VP43BFTCA	185 kW	370A	3-ph AC motor drive	J2	937	346	410	**251 000.00**
VFD395VP43BFTCA	200 kW	395A	3-ph AC motor drive	J2	937	346	410	**272 000.00**
VFD460VP43BFTCA	220 kW	460A	3-ph AC motor drive	K2	955	380	410	**286 000.00**
VFD485VP43BFTCA	250 kW	485A	3-ph AC motor drive	K2	955	380	410	**305 000.00**
VFD530VP43SHTCA	280 kW	530A	3-ph AC motor drive	L2	1279	345	529	**325 000.00**
VFD616VP43SHTCA	315 kW	616A	3-ph AC motor drive	L2	1279	345	529	**458 000.00**
VFD683VP43SHTCA	355 kW	683A	3-ph AC motor drive	L2	1279	345	529	**492 000.00**
VFD770VP43SHTCA	400 kW	770A	3-ph AC motor drive	L2	1279	345	529	**542 000.00**
VFD866VP43SHTCA	450 kW	866A	3-ph AC motor drive	M2	1434	345	529	**664 000.00**
VFD930VP43SHTCA	500 kW	930A	3-ph AC motor drive	M2	1434	345	529	**668 000.00**
VFD1K1VP43SHTCA	560 kW	1100A	3-ph AC motor drive	M2	1434	345	529	**772 000.00**
VFD1K2VP43SHTCA	630 kW	1200A	3-ph AC motor drive	M2	1434	345	529	**836 000.00**

Accessories for VP3000 drives

EMV-R6AA	relay	plug-in extension card for multi-function output selection	**1 110.00**
EMV-A22A	analog	plug-in I/O extension card 0 - 10 V, 0 - 20mA/4 - 20mA	**1 230.00**
EMV-D42A	I/O	plug-in I/O extension card	**680.00**
EMC-COP01	CANopen	plug-in CANopen communication card	**1 200.00**
CMC-EIP02	EtherNet	plug-in EtherNet/IP, Modbus TCP communication card	**2 520.00**
CMC-PN01	PROFINET	plug-in PROFINET communication card	**4 940.00**

Standard fieldbus cables

UC-CMC010-01A	1 m	CANopen	CANopen cable *(RJ45 connector)*	**203.00**
UC-CMC020-01A	2 m	CANopen	CANopen cable *(RJ45 connector)*	**301.00**
UC-CMC030-01A	3 m	CANopen	CANopen cable *(RJ45 connector)*	**542.00**
UC-EMC010-02B	1 m	EtherNet	EtherNet cable *(shielded)*	**460.00**
UC-EMC020-02B	2 m	EtherNet	EtherNet cable *(shielded)*	**644.00**
UC-EMC050-02B	5 m	EtherNet	EtherNet cable *(shielded)*	**1 030.00**

HVAC Fan Pump Motors

CP2000 series - Fan and Pump purpose drives

CP2000 series AC motor drive for energy-saving HVAC systems and for pump and fan applications. Equipped with special HVAC parameters and PID control functions for efficient operation, multi-segment V/F control curve and soft start functions to assist frequent torque change and constant output applications with energy-saving performance.

General features:

- Built-in PLC *(10K steps)* programming capacity with real-time-clock and calendar
- Built-in RS-485 (Modbus) and BACnet MS/TP *(expandable with optional extension cards)*
- Multi-pump control of up to 8 motors provide fixed amount and fixed time circulation control
- Flying start and auto restart after momentary power loss functions, suitable for fan application
- Enhanced PCB coatings ***(IEC 60721-3-3 class 3C2 standard)*** ensures drive operation in harsh environments
- Default rated current: Light duty *(break resistor chart, see **Annex-3**)*
- Dual rating chart for CP/CFP2000 drives - normal and heavy-duty applications *(see **Annex-4**)*

VFD150CP4EB-21

VFD450CP43S-21

VFD450FP4EA-52

type	motor rating	rated current	description	frame size	dimensions (mm) (H)	(W)	(D)	price
CP2000 series - Fan/Pump vector control drives								
Three-phase input 380-480V 50/60 Hz								
VFD015CP4EB-21	1.5 kW	4.2A	3-ph AC motor drive	A	250	130	170	**12 100.00**
VFD022CP4EB-21	2.2 kW	5.5A	3-ph AC motor drive	A	250	130	170	**13 100.00**
VFD040CP4EA-21	4.0 kW	10.5A	3-ph AC motor drive	A	250	130	170	**16 000.00**
VFD055CP4EB-21	5.5 kW	13A	3-ph AC motor drive	A	250	130	170	**17 600.00**
VFD075CP4EB-21	7.5 kW	18A	3-ph AC motor drive	A	250	130	170	**18 900.00**
VFD110CP4EB-21	11 kW	24A	3-ph AC motor drive	B	320	190	190	**22 900.00**
VFD150CP4EB-21	15 kW	32A	3-ph AC motor drive	B	320	190	190	**27 200.00**
VFD185CP4EB-21	18.5 kW	38A	3-ph AC motor drive	B	320	190	190	**30 800.00**
VFD220CP4EA-21	22 kW	45A	3-ph AC motor drive	C	400	250	210	**36 400.00**
VFD300CP4EB-21	30 kW	60A	3-ph AC motor drive	C	400	250	210	**41 100.00**
VFD370CP4EB-21	37 kW	73A	3-ph AC motor drive	C	400	250	210	**45 700.00**
VFD450CP43S-21	45 kW	91A	3-ph AC motor drive	D0	500	280	255	**56 500.00**
VFD550CP43S-21	55 kW	110A	3-ph AC motor drive	D0	500	280	255	**63 300.00**
VFD750CP43B-21	75 kW	150A	3-ph AC motor drive	D	550	330	275	**89 000.00**
VFD900CP43A-21	90 kW	180A	3-ph AC motor drive	D	550	330	275	**123 000.00**
VFD1100CP43A-21	110 kW	220A	3-ph AC motor drive	E	589	370	300	**139 000.00**
VFD1320CP43B-21	132 kW	260A	3-ph AC motor drive	E	589	370	300	**161 000.00**
VFD1600CP43A-21	160 kW	310A	3-ph AC motor drive	F	800	420	300	**182 000.00**
VFD1850CP43B-00	185 kW	370A	3-ph AC motor drive	F	800	420	300	**243 000.00**
VFD2200CP43A-00	220 kW	460A	3-ph AC motor drive	G1	1000	500	397	**298 000.00**
VFD2800CP43A-00	280 kW	530A	3-ph AC motor drive	G1	1000	500	397	**378 000.00**
VFD3150CP43A-00	315 kW	616A	3-ph AC motor drive	H1	1435	700	398	**483 000.00**
VFD3550CP43A-00	355 kW	683A	3-ph AC motor drive	H1	1435	700	398	**527 000.00**
VFD4000CP43A-00	400 kW	770A	3-ph AC motor drive	H1	1435	700	398	**593 000.00**
VFD5000CP43A-00	500 kW	930A	3-ph AC motor drive	H1	1435	700	398	**746 000.00**

Frames A, B, C - built-in braking chopper, EMI filter. Frames D,E,F,G,H - DC reactor built-in
Flange mount kits for rear projecting heat sinks for improved ventilation (see accessories page)
Larger sizes up to 630kW available on request

CFP2000 series - Drives for Fans and Pumps **IP55**

CFP2000 series designed with an industry leading IP55 enclosure providing protection from dust and water. It includes many outstanding features and built-in functionality, reducing setup and tuning time while providing higher efficiency.

- Built-in EMI filter *(meets EN61800-3)*
- Built-in DC choke *(meets EN6100-3-12)*
- Built-in Safe Torque Off (STO) SIL2 function and 2 sets of PID controller functions
- Enhanced PCB coating to **(IEC 60721-3-3 class 3C3)** ensures reliability in harsh environments

Three-phase input 380-480V 50/60 Hz								
VFD015FP4EA-52	1.5 kW	4.2A	3-ph AC motor drive	A-1	366	161	199	**20 000.00**
VFD022FP4EA-52	2.2 kW	5.5A	3-ph AC motor drive	A-1	366	161	199	**21 300.00**
VFD040FP4EA-52	4.0 kW	10.5A	3-ph AC motor drive	A-1	366	161	199	**22 200.00**
VFD055FP4EA-52	5.5 kW	13A	3-ph AC motor drive	A-1	366	161	199	**23 000.00**
VFD075FP4EA-52	7.5 kW	18A	3-ph AC motor drive	A-1	366	161	199	**23 500.00**
VFD110FP4EA-52	11 kW	24A	3-ph AC motor drive	B-1	491	216	229	**26 100.00**
VFD150FP4EA-52	15 kW	32A	3-ph AC motor drive	B-1	491	216	229	**32 200.00**
VFD185FP4EA-52	18.5 kW	38A	3-ph AC motor drive	B-1	491	216	229	**41 700.00**
VFD220FP4EA-52	22 kW	45A	3-ph AC motor drive	B-1	491	216	229	**49 400.00**
VFD300FP4EA-52	30 kW	60A	3-ph AC motor drive	C-1	630	282	265	**61 700.00**
VFD370FP4EA-52	37 kW	73A	3-ph AC motor drive	C-1	630	282	265	**82 500.00**
VFD450FP4EA-52	45 kW	91A	3-ph AC motor drive	D0-1	680	308	307	**105 000.00**
VFD550FP4EA-52	55 kW	110A	3-ph AC motor drive	D0-1	680	308	307	**122 000.00**
VFD750FP4EA-52	75 kW	150A	3-ph AC motor drive	D-1	770	370	335	**148 000.00**
VFD900FP4EA-52	90 kW	180A	3-ph AC motor drive	D-1	770	370	335	**171 000.00**

Frames A-1, B-1, C-1 - built-in braking chopper

Above ZAR prices do not include VAT. E&OE

IFD6500

MKC-DN1CB

CMC-EIP02

Accessories for C2000+, CP/CFP2000 series drives

Delta's AC Motor Drive product line provides a full range of motor control technologies and accessories that can be used throughout a wide range of industries to enhance and improve machine automation.

Optional communication cards include **EtherCAT, EtherNet/IP, PROFINET, Modbus TCP, CANopen**

Hardware accessories

type	device	description		price
KPC-CC01	keypad	with LCD, parameters backup function	C series drives	**1 930.00**
MKC-KPPK	bracket	remote panel adapter for **KPC-CC01** *(IP66)*	C series drives	**679.00**
EMC-D42A	DC 24V	digital I/O extension card, selectable NPN/PNP	4DI / 2DO	**620.00**
EMC-A22A	analog	I/O extension card, selectable 0-10V/4-20mA	2AI / 2AO	**1 130.00**
EMC-R6AA	card	multi-function relay output extension card	6 relay	**1 020.00**
IFD6530	converter/program	USB to RS-485 - KPC-CC01 and C series drives		**1 820.00**
IFD6500	converter	USB to RS-485 - C series drives		**1 080.00**

Mounting accessories

Flange mount kits to permit the chassis mounting of drives with the heat-sink section protruding from the rear of the enclosure for improved cooling/heat dissipation of drives.

MKC-AFM	flange	mount kit for rear exposure of heat sink	for drive frame A	**1 260.00**
MKC-BFM	flange	mount kit for rear exposure of heat sink	for drive frame B	**1 400.00**
MKC-CFM	flange	mount kit for rear exposure of heat sink	for drive frame C	**1 590.00**

Base mounting flange can be moved to central position to expose heat sinks for frames D, E, F.

Conduit boxes

- Application: Wall mount IP00 - IP21

MKC-DN1CB	frame D	Conduit box kit for frame D1 *(not D01)*	**3 260.00**
MKC-EN1CB	frame E	Conduit box kit for frame E1	**3 750.00**
MKC-FN1CB	frame F	Conduit box kit for frame F1	**5 170.00**

PG cards for C2000 drives

type	output voltage	PG 1-300kHz motor encoder	PG 2-300kHz optional pulse command	PG out re-transmission 1-255 ratio	price
EMC-PG01L	5 or 12 VDC	Line drive / Open collector	Line drive / Open collector	Line driver	**2 800.00**
EMC-PG01O	5 or 12 VDC	Line drive / Open collector	Line drive / Open collector	Open collector	**2 160.00**
EMC-PG01U	5 or 12 VDC	Line drive with commutation	Line drive / Open collector	Line driver	**3 010.00**

Fieldbus modules for drives *(plugs into drive)*

type	comms	description		rate	price
CMC-EIP02	EtherNet/IP	supports, Modbus TCP protocols	2 port	10/100 Mbps	**2 520.00**
CMC-PD01	Profibus-DP	plug-in communication card		9.6kbps - 12Mbps	**5 590.00**
EMC-COP01	CANopen	plug-in communication card		50kbps - 1Mbps	**1 200.00**
CMC-EC01	EtherCAT	plug-in 2 port comm. card		100 Mbps	**4 800.00**
CMC-PN01	Profinet	plug-in 2 port comm. card		10/100 Mbps Auto-Detect	**4 940.00**

Cables for above communication cards

				price
UC-CMC010-01A	CANopen	standard fieldbus cable, RJ45 connector	1 meter	**203.00**
UC-CMC020-01A	CANopen	standard fieldbus cable, RJ45 connector	2 meter	**301.00**
UC-CMC030-01A	CANopen	standard fieldbus cable, RJ45 connector	3 meter	**542.00**
UC-EMC010-02B	Ethernet	shielded Ethernet cable	1 meter	**460.00**
UC-EMC020-02B	Ethernet	shielded Ethernet cable	2 meter	**644.00**
UC-EMC050-02B	Ethernet	shielded Ethernet cable	5 meter	**1 030.00**

DIAStudio
Smart Machine Suite

Industrial communication protocols

EtherCAT · CANopen · Modbus · EtherNet/IP · PROFINET · POLAR CLOUD

VFD185ED43S

ED series - Elevator drives

ED series motor drives are specifically designed for elevator applications and feature the latest innovative control technology, providing extended features with outstanding performance. Designed to high safety standards and for high durability, the ED series is an excellent solution for elevator operation in critical environments.

General features:

- Auto-tuning with load attached
- Dual-output protection for reliable rides
- Supports both asynchronous and synchronous motors
- Precise time sequence for elevator motion *(start/stop)*
- Built-in USB-B port for parameter uploads and downloads
- Auto-correct start torque and load compensation with manual adjustment
- DC braking level and slip compensation enhancing the levelling accuracy providing ride comfort
- Built-in STO (Safe Torque Off) function (complies with **EN61800-5-2** and **EN61508 (SIL2)** standards
- Supports 1-phase 230/460 VAC UPS *(light-load direction search function triggered automatically on power failure)*
- Default rated current: Heavy duty

type	motor rating	rated current	description	frame size	dimensions (mm) (H)	(W)	(D)	price
Single-phase input 200-240 VAC 50/60Hz								
VFD037ED21S	3.7 kW	17A	1-ph elevator drive	B	260	194	134	**21 300.00**
Three-phase input 380-460VAC 50/60Hz								
VFD055ED43S*	5.5 kW	13A	3-ph elevator drive	C	350	235	146	**23 400.00**
VFD075ED43S*	7.5 kW	17A	3-ph elevator drive	C	350	235	146	**26 700.00**
VFD110ED43S*	11 kW	23A	3-ph elevator drive	C	350	235	146	**31 900.00**
VFD150ED43S*	15 kW	30A	3-ph elevator drive	C	350	235	146	**38 200.00**
VFD185ED43S*	18.5 kW	38A	3-ph elevator drive	C	350	235	146	**46 000.00**
VFD220ED43S*	22 kW	45A	3-ph elevator drive	D	404	255	178	**56 700.00**
VFD300ED43S*	30 kW	58A	3-ph elevator drive	D	404	255	178	**82 300.00**
VFD370ED43S	37 kW	80A	3-ph elevator drive	E	550	330	273	**97 800.00**
VFD450ED43S	45 kW	100A	3-ph elevator drive	E	550	330	273	**105 000.00**

* *Braking chopper built in (break resistor chart, see **Annex-3**)*
Larger sizes available on request.

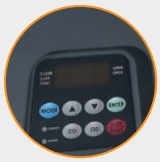
EMED-PGABD-1

Braking units for above drives without built-in braking chopper

type	IMAX (A) 10%ED	ICONT (A)	Input range. (VDC)	Min. Resistance (ohm)	price
VFDB4045	60	18	400-800	13.6	**7 650.00**

PG feedback cards

EMED-PGAB	supports open-collector or Line-driver and UVW encoder signal, 5/12 VDC supply	**1 450.00**
EMED-PGABD-1	open-collector, differential, UVW encoder signal and frequency divider output	**2 040.00**
EMED-PGHSD-3	supports Heidenhain ERN1387/ECN1313, SICK HIPERFACE 5/8V supply	**2 760.00**



VFD004DD21S

DD series elevator door drive

DD series AC motor drives *(specifically designed for elevator door applications)* feature door width auto-tuning with precise open and close control and smooth door open curve and blocking detection.

- Door width auto-tuning
- Smooth door re-open curve
- Safety protection and blockage detection *(four steps)*
- Induction motor *(asynchronous)* and permanent magnet motor *(synchronous)*
- Multiple door control solutions: distance /speed control / multi-step speed control modes

Single-phase input 230 VAC 50/60Hz

VFD004DD21S	0.4 kW	2.5A	1-ph elevator door drive	170	215	55	**7 160.00**

Accessories for DD Drive

MEC-SG1026S	1 meter	encoder cable *(without D-SUB connector)* for DD series	**272.00**
MEC-SG3026S	3 meter	encoder cable *(without D-SUB connector)* for DD series	**530.00**
KPC-CC01	keypad	with LCD display, parameters backup function	**1 930.00**

ECMD-B91608MS

Slimline sliding door motor *DC brushless motor*

- Ultra-slim design *(55 mm)*
- Instant torque up to 3 Nm
- Flexible installation *(front or back side installation)*

ECMD-B91608MS	80W	3.0Nm/250 rpm sliding door motor		160	160	55	**7 280.00**
DPB-N7779	dust cap	dust cover for protection of door motor terminals					**158.00**

Above ZAR prices do not include VAT. E&OE

Discover TechTop's Range of Electric Motors

Where Innovation Meets Efficiency

- IE3 Premium Efficiency Motors
- Frame size 80 - 355M/L
- 0.75 to 355kW

CE UKCA CSA DNV·GL RoHS

TECHTOP

Explore the Range

ELECTRON Series

IOT

POLAR CLOUD

300S-5SPLR-O

Electron series - Standard pump panels

Irrigation and water reticulation applications require precise pump control and protection to pump water reliably and efficiently. Pump purpose drives in constant pressure systems are designed to save energy, eliminate high start-up currents, and precisely control pump speed to match pressure demand.

Conventional constant pressure systems routinely introduce many problems, such as overloads during pipe filling, unreliable sleep and wake states resulting in pump cavitation requiring intricate and cumbersome setup.

Installation of a smart pump panel utilises various system variables and inputs which dynamically react to prevailing environmental conditions, ensuring a reactive dependable control system.

Comprehensive ready-to-connect pump panel comprising:

- Maintain a constant pressure by utilising a **CP2000** pump-purpose drive
  - Utilising an internal 10k step PLC to automatically preserve the system at peak efficiency
  - The software assesses variables to automatically determine the most reliable operation
  - Phase failure/reversal, no flow digital input
- Front panel controls
  - Three position Man/Off/Auto selector. Automatic mode maintains constant pressure
  - Manual mode for speed control by analogue potentiometer
  - Run and trip indicators for operational indication
  - Standard 0-5 position pressure selector for preset setpoints
  - Local or remote: Selector switch
- Ergonomic LCD keypad display for easy setup and operation, displaying all vital information: motor current, output frequency, current pressure set point, feedback pressure, no-load time out, sleep/wake status
- Graphical menu for easy navigation through basic to advanced embedded features such as:
  - Pipeline filling, smart sleep/wake, no flow/underload protection, overcurrent stall prevention, pump priming
  - Filter flush control *(optional accessory control relays **EMC-R6AA**)*, transmitter failure detection
  - Pipe burst detection, 0-24H restart delay for dry run trips, three-point acceleration curve
- Powder-coated metal RAL2000 enclosure suitable for outdoors with hooded vents and panel
- 40 kA Class II surge protection

Automatic mode: *Requires a pressure transmitter* **Type 528** *and* **4-pin M12** *cable (purchased separately)*

type	motor rating	rated current (A)	description	dimensions (mm) (H)	(W)	(D)	price
Electron series - Standard pump panel - *(3 phase input 380-480V, 50/60Hz)*							
400V three-phase pump panel							
075S-5SPLR-O	7.5 kW	18A	std. pump control panel	650	450	270	**39 700.00**
110S-5SPLR-O	11 kW	24A	std. pump control panel	750	550	270	**46 500.00**
150S-5SPLR-O	15 kW	32A	std. pump control panel	750	550	270	**51 200.00**
185S-5SPLR-O	18.5 kW	38A	std. pump control panel	750	550	270	**55 600.00**
220S-5SPLR-O	22 kW	45A	std. pump control panel	850	600	270	**61 800.00**
300S-5SPLR-O	30 kW	60A	std. pump control panel	850	600	270	**68 700.00**
370S-5SPLR-O	37 kW	73A	std. pump control panel	850	600	270	**74 200.00**
450S-5SPLR-O	45 kW	91A	std. pump control panel	950	700	330	**87 200.00**
550S-5SPLR-O	55 kW	110A	std. pump control panel	950	700	330	**93 900.00**
750S-5SPLR-O	75 kW	150A	std. pump control panel	1150	850	330	**132 000.00**
900S-5SPLR-O	90 kW	180A	std. pump control panel	1150	850	330	**162 000.00**
1100S-5SPLR-O	110 kW	220A	std. pump control panel	1150	850	330	**182 000.00**
1320S-5SPLR-O	132 kW	260A	std. pump control panel	1150	850	330	**205 000.00**

Larger sizes available on request

New

015S-1SP-L4

Electron Lite series - Pump panel - *(3 phase input 380-480V, 50/60Hz)*

Electron "Lite" series, featuring pre-configured parameters and an easy-to-navigate keypad with LED display and potentiometer, housed in a compact, durable steel enclosure perfect for various applications including: irrigation, borehole, booster pumps, and water storage tanks.

- Pre-configured parameters for irrigation applications with **ME300** drive
- Constant pressure control with the use of a pressure transmitter
- Excludes remote monitoring

220V three-phase pump panel							
015S-1SP-L2	1.5 kW	7.5A	basic pump control panel	450	300	220	**10 800.00**
022S-1SP-L2	2.2 kW	11.0A	basic pump control panel	450	300	220	**11 900.00**
400V three-phase pump panel							
015S-1SP-L4	1.5 kW	4.2A	basic pump control panel	450	300	220	**12 300.00**
022S-1SP-L4	2.2 kW	5.5A	basic pump control panel	450	300	220	**13 500.00**
040S-1SP-L4	4.0 kW	9.0A	basic pump control panel	450	300	220	**14 600.00**
055S-1SP-L4	5.5 kW	13.0A	basic pump control panel	450	300	220	**16 400.00**
075S-1SP-L4	7.5 kW	17.0A	basic pump control panel	450	300	220	**18 600.00**

Above ZAR prices do not include VAT. E&OE

PHOTON Series

IOT PV

POLAR CLOUD

220PV4-O-CP

Photon - Solar pump panels

Photon pump control panels harness solar energy to deliver water efficiently, ideal for remote agricultural areas and reducing electricity costs.

Modes:

- **Hybrid Mode:** Combines solar and AC power, ensuring constant pressure control during low solar conditions (CP2000)
- **Solar Mode:** Adjusts pump speed based on solar radiation: maintains user-defined output pressure with a pressure transmitter (CP2000)

Features:

- **Comprehensive System:** Includes solar and control tracking with a 10k step PLC, underload/no-flow detection, and optional no-flow digital input
- **User-Friendly Interface:** LCD shows motor current, frequency, DC voltage, and pressure. Graphical menu for easy navigation of advanced settings like MPPT values and bore hole pump startup
- **Rugged Enclosure:** Powder-coated metal (RAL2000)

Flexible Power Options: Hybrid mode, allowing seamless integration with AC power for continuous operation in varying sunlight conditions.

AC Automatic mode: *Works with a* **Type 528** *pressure transmitter, requiring a* **4-pin M12** *cable (purchased separately)*

type	motor rating	rated current (A)	vmp range (DC)	Voc (DC)	dimensions (mm) (H)	(W)	(D)	price
Photon series - Solar pump panels								
• Customized LCD keypad interface								
• Pressure control/limiter in solar mode								
• Constant speed and pressure control in hybrid mode								
• Sleep and wake functions in both solar and hybrid mode								
400V three-phase pump panel *(hybrid)*								
022PV4-D-O-CP	2.2 kW	5.5A	500 - 650V	770V	650	450	270	**30 600.00**
055PV4-D-O-CP	5.5 kW	13A	500 - 650V	770V	650	450	270	**35 300.00**
075PV4-D-O-CP	7.5 kW	18A	500 - 650V	770V	650	450	270	**37 400.00**
110PV4-D-O-CP	11 kW	24A	500 - 650V	770V	850	600	270	**47 600.00**
150PV4-D-O-CP	15 kW	32A	500 - 650V	770V	850	600	270	**54 500.00**
220PV4-D-O-CP	22 kW	45A	500 - 650V	770V	950	700	330	**68 700.00**
370PV4-D-O-CP	37 kW	73A	500 - 650V	770V	950	700	330	**86 400.00**
450PV4-D-O-CP	45 kW	91A	500 - 650V	770V	950	700	330	**110 000.00**
400V three-phase pump panel *(off-grid)*								
110PV4-O-CP	11 kW	24A	500-650V	770V	850	600	270	**41 400.00**
150PV4-O-CP	15 kW	32A	500-650V	770V	850	600	270	**48 300.00**
220PV4-O-CP	22 kW	45A	500-650V	770V	950	700	330	**62 300.00**
370PV4-O-CP	37 kW	73A	500-650V	770V	950	700	330	**74 800.00**
450PV4-O-CP	45 kW	91A	500-650V	770V	950	700	330	**86 400.00**

Larger sizes available on request

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Register Within 60 Days: To activate your included ONE YEAR SUBSCRIPTION to Polar Cloud and immediately begin monitoring your system.

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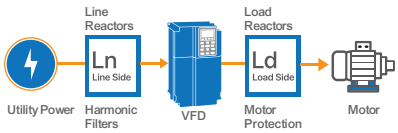


AC reactors *(chokes) are suited for all series Delta drives and are finely tuned to manufacturer's specifications.*

Installing an AC reactor on the **input** side of an AC motor drive can increase line impedance, improve power factor, reduce input current, and reduce harmonics generated from the motor drive.

Installing the AC reactor on the **output** side can allow the user to extend the output power cable further than otherwise possible *(actual length - model dependant)*. When multiple motors are installed on a single VFD which are being protected by manual motor starters it is advised to install a load reactor.

- High quality grain orientated silicon steel
- Normal operation temperature *(40°C...50°C)* above ambient

New

EIR...

Input/Line AC reactors — 4% impedance

- Increase line impedance, improves power factor, reduced input current, increase system capacity and reduce interference generated from the motor drive
- Reduces momentary voltage surges or abnormal current spikes from the mains supply
- Install an AC input reactor in series between the main power and the three input phases R S T

type	motor rating (kW)	rated current (A)	impedance (mH)	description	dimensions (mm) (H)	(W)	(D)	price
EIR003A0850	1.5 kW	3.5A	8.5	AC input reactor	135	120	70	**3 440.00**
EIR005A0590	2.2 kW	5.0A	5.9	AC input reactor	135	120	85	**3 440.00**
EIR008A0350	4.0 kW	8.5A	3.50	AC input reactor	155	150	80	**4 020.00**
EIR012A0260	5.5 kW	12A	2.60	AC input reactor	160	150	80	**4 020.00**
EIR016A0190	7.5 kW	16A	1.9	AC input reactor	160	150	100	**4 590.00**
EIR022A0134	11 kW	22A	1.34	AC input reactor	185	150	100	**4 920.00**
EIR030A0100	15 kW	30A	1	AC input reactor	160	180	110	**6 310.00**
EIR037AP800	18.5 kW	37A	0.8	AC input reactor	160	180	130	**6 880.00**
EIR044AP670	22 kW	44A	0.67	AC input reactor	160	180	135	**7 790.00**
EIR060AP490	30 kW	60A	0.49	AC input reactor	210	240	150	**10 400.00**
EIR072AP400	37 kW	72A	0.4	AC input reactor	210	240	155	**11 300.00**
EIR085AP350	45 kW	85A	0.35	AC input reactor	210	240	170	**12 100.00**
EIR105AP280	55 kW	105A	0.28	AC input reactor	205	240	175	**12 700.00**
EIR140AP210	75 kW	140A	0.21	AC input reactor	270	300	170	**16 100.00**
EIR170AP170	90 kW	170A	0.17	AC input reactor	270	300	190	**18 400.00**
EIR205AP140	110 kW	205A	0.14	AC input reactor	260	300	240	**21 300.00**
EIR245AP120	132 kW	245A	0.12	AC input reactor	260	300	210	**23 000.00**
EIR295AP100	160 kW	295A	0.1	AC input reactor	310	360	200	**25 800.00**
EIR340AP086	185 kW	340A	0.086	AC input reactor	310	390	230	**33 300.00**
EIR370AP079	200 kW	370A	0.079	AC input reactor	320	360	235	**37 900.00**
EIR460AP064	250 kW	460A	0.064	AC input reactor	440	440	255	**41 900.00**
EIR580AP050	315 kW	580A	0.05	AC input reactor	430	440	275	**48 800.00**
EIR636AP046	350 kW	636A	0.046	AC input reactor	480	440	280	**57 400.00**
EIR710AP042	400 kW	710A	0.042	AC input reactor	480	440	280	**63 100.00**
EIR800AP037	450 kW	800A	0.037	AC input reactor	475	470	290	**71 700.00**
EIR880AP034	500 kW	880A	0.034	AC input reactor	550	520	320	**77 400.00**

Output/Load AC reactors — 1.2% impedance

EOR...

- Useful for applications of multiple motors installed on a single VSD
- Assists in prevention of ground fault (GFF), over-current (OC), over-voltage (OV) on long cable runs
- Install an AC output reactor in series between the three output phases U V W and the motor
- Increases the high-frequency impedance and reduces terminal voltage to protect the motor

type	motor rating (kW)	rated current (A)	impedance (mH)	description	dimensions (mm) (H)	(W)	(D)	price
EOR003A0260	1.5 kW	3.5A	2.6	AC output reactor	135	120	70	**2 870.00**
EOR005A0180	2.2 kW	5.0A	1.80	AC output reactor	135	120	70	**2 870.00**
EOR008A0105	4 kW	8.5A	1.05	AC output reactor	135	120	90	**2 870.00**
EOR012AP800	5.5 kW	12A	0.8	AC output reactor	135	120	90	**3 120.00**
EOR016AP630	7.5 kW	16A	0.63	AC output reactor	160	150	90	**3 940.00**
EOR022AP400	11 kW	22A	0.4	AC output reactor	190	150	75	**4 020.00**
EOR030AP300	15 kW	30A	0.3	AC output reactor	130	150	115	**4 590.00**
EOR037AP240	18.5 kW	37A	0.24	AC output reactor	160	180	110	**5 490.00**
EOR044AP220	22 kW	44A	0.22	AC output reactor	160	180	120	**6 310.00**
EOR060AP150	30 kW	60A	0.15	AC output reactor	160	180	140	**7 460.00**
EOR072AP130	37 kW	72A	0.13	AC output reactor	180	240	160	**8 600.00**
EOR085AP110	45 kW	85A	0.11	AC output reactor	180	240	160	**10 400.00**
EOR105AP090	55 kW	105A	0.09	AC output reactor	180	240	160	**10 900.00**
EOR140AP070	75 kW	140A	0.07	AC output reactor	235	240	160	**12 700.00**
EOR170AP052	90 kW	170A	0.052	AC output reactor	245	240	155	**13 800.00**
EOR205AP043	110 kW	205A	0.043	AC output reactor	260	300	170	**15 000.00**
EOR245AP036	132 kW	245A	0.036	AC output reactor	260	300	170	**17 200.00**
EOR295AP030	160 kW	295A	0.03	AC output reactor	310	360	200	**21 800.00**
EOR340AP026	185 kW	340A	0.026	AC output reactor	310	360	180	**24 100.00**
EOR370AP024	200 kW	370A	0.024	AC output reactor	315	360	220	**26 400.00**
EOR460AP020	250 kW	460A	0.02	AC output reactor	365	360	220	**30 400.00**
EOR580AP016	315 kW	580A	0.016	AC output reactor	395	360	230	**45 900.00**
EOR636AP014	350 kW	636A	0.014	AC output reactor	480	420	240	**51 600.00**
EOR710AP013	400 kW	710A	0.013	AC output reactor	420	400	250	**57 400.00**
EOR800AP011	450 kW	800A	0.011	AC output reactor	490	420	270	**61 900.00**
EOR880AP010	500 kW	880A	0.01	AC output reactor	490	420	270	**66 000.00**

Use a motor with a rated voltage ≤ 500 VAC and insulation level ≥ 1.35 kV in accordance with IEC 60034-17
Distances based on non-shielded/non-armoured cables. Please refer to specific drive manual for more details.
For longer cable distances use a reactor with 3% impedance available on request.

Above ZAR prices do not include VAT. E&OE

ESF...

Sinusoidal / Sinewave output filters

Frequency converters generate high du/dt electrical interference signals which disturb the load, increasing the insulation load putting stress on the motor.

SINUSOIDAL FILTERS are low-pass filters providing a perfect sinusoid waveform to the motor which filters frequency from the PWM *(pulse width modulation)* output signal of the inverter, reducing motor heating in installations where the drive and motor are separated by extreme distances.

The filters are connected between the frequency converter and the motor reducing high-frequency transient emissions improving motor efficiency and the entire EMC load on equipment.
Suited for older motors *(not designed for inverter operations)* or installations with long cable lengths.

- Reduction of the motor noise and eddy current losses
- Inverter-operation on long motor cables made possible
- Protection for motors driven by inverters
- Generation of a sinusoidal output voltage

type	motor rating (kW)	rated current (A)	impedance (mH)	description	dimensions (mm) (H)	(W)	(D)	price
ESF011A0055	5.5 kW	11A	5.50	Sinewave output filter	235	240	170	**20 100.00**
ESF015A0075	7.5 kW	15A	4.00	Sinewave output filter	235	240	190	**20 900.00**
ESF022A0110	11 kW	22A	2.80	Sinewave output filter	265	240	240	**22 200.00**
ESF030A0150	15 kW	30A	2.10	Sinewave output filter	285	300	300	**25 400.00**
ESF037A0185	18.5 kW	37A	1.75	Sinewave output filter	285	300	290	**28 700.00**
ESF044A0220	22 kW	44A	1.40	Sinewave output filter	285	300	290	**29 500.00**
ESF057A0300	30 kW	57A	1.10	Sinewave output filter	375	360	340	**32 000.00**
ESF072A0370	37 kW	72A	0.82	Sinewave output filter	375	360	350	**43 500.00**
ESF085A0450	45 kW	85A	0.75	Sinewave output filter	375	360	360	**51 200.00**
ESF105A0550	55 kW	105A	0.60	Sinewave output filter	390	420	360	**54 100.00**
ESF140A0750	75 kW	140A	0.45	Sinewave output filter	390	420	380	**60 200.00**
ESF170A0900	90 kW	170A	0.36	Sinewave output filter	420	420	380	**71 700.00**

Braking resistors and EMC filters for drives

Aluminium-housed compact brake resistors have protection class superior to conventional ceramic-skeleton resistors offer improved heat dissipation and overload capabilities, designed to endure high pulse loads, common with heavy duty inverters and regenerative braking circuits in industrial drive systems.

- High pulse load and high vibration capability

Protection: IP33 *(others available on request)*
Temperature coefficient: Less than 400 ppm/ºC
Dielectric strength: AC 3.5kV @50Hz 5s

RXLG...

type	power (W)	resistance (ohm)	terminal	description	dimensions (mm) (H)	(W)	(D)	price
Aluminium-housed resistors		Tolerance: <1000VDC, <1200VAC						
RXLG-80W/200RJ	80	200 Ω	cable	brake resistor	110	40	20	**366.00**
RXLG-200W/91RJ	200	91 Ω	cable	brake resistor	170	60	30	**586.00**
RXLG-300W/70RJ	300	70 Ω	cable	brake resistor	220	60	30	**720.00**
RXLG-80W/750RJ	80	750 Ω	cable	brake resistor	115	40	20	**366.00**
RXLG-200W/360RJ	200	360 Ω	cable	brake resistor	170	60	30	**586.00**
RXLG-300W/250RJ	300	250 Ω	cable	brake resistor	220	60	30	**720.00**
RXLG-1KW/75RJ	1000	75 Ω	cable	brake resistor	400	60	30	**1 650.00**
RXLG-1.5KW/43RJ	1500	43 Ω	busbar	brake resistor	400	107	50	**2 550.00**
RXLG-2KW/32RJ	2000	32 Ω	busbar	brake resistor	450	107	50	**3 460.00**
RXLG-3KW/26RJ	3000	26 Ω	busbar	brake resistor	500	107	50	**5 220.00**
RXLG-4.8KW/16RJ	5000	16 Ω	busbar	brake resistor	700	107	50	**7 950.00**
RXLG-4KW/20RJ	5000	20 Ω	busbar	brake resistor	700	107	50	**6 820.00**
RXLG-6KW/14RJ	6000	14 Ω	busbar	brake resistor	750	107	50	**9 330.00**

VFDB4030

Braking units *for drives without built-in braking chopper*

type	IMAX (A) 10%ED	ICONT (A)	Input range (VDC)	Min. Resistance	price
VFDB4030	40	15	400-750	20 Ω	**7 350.00**
VFDB4045	60	18	400-750	13.6 Ω	**7 650.00**
VFDB4110	126	45	400-751	6 Ω	**21 700.00**
VFDB4160	190	50	400-752	4 Ω	**25 400.00**
VFDB4185	225	100	400-753	3.4 Ω	**29 900.00**
VFDB5055	60	20	607-1000	15.8 Ω	**10 400.00**
VFDB6055	46	29	600-1120	24.5 Ω	**14 600.00**
VFDB6110	92	59	600-1121	12.2 Ω	**18 100.00**
VFDB6160	136	86	600-1122	8.2 Ω	**23 800.00**
VFDB6200	162	107	600-1123	6.9 Ω	**29 400.00**

IP55 · IE3 · VFD Ready · B3 Motors

Electric Motors (Cast iron frame) - IE3 premium efficiency

TechTop electric motors conform to IEC standards, guaranteeing quality and reliability. Ideally suited for commercial, manufacturing, construction, and agricultural irrigation applications.

- Removable feet - terminal boxes can be side or top of motor
- Continuous duty service factor - S1
- Thermistors fitted as standard *(frame 160 and above)*
- Suitable for VSD use *(class H insulation rating)*
- In accordance with **SANS/IEC 60034-2-1** standards
- Electrically insulated non-drive end bearings *(frame 315 and above)*

New

T3CR 90S-2

Three-phase cast iron motors
Foot mounting (B3)

Protection degree: IP55
Insulation class: **H** (180°C) / ambient temperature 40°C
Colour: RAL 7024 *(graphite grey)*
Δ 220-240V *(or)* **Y** 380-415V 50Hz *(frame 80 - 100)*
Δ 380-415V *(or)* **Y** 660-690V 50Hz *(frame 112 - 355)*

Type	output (kW)	frame size	pole	speed RPM	description	shaft Ø (mm)	weight (kg)	price
2-pole	**Three-phase motors**				**IE3** - premium efficiency			
T3CR 801-2	0.75 kW	80	2	2880	3ph cast iron motor	19	15.2	**3 940.00**
T3CR 802-2	1.1 kW	80	2	2880	3ph cast iron motor	19	17.1	**4 320.00**
T3CR 90S-2	1.5 kW	90S	2	2880	3ph cast iron motor	24	21.5	**5 410.00**
T3CR 90L-2	2.2 kW	90L	2	2880	3ph cast iron motor	24	24.6	**6 260.00**
T3CR 100L-2	3 kW	100L	2	2900	3ph cast iron motor	28	35.5	**8 180.00**
T3CR 112M-2	4 kW	112M	2	2910	3ph cast iron motor	28	44.5	**10 200.00**
T3CR 132S1-2	5.5 kW	132S	2	2910	3ph cast iron motor	38	63.2	**13 600.00**
T3CR 132S2-2	7.5 kW	132S	2	2920	3ph cast iron motor	38	70.2	**14 900.00**
T3CR 160M1-2	11 kW	160M	2	2930	3ph cast iron motor	42	118	**26 700.00**
T3CR 160M2-2	15 kW	160M	2	2940	3ph cast iron motor	42	128	**31 700.00**
T3CR 160L-2	18.5 kW	160L	2	2940	3ph cast iron motor	42	144	**36 200.00**
T3CR 180M-2	22 kW	180M	2	2945	3ph cast iron motor	48	183	**45 000.00**
T3CR 200L1-2	30 kW	200L	2	2945	3ph cast iron motor	55	247	**56 400.00**
T3CR 200L2-2	37 kW	200L	2	2945	3ph cast iron motor	55	268	**63 000.00**
T3CR 225M-2	45 kW	225M	2	2950	3ph cast iron motor	55	369	**75 000.00**
T3CR 250M1-2	55 kW	250M	2	2960	3ph cast iron motor	60	428	**93 700.00**
T3CR 250M2-2	75 kW	250M	2	2960	3ph cast iron motor	60	587	**113 000.00**
T3CR 280M1-2	90 kW	280M	2	2960	3ph cast iron motor	65	655	**133 000.00**
T3CR 280M2-2	110 kW	280M	2	2960	3ph cast iron motor	65	980	**158 000.00**
T3C 315M-2	132 kW	315M	2	2960	3ph cast iron motor	65	1100	**259 000.00**
T3C 315L1-2	160 kW	315L	2	2960	3ph cast iron motor	65	1155	**292 000.00**

Larger sizes available on request

T3CR 160L-4

4-pole	**Three-phase motors**				**IE3** - premium efficiency			
T3CR 802-4	0.75 kW	80	4	1420	3ph cast iron motor	19	18.2	**4 200.00**
T3CR 90S-4	1.1 kW	90S	4	1430	3ph cast iron motor	24	23.0	**5 170.00**
T3CR 90L-4	1.5 kW	90L	4	1430	3ph cast iron motor	24	26.3	**6 120.00**
T3CR 100L1-4	2.2 kW	100L	4	1430	3ph cast iron motor	28	35.5	**7 880.00**
T3CR 100L2-4	3 kW	100L	4	1435	3ph cast iron motor	28	38.5	**8 930.00**
T3CR 112M-4	4 kW	112M	4	1440	3ph cast iron motor	28	47.0	**11 400.00**
T3CR 132S-4	5.5 kW	132S	4	1440	3ph cast iron motor	38	68.3	**13 900.00**
T3CR 132M1-4	7.5 kW	132M	4	1440	3ph cast iron motor	38	79	**16 300.00**
T3CR 160M-4	11 kW	160M	4	1450	3ph cast iron motor	42	127	**26 500.00**
T3CR 160L-4	15 kW	160L	4	1450	3ph cast iron motor	42	160	**31 600.00**
T3CR 180M-4	18.5 kW	180M	4	1460	3ph cast iron motor	48	170	**38 800.00**
T3CR 180L-4	22 kW	180L	4	1460	3ph cast iron motor	48	196	**45 200.00**
T3CR 200L1-4	30 kW	200L	4	1470	3ph cast iron motor	55	252	**58 800.00**
T3CR 225S-4	37 kW	225S	4	1470	3ph cast iron motor	60	325	**71 800.00**
T3CR 225M1-4	45 kW	225M	4	1470	3ph cast iron motor	60	353	**80 300.00**
T3CR 250M1-4	55 kW	250M	4	1470	3ph cast iron motor	65	428	**98 800.00**
T3CR 250M2-4	75 kW	250M	4	1480	3ph cast iron motor	75	674	**116 000.00**
T3CR 280M1-4	90 kW	280M	4	1480	3ph cast iron motor	75	692	**141 000.00**
T3CR 280M2-4	110 kW	280M	4	1480	3ph cast iron motor	80	1027	**174 000.00**
T3C 315M-4	132 kW	315M	4	1480	3ph cast iron motor	80	1155	**261 000.00**
T3C 315L1-4	160 kW	315L	4	1480	3ph cast iron motor	80	1240	**288 000.00**
T3C 315L3-4	200 kW	315L	4	1480	3ph cast iron motor	80	1400	**301 000.00**
T3C 355M1-4	220 kW	355M	4	1480	3ph cast iron motor	95	1560	**459 000.00**
T3C 355M2-4	250 kW	355M	4	1480	3ph cast iron motor	95	1600	**471 000.00**
T3C 355L1-4	280 kW	355L	4	1480	3ph cast iron motor	95	1650	**507 000.00**
T3C 355L2-4	315 kW	355L	4	1480	3ph cast iron motor	95	1700	**543 000.00**
T3C 355L3-4	355 kW	355L	4	1480	3ph cast iron motor	95	1700	**593 000.00**

Larger sizes available on request

T3C 315L3-4

Above ZAR prices do not include VAT. E&OE

VFD Ready

B3 Motors

Electric Motors (Cast iron frame) - IE3 top premium efficiency

TechTop electric motors conform to IEC standards, guaranteeing quality and reliability. Ideally suited for commercial, manufacturing, construction, and agricultural irrigation applications.

- Suitable for VSD use *(class H insulation rating)*
- In accordance with **SANS/IEC 60034-2-1** standards

Three-phase cast iron motors

Foot mounting (B3)

Protection degree: IP55
Insulation class: H (180°C) / ambient temperature 40°C
Colour: RAL 7024 *(graphite grey)*
Δ 220-240V *(or)* **Y** 380-415V 50Hz *(frame 80 - 100)*
Δ 380-415V *(or)* **Y** 660-690V 50Hz *(frame 112 - 355)*

T3CR 90L-6

Type	output (kW)	frame size	pole	speed RPM	description	shaft Ø (mm)	weight (kg)	price
6 pole	**Three-phase motors**					**IE3** - premium efficiency		
T3CR 90S-6	0.75 kW	90S	6	935	3ph cast iron motor	24	21.5	**5 260.00**
T3CR 90L-6	1.1 kW	90L	6	940	3ph cast iron motor	24	25.5	**6 480.00**
T3CR 100L-6	1.5 kW	100L	6	940	3ph cast iron motor	28	33.5	**7 440.00**
T3CR 112M-6	2.2 kW	112M	6	940	3ph cast iron motor	28	40.0	**9 700.00**
T3CR 132S-6	3 kW	132S	6	940	3ph cast iron motor	38	59.0	**13 200.00**
T3CR 132M1-6	4 kW	132M	6	950	3ph cast iron motor	38	75.5	**15 200.00**
T3CR 132M2-6	5.5 kW	132M	6	950	3ph cast iron motor	38	76.3	**17 500.00**
T3CR 160M-6	7.5 kW	160M	6	960	3ph cast iron motor	42	112	**26 400.00**
T3CR 160L-6	11 kW	160L	6	960	3ph cast iron motor	42	134	**31 900.00**
T3CR 180L-6	15 kW	180L	6	960	3ph cast iron motor	48	185	**41 800.00**
T3CR 200L1-6	18.5 kW	200L	6	970	3ph cast iron motor	55	231	**51 300.00**
T3CR 200L2-6	22 kW	200L	6	970	3ph cast iron motor	55	249	**55 500.00**
T3CR 225M-6	30 kW	225M	6	975	3ph cast iron motor	60	339	**72 200.00**
T3CR 250M1-6	37 kW	250M	6	975	3ph cast iron motor	65	399	**91 500.00**
T3CR 250M2-6	45 kW	250M	6	980	3ph cast iron motor	75	551	**104 000.00**
T3CR 280M1-6	55 kW	280M	6	980	3ph cast iron motor	75	624	**127 000.00**
T3CR 280M2-6	75 kW	280M	6	980	3ph cast iron motor	80	860	**159 000.00**
T3C 315M-6	90 kW	315M	6	980	3ph cast iron motor	80	970	**264 000.00**
T3C 315L1-6	110 kW	315L	6	980	3ph cast iron motor	80	1070	**296 000.00**
T3C 315L2-6	132 kW	315L	6	980	3ph cast iron motor	80	1196	**325 000.00**
T3C 355M1-6	160 kW	355M	6	980	3ph cast iron motor	95	1537	**456 000.00**

Larger sizes available on request

ML90L-2

Aluminium- Single-phase electric motors						**IE1** - standard efficiency		
Aluminium motors *(Totally Enclosed Fan Cooled) (TEFC)*								
Foot mounting (B3)								
- High performance and efficiency								
- Removable feet - terminal boxes can be side or top of motor								
- Continuous duty service factor - S1								
- Suitable for VSD use *(class H insulation rating)*								
- In accordance with **SANS/IEC 60034-2-1** standards								
- Colour: RAL 7024 *(graphite grey)*								
Protection degree: IP55								
Insulation class: F (155°C)								
Single-phase electric motors								
220V - High torque motor *(capacitor start and run)*								
2-pole	**Single - phase motors**					**IE1** - standard efficiency		
ML711-2	0.37 kW	71	2	2780	1ph aluminium motor	14	6.1	**3 430.00**
ML712-2	0.55 kW	71	2	2790	1ph aluminium motor	14	7.0	**3 870.00**
ML801-2	0.75 kW	80	2	2840	1ph aluminium motor	19	9.0	**4 840.00**
ML802-2	1.1 kW	80	2	2850	1ph aluminium motor	19	10.3	**5 490.00**
ML90S-2	1.5 kW	90S	2	2860	1ph aluminium motor	24	13.8	**6 960.00**
ML90L-2	2.2 kW	90L	2	2850	1ph aluminium motor	24	16.8	**8 280.00**
4-pole	**Single - phase motors**					**IE1** - standard efficiency		
ML711-4	0.25 kW	71	4	1415	1ph aluminium motor	14	5.9	**3 540.00**
ML712-4	0.37 kW	71	4	1410	1ph aluminium motor	14	6.9	**3 920.00**
ML801-4	0.55 kW	80	4	1420	1ph aluminium motor	19	9.6	**4 960.00**
ML802-4	0.75 kW	80	4	1420	1ph aluminium motor	19	10.9	**5 520.00**
ML90S-4	1.1 kW	90S	4	1420	1ph aluminium motor	24	13.8	**7 510.00**
ML90L-4	1.5 kW	90L	4	1420	1ph aluminium motor	24	16.7	**8 700.00**
ML100L1-4	2.2 kW	100L	4	1440	1ph aluminium motor	28	22.8	**11 100.00**

IP55 · IE3 · VFD Ready · B5 Motors

Electric Motors (Cast iron frame)

TechTop electric motors conform to IEC standards, guaranteeing quality and reliability. Ideally suited for commercial, manufacturing, construction, and agricultural irrigation applications.

Cast Iron motors - IE3 top premium efficiency

- High performance and efficiency
- Removable feet terminal boxes can be side or top of motor
- Continuous duty service factor - S1
- Thermistors fitted as standard *(frame 160 to 355)*
- Electrically insulated non-drive end bearings *(frame 315 and above)*
- Suitable for VSD use *(class H insulation rating)*
- In accordance with SANS/IEC 60034-2-1 standards

Three-phase cast iron motors

Flange/Foot mounting (B35)

Protection degree: IP55
Insulation class: **H** (180°C) / ambient temperature 40°C
Colour: RAL 7024 *(graphite grey)*
Δ 220-240V *(or)* **Y** 380-415V 50Hz *(frame 80 - 100)*
Δ 380-415V *(or)* **Y** 660-690V 50Hz *(frame 112 - 355)*

New

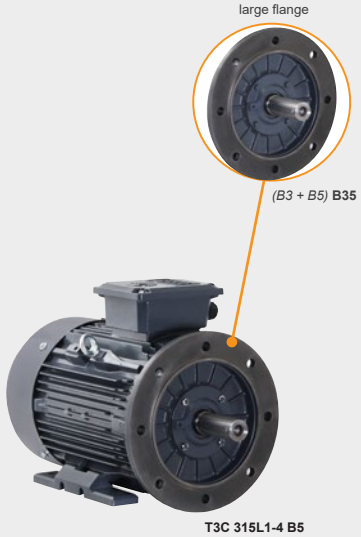
face flange

(B3 + B14) **B34**

T3CR 90S-2 B5

T3C 315L1-2 B5

large flange



(B3 + B5) **B35**

T3C 315L1-4 B5

Type	output (kW)	frame size	pole	speed RPM	description	shaft Ø (mm)	weight (kg)	price
2-pole	**Three-phase motors**				**IE3** - premium efficiency			
T3CR 801-2 B5*	0.75 kW	80	2	2880	3ph cast iron motor	19	15.2	**4 540.00**
T3CR 802-2 B5*	1.1 kW	80	2	2880	3ph cast iron motor	19	17.1	**4 920.00**
T3CR 90S-2 B5*	1.5 kW	90S	2	2880	3ph cast iron motor	24	21.5	**6 130.00**
T3CR 90L-2 B5*	2.2 kW	90L	2	2880	3ph cast iron motor	24	24.6	**6 980.00**
T3CR 100L-2 B5*	3 kW	100L	2	2900	3ph cast iron motor	28	35.5	**9 200.00**
T3CR 112M-2 B5*	4 kW	112M	2	2910	3ph cast iron motor	28	44.5	**11 500.00**
T3CR 132S1-2 B5*	5.5 kW	132S	2	2910	3ph cast iron motor	38	63.2	**15 300.00**
T3CR 132S2-2 B5*	7.5 kW	132S	2	2920	3ph cast iron motor	38	70.2	**16 600.00**
T3CR 160M1-2 B5*	11 kW	160M	2	2930	3ph cast iron motor	42	118	**28 800.00**
T3CR 160M2-2 B5*	15 kW	160M	2	2940	3ph cast iron motor	42	128	**34 380.00**
T3CR 160L-2 B5*	18.5 kW	160L	2	2940	3ph cast iron motor	42	144	**38 930.00**
T3CR 180M-2 B5	22 kW	180M	2	2945	3ph cast iron motor	48	183	**48 500.00**
T3CR 200L1-2 B5	30 kW	200L	2	2945	3ph cast iron motor	55	247	**61 160.00**
T3CR 200L2-2 B5	37 kW	200L	2	2945	3ph cast iron motor	55	268	**67 820.00**
T3CR 225M-2 B5	45 kW	225M	2	2950	3ph cast iron motor	55	369	**80 220.00**
T3CR 250M1-2 B5	55 kW	250M	2	2960	3ph cast iron motor	60	428	**100 510.00**
T3CR 250M2-2 B5	75 kW	250M	2	2960	3ph cast iron motor	60	587	**120 000.00**
T3CR 280M1-2 B5	90 kW	280M	2	2960	3ph cast iron motor	65	655	**141 460.00**
T3CR 280M2-2 B5	110 kW	280M	2	2960	3ph cast iron motor	65	980	**166 710.00**
T3C 315M-2 B5	132 kW	315M	2	2960	3ph cast iron motor	65	1100	**276 000.00**
T3C 315L1-2 B5	160 kW	315L	2	2960	3ph cast iron motor	65	1155	**303 310.00**
Larger sizes available on request								
4-pole	**Three-phase motors**				**IE3** - premium efficiency			
T3CR 802-4 B5*	0.75 kW	80	4	1420	3ph cast iron motor	19	18.2	**4 800.00**
T3CR 90S-4 B5*	1.1 kW	90S	4	1430	3ph cast iron motor	24	23.0	**5 880.00**
T3CR 90L-4 B5*	1.5 kW	90L	4	1430	3ph cast iron motor	24	26.3	**6 840.00**
T3CR 100L1-4 B5*	2.2 kW	100L	4	1430	3ph cast iron motor	28	35.5	**8 900.00**
T3CR 100L2-4 B5*	3 kW	100L	4	1435	3ph cast iron motor	28	38.5	**9 960.00**
T3CR 112M-4 B5*	4 kW	112M	4	1440	3ph cast iron motor	28	47.0	**12 530.00**
T3CR 132S-4 B5*	5.5 kW	132S	4	1440	3ph cast iron motor	38	68.3	**15 600.00**
T3CR 132M1-4 B5*	7.5 kW	132M	4	1440	3ph cast iron motor	38	79	**18 100.00**
T3CR 160M-4 B5*	11 kW	160M	4	1450	3ph cast iron motor	42	127	**29 800.00**
T3CR 160L-4 B5*	15 kW	160L	4	1450	3ph cast iron motor	42	160	**35 000.00**
T3CR 180M-4 B5	18.5 kW	180M	4	1460	3ph cast iron motor	48	170	**43 200.00**
T3CR 180L-4 B5	22 kW	180L	4	1460	3ph cast iron motor	48	196	**48 700.00**
T3CR 200L1-4 B5	30 kW	200L	4	1470	3ph cast iron motor	55	252	**63 580.00**
T3CR 225S-4 B5	37 kW	225S	4	1470	3ph cast iron motor	60	325	**76 990.00**
T3CR 225M1-4 B5	45 kW	225M	4	1470	3ph cast iron motor	60	353	**85 580.00**
T3CR 250M1-4 B5	55 kW	250M	4	1470	3ph cast iron motor	65	428	**105 700.00**
T3CR 250M2-4 B5	75 kW	250M	4	1480	3ph cast iron motor	75	674	**123 070.00**
T3CR 280M1-4 B5	90 kW	280M	4	1480	3ph cast iron motor	75	692	**149 600.00**
T3CR 280M2-4 B5	110 kW	280M	4	1480	3ph cast iron motor	80	1027	**182 930.00**
T3C 315M-4 B5	132 kW	315M	4	1480	3ph cast iron motor	80	1155	**279 000.00**
T3C 315L1-4 B5	160 kW	315L	4	1480	3ph cast iron motor	80	1240	**307 000.00**
T3C 315L3-4 B5	200 kW	315L	4	1480	3ph cast iron motor	80	1400	**320 000.00**
T3C 355M1-4 B5	220 kW	355M	4	1480	3ph cast iron motor	95	1560	**487 000.00**
T3C 355L1-4 B5	280 kW	355L	4	1480	3ph cast iron motor	95	1650	**537 000.00**
T3C 355L2-4 B5	315 kW	355L	4	1480	3ph cast iron motor	95	1700	**574 000.00**

* *For **B14** flange replace **B5** with **B4**. Larger sizes available on request*

Above ZAR prices do not include VAT. E&OE

Electric Motors (Cast iron frame)
Three-phase cast iron motors

Flange/Foot mounting (B35)

Protection degree: IP55
Insulation class: **H** (180°C) / ambient temperature 40°C
Colour: RAL 7024 *(graphite grey)*
Δ 220-240V *(or)* **Y** 380-415V 50Hz *(frame 80 - 100)*
Δ 380-415V *(or)* **Y** 660-690V 50Hz *(frame 112 - 355)*

T3CR 90L-6 B5

Type	output (kW)	frame size	pole	speed RPM	description	shaft Ø (mm)	weight (kg)	price
6 pole	**Three-phase motors**					**IE3** - premium efficiency		
T3CR 90S-6 B5*	0.75	90S	6	935	3ph cast iron motor	24	21.5	**5 970.00**
T3CR 90L-6 B5*	1.1	90L	6	940	3ph cast iron motor	24	25.5	**7 210.00**
T3CR 100L-6 B5*	1.5	100L	6	940	3ph cast iron motor	28	33.5	**8 460.00**
T3CR 112M-6 B5*	2.2	112M	6	940	3ph cast iron motor	28	40.0	**10 820.00**
T3CR 132S-6 B5*	3	132S	6	940	3ph cast iron motor	38	59.0	**14 570.00**
T3CR 132M1-6 B5*	4	132M	6	950	3ph cast iron motor	38	75.5	**16 590.00**
T3CR 132M2-6 B5*	5.5	132M	6	950	3ph cast iron motor	38	76.3	**18 920.00**
T3CR 160M-6 B5*	7.5	160M	6	960	3ph cast iron motor	42	112	**29 030.00**
T3CR 160L-6 B5*	11	160L	6	960	3ph cast iron motor	42	134	**34 580.00**
T3CR 180L-6 B5	15	180L	6	960	3ph cast iron motor	48	185	**45 270.00**
T3CR 200L1-6 B5	18.5	200L	6	970	3ph cast iron motor	55	231	**56 000.00**
T3CR 200L2-6 B5	22	200L	6	970	3ph cast iron motor	55	249	**60 250.00**
T3CR 225M-6 B5	30	225M	6	975	3ph cast iron motor	60	339	**77 400.00**
T3CR 250M1-6 B5	37	250M	6	975	3ph cast iron motor	65	399	**98 320.00**
T3CR 250M2-6 B5	45	250M	6	980	3ph cast iron motor	75	551	**110 950.00**
T3CR 280M1-6 B5	55	280M	6	980	3ph cast iron motor	75	624	**135 460.00**
T3CR 280M2-6 B5	75	280M	6	980	3ph cast iron motor	80	860	**167 780.00**
T3C 315M-6 B5	90	315M	6	980	3ph cast iron motor	80	970	**275 030.00**
T3C 315L1-6 B5	110	315L	6	980	3ph cast iron motor	80	1070	**307 350.00**
T3C 315L2-6 B5	132	315L	6	980	3ph cast iron motor	80	1196	**336 640.00**
T3C 355M1-6 B5	160	355M	6	980	3ph cast iron motor	95	1537	**472 680.00**

* *For **B14** flange replace B5 with **B4**, larger sizes available on request*

T3C 315L1-6 B5

Aluminium - Single-phase electric motors

Aluminium motors *(Totally Enclosed Fan Cooled) (TEFC)*

Flange/Foot mounting (B35)

Protection degree: IP55
Insulation Class: **F** (155°C)

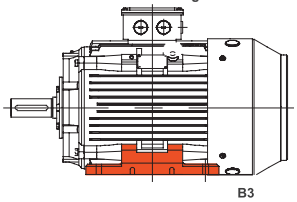
Single-phase electric motors

220V - High torque motor *(capacitor start and run)*

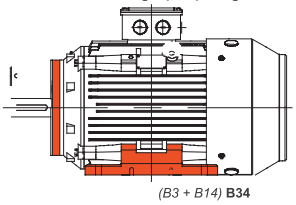
2-pole	**Single-phase motors**					**IE1** - standard efficiency		
ML711-2 B5	0.37	71	2	2780	1ph aluminium motor	14	6.1	**3 850.00**
ML712-2 B5	0.55	71	2	2790	1ph aluminium motor	14	7.0	**4 290.00**
ML801-2 B5	0.75	80	2	2840	1ph aluminium motor	19	9.0	**5 540.00**
ML802-2 B5	1.1	80	2	2850	1ph aluminium motor	19	10.3	**6 200.00**
ML90S-2 B5	1.5	90S	2	2860	1ph aluminium motor	24	13.8	**7 740.00**
ML90L-2 B5	2.2	90L	2	2850	1ph aluminium motor	24	16.8	**9 070.00**
4-pole	**Single-phase motors**					**IE1** - standard efficiency		
ML711-4 B5	0.25	71	4	1415	1ph aluminium motor	14	5.9	**3 960.00**
ML712-4 B5	0.37	71	4	1410	1ph aluminium motor	14	6.9	**4 340.00**
ML801-4 B5	0.55	80	4	1420	1ph aluminium motor	19	9.6	**5 660.00**
ML802-4 B5	0.75	80	4	1420	1ph aluminium motor	19	10.9	**6 230.00**
ML90S-4 B5	1.1	90S	4	1420	1ph aluminium motor	24	13.8	**8 300.00**
ML90L-4 B5	1.5	90L	4	1420	1ph aluminium motor	24	16.7	**9 500.00**
ML100L1-4 B5	2.2	100L	4	1440	1ph aluminium motor	28	22.8	**12 320.00**

Mounting options

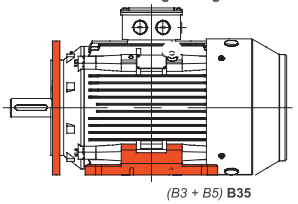
Foot mounting


B3

Foot mounting + (face) Flange


(B3 + B14) **B34**

Foot mounting + Flange


(B3 + B5) **B35**

Spare parts for motors

Spare parts for motors are available from our stocks and can be ordered *(see below examples)* as replacement parts for damaged components on the motor.

Example 1: Spare terminal box for **TC90** frame size, the ordering code is: **TC80/90/100TB**
Example 2: B5 flange for **TC250-2P** frame size, the ordering code is: **TC250-2PB5**

		TC80	TC90	TC100	TC112	TC132	TC160	TC180	TC200	TC225	TC250	TC280S	TC280M	TC315-2P	TC315-4/6P	TC355-2P	TC355-4/6P
Auxiliary Box	AB	MS56															
		144.00															
Terminal Box	TB	TC80/90/100					TC160/180				TC250/280S			TC315		TC355	
		434.00			597.00	597.00	1 260.00		2 140.00	2 140.00	2 900.00		3 040.00	2 990.00		3 980.00	
Terminal Block	TBL	TC80/90/100			TC112/132		TC160/180		TC200/225		TC250/280S			TC315		TC355	
		126.00			192.00		361.00		614.00		870.00		870.00	639.00		2 170.00	
Rubber Seal	RS	TC80/90/100			TC112/132		TC160/180		TC200/225		TC250/280S			TC315		TC355	
		11.00			14.00		22.00		39.00		50.00		50.00	141.00		292.00	
Plastic Fan	PF	T1C80	T1C90	T1C100	T1C112	T1C132	T1C160	T1C180	T1C200	T1C225	T1C250	T1C280			T1C315/355-4P	T1C355-2P	T1C 315/355-6P
		35.30	35.30	38.30	57.00	79.00	184.00	234.00	365.00	329.00	558.00	598.00		636.00	1 260.00	608.00	1 380.00
Fan Cover	FC	102.00	128.00	154.00	180.00	255.00	485.00	574.00	781.00	1 220.00	1 730.00	TC280		3 370.00	3 370.00	4 100.00	4 290.00
												2 080.00					
Rain Cover	RFC	164.00	197.00	240.00	283.00	413.00	771.00	904.00	1 260.00	1 840.00	2 590.00	TC280		4 760.00	4 760.00	4 100.00	4 290.00
												3 210.00					
End Shield (NE & NDE)	ES	185.00	210.00	293.00	432.00	590.00	1 050.00	1 510.00	1 980.00	2 590.00							
End Shield (Drive End)	ESDE										TC250-2P	TC250-4/6P	TC280-2P	TC280-4/6P	TC315-2P	TC315-4/6P	TC355-2P	TC355-4/6P
											3 240.00	3 150.00	4 000.00	4 050.00	6 590.00	6 600.00	6 150.00	6 490.00
End Shield (Non-Drive End)	ESND												TC280		TC315		TC355	
											3 240.00		4 000.00		6 590.00		6 440.00	
Bearing Cover	BC						225.00	319.00	447.00	550.00	665.00		TC280		TC315		TC355	
													1 020.00		1 630.00		2 020.00	
Oil Seal	OS	13.00	13.00	14.00	14.00	14.00	27.00	37.00	44.00	POR	POR		POR		POR		POR	
B5 Flange	B5										TC250-2P	TC250-4/6P	TC280-2P	TC280-4/6P				
		556.00	655.00	933.00	1 010.00	1 230.00	2 340.00	3 020.00	4 150.00	4 430.00	5 810.00	5 850.00	7 060.00	7 120.00	8 310.00	7 940.00	11 400.00	12 000.00
B14 Flange	B14	258.00	289.00	389.00	479.00	688.00	1 820.00											
Removable Feet	RF	POR																

G-355C...

Terminal block

Terminal box

B14 Flange

Forced cooling kit for cast iron motors

Forced cooling is recommended when the motor speed is below 25 Hz to compensate for the reduced cooling capacity of the motor at lower speeds.

Frame size	pole	frame	description	power (W)	phase	voltage	Hz	price
Three-phase forced cooling kits *(Cast Iron Motors)*								
G-80C	2/4/6	80	forced cooling kit	37	3-ph	400	50	**3 470.00**
G-90C	2/4/6	90	forced cooling kit	45	3-ph	400	50	**3 570.00**
G-100C	2/4/6	100	forced cooling kit	72	3-ph	400	50	**4 410.00**
G-112C	2/4/6	112	forced cooling kit	85	3-ph	400	50	**4 740.00**
G-132C	2/4/6	132	forced cooling kit	50	3-ph	400	50	**5 760.00**
G-160C	2/4/6	132	forced cooling kit	60	3-ph	400	50	**6 080.00**
G-180C	2/4/6	180	forced cooling kit	80	3-ph	400	50	**7 270.00**
G-200C	2/4/6	200	forced cooling kit	110	3-ph	400	50	**9 300.00**
G-225C	2/4/6	225	forced cooling kit	170	3-ph	400	50	**11 000.00**
G-250C	2/4/6	250	forced cooling kit	200	3-ph	400	50	**13 200.00**
G-280C	2/4/6	280	forced cooling kit	200	3-ph	400	50	**13 400.00**
G-315C2P	2	315	forced cooling kit	350	3-ph	400	50	**13 800.00**
G-315C4/6P	4/6	315	forced cooling kit	350	3-ph	400	50	**13 800.00**
G-355C2P	2	355	forced cooling kit	280	3-ph	400	50	**14 600.00**
G-355C4/6P	4/6	355	forced cooling kit	280	3-ph	400	50	**14 600.00**

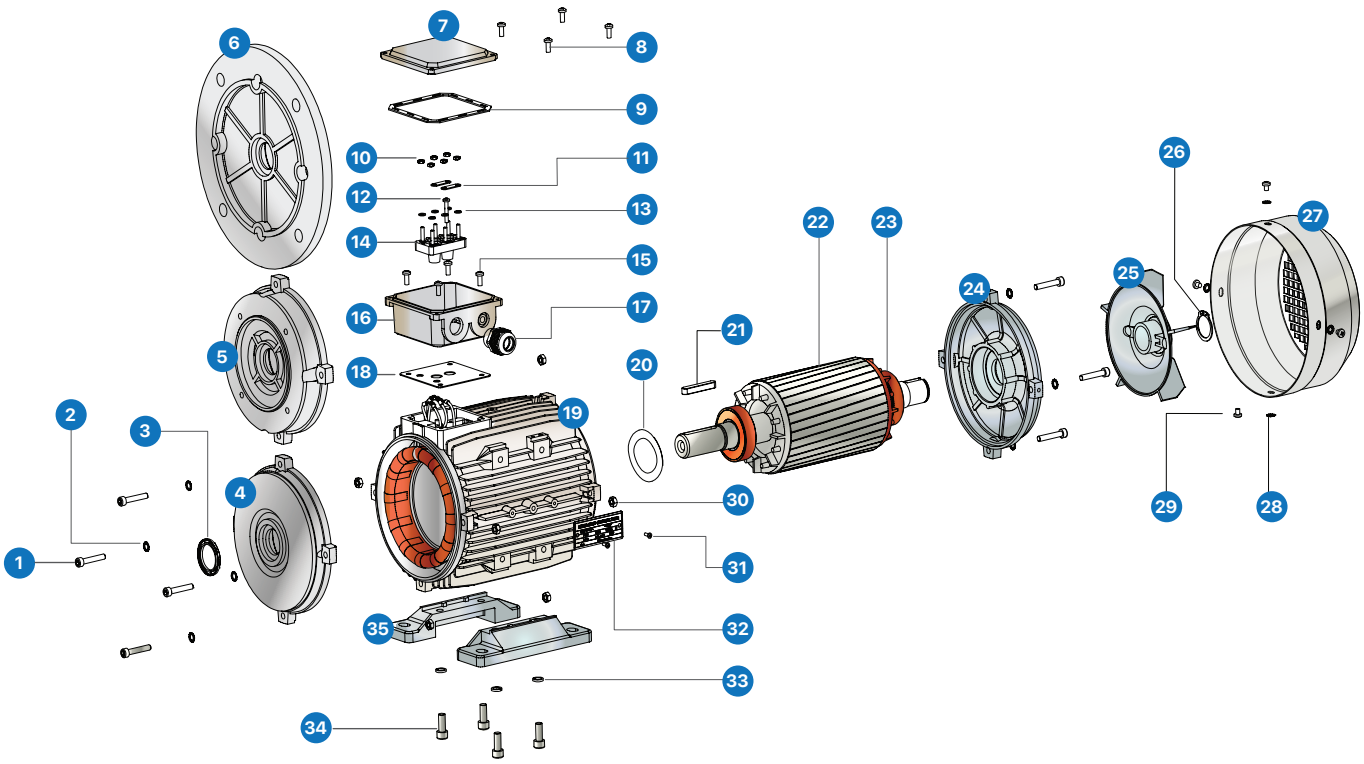
Modifications: Optional features

Available on request by special order. Contact us for assistance and a quotation.

		Frame size													
		71	80	90	100	112	132	160	180	200	225	250	280	315	355
IP65 Upgrade		–	–	–	–	–	*	*	*	*	*	*	*	*	*
Insulated NDE Bearing		–	–	–	–	–	–	*	*	*	*	*	*	STD	STD
Insulated DE Bearing		–	–	–	–	–	–	*	*	*	*	*	*	*	*
Thermistor		–	–	–	*	*	*	STD	STD	STD	STD	STD	STD	STD	STD
1x PT100 per Bearing		–	–	–	–	–	*	*	*	*	*	*	*	*	*
2x PT100 per Bearing		–	–	–	–	–	*	*	*	*	*	*	*	*	*
1x PT100 per Winding		–	–	–	–	–	–	*	*	*	*	*	*	*	*
2x PT100 per Winding		–	–	–	–	–	–	*	*	*	*	*	*	*	*
Space Heater		–	–	–	–	–	*	*	*	*	*	*	*	*	*

Above ZAR prices do not include VAT. E&OE

Electric motor exploded view



Illustrated reference guide

1. Screw
2. Washer
3. Oil seal
4. Front endshield
5. B14 flange
6. B5 flange
7. Terminal cover
8. Box cover fixing screws
9. TB upper gasket
10. Terminal board fixing nut
11. Terminal bridge
12. Terminal pin
13. Terminal shim
14. Terminal board
15. Terminal box fixing screws
16. Terminal block base
17. Cable gland
18. Terminal box bottom gasket
19. Motor frame
20. Preload washer
21. Shaft key
22. Rotor
23. Bearing
24. Non drive-end (NDE) endshield
25. Cooling fan
26. Fan circlip
27. Fan cover
28. Fan cover fixing shim
29. Fan cover fixing screws
30. Endshield fixing nut
31. Rivet
32. Motor nameplate
33. Foot fixing nut
34. Foot fixing screws
35. Foot

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ATyS p M
CONTROL
TEST OFF LOAD
TEST ON LOAD
AUT
CLICK !
CHARGING
POWER
ESC
ATyS p M 63A
Tighten all connected terminals before use
See instruction sheet
PRODUCT PATENTED www.socomec.com

B

Power Distribution & Protection

Interactive Catalogue

Power Distribution & Protection

B

B1 Miniature Circuit Breakers & Accessories

Miniature circuit breakers

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Earth leakage protection

B-8...9/11...12

B2 Moulded Case Circuit Breakers & Air Circuit Breakers

Moulded case circuit breakers

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Air circuit breakers

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B3 Load break & Changeover Switches

Load break switches

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Changeover switches

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B4 Fuse gear

Fuse links & Holders

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B5 Surge Protection Devices

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Photovoltaic (PV) surge protection devices

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B6 Power Supplies

Power supplies (AC-DC)

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Control and safety transformers

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Scan the QR code for a short tutorial video.

MJT720

NCN232A

NRN320

NRN440

Type		MV	MJT	MA	NF/NFN	HLF	NGN	HMD	NCN	HMC	NRN
Poles		1	1 + N	1, 2, 3, 4	1, 2, 3, 4	1, 2, 3, 4	1, 2, 3, 4	1, 2, 3, 4	1, 2, 3, 4	1, 2, 3, 4	1, 2, 3, 4
Width per Pole in 17.5 mm		1	1	1	1	1.5	1	1.5	1	1.5	1
Rated Current (A)		6 - 40A	2 - 40A	2 - 63A	2 - 63A	80 - 125A	2 - 63A	80 - 125A	6 - 63A	80 - 125A	6 - 63A
Breaking capacity		3kA	6kA	6kA	10kA	10kA	10kA	15kA	15kA	15kA	15 - 25kA
Tripping Curve		C	C	C	C	C	D	D	C	C	C
Rated AC Voltage (V)		230	230	230/400	230/400	230/400	230/400	230/400	230/400	230/400	230/400
DC Application *(refer **Annex-9**)*		Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Frequency (Hz)		50/60	50/60	50	50/60	50/60	50/60	50/60	50/60	50/60	50/60
Add on Block *(Earth Leakage)*		No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Connecting Capacity (conductor)	Flexible (mm²)	16 mm²	10 mm²	16 mm²	25 mm²	50 mm²	25 mm²	50 mm²	25 mm²	50 mm²	25 mm²
	Rigid (mm²)	25 mm²	16 mm²	25 mm²	35 mm²	70 mm²	35 mm²	70 mm²	35 mm²	70 mm²	35 mm²
Isolation		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Page		B-1	B-1, B-8	B-2	B-3	B-3	B-4	B-4	B-5	B-5	B-6

MV series — C curve *(5-10 In)*

Protection and control of circuits against overload and short circuits.
Suitable for residential and commercial installations.

MV116Z

Breaking capacity: **3kA** SANS/IEC 60947-2, SANS 556

- Does not accept clip-on accessories.

Single pole

type	current rating	poles	breaking capacity	description	width in 17.5 mm	price
MV106Z	6A	1	3kA	miniature circuit breaker	1	**90.00**
MV110Z	10A	1	3kA	miniature circuit breaker	1	**90.00**
MV116Z	16A	1	3kA	miniature circuit breaker	1	**90.00**
MV120Z	20A	1	3kA	miniature circuit breaker	1	**90.00**
MV125Z	25A	1	3kA	miniature circuit breaker	1	**90.00**
MV132Z	32A	1	3kA	miniature circuit breaker	1	**90.00**
MV140Z	40A	1	3kA	miniature circuit breaker	1	**90.00**

MJT series — C curve *(5-10 In)*

Breaking capacity: **6kA** SANS/IEC 60947-2, SANS 556

- Accepts clip-on: *(see MCB accessories)*
  - auxiliary/alarm contacts
  - shunt trip
  - undervoltage
  - overvoltage
- Accepts **BDC240F** earth leakage a compact device which simply clips on the side *(see accessories)*
- Trip indication - yellow flag on toggle indicates either "overload" or "short circuit" trip

MJT720

1 Ph+N *in one module*

MJT702	2A	1+N	6kA	miniature circuit breaker	1	**383.00**
MJT706	6A	1+N	6kA	miniature circuit breaker	1	**299.00**
MJT710	10A	1+N	6kA	miniature circuit breaker	1	**299.00**
MJT716	16A	1+N	6kA	miniature circuit breaker	1	**299.00**
MJT720	20A	1+N	6kA	miniature circuit breaker	1	**299.00**
MJT725	25A	1+N	6kA	miniature circuit breaker	1	**299.00**
MJT732	32A	1+N	6kA	miniature circuit breaker	1	**299.00**
MJT740	40A	1+N	6kA	miniature circuit breaker	1	**299.00**

Above ZAR prices do not include VAT. E&OE

MA163Z

MA series - *Miniature circuit breakers (MCBs)*

For the protection and control of circuits against overload and short circuits.
Suitable for residential, commercial and industrial installations.

- Compatible with DC voltage applications *(see chart **Annex-6**)*
- Cascading with MCCBs *(see chart **Annex-5**)*
- Suitable for isolation

Voltage rating: 230/400V 50-60Hz
Current rating: 2 - 63A

Field fittable clip-on accessories *(see MCB accessories)*
- auxiliary/alarm contacts
- shunt trip device
- undervoltage release
- overvoltage release
- earth leakage *(see accessories)*

MA206Z + MZ202

MA325Z

MA416Z

type	current rating	poles	breaking capacity	description	width in 17.5 mm	price
MA series		**C curve** *(5-10 In)*				
Breaking capacity:			**6kA**	SANS/IEC 60947-2, SANS 556		
Single pole						
MA102Z	2A	1	6kA	miniature circuit breaker	1	**200.00**
MA106Z	6A	1	6kA	miniature circuit breaker	1	**115.00**
MA110Z	10A	1	6kA	miniature circuit breaker	1	**115.00**
MA116Z	16A	1	6kA	miniature circuit breaker	1	**115.00**
MA120Z	20A	1	6kA	miniature circuit breaker	1	**115.00**
MA125Z	25A	1	6kA	miniature circuit breaker	1	**120.00**
MA132Z	32A	1	6kA	miniature circuit breaker	1	**120.00**
MA140Z	40A	1	6kA	miniature circuit breaker	1	**120.00**
MA150Z	50A	1	6kA	miniature circuit breaker	1	**170.00**
MA163Z	63A	1	6kA	miniature circuit breaker	1	**180.00**
Two pole						
MA202Z	2A	2	6kA	miniature circuit breaker	2	**560.00**
MA206Z	6A	2	6kA	miniature circuit breaker	2	**380.00**
MA210Z	10A	2	6kA	miniature circuit breaker	2	**380.00**
MA216Z	16A	2	6kA	miniature circuit breaker	2	**380.00**
MA220Z	20A	2	6kA	miniature circuit breaker	2	**380.00**
MA225Z	25A	2	6kA	miniature circuit breaker	2	**400.00**
MA232Z	32A	2	6kA	miniature circuit breaker	2	**400.00**
MA240Z	40A	2	6kA	miniature circuit breaker	2	**400.00**
MA250Z	50A	2	6kA	miniature circuit breaker	2	**450.00**
MA263Z	63A	2	6kA	miniature circuit breaker	2	**470.00**
Three pole						
MA302Z	2A	3	6kA	miniature circuit breaker	3	**900.00**
MA306Z	6A	3	6kA	miniature circuit breaker	3	**510.00**
MA310Z	10A	3	6kA	miniature circuit breaker	3	**510.00**
MA316Z	16A	3	6kA	miniature circuit breaker	3	**510.00**
MA320Z	20A	3	6kA	miniature circuit breaker	3	**510.00**
MA325Z	25A	3	6kA	miniature circuit breaker	3	**530.00**
MA332Z	32A	3	6kA	miniature circuit breaker	3	**530.00**
MA340Z	40A	3	6kA	miniature circuit breaker	3	**530.00**
MA350Z	50A	3	6kA	miniature circuit breaker	3	**600.00**
MA363Z	63A	3	6kA	miniature circuit breaker	3	**615.00**
Four pole						
MA406Z	6A	4	6kA	miniature circuit breaker	4	**1 100.00**
MA410Z	10A	4	6kA	miniature circuit breaker	4	**1 100.00**
MA416Z	16A	4	6kA	miniature circuit breaker	4	**1 100.00**
MA420Z	20A	4	6kA	miniature circuit breaker	4	**1 100.00**
MA425Z	25A	4	6kA	miniature circuit breaker	4	**1 130.00**
MA432Z	32A	4	6kA	miniature circuit breaker	4	**1 130.00**
MA440Z	40A	4	6kA	miniature circuit breaker	4	**1 130.00**
MA450Z	50A	4	6kA	miniature circuit breaker	4	**1 160.00**
MA463Z	63A	4	6kA	miniature circuit breaker	4	**1 160.00**

MCB poles

NFN163

NFN263

HLF290S

NFN363

NF / NFN / HLF series - *Miniature circuit breakers (MCBs)*

For the protection and control of circuits against overload and short circuits.
Suitable for residential, commercial and industrial installations.

- Compatible for DC voltage applications *(see chart **Annex-6**)*

Field fittable clip-on accessories *(see MCB accessories)*
- auxiliary/alarm contacts
- shunt trip device
- undervoltage release
- earth leakage

type	current rating	poles	breaking capacity	description	width in 17.5 mm	price
NF / NFN / HLF series			**C curve** *(5-10 In)*			
Breaking capacity:			**10kA**	SANS / IEC 60947-2, SANS 556		
Single pole						
NF102A	2A	1	10kA	miniature circuit breaker	1	**220.00**
NF106A	6A	1	10kA	miniature circuit breaker	1	**150.00**
NF110A	10A	1	10kA	miniature circuit breaker	1	**150.00**
NF116A	16A	1	10kA	miniature circuit breaker	1	**150.00**
NF120A	20A	1	10kA	miniature circuit breaker	1	**150.00**
NF125A	25A	1	10kA	miniature circuit breaker	1	**160.00**
NF132A	32A	1	10kA	miniature circuit breaker	1	**160.00**
NF140A	40A	1	10kA	miniature circuit breaker	1	**160.00**
NFN150	50A	1	10kA	miniature circuit breaker	1	**200.00**
NFN163	63A	1	10kA	miniature circuit breaker	1	**210.00**
HLF180S	80A	1	10kA	miniature circuit breaker	1.5	**790.00**
HLF190S	100A	1	10kA	miniature circuit breaker	1.5	**810.00**
HLF199S	125A	1	10kA	miniature circuit breaker	1.5	**1 050.00**
Two pole						
NF202A	2A	2	10kA	miniature circuit breaker	2	**700.00**
NF206A	6A	2	10kA	miniature circuit breaker	2	**510.00**
NF210A	10A	2	10kA	miniature circuit breaker	2	**510.00**
NF216A	16A	2	10kA	miniature circuit breaker	2	**510.00**
NF220A	20A	2	10kA	miniature circuit breaker	2	**510.00**
NF225A	25A	2	10kA	miniature circuit breaker	2	**570.00**
NF232A	32A	2	10kA	miniature circuit breaker	2	**570.00**
NF240A	40A	2	10kA	miniature circuit breaker	2	**570.00**
NFN250	50A	2	10kA	miniature circuit breaker	2	**680.00**
NFN263	63A	2	10kA	miniature circuit breaker	2	**700.00**
HLF280S	80A	2	10kA	miniature circuit breaker	3	**1 480.00**
HLF290S	100A	2	10kA	miniature circuit breaker	3	**1 500.00**
HLF299S	125A	2	10kA	miniature circuit breaker	3	**1 860.00**
Three pole						
NF302A	2A	3	10kA	miniature circuit breaker	3	**1 080.00**
NF306A	6A	3	10kA	miniature circuit breaker	3	**810.00**
NF310A	10A	3	10kA	miniature circuit breaker	3	**810.00**
NF316A	16A	3	10kA	miniature circuit breaker	3	**810.00**
NF320A	20A	3	10kA	miniature circuit breaker	3	**810.00**
NF325A	25A	3	10kA	miniature circuit breaker	3	**830.00**
NF332A	32A	3	10kA	miniature circuit breaker	3	**830.00**
NF340A	40A	3	10kA	miniature circuit breaker	3	**830.00**
NFN350	50A	3	10kA	miniature circuit breaker	3	**880.00**
NFN363	63A	3	10kA	miniature circuit breaker	3	**900.00**
HLF380S	80A	3	10kA	miniature circuit breaker	4.5	**1 880.00**
HLF390S	100A	3	10kA	miniature circuit breaker	4.5	**2 150.00**
HLF399S	125A	3	10kA	miniature circuit breaker	4.5	**2 850.00**
Four pole						
NF406A	6A	4	10kA	miniature circuit breaker	4	**1 180.00**
NF410A	10A	4	10kA	miniature circuit breaker	4	**1 180.00**
NF416A	16A	4	10kA	miniature circuit breaker	4	**1 180.00**
NF420A	20A	4	10kA	miniature circuit breaker	4	**1 180.00**
NF425A	25A	4	10kA	miniature circuit breaker	4	**1 230.00**
NF432A	32A	4	10kA	miniature circuit breaker	4	**1 230.00**
NF440A	40A	4	10kA	miniature circuit breaker	4	**1 230.00**
NFN450	50A	4	10kA	miniature circuit breaker	4	**1 380.00**
NFN463	63A	4	10kA	miniature circuit breaker	4	**1 420.00**
HLF480S	80A	4	10kA	miniature circuit breaker	6	**4 800.00**
HLF490S	100A	4	10kA	miniature circuit breaker	6	**5 000.00**
HLF499S	125A	4	10kA	miniature circuit breaker	6	**6 670.00**

Above ZAR prices do not include VAT. E&OE

NGN116

NGN216

NGN363

NGN410

NGN / HMD series - *Miniature circuit breakers (MCBs)*

For the protection and control of circuits against overload and short circuits.
Suitable for commercial and industrial installations.

- Compatible for DC voltage applications *(see chart **Annex-6**)*

Field fittable clip-on accessories *(see MCB accessories)*
- auxiliary/alarm contacts
- shunt trip device
- undervoltage release
- overvoltage release
- earth leakage

Voltage rating: 230/400V 50-60Hz

type	current rating	poles	breaking capacity	description	width in 17.5 mm	price
NGN / HMD series		**D curve** *(10-20 In)*				
Breaking capacity:		**NGN**:10kA / **HMD:** 15kA		SANS/IEC 60947-2, SANS 556		
Single pole						
NGN102	2A	1	10kA	miniature circuit breaker	1	**339.00**
NGN104	4A	1	10kA	miniature circuit breaker	1	**339.00**
NGN106	6A	1	10kA	miniature circuit breaker	1	**202.00**
NGN110	10A	1	10kA	miniature circuit breaker	1	**202.00**
NGN116	16A	1	10kA	miniature circuit breaker	1	**202.00**
NGN120	20A	1	10kA	miniature circuit breaker	1	**202.00**
NGN125	25A	1	10kA	miniature circuit breaker	1	**208.00**
NGN132	32A	1	10kA	miniature circuit breaker	1	**208.00**
NGN140	40A	1	10kA	miniature circuit breaker	1	**229.00**
NGN150	50A	1	10kA	miniature circuit breaker	1	**304.00**
NGN163	63A	1	10kA	miniature circuit breaker	1	**313.00**
HMD180	80A	1	15kA	miniature circuit breaker	1.5	**1 120.00**
HMD190	100A	1	15kA	miniature circuit breaker	1.5	**1 300.00**
HMD199	125A	1	15kA	miniature circuit breaker	1.5	**2 140.00**
Two pole						
NGN202	2A	2	10kA	miniature circuit breaker	2	**804.00**
NGN206	6A	2	10kA	miniature circuit breaker	2	**619.00**
NGN210	10A	2	10kA	miniature circuit breaker	2	**619.00**
NGN216	16A	2	10kA	miniature circuit breaker	2	**619.00**
NGN220	20A	2	10kA	miniature circuit breaker	2	**619.00**
NGN225	25A	2	10kA	miniature circuit breaker	2	**699.00**
NGN232	32A	2	10kA	miniature circuit breaker	2	**699.00**
NGN240	40A	2	10kA	miniature circuit breaker	2	**699.00**
NGN250	50A	2	10kA	miniature circuit breaker	2	**838.00**
NGN263	63A	2	10kA	miniature circuit breaker	2	**838.00**
HMD280	80A	2	15kA	miniature circuit breaker	3	**2 450.00**
HMD290	100A	2	15kA	miniature circuit breaker	3	**2 620.00**
HMD299	125A	2	15kA	miniature circuit breaker	3	**4 080.00**
Three pole						
NGN306	6A	3	10kA	miniature circuit breaker	3	**1 060.00**
NGN310	10A	3	10kA	miniature circuit breaker	3	**1 050.00**
NGN316	16A	3	10kA	miniature circuit breaker	3	**1 050.00**
NGN320	20A	3	10kA	miniature circuit breaker	3	**1 050.00**
NGN325	25A	3	10kA	miniature circuit breaker	3	**1 060.00**
NGN332	32A	3	10kA	miniature circuit breaker	3	**1 060.00**
NGN340	40A	3	10kA	miniature circuit breaker	3	**1 070.00**
NGN350	50A	3	10kA	miniature circuit breaker	3	**1 110.00**
NGN363	63A	3	10kA	miniature circuit breaker	3	**1 140.00**
HMD380	80A	3	15kA	miniature circuit breaker	4.5	**2 480.00**
HMD390	100A	3	15kA	miniature circuit breaker	4.5	**4 080.00**
HMD399	125A	3	15kA	miniature circuit breaker	4.5	**5 100.00**
Four pole						
NGN406	6A	4	10kA	miniature circuit breaker	4	**1 680.00**
NGN410	10A	4	10kA	miniature circuit breaker	4	**1 680.00**
NGN416	16A	4	10kA	miniature circuit breaker	4	**1 680.00**
NGN420	20A	4	10kA	miniature circuit breaker	4	**1 680.00**
NGN425	25A	4	10kA	miniature circuit breaker	4	**1 730.00**
NGN432	32A	4	10kA	miniature circuit breaker	4	**1 730.00**
NGN440	40A	4	10kA	miniature circuit breaker	4	**1 730.00**
NGN450	50A	4	10kA	miniature circuit breaker	4	**1 840.00**
NGN463	63A	4	10kA	miniature circuit breaker	4	**1 840.00**
HMD480	80A	4	15kA	miniature circuit breaker	6	**5 280.00**
HMD490	100A	4	15kA	miniature circuit breaker	6	**8 240.00**
HMD499	125A	4	15kA	miniature circuit breaker	6	**9 170.00**

NCN116A

NCN232A

NCN320A

NCN440A

NCN / HMC series - *Miniature circuit breakers (MCBs)*

For the protection and control of circuits against overload and short circuits.
Suitable for commercial and industrial installations.

- Compatible for DC voltage applications *(see chart **Annex-6**)*

Voltage rating: 230/400V 50-60Hz

Field fittable clip-on accessories *(see MCB accessories)*
- auxiliary/alarm contacts
- shunt trip device
- undervoltage release
- overvoltage release
- earth leakage

type	current rating	poles	breaking capacity	description	width in 17.5 mm	price
NCN / HMC series		**C curve** *(5-10 In)*				
Breaking capacity:			**15kA**	IEC 60947-2		
Single pole						
NCN106A	6A	1	15kA	miniature circuit breaker	1	**232.00**
NCN110A	10A	1	15kA	miniature circuit breaker	1	**232.00**
NCN116A	16A	1	15kA	miniature circuit breaker	1	**232.00**
NCN120A	20A	1	15kA	miniature circuit breaker	1	**232.00**
NCN125A	25A	1	15kA	miniature circuit breaker	1	**241.00**
NCN132A	32A	1	15kA	miniature circuit breaker	1	**241.00**
NCN140A	40A	1	15kA	miniature circuit breaker	1	**259.00**
NCN150A	50A	1	15kA	miniature circuit breaker	1	**318.00**
NCN163A	63A	1	15kA	miniature circuit breaker	1	**318.00**
HMC180	80A	1	15kA	miniature circuit breaker	1.5	**1 390.00**
HMC190	100A	1	15kA	miniature circuit breaker	1.5	**1 530.00**
HMC199	125A	1	15kA	miniature circuit breaker	1.5	**1 670.00**
Two pole						
NCN206A	6A	2	15kA	miniature circuit breaker	2	**620.00**
NCN210A	10A	2	15kA	miniature circuit breaker	2	**620.00**
NCN216A	16A	2	15kA	miniature circuit breaker	2	**620.00**
NCN220A	20A	2	15kA	miniature circuit breaker	2	**620.00**
NCN225A	25A	2	15kA	miniature circuit breaker	2	**670.00**
NCN232A	32A	2	15kA	miniature circuit breaker	2	**670.00**
NCN240A	40A	2	15kA	miniature circuit breaker	2	**715.00**
NCN250A	50A	2	15kA	miniature circuit breaker	2	**838.00**
NCN263A	63A	2	15kA	miniature circuit breaker	2	**838.00**
HMC280	80A	2	15kA	miniature circuit breaker	3	**3 150.00**
HMC290	100A	2	15kA	miniature circuit breaker	3	**3 250.00**
HMC299	125A	2	15kA	miniature circuit breaker	3	**3 340.00**
Three pole						
NCN306A	6A	3	15kA	miniature circuit breaker	3	**1 100.00**
NCN310A	10A	3	15kA	miniature circuit breaker	3	**1 100.00**
NCN316A	16A	3	15kA	miniature circuit breaker	3	**1 100.00**
NCN320A	20A	3	15kA	miniature circuit breaker	3	**1 100.00**
NCN325A	25A	3	15kA	miniature circuit breaker	3	**1 180.00**
NCN332A	32A	3	15kA	miniature circuit breaker	3	**1 180.00**
NCN340A	40A	3	15kA	miniature circuit breaker	3	**1 180.00**
NCN350A	50A	3	15kA	miniature circuit breaker	3	**1 280.00**
NCN363A	63A	3	15kA	miniature circuit breaker	3	**1 280.00**
HMC380	80A	3	15kA	miniature circuit breaker	4.5	**3 520.00**
HMC390	100A	3	15kA	miniature circuit breaker	4.5	**4 080.00**
HMC399	125A	3	15kA	miniature circuit breaker	4.5	**5 100.00**
Four pole						
NCN406A	6A	4	15kA	miniature circuit breaker	4	**2 010.00**
NCN410A	10A	4	15kA	miniature circuit breaker	4	**2 010.00**
NCN416A	16A	4	15kA	miniature circuit breaker	4	**2 010.00**
NCN420A	20A	4	15kA	miniature circuit breaker	4	**2 010.00**
NCN425A	25A	4	15kA	miniature circuit breaker	4	**2 010.00**
NCN432A	32A	4	15kA	miniature circuit breaker	4	**2 010.00**
NCN440A	40A	4	15kA	miniature circuit breaker	4	**2 010.00**
NCN450A	50A	4	15kA	miniature circuit breaker	4	**2 180.00**
NCN463A	63A	4	15kA	miniature circuit breaker	4	**2 180.00**
HMC480	80A	4	15kA	miniature circuit breaker	6	**5 560.00**
HMC490	100A	4	15kA	miniature circuit breaker	6	**5 930.00**
HMC499	125A	4	15kA	miniature circuit breaker	6	**6 950.00**

Above ZAR prices do not include VAT. E&OE

NRN110

NRN232

NRN320

NRN440

NRN series - *Miniature circuit breakers (MCBs)*

For the protection and control of circuits against overload and short circuits.
Suitable for commercial and industrial installations.

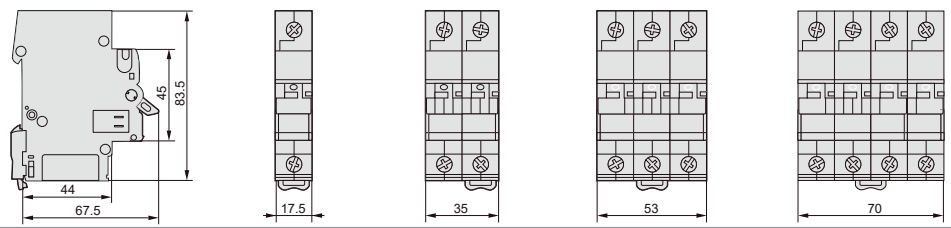
- Compatible for DC voltage applications *(see chart **Annex-6**)*

Voltage rating: 230/400V 50-60Hz

Field fittable clip-on accessories *(see MCB accessories)*
- auxiliary/alarm contacts
- shunt trip device
- undervoltage release
- overvoltage release
- earth leakage

type	current rating	poles	breaking capacity	description	width in 17.5 mm	price
NRN series			**C curve** *(5-10 In)*			
Breaking capacity:				IEC 60947-2		
	6 - 25A		25kA			
	32 - 40A		20kA			
	50 - 63A		15kA			
Single pole						
NRN106	6A	1	25kA	miniature circuit breaker	1	**501.00**
NRN110	10A	1	25kA	miniature circuit breaker	1	**501.00**
NRN116	16A	1	25kA	miniature circuit breaker	1	**501.00**
NRN120	20A	1	25kA	miniature circuit breaker	1	**501.00**
NRN125	25A	1	25kA	miniature circuit breaker	1	**501.00**
NRN132	32A	1	20kA	miniature circuit breaker	1	**567.00**
NRN140	40A	1	20kA	miniature circuit breaker	1	**567.00**
NRN150	50A	1	15kA	miniature circuit breaker	1	**590.00**
NRN163	63A	1	15kA	miniature circuit breaker	1	**590.00**
Two pole						
NRN206	6A	2	25kA	miniature circuit breaker	2	**943.00**
NRN210	10A	2	25kA	miniature circuit breaker	2	**943.00**
NRN216	16A	2	25kA	miniature circuit breaker	2	**943.00**
NRN220	20A	2	25kA	miniature circuit breaker	2	**943.00**
NRN225	25A	2	25kA	miniature circuit breaker	2	**943.00**
NRN232	32A	2	20kA	miniature circuit breaker	2	**943.00**
NRN240	40A	2	20kA	miniature circuit breaker	2	**1 040.00**
NRN250	50A	2	15kA	miniature circuit breaker	2	**1 040.00**
NRN263	63A	2	15kA	miniature circuit breaker	2	**1 040.00**
Three pole						
NRN306	6A	3	25kA	miniature circuit breaker	3	**1 510.00**
NRN310	10A	3	25kA	miniature circuit breaker	3	**1 510.00**
NRN316	16A	3	25kA	miniature circuit breaker	3	**1 510.00**
NRN320	20A	3	25kA	miniature circuit breaker	3	**1 510.00**
NRN325	25A	3	25kA	miniature circuit breaker	3	**1 510.00**
NRN332	32A	3	20kA	miniature circuit breaker	3	**1 510.00**
NRN340	40A	3	20kA	miniature circuit breaker	3	**1 610.00**
NRN350	50A	3	15kA	miniature circuit breaker	3	**1 610.00**
NRN363	63A	3	15kA	miniature circuit breaker	3	**1 610.00**
Four pole						
NRN406	6A	4	25kA	miniature circuit breaker	4	**2 930.00**
NRN410	10A	4	25kA	miniature circuit breaker	4	**2 930.00**
NRN416	16A	4	25kA	miniature circuit breaker	4	**2 930.00**
NRN420	20A	4	25kA	miniature circuit breaker	4	**2 930.00**
NRN425	25A	4	25kA	miniature circuit breaker	4	**3 210.00**
NRN432	32A	4	20kA	miniature circuit breaker	4	**3 210.00**
NRN440	40A	4	20kA	miniature circuit breaker	4	**3 210.00**
NRN450	50A	4	15kA	miniature circuit breaker	4	**4 340.00**
NRN463	63A	4	15kA	miniature circuit breaker	4	**4 340.00**

MCB sizes



Type		MV	MJT	MA	NF/NFN	NGN	NCN	NRN	HLF	HMD	HMC
Auxiliary contacts	1NO + 1NC	–	MZ201	MZ201	MZ201	MZ201	MZ201	MZ201	MZ201	MZ201	MZ201
Alarm contacts	1NO + 1NC	–	MZ202	MZ202	MZ202	MZ202	MZ202	MZ202	MZ202	MZ202	MZ202
Shunt trip device	110-130 VDC 230-415 VAC	–	MZ203	MZ203	MZ203	MZ203	MZ203	MZ203	MZ203	MZ203	MZ203
Shunt trip device	12-48 VDC 24-48 VAC	–	MZ204	MZ204	MZ204	MZ204	MZ204	MZ204	MZ204	MZ204	MZ204
Under voltage release	230 VAC	–	MZ206	MZ206	MZ206	MZ206	MZ206	MZ206	MZ206	MZ206	MZ206
Over voltage release	230 VAC	–	MZ212	MZ212	MZ212	MZ212	MZ212	MZ212	MZ212	MZ212	MZ212
Terminal Cover	–	–	–	–	–	–	–	–	MZN130	MZN130	MZN130
Phase separator	–	–	–	–	–	–	–	–	MZN131	MZN131	MZN131

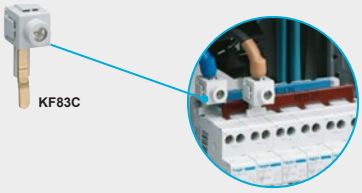
MZ201

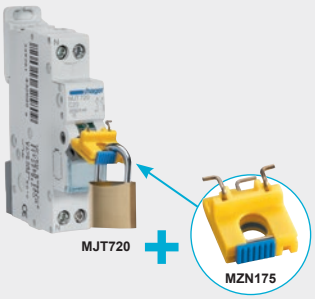
MZ202

MZ203

KB163P

KB263C


KF83C


MJT720

MZN175

MZN131

Auxiliaries and tripping devices for MCBs and RCDs

All auxiliaries are common to both single and multi-pole circuit breakers.
Auxiliaries are fitted to the left side of the protection device.

Shunt trips and undervoltage releases are fitted with a flag indicator that indicates the automatic / remote tripping of the device.

type	function	description			width in 17.5 mm	price
Auxiliary contacts						
Indication of MCB main contact status						
MZ201	auxiliary	contact block	1NO + 1NC	6A 230 VAC	0.5	**469.00**
Alarm contacts						
Indicates fault condition - MCB "tripped" on overload or short-circuit						
MZ202	alarm	contact block	1NO + 1NC	6A 230 VAC	0.5	**647.00**
Shunt trip device						
Permits remote tripping of the protection device						
MZ203	shunt	shunt trip device	110 - 130 VDC / 230 - 415 VAC		1	**845.00**
MZ204	shunt	shunt trip device	12 - 48 VDC / 24 - 48 VAC		1	**708.00**
Under voltage release						
MCB can only close when voltage is above 70% of Un Automatically trips when voltage drops below 35% of Un						
MZ206	undervolt	under voltage release		230 VAC	1	**845.00**
Over voltage release - *(trips the protection device in case of overvoltage)*						
Monitoring the voltage between phase and neutral Automatically trips when an overvoltage is detected						
MZ212	overvolt	over voltage release		230 VAC	1	**845.00**

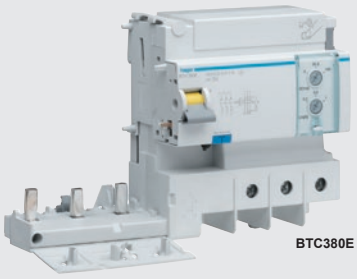
Connection and MCB accessories

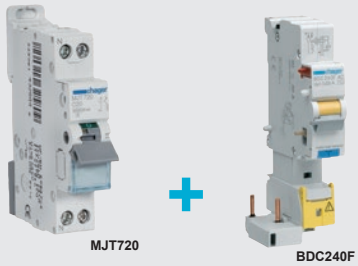
type	mm²	current rating	poles	description	no. ways	price
KB163P	10 mm²	63A	1-pole	brown ins. busbar	13	**73.00**
KB163N	10 mm²	63A	1-pole	blue ins. busbar	13	**73.00**
KB190C	20 mm²	100A	1-pole	insulated busbar	24	**290.00**
KB263C	10 mm²	63A	2-pole	insulated busbar	24	**611.00**
KB363C	10 mm²	63A	3-pole	insulated busbar	24	**673.00**
KB380B	16 mm²	80A	3-pole	insulated busbar	57	**1 230.00**
KB463C	10 mm²	63A	4-pole	insulated busbar	24	**1 090.00**
KZ022		end protection caps for busbar		**KB263C**	*(10 pcs)*	**57.00**
KZ023A		end protection caps for busbar		**KB363C, KB380B**	*(10 pcs)*	**113.00**
KZ024		end protection caps for busbar		**KB463C**	*(10 pcs)*	**59.00**
KF84A	25 mm²	enlarged terminal		*(lateral connection)*	–	**46.00**
KF83B	2 x 25 mm²	enlarged terminal		*(lateral connection)*	–	**125.00**
KF83C	25 mm²	enlarged terminal		*(top or lateral connection)*	–	**68.00**
Accessories for MCBs						
JP024	blanking	MCB blanking strip *(with breakable sections)*			24	**82.00**
LZ060	dummy	module or heat dissipation insert between devices			0.5	**12.20**
MZN175	padlock	attachment for locking MCB toggle in on/off position			–	**236.00**
MZN130	cover	terminal cover for **HLF, HMC, HMD MCBs**			–	**127.00**
MZN131	separator	phase separator for **HLF, HMC, HMD MCBs**			*(set of 3)*	**188.00**

Above ZAR prices do not include VAT. E&OE

Type	Poles	Sensitivity	MV	MJT	MA	NF/NFN	NGN	NCN	NRN	HLF	HMD	HMC
BD264	2 P	30 mA	–	–	Yes	Yes	Yes	Yes	Yes	–	–	–
BD364	3 P	30 mA	–	–	Yes	Yes	Yes	Yes	Yes	–	–	–
BD464	4 P	30 mA	–	–	Yes	Yes	Yes	Yes	Yes	–	–	–
BF264	2 P	300 mA	–	–	Yes	Yes	Yes	Yes	Yes	–	–	–
BF364	3 P	300 mA	–	–	Yes	Yes	Yes	Yes	Yes	–	–	–
BF464	4 P	300 mA	–	–	Yes	Yes	Yes	Yes	Yes	–	–	–
BDC280E	2 P	30 mA	–	–	–	–	–	–	–	Yes	Yes	Yes
BDC380E	3 P	30 mA	–	–	–	–	–	–	–	Yes	Yes	Yes
BDC480E	4 P	30 mA	–	–	–	–	–	–	–	Yes	Yes	Yes
BTC280E	2 P	0.3 / 0.5 / 1 A	–	–	–	–	–	–	–	Yes	Yes	Yes
BTC380E	3 P	0.3 / 0.5 / 1 A	–	–	–	–	–	–	–	Yes	Yes	Yes
BTC480E	4 P	0.3 / 0.5 / 1 A	–	–	–	–	–	–	–	Yes	Yes	Yes
BDC240F	2 P	30 mA	–	Yes	–	–	–	–	–	–	–	–

BD264


BTC380E


MJT720 + BDC240F

Add-on earth leakage devices for MCBs

For connection to all MCBs to be mounted to the right side of 2, 3 or 4 pole circuit breakers. The combined unit provides effective protection against overload, short circuit as well as earth leakage faults. Features independent indication of "earth fault" or "overload" when tripped.

Description: To automatically open a circuit in the event of an earth leakage fault
Suitable for residential, commercial and industrial installations

Nuisance Tripping: Hager earth leakage devices are protected against nuisance tripping caused by transient leakage currents

Nominal Voltage: *(2-pole)* 240V 50Hz
(4-pole) 400V 50Hz

type	current rating	sensitivity	poles	description	width in 17.5 mm	price
Add-on earth leakage devices - for **MA - NF - NFN - NGN - NCN - NRN** circuit breakers						
• BD fixed sensitivity 30 mA for human protection						
BD264	63A	30 mA	2-pole	add-on earth leakage device	2	**1 710.00**
BD364	63A	30 mA	3-pole	add-on earth leakage device	3	**2 000.00**
BD464	63A	30 mA	4-pole	add-on earth leakage device	3	**2 470.00**
• BF fixed sensitivity 300 mA for equipment protection						
BF264	63A	300 mA	2-pole	add-on earth leakage device	2	**2 370.00**
BF364	63A	300 mA	3-pole	add-on earth leakage device	3	**2 560.00**
BF464	63A	300 mA	4-pole	add-on earth leakage device	3	**3 790.00**
Add-on earth leakage devices - for **HLF - HMC - HMD** circuit breakers						
BDC series - fixed sensitivity 30mA for human protection						
BDC280E	125A	30 mA	2-pole	add-on earth leakage device	6	**3 250.00**
BDC380E	125A	30 mA	3-pole	add-on earth leakage device	6	**3 620.00**
BDC480E	125A	30 mA	4-pole	add-on earth leakage device	6	**3 890.00**
BTC series - adjustable sensitivity - 300mA - 500mA - 1A for equipment protection						
• Adjustable trip delay:		0/60/150ms				
BTC280E	125A	0.3/0.5/1A	2-pole	add-on earth leakage device	6	**3 710.00**
BTC380E	125A	0.3/0.5/1A	3-pole	add-on earth leakage device	6	**4 080.00**
BTC480E	125A	0.3/0.5/1A	4-pole	add-on earth leakage device	6	**4 540.00**

Add-on earth leakage device - for **MJT series** *(1 module)* circuit breakers only

BDC240F is a compact *(1 module)* earth leakage device which simply clips onto the **MJT series** (MCBs 1P+N) offering additional earth leakage protection to the attached MCB.

BDC240F	40A	30mA	2-pole	add-on earth leakage device	1	**1 440.00**

Combination MCB/RCD - provides effective protection against overload/short circuit protection as well as earthleakage faults achieved by attaching **BDC240F** *(above)* to MJT series MCBs *(below)*.

• Provides separate indication of "e/leakage" - "overload" - short circuit" fault

1 Ph+N *in one module*		**6kA**		SANS/IEC 60947-2		
MJT702	2A	6kA	1+N	miniature circuit breaker	1	**383.00**
MJT706	6A	6kA	1+N	miniature circuit breaker	1	**299.00**
MJT710	10A	6kA	1+N	miniature circuit breaker	1	**299.00**
MJT716	16A	6kA	1+N	miniature circuit breaker	1	**299.00**
MJT720	20A	6kA	1+N	miniature circuit breaker	1	**299.00**
MJT725	25A	6kA	1+N	miniature circuit breaker	1	**299.00**
MJT732	32A	6kA	1+N	miniature circuit breaker	1	**299.00**
MJT740	40A	6kA	1+N	miniature circuit breaker	1	**299.00**

CD241J

Residual current devices (RCDs) *without overload protection*

The compact device provides earth leakage protection *(against electrical shocks by direct or indirect contact)* to open automatically in the event of an earth fault between phase and earth and/or neutral and earth.

Hager earth leakage devices are protected against nuisance tripping caused by transient leakage currents.

- Earth fault indicator on the product
- Test button

Field fittable accessories *(see MCB accessories)*

- shunt trip device
- undervoltage release
- overvoltage release

} *Requires **CZ001** interface auxiliary*

Nominal voltage: *(2-pole)* 240V 50Hz
(4-pole) 400V 50Hz

Mechanical life: 40 000 operations

CD464J

HR500

HR520

HR700

HR743

type	current rating (A)	sensitivity (mA)	poles	description	width in 17.5 mm	price
Earth leakage units (RCDs) *(Type AC)*						
30mA sensitivity						
For human protection - The primary function is to safeguard people from electric shock. This sensitivity level is designed to detect small leakage currents that can be dangerous to humans.						
CD226J	25A	30 mA	2-pole	earth leakage device	2	**672.00**
CD241J	40A	30 mA	2-pole	earth leakage device	2	**672.00**
CD264J	63A	30 mA	2-pole	earth leakage device	2	**776.00**
CDC584Z*	100A	30 mA	2-pole	earth leakage device	2	**2 230.00**
CD464J	63A	30 mA	4-pole	earth leakage device	4	**1 340.00**
CDC684Z*	100A	30 mA	4-pole	earth leakage device	4	**3 210.00**
100/300mA sensitivity *(selective type)*						
For equipment protection - These devises are typically used to protect electrical installations and equipment from damage caused by earth faults. Commonly found in larger commercial and industrial installations where the primary focus is on safeguarding equipment.						
CE264J	63A	100 mA	2-pole	earth leakage device	2	**1 250.00**
CF264J	63A	300 mA	2-pole	earth leakage device	2	**1 490.00**
CFC584H*	100A	300 mA	2-pole	earth leakage device	4	**2 370.00**
CF464J	63A	300 mA	4-pole	earth leakage device	4	**3 070.00**
CFC684Z*	100A	300 mA	4-pole	earth leakage device	4	**5 530.00**
* *Does not require **CZ001***						
Auxiliaries for RCDs						
CZ001	1NO + 1NC			auxiliary + alarm contact for above RCDs	2	**781.00**
Industrial electronic earth leakage relay *(with separate torroid)*						
• Reset button • Test button • Torroid sensor to be ordered separately • Fault indicator: - On when fault occurs - Intermittent when there is a break between relay and toroid						
Fixed sensitivity, instantaneous trip						
HR500	230V	30 mA	4-pole	entry level e/leakage relay	1	**2 600.00**
HR502	230V	300 mA	4-pole	entry level e/leakage relay	1	**2 510.00**
Adjustable sensitivity and trip delay						
• Selectable In threshold: 0.03/0.1/0.3/0.5/1/3/10A (30mA - 10A) • Selectable trip delay: 0/0.1/0.3/0.4/0.5/1/3sec *(0-3sec)*						
HR510	230V	selectable	4-pole	earth leakage relay	3	**3 490.00**
HR520	as above with fault current indication and 50% pre-alarm output				3	**4 030.00**
Barregraph indicates continuously on **HR520**						

Separate toroid sensors *for electronic earth leakages*

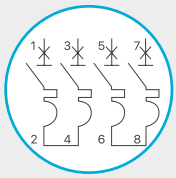
type	hole	diameter Ø (mm)		description	mount	price
HR700	round	30 mm	–	standard toroidal t/former	DIN-rail	**1 620.00**
HR742	round	70 mm	–	standard toroidal t/former	chassis	**1 700.00**
HR743	round	105 mm	–	standard toroidal t/former	chassis	**3 130.00**
HR745	round	210 mm	–	standard toroidal t/former	chassis	**6 260.00**
HR830	rectangular	70 x 175	–	standard toroidal t/former	chassis	**15 700.00**

Above ZAR prices do not include VAT. E&OE

MD63SK02

MD63DK06

MD63FK06



Bridged configuration

MD630F

MD63S/230

DC - Miniature circuit breakers

Photovoltaic applications are widely used as an alternative energy source, stimulating the development of a new generation of DC circuit breakers. Tripping of DC currents is more complicated than in AC where the arc between contacts can be interrupted when reaching zero value. DC applications *(on the other hand)* require higher tripping speeds, force and the fact that voltages can typically be up to 1000 VDC.

type	current rating	poles	breaking capacity	description	width in 18 mm	price
MD series - DC miniature circuit breakers				*mainly for PV installations*		

MD series DC miniature circuit breakers are designed for direct current applications, their polarity independency makes them suitable for photovoltaic applications.

Designed for protection against overloads and short circuits of cables between each PV module string as well as the PV inverter.

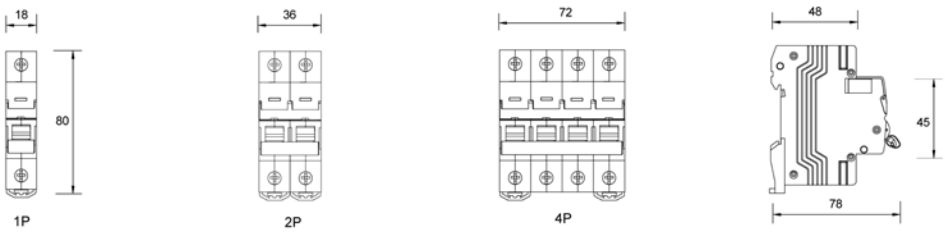
- Not polarity sensitive: (+) and (-) wires can inversed without any risk
- Suitability for isolation according to IEC/EN 60947-2 standard
- Contact position indication *(flag indication on facia of circuit breaker)*
- Suitable for multi-string photovoltaic applications
- Rated operating voltage Ue of 250 V DC per pole
- Rated short circuit breaking capacity 10 kA
- Tested according to IEC/EN 60947-2, GB 14048.2

1-pole, 250 VDC			**K curve** *(8-12 In)*			
MD63SK02	2A	1-pole	10kA	DC miniature circuit breaker	1	**187.00**
MD63SK04	4A	1-pole	10kA	DC miniature circuit breaker	1	**187.00**
MD63SK05	6A	1-pole	10kA	DC miniature circuit breaker	1	**187.00**
MD63SK06	10A	1-pole	10kA	DC miniature circuit breaker	1	**187.00**
MD63SK08	16A	1-pole	10kA	DC miniature circuit breaker	1	**187.00**
MD63SK09	20A	1-pole	10kA	DC miniature circuit breaker	1	**187.00**
MD63SK10	25A	1-pole	10kA	DC miniature circuit breaker	1	**187.00**
MD63SK11	32A	1-pole	10kA	DC miniature circuit breaker	1	**187.00**
MD63SK12	40A	1-pole	10kA	DC miniature circuit breaker	1	**187.00**
MD63SK13	50A	1-pole	10kA	DC miniature circuit breaker	1	**187.00**
MD63SK14	63A	1-pole	10kA	DC miniature circuit breaker	1	**187.00**
2-pole, 500 VDC			**K curve** *(8-12 In)*			
MD63DK06	10A	2-pole	10kA	DC miniature circuit breaker	2	**375.00**
MD63DK08	16A	2-pole	10kA	DC miniature circuit breaker	2	**375.00**
MD63DK09	20A	2-pole	10kA	DC miniature circuit breaker	2	**375.00**
MD63DK10	25A	2-pole	10kA	DC miniature circuit breaker	2	**375.00**
MD63DK11	32A	2-pole	10kA	DC miniature circuit breaker	2	**375.00**
MD63DK12	40A	2-pole	10kA	DC miniature circuit breaker	2	**375.00**
MD63DK13	50A	2-pole	10kA	DC miniature circuit breaker	2	**375.00**
MD63DK14	63A	2-pole	10kA	DC miniature circuit breaker	2	**375.00**
4 pole, 1000 VDC *(2 + 2-poles in series)*			**K curve** *(8-12 In)*			
MD63FK06	10A	4-pole	10kA	DC miniature circuit breaker	4	**806.00**
MD63FK08	16A	4-pole	10kA	DC miniature circuit breaker	4	**806.00**
MD63FK09	20A	4-pole	10kA	DC miniature circuit breaker	4	**806.00**
MD63FK10	25A	4-pole	10kA	DC miniature circuit breaker	4	**806.00**
MD63FK11	32A	4-pole	10kA	DC miniature circuit breaker	4	**806.00**
MD63FK12	40A	4-pole	10kA	DC miniature circuit breaker	4	**806.00**
MD63FK13	50A	4-pole	10kA	DC miniature circuit breaker	4	**806.00**
MD63FK14	63A	4-pole	10kA	DC miniature circuit breaker	4	**806.00**

4P DC MCBs - Bridged configuration as per the wiring diagram

Accessories for DC MCBs *(above)*					
MD630F	AUX11	1 CO	auxiliary contact	0.5	**180.00**
MD63S/230	SHT	230 VAC	shunt trip release	1	**225.00**
MD63S/024	SHT	24 VDC	shunt trip release	1	**225.00**
MD63S/048	SHT	48 VDC	shunt trip release	1	**225.00**
MD63UO/230	UVT	230 VAC	under/over voltage release	1	**450.00**

MCB sizes



PMVF81

Photovoltaic (PV) interface protection unit *(modular DIN-rail mount)*

The **PMVF81** is an interface protection relay intended for use within grid-tied PV systems to monitor and protect the grid.

Designed to ensure that the PV system operates within the required safety parameters and disconnects the system from the grid if any anomalies are detected.

These devices continuously monitor the voltage and frequency of the electrical utility and when either the voltage or the frequency are out of the admissible limits, they step in by de-energising a relay output so that an interface switch (IS) *(e.g. contactor)* opens, isolating the PV system from the grid.

Operational characteristics:

- 5 digital inputs: Interface switch feedback; R.O.C.O.F./Vector shift delay; Disabling tripping; Remote tripping; Programmable
- Auxiliary voltage: 24...240 VAC/DC
- Voltage inputs: 100 - 500000 VAC (with VT)
- 3 relay ouputs: Interface switch opening/closing; Standby device opening/closing; Programmable
- Programmable voltage rating, voltage thresholds, frequency and delays
- Supports EXM series expansion modules (USB, RS-232, RS-485 and Ethernet), *see* ***Category E***
- Compliant standards: VDE-AR-N , VDE-AR-N 4110, VDE-AR-N 4120x, IEC/EN 61010-1, IEC/EN 61000-6-2, IEC/EN 61000-6-4

Photovoltaic (PV) interface protection unit *(modular DIN-rail mount)*

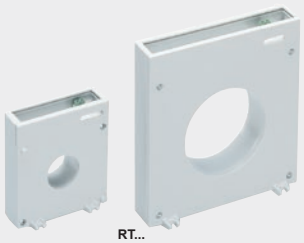
type	aux. power supply	inputs	outputs	description	width in 18 mm	price
PMVF81	24 - 240 VAC/DC	5	3	PV grid protection module	4	**18 000.00**

R4D 415

Industrial electronic earth leakage relays

- LED indication (Green – Power "ON") (Red – TRIP)
- Front "TEST" and "RESET" buttons
- Configurable automatic or manual reset
- Configurable tripping set-point (IΔn): 0.025 - 0.25A / 0.25 - 2.5A / 2.5 - 25A
- Configurable tripping time delay (t): 0.02 - 0.5s / 0.2 - 5s
- Reference standards: IEC/EN 60947-2

type	supply voltage	relays	description	price
Panel mount earth leakage relays - *(96 x 96 mm)*				
Require toroidal current transformers *(listed below)*				
R1D 1 operational threshold				
R1D 415	110 - 240 - 415V	1	earth leakage 1 operational threshold	**4 350.00**
R2D 2 operational thresholds		*(configurable for 2 tripping or 1 + alarm)*		
R2D 415	110 - 240 - 415V	2	earth leakage 2 operational threshold	**10 600.00**
R4D 2 operational thresholds		*(configurable for 2 tripping or 1 + alarm)*		
• Flag indicator "trip memory" • Digital fault current measurement and display with configurable tripping value				
R4D 415	110 - 240 - 415V	2	earth leakage 2 operational threshold	**15 600.00**



RT...

Toroidal current transformers for above earth leakage relays

type	supply voltage	hole size	description	price
RT60	toroid	60 mm	toroidal transformer for above relays	**1 990.00**
RT80	toroid	80 mm	toroidal transformer for above relays	**2 440.00**
RT110	toroid	110 mm	toroidal transformer for above relays	**2 560.00**
RT210	toroid	210 mm	toroidal transformer for above relays	**6 570.00**
RTA110	toroid	110 mm	split-core toroidal transformers	**6 930.00**
RTA210	toroid	210 mm	split-core toroidal transformers	**8 750.00**
Earth leakage relay incorporating toroidal transformer				
RC60 48	24 - 48 VAC/DC	60 mm	earth leakage and toroidal combinations	**9 950.00**
RC60 415	110 - 240 - 415V	60 mm	earth leakage and toroidal combinations	**6 070.00**
RC80 415	110 - 240 - 415V	80 mm	earth leakage and toroidal combinations	**6 650.00**
RC110 415	110-240-415V	110 mm	earth leakage and toroidal combinations	**7 110.00**

RC80 415

Above ZAR prices do not include VAT. E&OE

4941 3723

RESYS M40 - Earth leakage protection

RESYS M40 earth leakage relays associated with a remote trip breaking device *(automatic power breaking)*, provide the following functions:
- Protection against indirect contact
- Limitation of leakage currents

They also preventively monitor electrical installations via a *(configurable)* pre-alarm function or when used as a signalling relay.

- Positive or negative security
- Modular DIN-rail mountable *(same format as MCBs)* 44mm wide
- 2 relays with configurable function *(alarm or pre-alarm at 50% (IΔn)*
- Adjustment of IΔn: 0.03 - 0.1 - 0.3 - 0.5 - 1 - 3 - 5 - 10 - 30A
- Time delay: 0 - 0.06 - 0.15 - 0.30 - 0.50 - 0.80 - 1 - 4 - 10 sec
- Tripping accuracy by TRMS measurement *(improves immunity to nuisance tripping)*
- LED bargraph provides real-time display of leakage currents

type	current setting IΔn	time delay (sec)	power supply	description	price
RESYS M40 - Type A differential relay				*(H)85 x (W)44 x (D)63*	
4941 3723	0.03 - 30A	0 - 10	115/230 VAC	electronic earth leakage relay	**4 300.00**
4941 3740	0.03 - 30A	0 - 10	400 VAC	electronic earth leakage relay	**4 300.00**
4941 3602	0.03 - 30A	0 - 10	12 - 125 VDC	electronic earth leakage relay	**4 810.00**

4941 3724

RESYS M40R - With automatic reclosing

M40R relay recloses the system up to six consecutive times after preselected time intervals. If the fault is still present after the sequence of six reclosing attempts, the relay is locked in alarm mode and a manual intervention will be required.

- Time delay between two reclosings: 7.5 - 15 - 30 - 60 - 120 - 240 sec

4941 3724	0.03 - 30A	0 - 10	115/230 VAC	reclosing earth leakage relay	**4 500.00**
4941 3741	0.03 - 30A	0 - 10	400 VAC	reclosing earth leakage relay	**4 500.00**

RESYS P40 - Panel mounting *(48 x 48 mm)*

As per **RESYS M40** *(above)* but in panel mounting version

4942 3723	0.03 - 30A	0 - 10	230 VAC	panel-mount earth leakage relay	**5 910.00**

4942 3723

Core balance transformers *(toroidal transformers) - type A*

Active conductors pass through the aperture of the core balance transformer, providing a differential summation of vector currents, enabling detection of leakage currents.

type	aperture Ø diameter	description	dimensions (mm) (H)	(W)	(D)	price
4950 6030	30 mm	core balance transformer for e/leakages	104	92	26	**1 980.00**
4950 6050	50 mm	core balance transformer for e/leakages	125	103	26	**2 470.00**
4950 6080	80 mm	core balance transformer for e/leakages	143	116	26	**2 770.00**
4950 6120	120 mm	core balance transformer for e/leakages	183	163	26	**3 860.00**
4950 6200	200 mm	core balance transformer for e/leakages	274	253	51	**8 940.00**

Larger aperture sizes available on request

Accessories *for above*

Cable locator

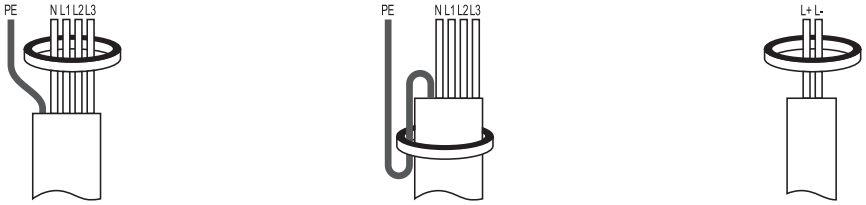
Enables cables passing through toroids to be centred *(for direct cable mounting)*

4950 0011	30 mm	for directly mounting transformers onto cables	**497.00**
4950 0012	50 mm	for directly mounting transformers onto cables	**872.00**
4950 0013	80 mm	for directly mounting transformers onto cables	**1 670.00**
4950 0014	120 mm	for directly mounting transformers onto cables	**1 920.00**
4950 0031		DIN-rail clip *(for DIN-rail mounting core balance transformers)*	**173.00**

4950 6080

Implementation (Installation of the detection toroids)

- All of the active conductors must be passed through the detection toroid's aperture
- The protective conductor must pass on the outside of the torrid or pass once for each direction



SBN132

SBN232

SBN399

SFH125

SFH225

SBN series - Modular isolators *(switch disconnectors)*

The SBN range of modular DIN-rail mountable switch disconnectors provide state-of-the-art comfort and a high degree of safety, complimenting the standard range of Miniature Circuit Breakers (MCBs).

- For use as a switch disconnector in all types of circuits
- **MZN175** padlocking kit allows to lock in the ON or OFF position *(see MCB accessories)*
- Green/red (I/O) indication on handle provides positive contact indication

SANS - IEC 60947-3 **Utilisation category:** AC 22A

type	current rating (A)	switching	poles	description	width in 17.5 mm	price
Modular isolators	*(modular DIN-rail mount)*					
1-pole disconnect switches						
SBN132	32A	on - off	1-pole	modular isolator switch	1	**129.00**
SBN163	63A	on - off	1-pole	modular isolator switch	1	**171.00**
SBN190	100A	on - off	1-pole	modular isolator switch	1	**214.00**
SBN199	125A	on - off	1-pole	modular isolator switch	1	**384.00**
2-pole disconnect switches						
SBN232	32A	on - off	2-pole	modular isolator switch	1	**171.00**
SBN263	63A	on - off	2-pole	modular isolator switch	2	**256.00**
SBN290	100A	on - off	2-pole	modular isolator switch	2	**299.00**
SBN299	125A	on - off	2-pole	modular isolator switch	2	**595.00**
3-pole disconnect switches						
SBN332	32A	on - off	3-pole	modular isolator switch	2	**256.00**
SBN363	63A	on - off	3-pole	modular isolator switch	3	**341.00**
SBN390	100A	on - off	3-pole	modular isolator switch	3	**425.00**
SBN399	125A	on - off	3-pole	modular isolator switch	3	**942.00**
4-pole disconnect switches						
SBN432	32A	on - off	4-pole	modular isolator switch	2	**464.00**
SBN463	63A	on - off	4-pole	modular isolator switch	4	**649.00**
SBN490	100A	on - off	4-pole	modular isolator switch	4	**1 800.00**
SBN499	125A	on - off	4-pole	modular isolator switch	4	**1 970.00**
Auxiliary contact for above isolators						
ESC080	6A	1NO + 1NC		clip-on auxiliary for above switches	0.5	**422.00**

Changeover switches *(modular DIN-rail mount)*

The **SF series** changeover switches are manually operated 1, 2 or 4 pole modular transfer switches with positive break indication. They provide on-load transfer between two sources for any low voltage power circuit, as well as safety isolation.

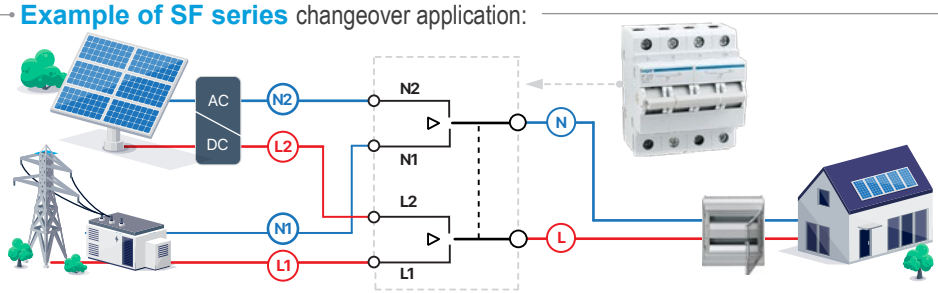
Ideal for manual changeover applications *(mains supply ↔ generator supply)*

- Complies with IEC/EN 60947-3
- Inductive and resistive loads
- Utilisation category: AC 22A (25 - 40A) AC 21A (63A)

SFH series - Changeover switches - *2 way (I - II)*						
SFH125	25A	on - on	1-pole	2-way changeover switch	1	**211.00**
SFH225	25A	on - on	2-pole	2-way changeover switch	2	**492.00**
SFT series - Changeover switches *(with centre off) - 3 way (I - O - II)*						
SFT125	25A	on - off - on	1-pole	centre off changeover switch	1	**241.00**
SFT140	40A	on - off - on	1-pole	centre off changeover switch	1	**241.00**
SFT240	40A	on - off - on	2-pole	centre off changeover switch	2	**450.00**
SFT440	40A	on - off - on	4-pole	centre off changeover switch	4	**900.00**
SF263	63A	on - off - on	2-pole	centre off changeover switch	4	**620.00**
SF463	63A	on - off - on	4-pole	centre off changeover switch	8	**1 800.00**

The incoming of the changeover must be protected with an appropriate MCB against short circuits

Example of SF series changeover application:



Above ZAR prices do not include VAT. E&OE

ESC225

ESC425

ERC216

ERC425S

ESC463S

ESC080

LZ060

EPN503

EPN051

EPN053

Modular contactors / Step relays

Contactors are power devices necessary for remote switching and control of power circuits. It is recommended that they be associated with command and energy management devices.

- Modular DIN-rail mounting *(same cutout as MCBs)*
- Feature economic low consumption, low heat dissipation coils

type	contact rating (AC1)	coil voltage	description	contact config.	width in 17.5 mm	price
Modular contactors						
Standard contactors *(230 VAC 50/60 Hz)*						
ESC225	25A	230 VAC	modular standard contactor	2NO	1	**566.00**
ESC226	25A	230 VAC	modular standard contactor	2NC	1	**566.00**
ESC227	25A	230 VAC	modular standard contactor	1NO + 1NC	1	**550.00**
ESC425	25A	230 VAC	modular standard contactor	4NO	2	**809.00**
ESC427	25A	230 VAC	modular standard contactor	2NO + 2NC	2	**824.00**
ESC240	40A	230 VAC	modular standard contactor	2NO	3	**1 060.00**
ESC241	40A	230 VAC	modular standard contactor	2NC	3	**1 060.00**
ESC440	40A	230 VAC	modular standard contactor	4NO	3	**1 270.00**
ESC442	40A	230 VAC	modular standard contactor	2NO + 2NC	3	**1 270.00**
ESC263	63A	230 VAC	modular standard contactor	2NO	3	**1 380.00**
ESC463	63A	230 VAC	modular standard contactor	4NO	3	**1 610.00**
ESC464	63A	230 VAC	modular standard contactor	4NC	3	**1 470.00**
ESC465	63A	230 VAC	modular standard contactor	2NO + 2NC	3	**1 580.00**
Relays and contactors *with manual override facility*						
ERC216	16A	230 VAC	modular rail mount relay	2NO	1	**455.00**
ERC218	16A	230 VAC	modular rail mount relay	1NO + 1NC	1	**455.00**
ERC416	16A	230 VAC	modular rail mount relay	4NO	2	**902.00**
ERC418	16A	230 VAC	modular rail mount relay	2NO + 2NC	2	**902.00**
ERC225	25A	230 VAC	modular standard contactor	2NO	1	**566.00**
ERC240	40A	230 VAC	modular standard contactor	2NO	3	**1 060.00**
ERC263	63A	230 VAC	modular standard contactor	2NO	3	**1 550.00**
Modular "low noise" contactors *(No humming while energised / low switching noise)*						
ERC225S*	25A	230 VAC	low noise modular contactor	2NO	1	**629.00**
ERC425S*	25A	230 VAC	low noise modular contactor	4NO	2	**1 040.00**
ESC440S	40A	230 VAC	low noise modular contactor	4NO	3	**1 550.00**
ESC463S	63A	230 VAC	low noise modular contactor	4NO	3	**1 810.00**
ERL625SDC*	25A	12 VDC	low noise modular contactor	2NO	2	**543.00**
ERL425SDC*	25A	12 VDC	low noise modular contactor	4NO	2	**1 020.00**
ESL440S	40A	12 VDC	low noise modular contactor	4NO	3	**1 550.00**
ESL463S	63A	12 VDC	low noise modular contactor	4NO	3	**1 810.00**
ERD225SDC*	25A	24 VDC	low noise modular contactor	2NO	1	**593.00**
ESD425SDC*	25A	24 VDC	low noise modular contactor	4NO	2	**1 040.00**
ESD440S	40A	24 VDC	low noise modular contactor	4NO	3	**1 550.00**
ESD463S	63A	24 VDC	low noise modular contactor	4NO	3	**1 810.00**
* *With manual override control*						
Contactor accessories						
Auxiliary contact for all above contactors						
*Auxiliaries are not compatible with low-noise contactors **ERC225S, ERD225SDC***						
ESC080	Ith 6A	–	clip-on auxiliary contact	1NO + 1NC	0.5	**422.00**
*Avoid overheating when installed side by side, insert a heat dissipation module **LZ060** between contactors*						
LZ060	heat dissipation insert for mounting between contactors				0.5	**12.20**
Modular latching / step relays						
• Pulsing the relay changes the contact status until pulsed again • Max. pulse duration: 60 seconds • With manual override facility						
EPN515	16A	230 VAC	modular stepping relay	1NO + 1NC	1	**457.00**
EPN503	16A	48 VAC/24 VDC	modular stepping relay	1NO + 1NC	1	**544.00**
EPN518	16A	24 VAC/12 VAC	modular stepping relay	1NO + 1NC	1	**455.00**
EPN519	16A	12 VAC	modular stepping relay	1NO + 1NC	1	**455.00**
EPN521	16A	12 VAC	modular stepping relay	2NO	1	**457.00**
Auxiliary for above stepping relays						
EPN051	2A	–	clip-on auxiliary contact	1NO + 1NC	0.5	**393.00**
EPN053	2A	converts maintained contact into a pulsed one		1 C/over	0.5	**391.00**

EHN011

Modular time switches

Time switches are used to control lighting, pumps, heating, household appliances, and many other applications according to pre-defined programming, to improve comfort and save energy.

General features:

- Supply voltage: 230 VAC
- Output: AC1 10A 230V ***(EGN100)*** / 16A 230V ***(EGN103/EGN200/EGN400)*** / 16A 250V ***(EHNxxx)***
- Mounting: Modular DIN-rail
- Manual override possible

For higher current ratings it is recommended to use time switches in conjunction with contactors

EHN110

type	time range	min. setting	reserve	contact config.	description	width in 17.5 mm	price
Analogue time switches			*(electro-mechanical)*				
Slimline 1 module wide *(17.5 mm)*							
EHN010	24 hr	15 min	no	1 NO	time switch	1	**880.00**
EHN011	24 hr	15 min	120 hrs	1 NO	time switch	1	**810.00**
Standard 3 module wide - *clock hands indicate real time*							
EHN110	24 hr	15 min	no	1 c/over	time switch	3	**780.00**
EHN111	24 hr	15 min	120 hrs	1 c/over	time switch	3	**1 400.00**
EHN171	7 day	2 hrs	120 hrs	1 c/over	time switch	3	**1 960.00**

EGN103 EGN003

Digital time switches

Basic version *(weekly time switch)*

For less complex switching tasks, the time switch is a single channel digital clock with daily or weekly electronic programming that automatically controls different loads.

- Programmable by day or group of days
- 56 programmable steps
- ON or OFF control
- Indicates date and time *(pre-programmed at factory)*
- Programmable via front keypad or via Bluetooth with the **EGN003** *(even without supply)*

EGN103	7 day	1 min	5 years	1 c/over	time switch	2	**2 240.00**
EGN003	Programming Bluetooth key for **EGN103**						**1 810.00**

EGN100

Advanced versions *(multi-function time switches)*

Combine all functions of a modern time switch and feature daily, weekly and yearly programmable cycles for the automatic control of different loads.

- Built-in astronomical clock
- 1, 2 or 4 channel options available
- 100/200/400 programmable steps *(version dependent)*
- ON, OFF or Pulse *(1-60s)* control
- Programmable wired input for variance or forcing
- Long power reserve with accuracy +-90s/year
- Programmable via Bluetooth or via front keypad ***(EGN200/400)***

EGN100	week/annual	1 sec	10 years	1 c/over	time switch	1	**4 140.00**
EGN200	week/annual	1 sec	10 years	2 c/over	time switch	2	**4 600.00**
EGN400	week/annual	1 sec	10 years	4 c/over	time switch	4	**6 460.00**

EGN200

Modular electronic timers

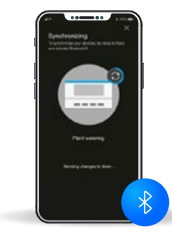
Delay timer devices are used to control a variety of processes where the requirement is for switching circuits on, off or delaying the on or off switching for a pre-set period of time.

- Multi-time range: 0.05s - 100h
- Multi-voltage: 24-240V AC/DC
- 8A 230V changeover output

EZD100	On-delay multi-range *(modular timer)*	electronic timer	1	**1 610.00**
EZF100	Off-delay multi-range *(modular timer)*	electronic timer	1	**1 840.00**
EZM100	Multi-function on-delay / off-delay / interval / repeat	electronic timer	1	**1 610.00**

EZM100

Bluetooth programing



Easy programming via Hager Mood app.

01 Synchronise the program with the timer
02 Create programs
03 Select the timer

Scan to watch our tutorials

Download the free Hager Mood from

Download on the App Store

GET IT ON Google Play

Above ZAR prices do not include VAT. E&OE

ECP180D

ECP300C

Energy meters (kWh meters) *(modular DIN-rail mounting)*

The 4 quadrants pulse energy meters measure the active and reactive energy used in an electrical installation.

Capable of managing dual tariffs, the meters are equipped with LCD backlight and 3 push-button keys to read Energies, V, I, PF, F, P, Q and to configure some parameters.

- Accuracy: 1%
- Pulse output
- Backlit LCD
- "Total" counter and "Partial" *(resettable)* counter
- Class 1 according to IEC 62 053-21 and EN 50470
- LED indication blinks according to consumption (1000/kWh)

type	current	operation	description	width	price
Single-phase kWh meter 80A			*(direct reading)*		
ECP180D	80A	direct	single-phase kWh meter	2	**4 480.00**
Three-phase kWh meters 80/125A			*(direct reading)*		
ECP380D	80A	direct	three-phase kWh meter	4	**5 860.00**
ECP310D	125A	direct	three-phase kWh meter	6	**7 440.00**
Three-phase kWh meters up to 6000A			*(connection via CT)*		
ECP300C	6000A	CT / 5A	three-phase kWh meter	4	**5 480.00**

*For CTs, see page **E-20...25***

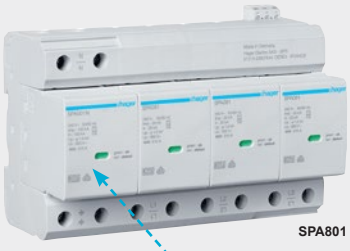
SPDs Type 1 Type 2

New

Surge protection devices (SPDs) Class 1 and 2 *(modular DIN-rail mounting)*

For the protection of low-voltage equipment against transient voltages and current surges from atmospheric origins *(lightning)* as well as transients produced by switching characteristics such as switching of distribution networks, transformers, motors, etc.

• Complies with SANS/IEC 61643-11


SPA801

SPA081 *(On request)*

type	Iimp L-N (10/350us)	In L-N (8/20us)	Imax (8/20us)	Uc max voltage	Up protection voltage	config.	width in 17.5 mm	price
Class 1 and class 2 combined surge protection device *(for TT or TNS-Networks)*								
SPA801*	25kA	25kA	50kA	350V	≤ 1.5 kV	3ph + N	8	**32 500.00**
SPN802R*	25kA	25kA	50kA	350V	≤ 1.5 kV	3ph + N	8	**12 000.00**

The combined surge protection devices offer an all-in-one solution to protect against lightning and surge-voltage in one device.

- Compliance with to EN 61643-11, requirement class type 1+2
- Replaceable plug-in modules
- Integrated fault indicator in the plug-in modules
- SPDs with separate auxiliary contact

Surge protection devices (SPDs) Class 2 *(modular DIN-rail mounting)*

Class 2 surge protection devices are designed to provide reliable protection against transient overvoltages, typically caused by lightning strikes or switching operations in the network.

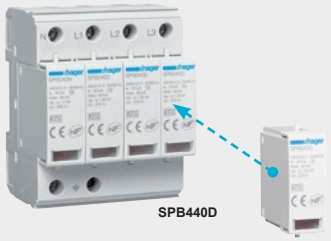
Suitable for second-level protection in distribution panels where type 1 protectors are installed or areas not exposed to direct lightning strikes and with no external lightning protection system.

- Can be used in any supply system TNC/TNCS/TNS/TT
- Replaceable plug-in modules
- Integrated fault indicator in the plug-in modules

SPB140D

Imax 40kA *(8/20µs)*								
SPB140D	–	20kA	40kA	275V	≤ 1.5 kV	1P	1	**1 780.00**
SPB240D	–	20kA	40kA	275V	≤ 1.5 kV	1ph + N	2	**3 830.00**
SPB240R*	–	20kA	40kA	275V	≤ 1.5 kV	1ph + N	2	**4 330.00**
SPB440D	–	20kA	40kA	275V	≤ 1.5 kV	3ph + N	4	**7 070.00**
SPB440R*	–	20kA	40kA	275V	≤ 1.5 kV	3ph + N	4	**9 210.00**

* *With remote signalling contact for monitoring*


SPB440D SPB040D

Replacement cartridges for the above surge protection devices

Replacement cartridges keep your surge protection effective without needing a full device replacement.

SPB040D	phase	replacement cartridge	for protectors	SPB140/240/440	–	**2 410.00**
SPB040N	neutral	replacement cartridge	for protectors	SPB240/440	–	**1 670.00**

ST314

Control transformers *(modular DIN-rail mount)*

- Transformers ensure an electrical separation between primary and secondary circuits

type	supply voltage	output voltage	power (VA)	description	width in 17.5 mm	price
ST312	230V	12/24V	25VA	modular safety transformer	4	**941.00**
ST314	230V	12/24V	40VA	modular safety transformer	4	**1 060.00**
ST315	230V	12/24V	63VA	modular safety transformer	6	**1 430.00**
ST303	230V	8/12V	8VA	modular bell transformer	2	**589.00**
ST305	230V	8/12V	16VA	modular bell transformer	3	**980.00**

Bell transformers are short-circuit protected

SU213

Audible devices *(modular DIN-rail mount)*

- Bells/buzzers max. continuous duty < 30 minutes

SU213	230V	–	6.5VA	85 dB	modular bell	1	**359.00**
SU214	8/12 VAC	–	4.0VA	78 dB	modular buzzer	1	**359.00**
SU215	230V	–	6.5VA	78 dB	modular buzzer	1	**359.00**

LSN502

Fuse holders *(modular DIN-rail mount)*

- For protection and control of circuits against overloads and short circuits
- Short-circuit resistance with 10 x 38 mm fuse-link: 80kA
- For 10 x 38 mm cylindrical fuses *(see page **B-45...50**)*

LSN501	32A	1-pole	modular cylindrical fuse holder	1	**80.00**
LSN502	32A	2-pole	modular cylindrical fuse holder	2	**199.00**

Control and indicating devices *(modular DIN-rail mount)*

LED indicating lights *(100 000hrs)*

- With integrated label holder

SVN121	230VAC	green	modular LED indicating light	1	**243.00**
SVN122	230 VAC	red	modular LED indicating light	1	**243.00**
SVN123	230 VAC	amber	modular LED indicating light	1	**243.00**
SVN126	230 VAC	grn+red	modular LED indicating light	1	**341.00**
SVN223	230 VAC	red/wht/blu	modular LED p/light for phase indication	1	**435.00**
SVN131	12 - 48 VAC/DC	green	modular LED indicating light	1	**241.00**
SVN132	12 - 48 VAC/DC	red	modular LED indicating light	1	**243.00**
SVN351	1NO + 1NC	–	modular momentary pushbutton	1	**341.00**
SVN391	1NO + 1NC	grn+red	double pushbutton (grn NO / red NC)	1	**339.00**
SVN411	1NO	green	modular pushbutton + green pilot light	1	**316.00**

SVN.....

I - Plugs & Sockets

SCAME feeling connected

SCAME DIN modular domestic sockets for distribution boards

Permits the mounting of domestic switches and/or sockets into standard DIN distribution boards to provide an electrical connection for tools, power supplies or recording instruments.

- DIN-rail mounting housing/support for domestic switches or sockets
- Mounts into standard distribution boards with same dimensions and cut-out as MCBs
- Two modular widths: One module *(18 mm)* and two module *(36 mm)*

654.0091

101.6414.G

type				description	no. of modules	price
DIN-rail support for Evolution series						
654.0091				DIN-rail support for Evolution series switches or sockets	1	
654.0092				DIN-rail support for Evolution series switches or sockets	2	
Evolution series switches and sockets for *(above)* supports						
• Simply clips into DIN-rail mount housing *(above)*						
101.6414.G	15A		2P+E	South African std socket for housings	2	
101.6403.G	16A		2P+E	European/Italian socket for housings	1	
101.6303.G	16A		1-pole	switch for housings (I-O)	1	
101.6311.G	16A		2-pole	changeover switch for housings (I-O-II)	1	

*see **Cat I** for pricing.*

654.0092 + 101.6414.G

Above ZAR prices do not include VAT. E&OE

HJM5DC250/2-200

DC - Moulded case circuit breakers

HJM5DC dedicated DC circuit breaker in a 2 pole (+ / -) version can be applied to DC underground systems, negative or neutral grounding systems and meet environmental requirements of photovoltaic applications.

Application scenarios include DC power distribution, photovoltaic, energy storage, data centres etc.

General features:

- Two pole design, compact dimensions with high performance ratings
- Superior insulating performance, clearance and creepage distance meets UL489, IEC 60947-2 standards
- Non-polarity, reverse current and reverse incoming reliably protected
- Zero arcing: True zero arcing avoiding secondary system failure due to arc spray on breaking standards

DC moulded case circuit breakers

HJM5DC series features:

- Rated voltage 1000, 1500 VDC
- Rated insulation voltage 1500V
- Rated impulse withstand voltage 12kV

type	rated current	no. poles	nominal voltage	breaking capacity 1000V (τ = 5ms)	breaking capacity 1500V (τ = 5ms)	dimensions (mm) (H)	(W)	(D)	price
HJM5DC250/2-125	125A	2-pole	1000 VDC	50kA	15kA	200	81	100	**3 070.00**
HJM5DC250/2-160	160A	2-pole	1000 VDC	50kA	15kA	200	81	100	**3 070.00**
HJM5DC250/2-200	200A	2-pole	1000 VDC	50kA	15kA	200	81	100	**3 070.00**
HJM5DC250/2-250	250A	2-pole	1000 VDC	50kA	15kA	200	81	100	**3 070.00**
HJM5DC250/2-320	320A	2-pole	1000 VDC	50kA	15kA	200	81	100	**3 070.00**
HJM5DC800/2-325	325A	2-pole	1500 VDC	35kA	20kA	280	124	135	**7 720.00**
HJM5DC800/2-400	400A	2-pole	1500 VDC	35kA	20kA	280	124	135	**7 720.00**
HJM5DC800/2-500	500A	2-pole	1500 VDC	35kA	20kA	280	124	135	**7 720.00**
HJM5DC800/2-630	630A	2-pole	1500 VDC	35kA	20kA	280	124	135	**7 720.00**
HJM5DC800/2-800	800A	2-pole	1500 VDC	35kA	20kA	280	124	135	**8 550.00**

HJM5DC800/2-500

AC moulded case circuit breakers *(high voltage 1000 VAC)*

In recent years the increasing demand for high service voltage protection devices in industrial plants has prompted the introduction of circuit breakers for use in 800/1000 VAC applications. Hence the introduction of the **HJM5HU** special series for up to 1140 VAC rated operational voltage.

Suitable for use under special environmental conditions in mines, road and railway tunnels, electrical transport, refineries, chemical plants for high performance and general industrial power supply with long supply lines.

HJM5HU series features:

Rated working voltage 50/60Hz:	Ue	525, 690, 800, 1000, 1140 VAC
Rated insulated voltage:	Ui	1250V
Rated impulse withstand volts:	Uimp	12 kV
Standards:		GB/T14048.2, IEC/EN60947-2, UL489

type	rated current	no. poles	nominal voltage	breaking capacity 800V	breaking capacity 1000V	dimensions (mm) (H)	(W)	(D)	price
HJM5HU250/3-125	125A	3-pole	1000 VAC	50kA	15kA	200	81	100	**4 000.00**
HJM5HU250/3-160	160A	3-pole	1000 VAC	50kA	15kA	200	81	100	**4 000.00**
HJM5HU250/3-200	200A	3-pole	1000 VAC	50kA	15kA	200	81	100	**4 000.00**
HJM5HU250/3-250	250A	3-pole	1000 VAC	50kA	15kA	200	81	100	**4 000.00**
HJM5HU250/3-320	320A	3-pole	1000 VAC	50kA	15kA	200	81	100	**4 000.00**
Available in lower rated currents - 40, 50, 63, 80, 100A (same frame) on request									
HJM5HU630/3-630	630A	3-pole	1000 VAC	50kA	15kA	258	150	115	**10 790.00**
HJM5HU800/3-630	630A	3-pole	1000 VAC	50kA	15kA	280	182	135	**12 300.00**
HJM5HU800/3-800	800A	3-pole	1000 VAC	50kA	15kA	280	182	135	**13 500.00**

HJM5HU800/3-800

Accessories for above circuit breakers HJM5DC and HJM5HU

HJM5AUX320	aux	auxiliary + alarm contact for	**HJM5-320** MCCB	**260.00**
HJM5AUX630	aux	auxiliary + alarm contact for	**HJM5-630** MCCB	**260.00**
HJM5AUX800	aux	auxiliary + alarm contact for	**HJM5-800** MCCB	**260.00**
HJM5SHT300/*	shunt	shunt release for	**HJM5-320** MCCB	**530.00**
HJM5SHT630/*	shunt	shunt release for	**HJM5-630/800** MCCB	**530.00**

* *Specify voltage required:* ***02*** *= 24VDC,* ***11*** *= 110VAC,* ***23*** *= 230VAC,*
For 230 VAC shunt, see ordering example **HJM5SHT300/*23***

Moulded case circuit breakers - Selection chart

Hager moulded case circuit breakers conform to IEC/EN 60947-2 standards and to all major international standards and performance categories.

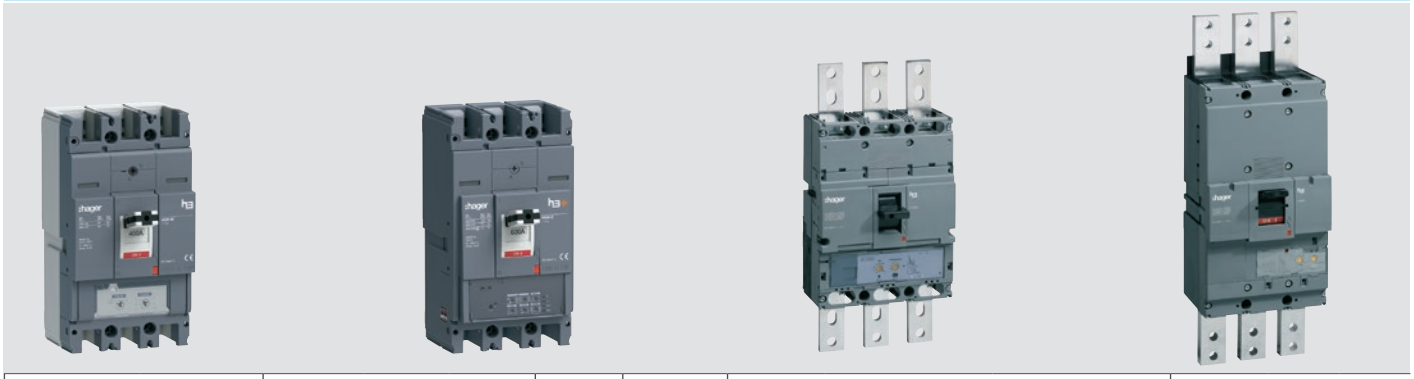
- Calibrated at 50ºC
- Load break switches
- Thermal magnetic and electronic release
- Quick, easy and safe mounting of accessories
- Safety for low voltage electrical circuit protector
- Suitable for co-ordinated installations in all applications
- Wide range of rated current ratings and breaking capacities

Cascading with MCBs (see cascading chart ***Annex-5***)

Frame			x160			x250		
Product			Switch	MCCB		Switch	MCCB	
Reference			HCA	HHA	HNA	HCB	HHB	HNB
Number of poles		[No.]	3/4	3	3/4	3/4	3	3/4
Electrical characteristics								
Rated current	In	[A]	160			250		
Current rated range		[A]	125 - 160	16 - 160	25 - 160	250	200 - 250	250
Rated service voltage (AC)	Ue	[V]	220 - 415			220 - 415		
Frequency	f	[Hz]	50/60			50/60		
Rated insulation voltage	Ui	[V]	690			800		
Rated impulse withstand voltage	Uimp	[kV]	8			8		
Suitability for insulation			Yes			Yes		
Rated ultimate short-circuit-breaking capacity	(Icu)							
(AC) 50-60 Hz 220/230 V	Icu	[kA]	–	35	85	–	35	85
(AC) 50-60 Hz 380/415 V	**Icu**	**[kA]**	**–**	**25**	**40**	**–**	**25**	**40**
(AC) 50-60 Hz 480/500/525 V	Icu	[kA]	–	7.5	12.5	–	–	10
(AC) 50-60 Hz 660/690 V	Icu	[kA]	–	4	6	–	–	4
(DC) 250 V - 2-poles in series	Icu	[kA]	–	20	25	–	25	25
Rated service short-circuit-breaking capacity,	(Ics)							
(AC) 50-60 Hz 220/230 V	Ics	[kA]	–	25	40	–	25	40
(AC) 50-60 Hz 380/415 V	**Ics**	**[kA]**	**–**	**20**	**20**	**–**	**20**	**20**
(AC) 50-60 Hz 480/500/525 V	Ics	[kA]	–	4	7.5	–	–	7.5
(AC) 50-60 Hz 660/690 V	Ics	[kA]	–	–	3	–	–	2
(DC) 250 V - 2-poles in series	Ics	[kA]	–	10	13	–	13	13
Rated short-circuit making capacity	Icm	[kA]	2.8	–	–	6	–	–
Rated short-time withstand current for 1s	Icw	[kA]	2	–	–	3	–	–
Category of use (EN 60947-2)			–	A		–	A	
Trip unit			–	TM		–	TM	
Calibration temperature			–	50°C		–	50°C	
Derating	40°C		–	100%		–	100%	
	50°C		–	100%		–	100%	
	55°C		–	95%		–	94%	
	60°C		–	93%		–	91%	
	65°C		–	90%		–	88%	
Electric endurance in the number of cycles			10 000			10 000		
Mechanical endurance in number of operations			20 000			20 000		
Operating temperature			-25 to +70°C			-25 to +70°C		
Storage temperature			-35 to +70°C			-35 to +70°C		
Power loss (at In for 3P)		[W]	39			60		
Reference standard			IEC 60947-3	IEC 60947-2	IEC 60947-2	IEC 60947-3	IEC 60947-2	IEC 60947-2
Releases: switch			ok	–	–	ok	–	–
Releases: TM (thermomagnetic)			–	ok	ok	–	ok	ok
T fixed, M fixed			–	ok	–	–	ok	–
T adjustable, M fixed			–	–	ok	–	–	–
T adjustable, M adjustable			–	–	–	–	–	ok
Thermal adjustment value			–	–	0.63 to 1 x In	–	–	0.63 - 0.8 - 1 x In
Magnetic adjustment value			–	–	–	–	–	5-7-9-11 x In
Releases: LSnI (electronic) Non-adjustable magnetic			–	–	–	–	–	–
Releases: LSI (electronic)			–	–	–	–	–	–
Long delay			–	–	–	–	–	–
Short delay			–	–	–	–	–	–
Time delay			–	–	–	–	–	–
Connection								
Standard terminal type			cage			lugs		
Terminal width		mm	13			25		
Terminal shields			optional			optional		
Cage terminal			integrated			ok		
Extended connections			optional			optional		
Rear connections			no			optional		
Dimensions								
Height		mm	130			165		
Width	3P	mm	75			105		
	4P	mm	100			140		
Depth		mm	68			68		
Weight	3P	**kg**	0.715			1.3		
	4P	**kg**	0.95			1.6		

* *Without links/with straight links*

Above ZAR prices do not include VAT. E&OE



x630		P630			h400e	h800e	h1000			h1600		
MCCB		Switch	MCCB		ECONO MCCB		Switch	MCCB		Switch	MCCB	
HMJ	HEJ	HCW	HMW	HEW	HND	HNE	HCE	HNE	HEE	HCF	HNF	HEF
3/4		3/4			3/4		3/4			3/4		
630		630			400	800	1000			1600		
320 - 630		400 - 630			320 - 400	500 - 800	800 - 1000			1250 - 1600		
220 - 690		220 - 690			415		220 - 415			220 - 415		
50/60		50/60			50		50/60			50/60		
800		800			690		800			800		
8		8			8		8			8		
Yes		Yes			Yes		Yes			Yes		
85	100	–	85	100	–	–	–	85 (800A), 75 (1000A)	100	–	100	100
50	**70**	**–**	**50**	**70**	**50**	**50**	**–**	**50**	**70**	**–**	**50**	**70**
–	–	–	–	–	–	–	–	30	30	–	45	65
–	–	–	12	12	–	–	–	20	20	–	25	45
6	8	–	–	–	–	–	–	–	–	–	–	–
85	100	–	85	100	–	–	–	85 (800A), 75 (1000A)	100 (800A), 75 (1000A)	–	75	75
50	**70**	**–**	**50**	**70**	**36**	**36**	**–**	**50**	**50**	**–**	**50**	**50**
–	–	–	–	–	–	–	–	30	30	–	45	50
–	–	–	12	12	–	–	–	20	20	–	25	34
6	8	–	–	–	–	–	–	–	–	–	–	–
–	–	7.5/13	–	–	–	–	20	–	–	45	–	–
–	–	5/7.6	–	–	–	–	10 (0.3s)	–	–	20 (0.3s)	–	–
A		–	A		A		–	B (800A), A (1000A)		–	B	
TM		–	Electronic		TM		–	Electronic		–	Electronic	
30°C (630A), 50°C (≤500A)		–	50°C		40°C		–	50°C		–	50°C	
100%		–	100%		100%	100%	–	100%		–	100%	
95%		–	95%		92%	94%	–	95%		–	95%	
90%		–	90%		88%	86%	–	90%		–	90%	
80%		–	80%		83%	82%	–	80%		–	80%	
80%		–	80%		–		–	80%		–	80%	
6 000/4 000		6 000/4 000			2000	1500	4 500			4500		
15 000		30 000			4000	4000	15 000			15000		
-25 to +70°C		-25 to +70°C			-5 to +60°C		-25 to +70°C			-25 to +70°C		
-35 to +70°C		-35 to +70°C			-25 to +70°C		-35 to +70°C			-35 to +70°C		
176.3		175.8					153.6			187.5		
IEC 60947-2		IEC 60947-3	IEC 60947-2		IEC 60947-2		IEC 60947-3	IEC 60947-2		IEC 60947-3	IEC 60947-2	
–		ok	–		–		ok	–		ok	–	
ok		–			ok		–			–		
–		–			ok		–			–		
–		–			–		–			–		
ok		–			–		–			–		
0.63 - 0.8 - 1 x In		–			–		–			–		
(400A) 5-6-7-8-9-10 (630)4-5-6-7-8		–			–		–			–		
–		–			–		–					
–		–	ok		–		–	ok		–	ok	
–		–	0.4 to 1 x Ir		–		–	0.4 to 1 x Ir		–	0.4 to 1 x In	
–		–	1.5 to 10 x Ir		–		–	2.5 to 10 x Ir (800A), 2.5 to 8 x Ir (1000A)		–	2.5 to 10 x Ir	
–		–	0.05 - 0.4s		–		–	0.1 - 0.2s		–	0.1 - 0.2s	
lugs		lugs			lugs		lugs			lugs		
32		32			–		45			45		
optional		optional			–		optional			optional		
optional		optional			–		–			–		
optional		optional			integrated		integrated			integrated		
optional		optional			optional		optional			–		
260		260			257	275	273/433*			370/570*		
140		140			140	210	210			210		
185		185			184	280	280			280		
150		150			155	155	99.5			140		
5.8		4.8	5.8		4.3	6.6	11			27		
7.6		6.4	7.6		5.2	8.9	14.8			31		

Moulded case circuit breakers 25/50/70kA

HHA125Z

HND400P

HNB250U

HMJ400DR

HEJ630DE

- Mechanical “test” button on the front
- Integrated padlock facility on toggle
- Cascading with MCBs *(see chart **Annex-5**)*
- Lockable thermal/magnetic settings
- Standards: SANS / IEC 60947-2

"Clip-in" accessories *(see MCCB accessories)*
- Auxiliary contacts
- Alarm contacts
- Shunt trip device
- Undervoltage release

type	thermal current	rated kA 415V (Icu)	poles	description	frame	price
Fixed-type thermal / magnetic trip 25 kA						
Fixed: Thermal 1 x In / magnetic >10 x In						
HHA016Z	16A	25 kA	3-pole	moulded case CB	x160	**2 420.00**
HHA020Z	20A	25 kA	3-pole	moulded case CB	x160	**2 420.00**
HHA025Z	25A	25 kA	3-pole	moulded case CB	x160	**2 420.00**
HHA032Z	32A	25 kA	3-pole	moulded case CB	x160	**2 420.00**
HHA040Z	40A	25 kA	3-pole	moulded case CB	x160	**2 420.00**
HHA050Z	50A	25 kA	3-pole	moulded case CB	x160	**2 420.00**
HHA063Z	63A	25 kA	3-pole	moulded case CB	x160	**2 420.00**
HHA080Z	80A	25 kA	3-pole	moulded case CB	x160	**2 420.00**
HHA100Z	100A	25 kA	3-pole	moulded case CB	x160	**2 420.00**
HHA125Z	125A	25 kA	3-pole	moulded case CB	x160	**2 570.00**
HHA160Z	160A	25 kA	3-pole	moulded case CB	x160	**3 130.00**
HHB200Z	200A	25 kA	3-pole	moulded case CB	x250	**5 290.00**
HHB250Z	250A	25 kA	3-pole	moulded case CB	x250	**5 290.00**
H3e series economical, cost-efficient						
• Not compatible with Quadro enclosure system						
Fixed: Thermal 1.05 to 1.3 x In / magnetic >10 x In						
HND320P	320A	50 kA	3-pole	moulded case CB	h400e	**8 190.00**
HND400P	400A	50 kA	3-pole	moulded case CB	h400e	**8 190.00**
HNE500P	500A	50 kA	3-pole	moulded case CB	h800e	**12 900.00**
HNE630P	630A	50 kA	3-pole	moulded case CB	h800e	**13 200.00**
HNE800P	800A	50 kA	3-pole	moulded case CB	h800e	**13 500.00**
4 pole available on request						
Adjustable thermal / magnetic trip 40/50 kA						
• Window indicating the presence of: Auxiliary/alarm contacts, shunt trip, UV release						
TM: Adjustable thermal 0.63 - 0.8 - 1 x In / fixed magnetic 5-10 x In (320-400A) and 4-8 x In (630A)						
HNA025U	16 - 25A	40kA	3-pole	moulded case CB	x160	**2 690.00**
HNA040U	25 - 40A	40kA	3-pole	moulded case CB	x160	**2 650.00**
HNA063U	40 - 63A	40kA	3-pole	moulded case CB	x160	**2 650.00**
HNA100U	63 - 100A	40kA	3-pole	moulded case CB	x160	**2 650.00**
HNA125U	80 - 125A	40kA	3-pole	moulded case CB	x160	**2 650.00**
HNA160U	101 - 160A	40kA	3-pole	moulded case CB	x160	**3 100.00**
HNA026U	16 - 25A	40kA	4-pole	moulded case CB	x160	**3 570.00**
HNA041U	25 - 40A	40kA	4-pole	moulded case CB	x160	**3 570.00**
HNA064U	40 - 63A	40kA	4-pole	moulded case CB	x160	**3 570.00**
HNA101U	63 - 100A	40kA	4-pole	moulded case CB	x160	**3 570.00**
HNA126U	80 - 125A	40kA	4-pole	moulded case CB	x160	**3 570.00**
HNA161U	101 - 160A	40kA	4-pole	moulded case CB	x160	**4 330.00**
TM: Adjustable thermal 0.63 - 0.8 - 1 x In / adjustable magnetic 5-7-9-11 x In						
HNB250U	160 - 250A	40kA	3-pole	moulded case CB	x250	**7 280.00**
HNB251U	160 - 250A	40kA	4-pole	moulded case CB	x250	**9 040.00**
TM: Adjustable thermal 0.63 - 0.8 - 1 x In / adjustable magnetic 6-12 x In						
HMJ320DR	202 - 320A	50kA	3-pole	moulded case CB	x630	**11 900.00**
HMJ400DR	252 - 400A	50kA	3-pole	moulded case CB	x630	**12 000.00**
HMJ630DE	397 - 630A	50kA	3-pole	moulded case CB	x630	**14 200.00**
HMJ321DR	202 - 320A	50kA	4-pole	moulded case CB	x630	**15 900.00**
HMJ401DR	252 - 400A	50kA	4-pole	moulded case CB	x630	**16 100.00**
HMJ631DE	397 - 630A	50kA	4-pole	moulded case CB	x630	**18 500.00**
Adjustable thermal / magnetic trip 70 kA						
HEJ320DR	202 - 320A	70kA	3-pole	moulded case CB	x630	**13 200.00**
HEJ400DR	252 - 400A	70kA	3-pole	moulded case CB	x630	**13 600.00**
HEJ630DE	397 - 630A	70kA	3-pole	moulded case CB	x630	**15 700.00**
HEJ321DR	202 - 320A	70kA	4-pole	moulded case CB	x630	**16 900.00**
HEJ401DR	252 - 400A	70kA	4-pole	moulded case CB	x630	**17 700.00**
HEJ631DE	397 - 630A	70kA	4-pole	moulded case CB	x630	**20 300.00**
Frame size x/P630 with direct connection						

Above ZAR prices do not include VAT. E&OE

HNE970H

HEW630JR

HCW630AR

HCF990H

- Mechanical “test” button on the front
- Integrated padlock facility on toggle
- Cascading with MCBs *(see chart **Annex-5**)*
- Lockable thermal/magnetic settings
- Standards: SANS / IEC 60947-2

"Clip-in" accessories *(see MCCB accessories)*
- Auxiliary contacts
- Alarm contacts
- Shunt trip device
- Undervoltage release

type	thermal current	rated kA 415V (Icu)	poles	description	frame	price
Adjustable electronic release (LSI) 50 kA						
LSI: P630: Ir = (0.4...1 x In) x (0.91...1) / Isd = OFF / Ir x 1.5...10 / td = 0.05...0.4s h1000: Ir = (0.4...1 x In) / Isd = Ir x 2.5...10 (800A) / Ir x 2.5...8 (1000A) / td = 0.1...0.2s h1600: Ir = (0.4...1 x In) / Isd = Ir x 2.5...10 / td = 0.1...0.2s						
HMW400JR	146- 400A	50 kA	3-pole	moulded case CB	P630	**18 700.00**
HMW630JR	230 - 630A	50 kA	3-pole	moulded case CB	P630	**19 600.00**
HNE800H	320 - 800A	50 kA	3-pole	moulded case CB	h1000	**27 100.00**
HNE970H	400 - 1000A	50 kA	3-pole	moulded case CB	h1000	**42 900.00**
HNF980H	500 -1250A	50 kA	3-pole	moulded case CB	h1600	**50 900.00**
HNF990H	640 - 1600A	50 kA	3-pole	moulded case CB	h1600	**64 900.00**
HMW401JR	146- 400A	50 kA	4-pole	moulded case CB	P630	**24 200.00**
HMW631JR	230 - 630A	50 kA	4-pole	moulded case CB	P630	**27 600.00**
HNE801H	320 - 800A	50 kA	4-pole	moulded case CB	h1000	**40 100.00**
HNE971H	400 - 1000A	50 kA	4-pole	moulded case CB	h1000	**55 200.00**
HNF981H	500 - 1250A	50 kA	4-pole	moulded case CB	h1600	**68 700.00**
HNF991H	640 - 1600A	50 kA	4-pole	moulded case CB	h1600	**87 500.00**
Adjustable electronic release (LSI) 70 kA						
HEW400JR	146 - 400A	70 kA	3-pole	moulded case CB	P630	**21 900.00**
HEW630JR	230 - 630A	70 kA	3-pole	moulded case CB	P630	**23 800.00**
HEE800H	320 - 800A	70 kA	3-pole	moulded case CB	h1000	**28 800.00**
HEE970H	400 - 1000A	70 kA	3-pole	moulded case CB	h1000	**45 800.00**
HEF980H	500 - 1250A	70 kA	3-pole	moulded case CB	h1600	**56 700.00**
HEF990H	640 - 1600A	70 kA	3-pole	moulded case CB	h1600	**79 200.00**
HEW401JR	146 - 400A	70 kA	4-pole	moulded case CB	P630	**26 400.00**
HEW631JR	230 - 630A	70 kA	4-pole	moulded case CB	P630	**29 400.00**
HEE801H	320 - 800A	70 kA	4-pole	moulded case CB	h1000	**38 800.00**
HEE971H	400 - 1000A	70 kA	4-pole	moulded case CB	h1000	**61 900.00**
HEF981H	500 - 1250A	70 kA	4-pole	moulded case CB	h1600	**76 500.00**
HEF991H	640 - 1600A	70 kA	4-pole	moulded case CB	h1600	**107 000.00**
Load break switches	*(switch disconnectors / isolators)*					
HCA125Z	125A	–	3-pole	load break switch	x160	**1 460.00**
HCA160Z	160A	–	3-pole	load break switch	x160	**1 520.00**
HCB250Z	250A	–	3-pole	load break switch	x250	**3 790.00**
HCW400AR	400A	–	3-pole	load break switch	P630	**9 860.00**
HCW630AR	630A	–	3-pole	load break switch	P630	**12 800.00**
HCE800H	800A	–	3-pole	load break switch	h1000	**22 500.00**
HCE970H	1000A	–	3-pole	load break switch	h1000	**34 200.00**
HCF980H	1250A	–	3-pole	load break switch	h1600	**50 000.00**
HCF990H	1600A	–	3-pole	load break switch	h1600	**57 500.00**
HCA126Z	125A	–	4-pole	load break switch	x160	**1 910.00**
HCA161Z	160A	–	4-pole	load break switch	x160	**2 050.00**
HCB251Z	250A	–	4-pole	load break switch	x250	**4 330.00**
HCW401AR	400A	–	4-pole	load break switch	P630	**12 300.00**
HCW631AR	630A	–	4-pole	load break switch	P630	**16 700.00**
HCE801H	800A	–	4-pole	load break switch	h1000	**30 400.00**
HCE971H	1000A	–	4-pole	load break switch	h1000	**48 300.00**
HCF981H	1250A	–	4-pole	load break switch	h1600	**67 500.00**
HCF991H	1600A	–	4-pole	load break switch	h1600	**77 600.00**

Frame size x/P630 with direct connection

MCCB accessories

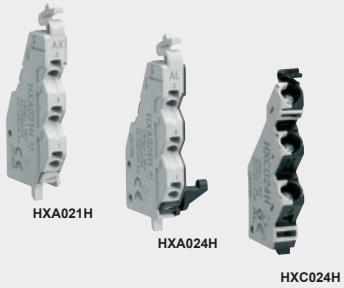
Auxiliaries

Undervoltage

Rotary handles

Motor operators

MCCB Accessories Chart			Auxiliary contacts		Alarm contacts	Shunt trip			
			1NO+1NC	2NO+2NC	1NO+1NC	24V DC	110V AC	230V AC	400V AC
Frame size	x160	HHA / HNA	HXA021H	–	HXA024H	HXA001H	HXA003H	HXA004H	HXA005H
	x250	HHB / HNB	HXA021H	–	HXA024H	HXA001H	HXA003H	HXA004H	HXA005H
	x630 H3	HMJ / HEJ / HMW / HEW	HXA021H	–	HXA024H	HXA001H	HXA003H	HXA004H	HXA005H
	P630 H3+	HMJ / HEJ / HMW / HEW	HXA021H	–	HXA024H	HXA001H	HXA003H	HXA004H	HXA005H
	h1000	HNE	HXC021H	–	HXC024H	HXC001H	HXC003H	HXC004H	HXC005H
	h1600	HNF	HXC021H	–	HXC024H	HXF001H	HXF003H	HXF004H	HXF005H
	h400e	HNDxxxP	–	HXD022P	HXD024P	HXD006P	–	HXD004P	HXD005P
	h800e	HNExxxP	–	HXE022P	HXE024P	HXE006P	–	HXE004P	HXE005P


HXA021H HXA024H HXC024H

HXC014H

HXC004H

HXA030H

HXA031H

type	voltage		description		frame	price
Accessories for MCCBs and load break switches						
Auxiliary contacts						
HXA021H	1NO + 1NC	auxiliary	contact	1NO+1NC for circuit breakers	x160-x/P630	**303.00**
HXC021H	1NO + 1NC	auxiliary	contact	1NO+1NC for circuit breakers	h1000/h1600	**1 020.00**
HXD022P	2NO + 2NC	auxiliary	contact	2NO+2NC for circuit breakers	h400e	**1 260.00**
HXE022P	2NO + 2NC	auxiliary	contact	2NO+2NC for circuit breakers	h800e	**1 540.00**
HXA024H	1NO + 1NC	alarm	contact	1NO+1NC for circuit breakers	x160-x/P630	**427.00**
HXC024H	1NO + 1NC	alarm	contact	1NO+1NC for circuit breakers	h1000/h1600	**1 020.00**
HXD024P	1NO + 1NC	alarm	contact	1NO+1NC for circuit breakers	h400e	**627.00**
HXE024P	1NO + 1NC	alarm	contact	1NO+1NC for circuit breakers	h800e	**809.00**
Shunt trip units (SH)						
HXA00*H	shunt	(SH)	shunt trip device for circuit breakers		x160-x/P630	**1 080.00**
HXC00*H	shunt	(SH)	shunt trip device for circuit breakers		h1000	**1 070.00**
HXF00*H	shunt	(SH)	shunt trip device for circuit breakers		h1600	**1 880.00**
* ***1*** *= 24 VDC,* ***3*** *= 110 VAC,* ***4*** *= 230 VAC,* ***5*** *= 400 VAC*						
HXD00*P	shunt	(SH)	shunt trip device for circuit breakers		h400e	**1 480.00**
HXE00*P	shunt	(SH)	shunt trip device for circuit breakers		h800e	**1 690.00**
* ***6*** *= 24 VDC,* ***4*** *= 230 VAC,* ***5*** *= 400 VAC*						
Undervoltage release (UV)						
HXA014H	230 VAC	(UV)	undervolt release for circuit breakers		x160-x/P630	**1 250.00**
HXA015H	380 VAC	(UV)	undervolt release for circuit breakers		x160-x/P630	**1 410.00**
HXD014P	230 VAC	(UV)	undervolt release for circuit breakers		h400e	**1 670.00**
HXD015P	380 VAC	(UV)	undervolt release for circuit breakers		h400e	**1 670.00**
HXE014P	230 VAC	(UV)	undervolt release for circuit breakers		h800e	**1 820.00**
HXE015P	380 VAC	(UV)	undervolt release for circuit breakers		h800e	**1 870.00**
HXE014H	230 VAC	(UV)	undervolt release for circuit breakers		h1000/1600	**1 820.00**
HXE015H	380 VAC	(UV)	undervoltage release for circuit breakers		h1000/1600	**1 980.00**
Direct rotary handles						
• Direct mounting • Padlockable in “off” position						
HXA030H	direct mount		front mount rotary handle for circuit breakers		x160	**1 890.00**
HXB030H	direct mount		front mount rotary handle for circuit breakers		x250	**1 890.00**
HXW030H	direct mount		front mount rotary handle for circuit breakers		x630/P630	**1 790.00**
HXE030H	direct mount		front mount rotary handle for circuit breakers		h1000	**3 090.00**
HXF030H	direct mount		front mount rotary handle for circuit breakers		h1600	**4 250.00**
Extended rotary handles						
• Vari-depth door interlocking						
HXA031H	vary-depth	200 mm	door interlocking rotary handle and shaft		x160	**2 500.00**
HXB031H	vary-depth	200 mm	door interlocking rotary handle and shaft		x250	**2 500.00**
HXW031H	vary-depth		door interlocking rotary handle and shaft		x630/P630	**3 830.00**
HXD031P	vary-depth		door interlocking rotary handle and shaft		h400e	**1 670.00**
HXE031P	vary-depth		door interlocking rotary handle and shaft		h800e	**2 090.00**
HXE031H	vary-depth		door interlocking rotary handle and shaft		h1000	**11 000.00**
HXF031H	vary-depth		door interlocking rotary handle and shaft		h1600	**13 600.00**

Above ZAR prices do not include VAT. E&OE

Undervoltage		Rotary handles		Motor operators		Terminals and mounting			
230V AC	440V AC	Direct	Vary-depth	Auto reset 230 VAC	NO Auto reset 230 VAC	Adaptors	Shrouds 3P	Shrouds 4P	Phase barriers
HXA014H	HXA015H	HXA030H	HXA031H	–	–	HYA033H	HYA027H	HYA028H	HYA019H
HXA014H	HXA015H	HXB030H	HXB031H	HXB042H	–	HYB033H	HYB021H	HYB022H	HYB019H
HXA014H	HXA015H	HXW030H	HXW031H	HXW042H	HXW044H	–	HYW023H	HYW024H	HYW019H
HXA014H	HXA015H	HXW030H	HXW031H	HXW042H	HXW044H	–	HYW023H	HYW024H	HYW019H
HXE014H	HXE015H	HXE030H	HXE031H	HXE042H	–	–	HYE021H	HYE022H	HYD019H
HXE014H	HXE015H	HXF030H	HXF031H	HXF042H	–	–	–	–	HYD019H
HXD014P	HXD015P	–	HXD031P	HXD042P	–	–	–	–	–
HXE014P	HXE015P	–	HXE031P	HXE042P	–	–	–	–	–

HXB042H

type	voltage	description	frame	price
Motor operators for MCCBs				
HXB042H	230 VAC	motor operator for remote operation of MCCB	x250	**13 600.00**
HXW042H	110 - 230 VAC	motor operator for remote operation of MCCB	x630/P630	**19 100.00**
HXW044H*	110 - 230 VAC	motor operator for remote operation of MCCB	x630/P630	**19 100.00**
HXE042H	230 VAC	motor operator for remote operation of MCCB	h1000	**30 700.00**
HXF042H	230 VAC	motor operator for remote operation of MCCB	h1600	**31 000.00**
HXD042P	230 VAC	motor operator for remote operation of MCCB	h400e	**7 840.00**
HXE042P	230 VAC	motor operator for remote operation of MCCB	h800e	**8 880.00**
* *Non auto reset*				
Terminals and mounting accessories				
Adaptors				
HYA033H	adaptor	DIN-rail mounting adaptor	x160	**158.00**
HYB033H	adaptor	DIN-rail mounting adaptor	x250	**392.00**
HYA036H	DIN-rail raiser	MCBs to match MCCBs on DIN-rail	(3 pcs)	**251.00**
Terminals				
HYB001H	set of 3	150 mm² collar terminals for cables	x250	**3 340.00**
HYW001H	set of 3	300 mm² collar terminals for cables	x630/P630	**3 040.00**
HYA014H	3-pole	spreader link extended terminals	x160	**394.00**
HYB011H	3-pole	spreader link extended terminals	x250	**493.00**
HYW014H	3-pole	spreader link extended terminals	x630/P630	**2 070.00**
HYA015H	4-pole	spreader link extended terminals	x160	**443.00**
HYB012H	4-pole	spreader link extended terminals	x250/P250	**705.00**
HYW015H	4-pole	spreader link extended terminals	x630/P630	**2 750.00**
Shrouds				
HYA027H	3-pole	terminal shrouds	x160	**751.00**
HYB021H	3-pole	extended terminal shrouds	x250	**751.00**
HYW023H	3-pole	extended terminal shrouds	x630/P630	**881.00**
HYE021H	3-pole	extended terminal shrouds	h1000	**2 340.00**
HYA028H	4-pole	terminal shrouds	x160	**281.00**
HYB022H	4-pole	terminal shrouds	x250	**392.00**
HYW024H	4-pole	terminal shrouds	x630/P630	**977.00**
HYE022H	4-pole	terminal shrouds	h1000	**3 170.00**
Phase barriers				
HYA019H	set of 3	spare interphase barriers	x160	**306.00**
HYB019H	set of 3	spare interphase barriers	x250	**345.00**
HYW019H	set of 3	spare interphase barriers	x630/P630	**226.00**
HYD019H	set of 3	spare interphase barriers	h1000/h1600	**356.00**

HYA033H

HYA014H

HYA027H

Special *"contained palm"* cable lugs for MCCBs

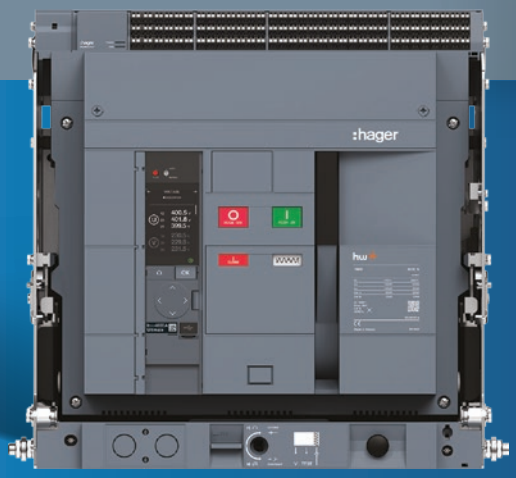
AM range of cable lugs by Cembre are designed to obtain the most efficient electrical conductivity and mechanical strength to resist vibration and pull out.

A48-M10/31

type	cable size	lug width	hole Ø	description	for MCCB	price (ea)
A24B-M8/19	120 mm²	19.0 mm	M8	contained palm cable lug (ea)	x250	**180.00**
A30B-M8/19	150 mm²	19.0 mm	M8	contained palm cable lug (ea)	x250	**222.00**
A37B-M10/24.5	185 mm²	24.5 mm	M10	contained palm cable lug (ea)	250/400/630	**246.00**
A48-M10/31	240 mm²	31.0 mm	M10	contained palm cable lug (ea)	400/630	**322.00**

Say hello to hw+

Explore the new innovative, easy-to-install ACB range from Hager.



A new era in protection

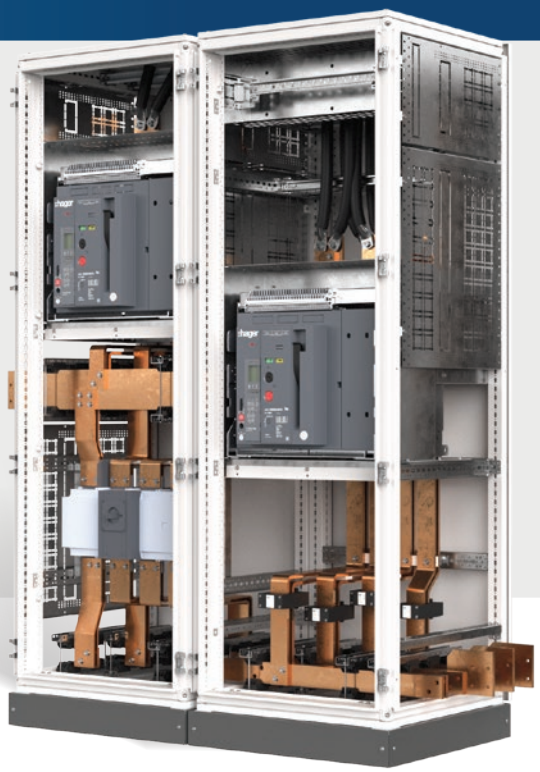
Introducing Hager's new hw+ range of compact and reliable Air Circuit Breakers and Switch Disconnectors.

- Ideal for residential, commercial and industrial applications, the range offers robust protection against overloads, short circuits and ground faults
- Flexible connection options and a comprehensive set of accessories ensure seamless integration into your electrical system

Experience **smart, safe**, and **simple** power protection with Hager

Features

- Easy commissioning via software
- Easy and safe mounting of accessories
- Plug & play rating plug
- Simple locking and interlocking
- Output alarm contacts
- Warnings and trip alarms
- Secure & easy-to-use trip units
- Compact dimensions



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Scan the QR code to download the brochure

HW1

HW2

HW3

hw+ air circuit breakers and switch disconnectors

Frame			HW1		HW2		HW4	
Product			ACB	switch	ACB	switch	ACB	switch
Version			fixed / draw-out		fixed / draw-out		fixed / draw-out	
Number of poles			3 / 4		3 / 4		3 / 4	
Rated current @ 50 deg C		In	1250-1600A		2500A		3200-4000A	
Rated operational voltage		Ue	690 VAC		690 VAC		690 VAC	
Rated insulation voltage		Ui	1000 VAC		1000 VAC		1000 VAC	
Rated impulse withstand voltage		Uimp	12 kV		12 kV		12 kV	
Standards compliance			**IEC 60947-2**	**IEC 60947-3**	**IEC 60947-2**	**IEC 60947-3**	**IEC 60947-2**	**IEC 60947-3**
Selectivity category according to IEC 60947-2			B	–	B	–	B	–
Pollution degree according to IEC 60947-1			3		3		3	
Utilization category according to IEC 60947-3			–	AC-23A	–	AC-23A	–	AC-23A
Rated ultimate short-circuit breaking capacity:	380-415 VAC	Icu	66 kA	–	66 kA	–	85 kA	–
	440 VAC		66 kA	–	66 kA	–	85 kA	–
	500-525 VAC		42 kA	–	55 kA	–	75 kA	–
	690 VAC		42 kA	–	55 kA	–	75 kA	–
Rated making capacity:	380-415 VAC	Icm	145 kA	121 kA	145 kA	145 kA	187 kA	187 kA
	440 VAC		145 kA	121 kA	145 kA	145 kA	187 kA	187 kA
	500-525 VAC		88 kA	88 kA	121 kA	145 kA	165 kA	187 kA
	690 VAC		88 kA	88 kA	121 kA	145 kA	165 kA	187 kA
Short-time withstand current rating capacity 1s	400 VAC	Icw	55 kA		66 kA		85 kA	
Break time between tripping order and arc extinction			< 25 ms	–	< 25 ms	–	< 25 ms	–
Closing time			< 50 ms	–	< 50 ms	–	< 50 ms	–
Mechanical durability	cycles x 1000		12.5		12.5		10	–
Electrical endurance at In	cycles x 1000		8	6	8		6	–
Tripping unit			sentinal electronic LSIG	–	sentinal electronic LSIG	–	sentinal electronic LSIG	–
Connection:	Fixed	Front*	yes		–		–	
		Rear	yes		yes		yes	
	Draw-out	Front*	yes		–		–	
		Rear	yes		yes		yes	
Dimensions H(mm) x W(mm) x D(mm):	Fixed	3-pole	313 x 276 x 227		416 x 385 x 373		416 x 478 x 373	
		4-pole	313 x 346 x 227		416 x 480 x 373		416 x 604 x 373	
	Draw-out	3-pole	322 x 284 x 328		450 x 400 x 465		450 x 493 x 465	
		4-pole	322 x 349 x 328		450 x 495 x 465		450 x 619 x 465	

* *Front connection for **HW1** fixed / draw-out ACB optional*

Sentinal Electronic LSIG tripping unit
hw+ air circuit breakers are equipped with a LSIG sentinel electronic trip unit used to protect cable lines and equipment against overloads, short circuits and earth faults.

Dynamic LCD and settings dials accessible from the front of the hw+ circuit breakers, permitting precise indication and adjustment of protection settings.

LTD Long Time Delay protection ①
Overload protection, fine setting of Ir (A) is done using two dials Ir1 and Ir2, the time delay tr (s) can be set via a dial from 0.5 to 25 s.

STD Short Time Delay Protection ②
Short-circuit protection, Isd (x Ir) current adjusted using a dial from 1 to 10 times the protection of the Ir or can be deactivated (OFF).

The time delay tsd (s) adjustable via a dial from 50 to 600 ms with the option of including an inverse time curve (I^2t OFF or ON).

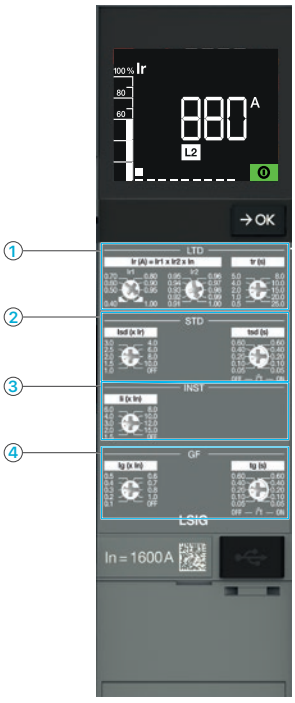
INST Instantaneous protection ③
Instantaneous protection against short-circuits, Ii (x In) can be set using a dial from 1.5 to 15 times rated current value In or can be deactivated (OFF).

GF earth fault protection ④
Phase-to-earth fault protection, Ig (x In) is set using a dial from 0.1 to 1 times the rated current In or can be deactivated (OFF).

The time delay tg (s) adjustable via a dial from 50 to 600 ms with the option of including an inverse time curve (I^2t OFF or ON).

Neutral protection N
Factory-installed on 4-pole circuit breakers, it is necessary if the neutral conductor cross section is less than that of the phases or is heavily loaded.

It uses the LTD, STD and INST protection parameters.



Air circuit breakers *(fixed)*

- Terminals easily converted from horizontal to vertical orientation
- Compact dimensions
- Quick and easy mounting of accessories
- 3 frame sizes: **HW1** 1250 - 1600A
  HW2 2500A
  HW4 3200 - 4000A

Fixed circuit breakers are supplied standard with the following:

- Auxiliary contacts *(4 C/O) / HW4 (6C/O)*
- Fault indication contact *(not on switch-disconnectors)*
- RTC (ready to close) contact for "spring loaded" indication
- Door mounting frame/flange
- OCR - LSIG microprocessor protection and control unit *(with colour LCD)*

New

HW1E312FB

HW2W325FS

type	thermal adjustment (A)	breaking capacity 415V (rms)	poles	mount	description	frame size	price
Fixed-type air circuit breaker							
Three-pole air circuit breakers							
HW1E312FB	455 - 1250A	66kA	3-pole	fixed	air circuit breaker	HW1	**70 000.00**
HW1E316FB	583 - 1600A	66kA	3-pole	fixed	air circuit breaker	HW1	**72 900.00**
HW2E325FB	910 - 2500A	66kA	3-pole	fixed	air circuit breaker	HW2	**98 700.00**
HW4S332FB	1165 - 3200A	85kA	3-pole	fixed	air circuit breaker	HW4	**116 000.00**
HW4S340FB	1456 - 4000A	85kA	3-pole	fixed	air circuit breaker	HW4	**136 000.00**
Four-pole air circuit breakers							
HW1E412FB	455 - 1000A	66kA	4-pole	fixed	air circuit breaker	HW1	**83 500.00**
HW1E416FB	583 - 1600A	66kA	4-pole	fixed	air circuit breaker	HW1	**91 400.00**
HW2E425FB	910 - 2500A	66kA	4-pole	fixed	air circuit breaker	HW2	**122 000.00**
HW4S432FB	1165 - 3200A	85kA	4-pole	fixed	air circuit breaker	HW4	**136 000.00**
HW4S440FB	1456 - 4000A	85kA	4-pole	fixed	air circuit breaker	HW4	**166 000.00**

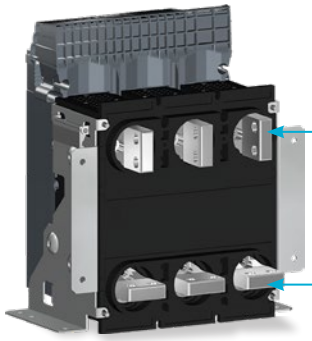
Switch-disconnectors Utilization category according to IEC 60947-3

type	rated current (A)	short-time withstand Icw (1s)	poles	mount	description	frame size	price
Three-pole switch-disconnectors							
HW1W312FS	1250A	55kA	3-pole	fixed	switch-disconnector	HW1	**53 000.00**
HW1W316FS	1600A	55kA	3-pole	fixed	switch-disconnector	HW1	**56 100.00**
HW2W325FS	2500A	66kA	3-pole	fixed	switch-disconnector	HW2	**83 500.00**
HW4W332FS	3200A	85kA	3-pole	fixed	switch-disconnector	HW4	**93 900.00**
HW4W340FS	4000A	85kA	3-pole	fixed	switch-disconnector	HW4	**115 000.00**
Four-pole switch-disconnectors							
HW1W412FS	1250A	55kA	4-pole	fixed	switch-disconnector	HW1	**62 200.00**
HW1W416FS	1600A	55kA	4-pole	fixed	switch-disconnector	HW1	**70 100.00**
HW2W425FS	2500A	66kA	4-pole	fixed	switch-disconnector	HW2	**101 000.00**
HW4W432FS	3200A	85kA	4-pole	fixed	switch-disconnector	HW4	**115 000.00**
HW4W440FS	4000A	85kA	4-pole	fixed	switch-disconnector	HW4	**145 000.00**

Draw-out type 3-pole circuit breaker outside its chassis:

1. Terminal blocks TB
2. Lifting handle
3. Front cover
4. Electronic trip unit
5. Charging handle

Terminal connections:



Above ZAR prices do not include VAT. E&OE

HW2E325DB

HW2E325DB

Air circuit breakers *(Draw-out)*

- Terminals easily converted from horizontal to vertical orientation
- Compact dimensions
- Quick and easy mounting of accessories
- 3 frame sizes: **HW1** 1250 - 1600A
  HW2 2500A
  HW4 3200 - 4000A

Draw-out circuit breakers are supplied with the following:

- Auxiliary contacts *(4 C/O) / HW4 (6C/O)*
- Fault indication contact *(not on switch-disconnectors)*
- RTC *(ready to close)* contact for "spring loaded" indication
- OCR - LSIG microprocessor protection and control unit *(with colour LCD)*
- Panel door ingress seal *(flange for compartment door)*
- Cradle/chassis of draw-out circuit breaker
- Operation *(racking)* crank handle
- Safety shutters *(padlockable top and bottom)*

type	thermal adjustment (A)	breaking capacity 415V (rms)	poles	mount	description	frame size	price
Draw-out air circuit breaker							
Three-pole air circuit breakers							
HW1E312DB	455 - 1250A	66kA	3-pole	draw-out	air circuit breaker	HW1	**93 200.00**
HW1E316DB	583 - 1600A	66kA	3-pole	draw-out	air circuit breaker	HW1	**96 300.00**
HW2E325DB	910 - 2500A	66kA	3-pole	draw-out	air circuit breaker	HW2	**134 000.00**
HW4S332DB	1165 - 3200A	85kA	3-pole	draw-out	air circuit breaker	HW4	**150 000.00**
HW4S340DB	1456 - 4000A	85kA	3-pole	draw-out	air circuit breaker	HW4	**175 000.00**
Four-pole							
HW1E412DB	455 - 1250A	66kA	4-pole	draw-out	air circuit breaker	HW1	**113 000.00**
HW1E416DB	583 - 1600A	66kA	4-pole	draw-out	air circuit breaker	HW1	**115 000.00**
HW2E425DB	910 - 2500A	66kA	4-pole	draw-out	air circuit breaker	HW2	**157 000.00**
HW4S432DB	1165 - 3200A	85kA	4-pole	draw-out	air circuit breaker	HW4	**195 000.00**
HW4S440DB	1456 - 4000A	85kA	4-pole	draw-out	air circuit breaker	HW4	**228 000.00**

Switch-disconnectors Utilization category according to IEC 60947-3

type	rated current (A)	short-time withstand Icw (1s)	poles	mount	description	frame size	price
Three-pole switch-disconnectors							
HW1W312DS	1250A	55kA	3-pole	draw-out	switch-disconnector	HW1	**71 900.00**
HW1W316DS	1600A	55kA	3-pole	draw-out	switch-disconnector	HW1	**75 000.00**
HW2W325DS	2500A	66kA	3-pole	draw-out	switch-disconnector	HW2	**113 000.00**
HW4W332DS	3200A	85kA	3-pole	draw-out	switch-disconnector	HW4	**129 000.00**
HW4W340DS	4000A	85kA	3-pole	draw-out	switch-disconnector	HW4	**154 000.00**
Four-pole							
HW1W412DS	1250A	55kA	4-pole	draw-out	switch-disconnector	HW1	**91 400.00**
HW1W416DS	1600A	55kA	4-pole	draw-out	switch-disconnector	HW1	**93 200.00**
HW2W425DS	2500A	66kA	4-pole	draw-out	switch-disconnector	HW2	**136 000.00**
HW4W432DS	3200A	85kA	4-pole	draw-out	switch-disconnector	HW4	**174 000.00**
HW4W440DS	4000A	85kA	4-pole	draw-out	switch-disconnector	HW4	**206 000.00**

ACB draw-out version

Chasis *(fixed part)*

• The chassis (fixed part) is installed in the enclosure

Body *(moving part)*

• The body (moving part) is mounted inside the chassis

ACB

• Once installed. Body can be moved to any of the 3 available positions: Connected / Test / Disconnected

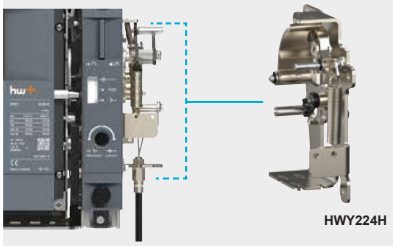
HWX024HSA

HWX030HSA

HWX014HSA

HWX040HSA

HWY952HSA


HWY224H

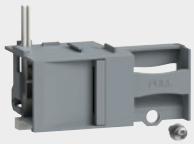
HWY218H

Air circuit breaker (ACB) accessories

- Quick and easy mounting of all accessories
- **SH, CC, UVT, MO, AX** - *require **HWY950HSA** terminal block (below)*

type	ref.	description	supply voltage	for ACB	price
Shunt trip *(opening release)*			*to remotely open the circuit breaker*		
HWX020HSA	SH	shunt opening release	24-30V AC/DC	all ACB	**1 920.00**
HWX022HSA	SH	shunt opening release	100-130V AC/DC	all ACB	**1 600.00**
HWX023HSA	SH	shunt opening release	200-250V AC/DC	all ACB	**1 600.00**
HWX024HSA	SH	shunt opening release	380-480V AC	all ACB	**1 600.00**
Shunt closing release			*to remotely close the circuit breaker*		
HWX025HSA	CC	shunt closing release	24-30V AC/DC	all ACB	**1 920.00**
HWX027HSA	CC	shunt closing release	100-130V AC/DC	all ACB	**1 600.00**
HWX028HSA	CC	shunt closing release	200-250V AC/DC	all ACB	**1 600.00**
HWX029HSA	CC	shunt closing release	380-480V AC	all ACB	**1 600.00**
Under voltage release			*to remotely open the circuit breaker*		
HWX030HSA	UVT	under voltage release	24-30V AC/DC	all ACB	**2 230.00**
HWX032HSA	UVT	under voltage release	100-130V AC/DC	all ACB	**1 920.00**
HWX033HSA	UVT	under voltage release	200-250V AC/DC	all ACB	**1 920.00**
HWX034HSA	UVT	under voltage release	380-480V AC	all ACB	**1 920.00**
Motor operators			*to automatically recharge the closing spring*		
HWX004HSA	MO	for charging of closing spring	200-250V AC	HW1	**5 100.00**
HWX005HSA	MO	for charging of closing spring	380-400V AC	HW1	**5 100.00**
HWX014HSA	MO	for charging of closing spring	200-250V AC	HW2/4	**5 420.00**
HWX015HSA	MO	for charging of closing spring	380-400V AC	HW2/4	**5 420.00**
HWX701HSA	MO	for charging of closing spring	24V DC	HW1	**5 740.00**
HWX711HSA	MO	for charging of closing spring	24V DC	HW2/4	**6 060.00**
Auxiliary contacts			*for remote signalling of "open" or "closed" status of ACB*		
HWX040HSA	AX	auxiliary contact for ACB	1 CO	HW1	**1 920.00**
HWX042HSA	AX	auxiliary contact for ACB	1 CO	HW2/4	**1 920.00**
Output alarm contacts module			*integrates into the ACB without external accessories*		
The **OAC** output module has 5 alarm output contacts assigned to the following events:					
- LTD tripping			- STD / INST / MCR tripping		
- Overload pre-alarm			- GF tripping		
- Tripping due to a critical system alarm					
HWX090HSA*	OAC	output alarm contacts module	1 CO	all ACB	**9 560.00**
* *Requires* **HWY952HSA** *terminal block (below)*					
Terminal block			*connection terminal for terminating accessories in the ACB*		
HWY950HSA	TB	connection terminal block	type A 6/3	all ACB	**637.00**
HWY952HSA	TB	connection terminal block	type C 2x 6/3	all ACB	**956.00**
Mechanical interlock			*to mechanically interlock two circuit breakers*		
HWY224H*	MI	mechanical interlock for	fixed	HW1	**4 460.00**
HWY226H*	MI	mechanical interlock for	fixed	HW2/4	**7 650.00**
HWY225H*	MI	mechanical interlock for	draw-out	HW1	**5 740.00**
HWY227H*	MI	mechanical interlock for	draw-out	HW2/4	**9 560.00**
* *One required for each circuit breaker*					
Cable set - for interlocks			*1 x set = 2x cables (only one set required for two ACB)*		
HWY218H	MI	cable set for mech. interlocks	1.5 meter	all ACB	**2 550.00**
HWY228H	MI	cable set for mech. interlocks	3 meter	all ACB	**3 830.00**
Door frame *(spare)*			*supplied standard with all ACB*		
- Protects the protruding front face of the ACB and the cut edge of the panel door					
- Includes clamps at the back enabling quick, tool-free installation					
HWY280H	DF	door frame for fixed ACB	fixed	HW1	**1 280.00**
HWY281H	DF	door frame for draw-out ACB	draw-out	HW1	**1 280.00**
HWY284H	DF	door frame for fixed ACB	fixed	HW2	**1 600.00**
HWY285H	DF	door frame for draw-out ACB	draw-out	HW2	**1 600.00**
HWY288H	DF	door frame for fixed ACB	fixed	HW4	**1 600.00**
HWY289H	DF	door frame for draw-out ACB	draw-out	HW4	**1 600.00**

Above ZAR prices do not include VAT. E&OE


HWY265HSA

HWY261HSA

HWY089HSA

HWY041HSA

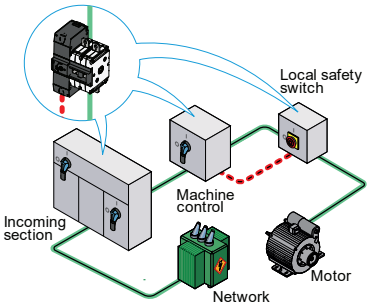
HWY240HSA

Air circuit breaker (ACB) accessories

- Quick and easy mounting of all accessories

type	ref.	description	poles	for ACB	price
Locking device adaptor		*for locking circuit breaker in "OFF" position*			
HWY269HSA	OLP	adaptor for using padlocks	3/4-pole	HW1	**1 600.00**
HWY265HSA	OLP	adaptor for using padlocks	3/4-pole	HW2/4	**1 600.00**
HWY260HSA	OLK	adaptor for using key locks	3/4-pole	HW1	**1 600.00**
HWY261HSA	OLK	adaptor for using key locks	3/4-pole	HW2/4	**1 600.00**
Keylocks and padlocks to be purchased separately					
HWY701	–	Ronis type key lock - type 1	K1 - L1/L4	all ACB	**884.00**
HWY702	–	Ronis type key lock - type 2	K2 - L2/L4/L5	all ACB	**1 260.00**
HWY703	–	Ronis type key lock - type 3	K3 - L3/L5	all ACB	**1 260.00**
HWY704	–	Ronis type key lock - type 4	K4 - L4	all ACB	**1 340.00**
HWY705	–	Ronis type key lock - type 5	K5 - L5	all ACB	**1 340.00**
Arc chute cover		*for fixed circuit breakers with front facing connections*			
HWY958H		chamber cover for fixed	3-pole	HW1	**3 190.00**
HWY959H		chamber cover for fixed	4-pole	HW1	**3 190.00**
Pushbutton cover		*to lock out access to the circuit breaker push buttons*			
HWY089HSA	PBC	pushbutton cover	3/4-pole	HW1	**1 600.00**
HWY090HSA	PBC	pushbutton cover	3/4-pole	HW2/4	**1 600.00**
Accessories for draw-out breakers		*for draw-out version ACB*			
Position contact		*indicates one of the three positions of ACB within the chassis*			
HWX050HSA	PS	position contact for	draw-out	ACB	**1 280.00**
Racking interlock		*prevents insertion of racking handle when enclosure door is open*			
HWY238H	RI	door racking interlock for	draw-out	HW1	**510.00**
HWY239H	RI	door racking interlock for	draw-out	HW2/4	**510.00**
Connection accessories		*for air circuit breakers*			
All circuit breakers are supplied standard with rear horizontal terminals that can easily be converted to vertical orientation. Connection kits *(below)* permit conversion to other forms of termination such as Spreader, Front connection or for Vertical connection.					
Spreader links for circuit breaker		*top (or) bottom*			
HWY001H	SP	spreader link kit	3-pole	HW1	**9 560.00**
HWY002H	SP	spreader link kit	4-pole	HW1	**12 800.00**
Front connection kit for circuit breaker		*top (or) bottom*			
HWY040HSA	FC	front connection for fixed	3-pole	HW1	**6 370.00**
HWY041HSA	FC	front connection for fixed	4-pole	HW1	**9 560.00**
HWY044HSA	FC	front connection for draw-out	3-pole	HW1	**9 560.00**
HWY045HSA	FC	front connection for draw-out	4-pole	HW1	**12 800.00**
Vertical connector conversion kit		*top (or) bottom*			
HWY005H	VCA	vertical connector kit	3-pole	HW1	**12 800.00**
HWY006H	VCA	vertical connector kit	4-pole	HW1	**16 000.00**
Interphase barrier set - *highly recommended for voltages above 500V*					
HWY240HSA	IB	ph barriers for fixed/draw-out	3-pole	HW1	**3 190.00**
HWY241HSA	IB	ph barriers for fixed/draw-out	4-pole	HW1	**4 780.00**
HWY246HSA	IB	phase barriers for fixed	3-pole	HW2/4	**3 830.00**
HWY247HSA	IB	phase barriers for fixed	4-pole	HW2/4	**5 740.00**
HWY248HSA	IB	phase barriers for draw-out	3-pole	HW2/4	**3 830.00**
HWY249HSA	IB	phase barriers for draw-out	4-pole	HW2/4	**5 740.00**

Scan the QR Code ▶
for **How To Tutorial** videos for the new HW+ ACB range



SIRCO M and MV manually operated switches

SIRCO modular switches make and break under load conditions and provide safety isolation for any low voltage circuit, particularly for machine control circuits.

Within a single product, **SIRCO M** offers front or side operation. The highly functional design enables the switch to be easily transformed from a load break switch to a changeover switch, offering a highly innovative modular solution for numerous applications.

General features:

- Modular DIN-rail mounting *(fits into standard distribution board 45 mm cut-out)*
- External front *(or side)* operating handle and shaft *(to be ordered separately-see below)*
- Severe load duty categories (AC-22 and AC-23)
- Conformity to standards: IEC 60947-3

2200 3005

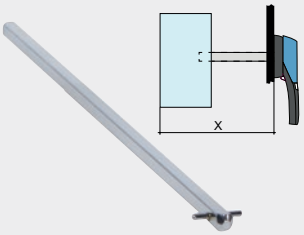
2200 3011

type	AC-22 A 415V (A)	AC-23 A 400V (kW)	No. poles	frame size	description	dimensions (mm) (H)	(W)	(D)	price
SIRCO M series - Load break switches					**16 - 125A**				
2200 3000	16A	7.5 kW	3	M1	load break switch	68	45	75	**381.00**
2200 3002	25A	11.0 kW	3	M1	load break switch	68	45	75	**437.00**
2200 3003	32A	15.0 kW	3	M1	load break switch	68	45	75	**492.00**
2200 3004	40A	18.5 kW	3	M1	load break switch	68	45	75	**503.00**
2200 3005	63A	22.0 kW	3	M1	load break switch	68	45	75	**678.00**
2200 3006	63A	30.0 kW	3	M2	load break switch	76	53	75	**944.00**
2200 3008	80A	37.0 kW	3	M2	load break switch	76	53	75	**1 120.00**
2200 3010	100A	45.0 kW	3	M3	load break switch	125	78	75	**1 280.00**
2200 3011	125A	55.0 kW	3	M3	load break switch	125	78	75	**1 550.00**
SIRCO MV series - Load break switches			160A		*(visual double break contacts)*				
2200 3016	160A	75.0 kW	3	MV	load break switch	125	109	75	**3 160.00**
2200 4016	160A	75.0 kW	4	MV	load break switch	125	135	75	**3 810.00**

2200 3016

1474 1111

1413 2111



1407 0520

2299 5012

2299 0011

Operating handles and shafts *for above switches* — IP65

- External front operated, door interlocking, padlockable in "off" position *(up to 3 padlocks)*
- Defeatable interlocking mechanism

type	handle size	colour	description	for switch frame	(A)	price
Handles for switches - *external operation*						
1473 1111	S00	black	external operating handle for switches	M1 - 2	16 - 80A	**199.00**
1474 1111	S00	red/yellow	external operating handle for switches	M1 - 2	16 - 80A	**209.00**
1483 1111	S0	black	external operating handle for switches	M3	100 - 125A	**285.00**
1484 1111	S0	red/yellow	external operating handle for switches	M3	100 - 125A	**285.00**
1493 0111	S0	black	external operating handle for switches	MV	160A	**328.00**
1413 2111	S1	black	external operating handle for switches	MV	160A	**469.00**
141D 2911	S1	black	as above *(with metal padlocking mech.)*	MV	160A	**854.00**
Extension shafts for switches						
1407 0520	S000/S00/S0	200 mm	□ 5 extension shaft for switch	M1 - 3	16 - 125A	**107.00**
1407 0532	S000/S00/S0	320 mm	□ 5 extension shaft for switch	M1 - 3	16 - 125A	**125.00**
1409 0632	S00/S0	320 mm	□ 6 extension shaft for switch	MV	160A	**160.00**
1401 0632	S1	320 mm	□ 6 extension shaft for switch	MV	160A	**526.00**
1419 0000	guide	*(permits engaging of misaligned shaft with handle)*			S000/S00/S0	**113.00**
1429 0000	guide	*(permits engaging of misaligned shaft with handle)*			S1	**155.00**
Direct mount handles			*(mounts directly onto front of switch - no shaft required)*			
2299 5012	M00	blue	direct switch mount handle	M - 2	16 - 80A	**27.40**
2299 5032	M01	blue	direct switch mount handle	M3	100 - 125A	**84.00**
2299 5042	M0b	blue	direct switch mount handle	MV	160A	**124.00**

Auxiliary contacts *for M/MV switches*

2299 0001	1NO + 1NC	M type	side mount auxiliary contact	M/MV	16 - 160A	**323.00**
2299 0011	2NO	M type	side mount auxiliary contact	M/MV	16 - 160A	**323.00**
3999 0701	1NO	U type	internal mounting auxiliary contact	MV	160A	**259.00**
3999 0702	1NC	U type	internal mounting auxiliary contact	MV	160A	**259.00**

Example: *To build up 63A 3-pole changeover with direct handle*
Combine 2 x **2200 3005** and 1 x **2209 6009**

Alternatively: *Refer to page **B-36** for pre-assembled units*

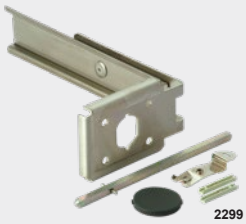
Above ZAR prices do not include VAT. E&OE

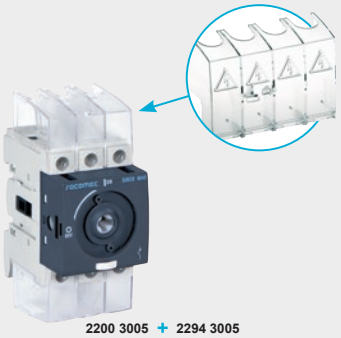
2200 3005

2209 6009

2269 6009

2200 1011


2299 3409


2200 3005 + 2294 3005

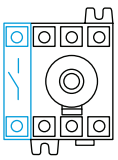
Conversion kits for Sirco M switches *(mechanical interlock / parallel attachment)*

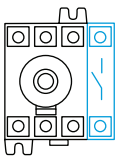
Sirco M switches can be converted to 3 or 4-pole changeover switches with conversion kits. A mechanical interlock module simply clips onto two identical 3-pole switches to provide a changeover facility.

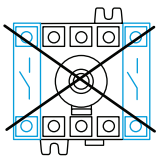
- 4th poles clip onto 3-pole switches for 4-pole applications

type	info	no. of poles	description	for switch frame	(A)	price
Changeover mechanism			*(mechanically interlocks two switches)*			
Supplied with direct mounting operating handle. Handle and shaft to be ordered separately for externally mounted applications.						
2209 6009	I-O-II		changeover mechanism between two switches	M1 - 2	16 - 80A	**633.00**
2209 6011	I-O-II		changeover mechanism between two switches	M3	100 - 125A	**1 240.00**
Handles and shafts for changeover switches						
1473 1113	S00	I-O-II	for above changeover switches	M1 - 2	16 - 80A	**267.00**
1473 0113	S00	I-O-II	for above changeover switches	M3	100 - 125A	**353.00**
1407 0532	S00	320 mm	□ 5 extension shaft for switch	M1 - 2	16 - 80A	**125.00**
1409 0632	S00	320 mm	□ 6 extension shaft for switch	M3	100 - 125A	**160.00**
Bridging kit for changeover switches						
2299 3005	bridge	3-pole	bridging kit for ch/over switches	M1	16 - 40A	**913.00**
2299 4005	bridge	4-pole	bridging kit for ch/over switches	M1	16 - 40A	**1 080.00**
2299 3009	bridge	3-pole	bridging kit for ch/over switches	M2	63 - 80A	**1 530.00**
2299 4009	bridge	4-pole	bridging kit for ch/over switches	M2	63 - 80A	**1 840.00**
Parallel attachments						
A mechanical module simply clips onto two identical 3/4-pole switches to provide a 6/8 pole switch that switches simultaneously.						
2269 6009	I-O	6/8-pole	conversion kit between two switches	M1 - 2	16 - 80A	**634.00**
2269 6011	I-O	6/8-pole	conversion kit between two switches	M3	100 - 125A	**1 250.00**
Handles and shafts for above parallel attachments *(IP65)*						
1473 1111	S00	I-O	ext. operating handle for switches	M1 - 2	16 - 80A	**199.00**
1473 0111	S0	I-O	ext. operating handle for switches	M3	100 - 125A	**319.00**
1407 0532	S000/S00/S0	320 mm	□ 5 extension shaft for switch	M1 - 2	16 - 80A	**125.00**
1409 0632	S00/S0	320 mm	□ 6 extension shaft for switch	M3	125A	**160.00**
Handle and shaft to be ordered separately for externally mounted applications						
Attachable 4th pole module						
• Clips onto either side of 3-pole switches						
2200 1004	40A	1-pole	attachable 4th pole module	M1	16 - 40A	**188.00**
2200 1005	63A	1-pole	attachable 4th pole module	M1	63A	**239.00**
2200 1008	80A	1-pole	attachable 4th pole module	M2	63 - 80A	**326.00**
2200 1011	125A	1-pole	attachable 4th pole module	M3	100 - 125A	**509.00**
Door mount kit						
• For direct door or side panel mounting of Sirco M switches • Compatible with 3/4-pole switches with S00 type handles only						
2299 3409			door mounting kit *(direct door mounting of switch)*	M1 - 2	16 - 80A	**178.00**
2299 3609			door mounting kit *(direct door mounting of switch)*	M3	100 - 125A	**1 410.00**
Terminal shrouds						
• Top *(or)* bottom terminal protection *(two required for total protection)*						
2294 1005	shroud	1-pole	t/parent terminal protection shroud	M1	16 - 63A	**56.00**
2294 3005	shroud	3-pole	t/parent terminal protection shroud	M1	16 - 63A	**118.00**
2294 1009	shroud	1-pole	t/parent terminal protection shroud	M2	63 - 80A	**76.00**
2294 3009	shroud	3-pole	t/parent terminal protection shroud	M2	63 - 80A	**175.00**
2294 1011	shroud	1-pole	t/parent terminal protection shroud	M3	100 - 125A	**84.00**
2294 3016	shroud	3-pole	t/parent terminal protection shroud	M3/MV	100 - 160A	**217.00**
2294 4016	shroud	4-pole	t/parent terminal protection shroud	MV	160A	**270.00**

Additional 4th pole configuration


Right mounting


Left mounting


Unachievable

SIRCO series - Manually operated switches

SIRCO switches make and break under load conditions and provide safety isolation for any low voltage circuit.

- External front operating handle and shaft *(to be ordered separately - see below)*
- Severe load duty categories (AC-22 and AC-23)
- Position indicator located on the sliding bar mechanism, ensures visibility in all circumstances
- High thermal and dynamic withstand
- High electrical and mechanical endurance
- Conformity to standards: IEC/EN 60947-3 / IS13947-3 / KEMA / RINA

SIRCO AC series - Load break switches 125 - 3200A

SIRCO double break per pole achieved through its sliding bar contact system offers very high durability and short-circuit withstand.

3-pole switches

type	AC-22 A 415V (A)	AC-23 A 400V	No. poles	frame size	description	dimensions (mm) (H)	(W)	(D)	price
2600 3014	125A	63 kW	3	B3	load break switch	135	140	115	**1 510.00**
2600 3017	160A	80 kW	3	B3	load break switch	135	140	115	**1 730.00**
26AC 3020	200A	110 kW	3	B4	load break switch	160	180	115	**3 600.00**
26AC 3025	250A	110 kW	3	B4	load break switch	160	180	115	**3 780.00**
26AC 3031	315A	160 kW	3	B4	load break switch	160	180	115	**4 460.00**
26AC 3040	400A	220 kW	3	B5	load break switch	235	230	165	**6 800.00**
26AC 3050	500A	295 kW	3	B5	load break switch	235	230	165	**8 630.00**
26AC 3063	630A	375 kW	3	B5	load break switch	260	230	165	**9 310.00**
26AC 3080	800A	475 kW	3	B6	load break switch	321	280	166	**11 900.00**
26AC 3100	1000A	600 kW	3	B6	load break switch	321	280	166	**20 200.00**
26AC 3121	1250A	750 kW	3	B7	load break switch	288	372	166	**23 700.00**
26AC 3160	1600A	600 kW	3	B7	load break switch	288	372	166	**30 200.00**
2600 3200	2000A	710 kW	3	B8	load break switch	380	372	226	**44 300.00**
2600 3250	2500A	900 kW	3	B8	load break switch	380	372	226	**53 100.00**
2600 3320	3200A	900 kW	3	B8	load break switch	380	372	226	**73 500.00**

4-pole switches

26AC 4025	250A	132 kW	4	B4	load break switch	160	230	115	**5 130.00**
26AC 4040	400A	220 kW	4	B5	load break switch	235	290	160	**8 740.00**
26AC 4063	630A	280 kW	4	B5	load break switch	260	290	160	**11 800.00**
26AC 4080	800A	450 kW	4	B6	load break switch	321	360	166	**17 600.00**
26AC 4121	1250A	710 kW	4	B7	load break switch	288	492	166	**34 300.00**

Larger sizes (up to 5000A) available on request

Operating handles and shafts *for above switches* IP65

type	handle	colour	description	frame	(A)	price
External front operated door interlocking, padlockable in "off" position *(3 padlocks)*						
1423 2111	S2	black	pistol grip ext. operating handle	B3 - 5	125 - 630A	**477.00**
1443 3111	S4	black	"T" grip ext. operating handle	B6 - 7	800 - 1600A	**1 370.00**
1453 8111	S5	black	"T" grip ext. operating handle	B8	2000 - 3200A	**4 550.00**
142D 2911	S2	black	as above *(with metal padlock mech.)*	B3 - 5	125 - 630A	**849.00**
144D 3911	S4	black	as above *(with metal padlock mech.)*	B6 - 7	800 - 1600A	**1 900.00**
1400 1032	S2	320 mm	□ 10 extension shaft	B3 - 5	125 - 630A	**243.00**
1400 1050	S2	500 mm	□ 10 extension shaft	B3 - 5	125 - 630A	**480.00**
1401 1532	S4	320 mm	□ 15 extension shaft	B6 - 7	800 - 1600A	**509.00**
1401 1540	S4	400 mm	□ 15 extension shaft	B6 - 7	800 - 1600A	**966.00**
2799 3018	S5	320 mm	□ 30 extension shaft	B8	2000 - 3200A	**1 310.00**
1429 0000	guide	*(permits engaging of misaligned shaft with handle)*			S2/S4/S5	**155.00**
Direct mount handles	*(mounts directly onto front of switch)*					
2699 5042	B1	black	direct switch mount handle	B3	125 - 160A	**375.00**
1112 1111	J1	black	direct switch mount handle	B4 - 5	200 - 630A	**421.00**
1142 1111	J4	black	direct switch mount handle	B6 - 8	800 - 3200A	**1 490.00**
2799 7042	S5	black	direct switch mount handle	B8	2000 - 3200A	**2 270.00**
Auxiliary contacts *for switches*						
2699 0031	1 C/Over	aux	auxiliary contact and support	B3 - 8	125 - 3200A	**226.00**
2699 0032	1 C/Over	aux	additional auxiliary contact	B3 - 8	125 - 3200A	**570.00**
Inter-phase barriers	*(essential for use at 690VAC or in a polluted or dusty atmosphere)*					
2998 0033	barriers	–	phase barriers for switches *(2pcs)*	B3	125-160A	**378.00**
2998 0023	barriers	–	phase barriers for switches *(2pcs)*	B4	200- 315A	**451.00**
2998 0013	barriers	–	phase barriers for switches *(2pcs)*	B5	315 - 630A	**521.00**

Above ZAR prices do not include VAT. E&OE

Photovoltaic load break switches

21PV 3722
+
2119 1012

Load break switches for DC and PV applications

Can also be used for emergency power switching applications. INOSYS load break switches incorporate patented technology providing a breaking capacity of 1500 VDC in just 2-poles.

type	rated current	poles/ config.	nominal voltage	utilization cat. DC-21B	utilization cat. PV2	frame size	description	price
SIRCO MC PV series - PV load break switches						**DC-21B**		
21PV 3722	25A	2P+, 1P-	1000 VDC	•	–	MC	DC load-break switch	**1 540.00**
21PV 4754	40A	2P+, 2P-	1000 VDC	•	–	MC	DC load-break switch	**2 040.00**
SIRCO PV series - PV load break switches						**DC-21B**		
26PV 2010	100A	1P+, 1P-	1000 VDC	•	–	B4	DC load-break switch	**2 920.00**
26PV 2016	160A	1P+, 1P-	1000 VDC	•	–	B4	DC load-break switch	**3 240.00**
26PV 2025	250A	1P+, 1P-	1000 VDC	•	–	B4	DC load-break switch	**3 770.00**
26PV 2031	315A	1P+, 1P-	1000 VDC	•	–	B4	DC load-break switch	**4 270.00**
26PV 4040	400A	2P+, 2P-	1000 VDC	•	–	B4	DC load-break switch	**5 930.00**

26PV 2016
+
1112 1111

INOSYS LBS series - PV load break switches — DC-21B and DC-PV2

INOSYS LBS DC a range of manually controlled load break switches can also be used for emergency power switching applications. INOSYS load break switches incorporate patented technology providing a breaking capacity of 750 VDC per pole and 1500 VDC in just 2-poles, significantly limiting power dissipation, in an exceptionally compact device.

INOSYS range meets or exceeds industry standards and certifications, ensuring compliance with all electrical safety regulations and guidelines.

Scan to watch

- High performance power switching in a compact frame
- Safe & reliable operation
- Designed for harsh environments
- No derating up to 55°C, functional from -40 to +70°C
- Conformity to standards: IEC 60947-3, DC-21B & DC-PV2
- Direct position indication on the bar and visible contact with containment of the electrical arc
- Switching is independent on the speed of operation, ensuring safe operation under all conditions

DC-PV2

New

86P2 2100

Single switch poles - on either side of operating mechanism

86P1 1017	160A	1P+, 1P-	1500 VDC	•	•	F2	DC load-break switch	**5 420.00**
86P1 1026	250A	1P+, 1P-	1500 VDC	•	•	F2	DC load-break switch	**6 830.00**
86P1 1032	315A	1P+, 1P-	1500 VDC	•	•	F2	DC load-break switch	**8 160.00**
86P1 1041	400A	1P+, 1P-	1500 VDC	•	•	F3	DC load-break switch	**11 500.00**
86P1 1064	630A	1P+, 1P-	1500 VDC	•	•	F3	DC load-break switch	**16 300.00**

Double switch poles - on either side of operating mechanism

86P2 2081	800A	2P+, 2P-	1500 VDC	•	•	F3	DC load-break switch	**17 900.00**
86P2 2100	1000A	2P+, 2P-	1500 VDC	•	•	F3	DC load-break switch	**20 400.00**
86P2 2125	1250A	2P+, 2P-	1500 VDC	•	–	F3	DC load-break switch	**29 200.00**
86P2 2160	1600A	2P+, 2P-	1500 VDC	•	–	F3	DC load-break switch	**37 600.00**

Bridge pieces to couple up poles in series **8409 1600** *supplied separately (see below)*

Accessories - *for above switches*

2119 3312

1423 2111

2119 0001

Handles and shafts *for above switches - external operation*

				frame size	(A)	
2119 3312	MC1	black	external operating handle	MC	25 - 40A	**604.00**
1423 2111	S2	black	door interlock/padlockable in OFF	B4	160 - 315A	**477.00**
742F 2111	S2	black	door interlock/padlockable in OFF	F2	160 - 630A	**701.00**
14AF 2111	S2L	black	door interlock/padlockable in OFF	F3	800 - 1600A	**555.00**
2107 0516	MC1	165 mm	□5 extension shaft	MC	25 - 40A	**264.00**
1400 1032	S2	320 mm	□10 extension shaft	B4/F2 - 3	160 - 1600A	**243.00**

Direct mount handles *(mounts directly onto front of switch - no shaft required)*

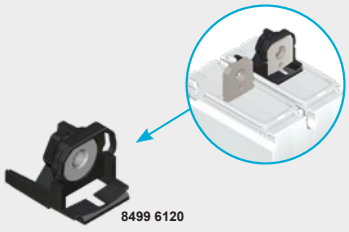
2119 1012	MC01	blue	direct switch mounting handle for	MC	25 - 40A	**332.00**
1112 1111	J1	black	direct switch mount handle for	B4	160-315A	**421.00**
8499 5022	E2	black	direct switch mounting handle for	F2	160 - 630A	**272.00**
8499 5032	E3	black	direct switch mounting handle for	F3	800 - 1600A	**310.00**

Auxiliary contacts for switches

2119 0001	aux.	1NO+1NC	auxiliary contact block for	MC	25 - 40A	**726.00**
2699 0031	aux.	1CO	auxiliary contact block for	B4	160 - 315A	**226.00**
8499 0001	aux.	1NO+1NC	auxiliary contact block for	F2 - 3	160 - 1600A	**622.00**

Terminal accessories

8499 6120	nut	support	retaining captive nut for switch	F2	*(12 pack)*	**1 160.00**
8499 6130	nut	support	retaining captive nut for switch	F3	*(12 pack)*	**2 290.00**
8409 1600	bridge	bar	to couple poles for switch *(2 pcs)*	F3	800 - 1600A	**3 830.00**


8499 6120

2115 3401

2115 3403

ESW3080M

32LC 3163

Enclosed isolator switches *(manually operated)*

Socomec **COMO** series enclosed isolators are supplied in robust, heavy-duty ABS enclosures.

- Red/yellow handle, interlocked with front cover in ON position, padlockable *(3 padlocks)* in OFF position

type	AC-23A ≤ 400V	AC-23A ≤ 525V	poles	description	dimensions (mm) (H)	(W)	(D)	price
Enclosed isolator switches *(manually operated)*				ABS enclosure			**IP65**	
2115 3401	20A	7.5 kW	3	enclosed load-break switch	90	64	58	**576.00**
2115 3403	32A	11.0 kW	3	enclosed load-break switch	152	100	81	**743.00**
2115 3404	40A	18.5 kW	3	enclosed load-break switch	152	100	81	**769.00**
2115 3406	63A	22.0 kW	3	enclosed load-break switch	152	100	81	**1 290.00**
2115 4401	20A	7.5 kW	4	enclosed load-break switch	90	64	58	**620.00**
2115 4404	40A	18.5 kW	4	enclosed load-break switch	152	100	81	**893.00**
2115 4406	63A	22.0 kW	4	enclosed load-break switch	152	100	81	**1 420.00**
Auxiliary contacts *(for above)* **enclosed switches**								
2113 4001	NO + NC	auxiliary		contact for enclosed switches			32 - 50A	**220.00**
2113 4002	2 NO	auxiliary		contact for enclosed switches			33 - 50A	**309.00**
Sheet metal enclosure				Colour: BS/EN06 E53 *(electric orange)*			**IP65**	

- IP65 sheet metal enclosed load-break switches
- Door interlocking in "ON" position, padlockable *(3 padlocks)* in "OFF" position

3-pole switches

ESW3004M	40A	18.5 kW	3	enclosed load-break switch	350	250	170	**2 720.00**
ESW3006M	63A	30 kW	3	enclosed load-break switch	350	250	170	**2 880.00**
ESW3012M	125A	63 kW	3	enclosed load-break switch	350	250	170	**3 810.00**
ESW3016M	160A	80 kW	3	enclosed load-break switch	350	250	170	**5 510.00**
ESW3025M	250A	132 kW	3	enclosed load-break switch	550	400	220	**7 270.00**
ESW3040M	400A	220 kW	3	enclosed load-break switch	550	400	220	**10 300.00**
ESW3063M	630A	280 kW	3	enclosed load-break switch	550	400	220	**11 100.00**
ESW3080M	800A	450 kW	3	enclosed load-break switch	950	700	270	**20 600.00**
ESW3100M	1000A	560 kW	3	enclosed load-break switch	950	700	270	**28 300.00**
ESW3125M	1250A	710 kW	3	enclosed load-break switch	950	700	270	**30 800.00**

Larger sizes available on request

4-pole switches - 4th pole can be attached to above 40/63/125A switches *(see below)*

2200 1004	40A	1-pole	attachable 4th pole module	M1	40A	**188.00**
2200 1008	80A	1-pole	attachable 4th pole module	M2	63A	**326.00**
2200 1011	125A	1-pole	attachable 4th pole module	M3	125A	**326.00**

Safety enclosures — Steel enclosures 50 - 630A — IP65

Safety enclosed switches provide emergency stop and safety breaking for any low voltage electric circuit. They break "ON" and "OFF" load and provide safety isolation, for mechanical maintenance and safety isolation in the vicinity of any low-voltage final circuit.

General features:

- Made of Zinc galvanised sheet metal enclosure *(2 mm thick)* with chrome-plated Zamak hinges
- Bottom mounted gland plate and 2 internal + 1 external earthing connection
- Metallic side-mounted operating handle *(red colour)* padlockable in "OFF" position *(3 padlocks)*
- Equipped with a double locking system *(door can also be padlocked closed in the "OFF" position)*
- Visible breaking facility provided through a triplex window *(made of 2 layer 3mm thick safety glass)*
- Mechanical flag indicator *(visible through triplex window)* for indication of switch position status
- 2 sets of terminated auxiliary contacts NO + NC mounted on the double locking system internally
- Supplied with 2 hooded pushbuttons on right side of enclosure: *(green 1NO / red 2NC contacts)*
- Compliance with standards: IEC 603947-3

Advantages:

- Operator safety
- Quick and easy implementation
- Operating continuity
- Inductive load breaking (AC23)

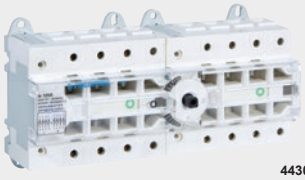
The solution for:

- Iron, steel and mining industry
- Cement plants
- Paper / Saw mills
- Hydraulic power packs

type	motor rating 400 VAC	525 VAC	current rating	No. poles	description	dimensions (mm) (H)	(W)	(D)	price
Safety enclosures					Colour: RAL 9001 and RAL 7032				
32LC 3105	15 kW	9 kW	50A	3	K1 safety encl. switch	300	200	150	**19 800.00**
32LC 3108	25 kW	15 kW	80A	3	K1 safety encl. switch	300	200	150	**21 300.00**
32LC 3120	110 kW	63 kW	200A	3	K1 safety encl. switch	400	300	200	**49 300.00**
32LC 3140	160 kW	157 kW	400A	3	K1 safety encl. switch	700	400	250	**65 200.00**
32LC 3163	270 kW	250 kW	630A	3	K1 safety encl. switch	900	500	300	**91 200.00**
32LC 3608	15 kW	25 kW	80A	3	K2 safety encl. switch	300	400	200	**28 300.00**

Above ZAR prices do not include VAT. E&OE

2230 3004EM


4430 4012

41AC 3063

1443 3113

1132 1111

SIRCO series - Changeover switches

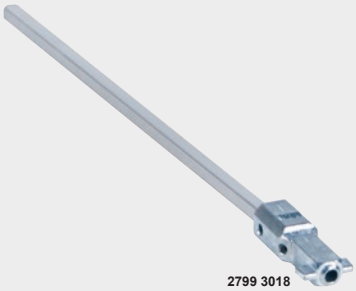
SIRCO manual changeover switches provide switching, source inversion and changeover under load for two power circuits with safety isolation double breaking per pole.

- Severe load duty categories (AC-23 AND AC-33)
- Conformity to Standards: IEC/EN 60947-3, IEC 60947-6-1, IS13947-3, UL, KEMA, RINA
- External front operating handle and shaft *(to be ordered separately)*

type	AC-23 A 415V (A)	no. of poles	frame size	description	dimensions (mm) (H)	(W)	(D)	price
SIRCO M - Changeover switches				**16A - 125A**				
• Modular DIN-rail mounting *(fits into standard distribution board with 45 mm cut-out)*								
• Supplied with internal direct mount handle for external mount handle, *(see accessories below)*								
2230 3001EM	16A	3-pole	M1	modular changeover switch	68	98	89	**1 390.00**
2230 3002EM	25A	3-pole	M1	modular changeover switch	68	98	89	**1 500.00**
2230 3004EM	40A	3-pole	M1	modular changeover switch	68	98	89	**1 630.00**
2230 3006EM	63A	3-pole	M1	modular changeover switch	76	105	89	**1 980.00**
2230 3008EM	80A	3-pole	M2	modular changeover switch	76	105	89	**2 850.00**
2230 3010EM	100A	3-pole	M3	modular changeover switch	125	159	100	**3 770.00**
2230 3011EM	125A	3-pole	M3	modular changeover switch	125	159	100	**4 310.00**
*4th pole can be added to above switches (see page **B-32**)*								
Accessories for changeover switches								
1473 1113	S00	I-O-II		external for ch/over switches	M1 - 2	16 - 80A		**267.00**
1473 0113	S00	I-O-II		external for ch/over switches	M3	100 - 125A		**353.00**
1407 0532	shaft	320 mm	□ 5	external shaft for switch	M1 - 2	16 - 80A		**125.00**
1409 0632	shaft	320 mm	□ 6	external shaft for switch	M3	100 - 125A		**160.00**
2299 3005	bridge	3-pole		bridging kit for ch/over switches	M1	16 - 40A		**913.00**
2299 4005	bridge	4-pole		bridging kit for ch/over switches	M1	16 - 40A		**1 080.00**
2299 3009	bridge	3-pole		bridging kit for ch/over switches	M2	63 - 80A		**1 530.00**
2299 4009	bridge	4-pole		bridging kit for ch/over switches	M2	63 - 80A		**1 840.00**
SIRCO VM1 - Changeover switches				**100A - 125A**				
• DIN-rail, chassis or modular panel mounting								
• Double visible breaking								
4430 4010	100A	4-pole		modular changeover switch	95	215	97	**5 130.00**
4430 4012	125A	4-pole		modular changeover switch	95	215	97	**6 200.00**
4499 4006	bridge	4 pole		insulated 4P bridging bar set	for VM1 switches			**2 320.00**
4439 5012	handle	I-O-II		direct switch mount handle	for VM1 switches			**425.00**
1413 2113	handle	I-O-II		external door interlock handle	for VM1 switches			**703.00**
1402 0832	shaft	320 mm		extension shaft	for VM1 switches			**548.00**
SIRCOVER - Manual changeover switches				**125A - 3200A**				
• High thermal and dynamic withstand, high electrical and mechanical endurance								
• Severe utilization categories (AC-22 and AC-23)								
• Handles and shafts *(to be ordered separately-see below)*								
41AC 3016	160A	3-pole	B3	manual changeover switch	135	221	173	**9 090.00**
41AC 3020	200A	3-pole	B3	manual changeover switch	135	221	173	**10 600.00**
41AC 3025	250A	3-pole	B4	manual changeover switch	160	262	173	**12 500.00**
41AC 3040	400A	3-pole	B4	manual changeover switch	170	262	173	**20 000.00**
41AC 3063	630A	3-pole	B5	manual changeover switch	260	319	225	**26 300.00**
41AC 3080	800A	3-pole	B6	manual changeover switch	321	386	298	**37 400.00**
41AC 3100	1000A	3-pole	B6	manual changeover switch	321	386	298	**43 500.00**
41AC 3120	1250A	3-pole	B6	manual changeover switch	330	386	298	**47 500.00**
41AC 3160	1600A	3-pole	B7	manual changeover switch	228	478	298	**87 800.00**
41AC 4016	160A	4-pole	B3	manual changeover switch	135	251	173	**12 300.00**
41AC 4025	250A	4-pole	B4	manual changeover switch	160	312	173	**17 600.00**
41AC 4040	400A	4-pole	B4	manual changeover switch	170	312	173	**30 900.00**
41AC 4063	630A	4-pole	B5	manual changeover switch	260	379	225	**34 300.00**
41AC 4080	800A	4-pole	B6	manual changeover switch	320	466	298	**54 700.00**
41AC 4120	1250A	4-pole	B6	manual changeover switch	330	466	298	**67 100.00**
41AC 4160	1600A	4-pole	B7	manual changeover switch	288	598	298	**125 000.00**
Larger sizes up to 3200A available on request								
Operating handles and shafts for above changeover switches								
1423 2113	S2	black		I-O-II ext. operating handle	B3-5	160 - 630A		**997.00**
1443 3113	S4	black		I-O-II ext. operating handle	B6-7	800 - 1600A		**2 540.00**
1400 1032	S2	320 mm		□ 10 ext. shaft for switch	B3-5	160 - 630A		**243.00**
1401 1532	S4	320 mm		□ 15 ext. shaft for switch	B6-7	800 - 1600A		**509.00**
1122 1111	J2	black		direct switch mounting handle	B3-5	160 - 630A		**462.00**
1132 1111	J3	black		direct switch mounting handle	B6-5	800 - 1600A		**1 490.00**

41AC 7063

1433 3113


2799 3018

4109...

2694 4051

SIRCOVER series - Manual bypass switches

SIRCOVER Bypass are a combination of three interlocked switches enabling the use with 3+6 or 4+8 poles from 160A to 1600A.

General features:

- Severe load duty categories (AC-23 AND AC-33)
- Conformity to Standards: IEC/EN 60947-3, IEC 60947-6-1, IS13947-3, UL, KEMA, RINA
- External IP65 front operating handle and shaft *(to be ordered separately)*

type	AC-23 A 415V (A)	No. poles	frame size	description	dimensions (mm) (H)	(W)	(D)	price
SIRCOVER series - Manual bypass switches					**160-1600A**			
3-pole manual bypass								
41AC 7016	160A	3-pole	B3	man. operated bypass switch	15	221	268	**17 700.00**
41AC 7020	200A	3-pole	B3	man. operated bypass switch	135	221	268	**22 600.00**
41AC 7025	250A	3-pole	B4	man. operated bypass switch	160	262	268	**26 700.00**
41AC 7040	400A	3-pole	B4	man. operated bypass switch	170	262	268	**37 500.00**
41AC 7063	630A	3-pole	B5	man. operated bypass switch	260	319	387	**49 100.00**
41AC 7080	800A	3-pole	B6	man. operated bypass switch	320	386	508	**68 000.00**
41AC 7120	1250A	3-pole	B6	man. operated bypass switch	320	386	508	**115 000.00**
41AC 7160	1600A	3-pole	B7	man. operated bypass switch	288	478	508	**152 000.00**
4 pole manual bypass switches								
41AC 9016	160A	4-pole	B3	man. operated bypass switch	135	251	268	**20 700.00**
41AC 9025	250A	4-pole	B4	man. operated bypass switch	160	312	268	**28 200.00**
41AC 9040	400A	4-pole	B4	man. operated bypass switch	170	312	268	**40 200.00**
41AC 9063	630A	4-pole	B5	man. operated bypass switch	260	379	387	**60 700.00**
41AC 9080	800A	4-pole	B6	man. operated bypass switch	320	466	508	**90 700.00**
41AC 9120	1250A	4-pole	B6	man. operated bypass switch	320	466	508	**148 000.00**
41AC 9160	1600A	4-pole	B7	man. operated bypass switch	288	598	508	**164 000.00**
Handles and shafts for bypass switches - *(door interlocking padlockable in "O" position)*								
1423 2113	S2	black	I-O-II	ext. operating handle	B3	160 - 200A		**997.00**
1433 3113	S3	black	I-O-II	ext. operating handle	B4-5	250 - 630A		**2 010.00**
4199 7146	V2	black	I-O-II	ext. operating handle	B6-7	800 - 1600A		**7 270.00**
1400 1032	S2	320 mm	□ 10	extension shaft for switch	B3	160 - 200A		**243.00**
1401 1532	S3	320 mm	□ 15	extension shaft for switch	B4-5	250 - 630A		**509.00**
2799 3018	V2	320 mm	□ 30	extension shaft for switch	B6-7	800 - 1600A		**1 310.00**
1429 0000	guide	*(permits engaging of misaligned shaft with handle)*				S2/S3		**155.00**
1122 1111	J2	black		direct switch mounting handle	B3	160 - 200A		**462.00**
1132 1111	J3	black		direct switch mounting handle	B4-5	250 - 630A		**1 490.00**
1142 1111	J4	black		direct switch mounting handle	B6-7	800 - 1600A		**1 490.00**

Accessories *for all changeover and bypass switches*

type	poles	description	frame size	(A)	price
Auxiliary contacts for switches					
4109 0021	1 C/Over	aux	auxiliary contact for switches	*(all sizes)*	**487.00**
Bridging bar sets for changeover and bypass switches					

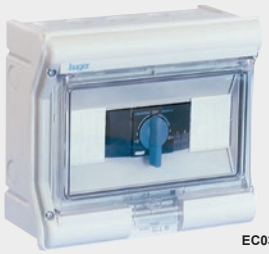
- For creating a common connection between source I & II, on top or bottom side of the SIRCOVER
- For SIRCOVER bypass, two sets of bridging bars are required

4109 0019	bridge	1-pole	bridging bar for ch/over switches	B3	100/200A	**341.00**
4109 0025	bridge	1-pole	bridging bar for ch/over switches	B4	250A	**392.00**
4109 0039	bridge	1-pole	bridging bar for ch/over switches	B4	400A	**490.00**
4109 0063	bridge	1-pole	bridging bar for ch/over switches	B5	630A	**968.00**
4109 0080	bridge	1-pole	bridging bar for ch/over switches	B6	800/1000A	**1 420.00**
4109 0120	bridge	1-pole	bridging bar for ch/over switches	B6	1250A	**2 300.00**
4109 0160	bridge	1-pole	bridging bar for ch/over switches	B7	1600A	**3 190.00**

For 3-pole device order 3 bridging bars, for a 4-pole device order 4 bridging bars
For optimal performance, it is recommended to use original bridging bars from Socomec

Terminal shrouds *for changeover and bypass switches*						
2694 3014	shroud	3-pole	t/parent terminal protection shroud	B3	160/200A	**588.00**
2694 3021	shroud	3-pole	t/parent terminal protection shroud	B4	250/400A	**664.00**
2694 3051	shroud	3-pole	t/parent terminal protection shroud	B5	630A	**991.00**
2694 4014	shroud	4-pole	t/parent terminal protection shroud	B3	160/200A	**717.00**
2694 4021	shroud	4-pole	t/parent terminal protection shroud	B4	250/400A	**903.00**
2694 4051	shroud	4-pole	t/parent terminal protection shroud	B5	630A	**1 330.00**
1509 3080	screen	3-pole	t/parent terminal protection screen	B6	800/1250A	**1 970.00**
1509 4080	screen	4-pole	t/parent terminal protection screen	B6	800/1250A	**2 270.00**
1509 3160	screen	3-pole	t/parent terminal protection screen	B7	1600A	**2 420.00**
1509 4160	screen	4-pole	t/parent terminal protection screen	B7	1600A	**2 780.00**

Above ZAR prices do not include VAT. E&OE


EC03009P

ECO...

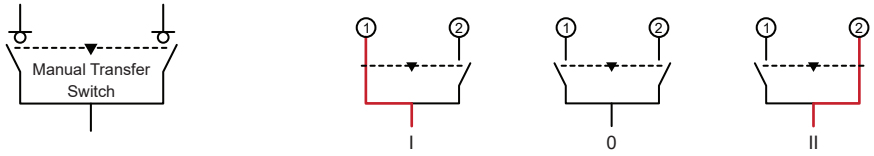
Enclosed manual changeover switches *(IP65)*

type	AC-31 B 415V (A)	enclosure	no. poles	description	dimensions (mm) (H)	(W)	(D)	price
SIRCO-M - Changeover switches								
Polycarbonate housing *(IP65)*								
• Supplied with internal direct mount handle								
• Distribution board style enclosure with transparent door								
ECO3002P	25A	polycarb	3-pole	enclosed ch/over switch	210	237	114	**2 210.00**
ECO3004P	40A	polycarb	3-pole	enclosed ch/over switch	210	237	114	**2 340.00**
ECO3006P	63A	polycarb	3-pole	enclosed ch/over switch	210	237	114	**2 690.00**
ECO3009P	100A	polycarb	3-pole	enclosed ch/over switch	302	310	151	**4 800.00**
ECO3012P	125A	polycarb	3-pole	enclosed ch/over switch	302	310	151	**5 300.00**
Sheet metal enclosed *(IP65)*								
• With external door interlocking padlockable handle								
ECO3004M	40A	metal	3-pole	enclosed ch/over switch	350	250	170	**4 330.00**
ECO3006M	63A	metal	3-pole	enclosed ch/over switch	350	250	170	**4 670.00**
ECO3009M	100A	metal	3-pole	enclosed ch/over switch	350	250	170	**6 170.00**
ECO3012M	125A	metal	3-pole	enclosed ch/over switch	350	250	170	**7 610.00**
*4 pole switches can be made by adding clip-on 4th poles (see page **B-32**)*								
SIRCOVER - Changeover switches								
• With external door interlocking padlockable handle								
• Supplied complete with bridge bars *(output side)*								
• Sheet metal enclosed								
ECO3016M	160A	metal	3-pole	enclosed ch/over switch	550	400	220	**14 200.00**
ECO3025M	250A	metal	3-pole	enclosed ch/over switch	550	400	220	**17 700.00**
ECO3040M	400A	metal	3-pole	enclosed ch/over switch	850	600	270	**28 000.00**
ECO3063M	630A	metal	3-pole	enclosed ch/over switch	850	600	270	**36 200.00**
ECO3080M	800A	metal	3-pole	enclosed ch/over switch	900	600	450	**57 100.00**
ECO3125M	1250A	metal	3-pole	enclosed ch/over switch	900	600	450	**70 000.00**
ECO3160M	1600A	metal	3-pole	enclosed ch/over switch	900	600	450	**113 000.00**
ECO4016M	160A	metal	4-pole	enclosed ch/over switch	550	400	220	**17 700.00**
ECO4025M	250A	metal	4-pole	enclosed ch/over switch	550	400	220	**24 000.00**
ECO4040M	400A	metal	4-pole	enclosed ch/over switch	850	600	270	**39 300.00**
ECO4063M	630A	metal	4-pole	enclosed ch/over switch	850	600	270	**45 200.00**
ECO4080M	800A	metal	4-pole	enclosed ch/over switch	900	600	450	**75 800.00**
ECO4125M	1250A	metal	4-pole	enclosed ch/over switch	900	600	450	**91 900.00**
ECO4160M	1600A	metal	4-pole	enclosed ch/over switch	900	600	450	**164 000.00**

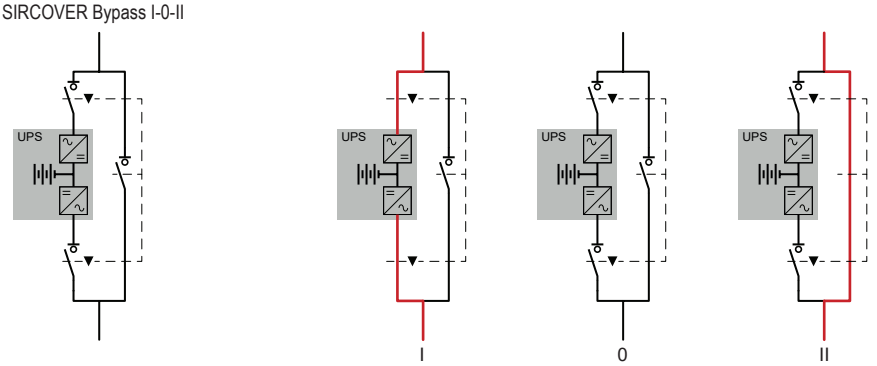
For enclosed automatic changeover panels, see page **B-43**

Operating principle

SIRCOVER Changeover I-0-II



SIRCOVER Bypass I-0-II



9505 4008

9513 4008

9509 4013

9594 4012

ATyS S - Motorised changeover switches *(4-pole)*

ATyS S is 4-pole remotely operated transfer switch with positive break indication, enabling the on-load transfer of two three-phase supplies via remote volt-free contacts, an external automatic controller, pulse logic, or a switch.

For use in low voltage power supply systems where a brief interruption of the load supply is acceptable during transfer.

Fully integrated cost-effective solution to switch between main and an alternative power supply for loads of up to 125A: <90kVA /3 phase 415 VAC.

General features:

- Two switches mounted back to back, motorised *(easily replaceable motors)*
- Fail-safe mechanical interlock
- Padlockable in the “OFF” position
- Manual override facility *(handle supplied)*
- Wide-band AC control voltage ±30%
- Can be configured for “impulse” or “contactor” logic
- Energy-efficient power consumption is minimal and only required during transfer operation
- Fully independent position auxiliary contacts one for each position (I / O / II)

AC 32B IEC 60947-6-1, GB 14048-11 *(transfer switch standards)*
AC 22A IEC60947-3 *(load break switch standard)*

type	AC-31 B 415V (A)	poles	supply voltage	description	price
ATyS S - Motorised changeover switches				*(H) 144 x (W) 198 x (D) 181 mm*	
230 VAC power supply					
9503 4004	40A	4-pole	230 VAC	motorised changeover switch	**8 020.00**
9503 4006	63A	4-pole	230 VAC	motorised changeover switch	**8 450.00**
9503 4008	80A	4-pole	230 VAC	motorised changeover switch	**10 800.00**
9503 4010	100A	4-pole	230 VAC	motorised changeover switch	**12 100.00**
9503 4012	125A	4-pole	230 VAC	motorised changeover switch	**13 100.00**
12 VDC power supply					
9505 4006	63A	4-pole	12 VDC	motorised changeover switch	**4 800.00**
9505 4008	80A	4-pole	12 VDC	motorised changeover switch	**9 320.00**
9505 4010	100A	4-pole	12 VDC	motorised changeover switch	**12 300.00**
9505 4012	125A	4-pole	12 VDC	motorised changeover switch	**12 600.00**
24/48 VDC power supply					
9506 4004	40A	4-pole	24/48 VDC	motorised changeover switch	**6 920.00**
9506 4006	63A	4-pole	24/48 VDC	motorised changeover switch	**7 600.00**
9506 4008	80A	4-pole	24/48 VDC	motorised changeover switch	**10 700.00**
9506 4010	100A	4-pole	24/48 VDC	motorised changeover switch	**10 700.00**
9506 4012	125A	4-pole	24/48 VDC	motorised changeover switch	**11 800.00**

ATyS d S - Dual power supply *(2 x 230 VAC)*

Incorporates supply redundancy without the need for additional wiring by integrating a double supply *(2 independent supplies)* directly within the product.

9513 4004	40A	4-pole	2 x 230 VAC	motorised changeover switch	**8 790.00**
9513 4006	63A	4-pole	2 x 230 VAC	motorised changeover switch	**11 100.00**
9513 4008	80A	4-pole	2 x 230 VAC	motorised changeover switch	**11 700.00**
9513 4010	100A	4-pole	2 x 230 VAC	motorised changeover switch	**12 300.00**
9513 4012	125A	4-pole	2 x 230 VAC	motorised changeover switch	**15 700.00**

Accessories for ATyS S switches

Bridging bars

9509 4013	bridge	4-pole	power terminal bridging bar *(top or bottom)*	**436.00**

Voltage tap

9599 4001	terminal		control voltage tapping kit *(from power terminals)*	**443.00**

Terminal shroud

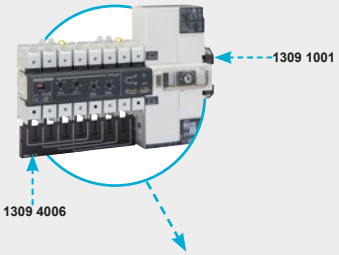
9594 4012	shroud	4-pole	supply side terminal protection shrouds	**389.00**
9594 9012	shroud	4-pole	load side terminal protection shrouds	**389.00**

Spare motor units

9505 5012	motor	12 VDC	spare motor for above switches	**8 800.00**
9506 5012	motor	24/48 VDC	spare motor for above switches	**8 410.00**
9513 5012	motor	2 x 230 VAC	spare motor for above switches	**11 700.00**

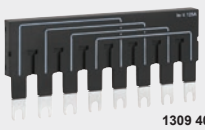
Above ZAR prices do not include VAT. E&OE

9323 4006



9354 4012

9364 4012


1309 4006

1309 1001

ATyS M - Motorised changeover switches

ATyS M modular motorised changeover switches with positive break indication enabling on-load changeover switching of two supply sources in automatic or manual mode.

General features:

- Modular format to easily mount into standard distribution boards
- Provide rapid switching (< 90ms) excellent dynamic withstand and long life
- Auto or manual operation *(with incorporated Allen key)* padlockable in “O” position
- Supply only active during transfer, unaffected by network voltage fluctuations
- Fully compliant with IEC 60947-6-1 *(standard governing transfer switches)*

type	AC-31 B 415V (A)	poles	supply voltage	description	price
ATyS d M - Motorised changeover switches				*(H) 245 x (W) 2P 235/4P 340 x (D) 74 mm*	
9323 2006	63A	2-pole	230 VAC	motorised changeover switch	**14 600.00**
9323 2008	80A	2-pole	230 VAC	motorised changeover switch	**15 700.00**
9323 4006	63A	4-pole	230 VAC	motorised changeover switch	**17 100.00**
9323 4008	80A	4-pole	230 VAC	motorised changeover switch	**17 900.00**
9323 4010	100A	4-pole	230 VAC	motorised changeover switch	**19 600.00**
9323 4012	125A	4-pole	230 VAC	motorised changeover switch	**20 600.00**
9323 4016	160A	4-pole	230 VAC	motorised changeover switch	**24 200.00**

ATyS g M - Automatic changeover switches *(H) 245 x (W) 2P 235/4P 340 x (D) 74 mm*

The ATyS g M switch monitors the supply from both mains and generator.
On mains failure, the switch provides an output to start generator and once the generator voltage reaches the correct level, switches over to the generator supply until mains is restored, causing the switch to change back to the mains supply and stop the generator.

Potentiometers for:	Nominal voltage configuration Voltage and frequency threshold configuration Operating cycle configuration
DIP- switches for:	50 or 60Hz, single or 3-phase Delay in “O” position during I-O transfer cycles
LED indication of:	Supply source availability, automatic mode, fault
External command inputs:	Manual change of supply from emergency to main source Remote test on-load *(or priority change)* 1NO output relay for generator start/stop command

9353 2006	63A	2-pole	230 VAC	automatic changeover switch	**22 700.00**
9353 2008	80A	2-pole	230 VAC	automatic changeover switch	**23 100.00**
9354 4006	63A	4-pole	230 VAC	automatic changeover switch	**27 300.00**
9354 4008	80A	4-pole	230 VAC	automatic changeover switch	**27 600.00**
9354 4010	100A	4-pole	230 VAC	automatic changeover switch	**28 300.00**
9354 4012	125A	4-pole	230 VAC	automatic changeover switch	**30 400.00**
9354 4016	160A	4-pole	230 VAC	automatic changeover switch	**34 400.00**

ATyS p M - Automatic changeover switch *(digital display and settings)*

As the ATyS g M above, but configurable for network/genset or network/network *(with or without priority)*. Monitoring parameters configured via pushbuttons and a digital display.

- LED indicator: power on, supply status, position of switch, auto/manual/test mode, fault
- 3 configurable inputs and 3 x outputs
- 1 configurable bi-stable output relay for generator start/stop command

9364 4006	63A	4-pole	230 VAC	automatic changeover switch	**35 200.00**
9364 4008	80A	4-pole	230 VAC	automatic changeover switch	**39 900.00**
9364 4010	100A	4-pole	230 VAC	automatic changeover switch	**42 700.00**
9364 4012	125A	4-pole	230 VAC	automatic changeover switch	**45 400.00**
9364 4016	160A	4-pole	230 VAC	automatic changeover switch	**46 700.00**

Above range with RS-485 communication available on request

Accessories for all ATyS M switches

Bridging bars (plug-in) *(for incoming or outgoing side of switch)*

- *Provides a common connection between switches I & II on the incoming or outgoing side of the ATyS M without reducing terminal capacity*

1309 2006	63 - 125A	2-pole	plug-in	fully insulated plug-in bridging bar	**1 470.00**
1309 4006	63 - 125A	4-pole	plug-in	fully insulated plug-in bridging bar	**2 430.00**
1309 4016	160A	4-pole	plug-in	fully insulated plug-in bridging bar	**3 670.00**
1399 4006	tap	1-pole		tap-off terminal for power supply	**1 040.00**
2294 4016	shroud	2-pole		terminal protection shroud	**270.00**
1309 1001	auxiliary	contact	1NO+1NC	for each position (I-O-II)	**2 210.00**

9523 3120

9523 4016

9553 4016

ATyS - Motorised and automatic changeover switches

Three-phase motorised changeover switches with positive break indication, enabling the on-load transfer of two different three-phase supplies.

General features:

- Wide-band AC control voltage ± 20%
- Fail-safe mechanical interlock
- Padlockable in the “OFF” position
- Fully independent position auxiliary contacts one for each position (I / O / II)

ATyS r - Motorised changeover switches — supply: 230 VAC

Three-phase remotely operated motorised transfer switches, 3 or 4-poles, with positive break indication, enable the on-load transfer of two three-phase power supplies via remote volt-free contacts, from an external automatic controller using pulse logic, or a switch.

3-pole switches

type	AC-31 B 415V (A)	poles	frame size	description	dimensions (mm) (H)	(W)	(D)	price
9523 3016	160A	3-pole	B3	motorised ch/over switch	135	287	244	**18 200.00**
9523 3025	250A	3-pole	B4	motorised ch/over switch	160	328	244	**20 700.00**
9523 3040	400A	3-pole	B4	motorised ch/over switch	170	328	244	**33 100.00**
9523 3063	630A	3-pole	B5	motorised ch/over switch	260	377	321	**36 100.00**
9523 3080	800A	3-pole	B6	motorised ch/over switch	370	504	440	**56 000.00**
9523 3100	1000A	3-pole	B6	motorised ch/over switch	370	504	440	**58 400.00**
9523 3120	1250A	3-pole	B6	motorised ch/over switch	370	504	440	**70 900.00**
9523 3160	1600A	3-pole	B7	motorised ch/over switch	380	596	440	**99 200.00**
9523 3200	2000A	3-pole	B8	motorised ch/over switch	380	596	569	**151 000.00**
9523 3250	2500A	3-pole	B8	motorised ch/over switch	380	596	569	**176 000.00**
9523 3320	3200A	3-pole	B8	motorised ch/over switch	380	596	569	**242 000.00**

4-pole switches

9523 4016	160A	4-pole	B3	motorised ch/over switch	135	317	244	**19 600.00**
9523 4025	250A	4-pole	B4	motorised ch/over switch	160	395	244	**23 200.00**
9523 4040	400A	4-pole	B4	motorised ch/over switch	170	395	244	**39 500.00**
9523 4063	630A	4-pole	B5	motorised ch/over switch	260	454	321	**48 200.00**
9523 4080	800A	4-pole	B6	motorised ch/over switch	321	584	440	**69 200.00**
9523 4100	1000A	4-pole	B6	motorised ch/over switch	321	584	440	**72 900.00**
9523 4120	1250A	4-pole	B6	motorised ch/over switch	330	584	440	**88 400.00**
9523 4160	1600A	4-pole	B7	motorised ch/over switch	288	716	440	**146 000.00**
9523 4200	2000A	4-pole	B8	motorised ch/over switch	380	716	569	**182 000.00**
9523 4250	2500A	4-pole	B8	motorised ch/over switch	380	716	569	**214 000.00**
9523 4320	3200A	4-pole	B8	motorised ch/over switch	380	716	569	**314 000.00**

ATyS g - Automatic changeover switches — supply: 230 VAC

Automatic changeover switches for transformer/generator applications. An integrated controller provides all necessary functions, including monitoring the voltage and frequency of both sources providing on-load changeover switching between two power supply sources.

General features:

- Integrated generator on-load and off-load test function
- Integrated dual power supply *(2 independent supplies within the switch)*
- Optional remote monitoring via additional RS485 communication module (**4825 0092**), see ***B-42***

ATyS g automatic changeover switches

3-pole switches

9553 3016	160A	3-pole	B3	automatic ch/over switch	135	287	244	**38 000.00**
9553 3025	250A	3-pole	B4	automatic ch/over switch	160	328	244	**44 700.00**
9553 3040	400A	3-pole	B4	automatic ch/over switch	170	328	244	**53 400.00**
9553 3063	630A	3-pole	B5	automatic ch/over switch	260	377	321	**61 900.00**
9553 3080	800A	3-pole	B6	automatic ch/over switch	321	504	392	**104 000.00**
9553 3100	1000A	3-pole	B6	automatic ch/over switch	321	504	392	**111 000.00**
9553 3120	1250A	3-pole	B6	automatic ch/over switch	330	504	392	**122 000.00**
9553 3160	1600A	3-pole	B7	automatic ch/over switch	288	596	392	**149 000.00**

4-pole switches

9553 4016	160A	4-pole	B3	automatic ch/over switch	135	317	244	**42 100.00**
9553 4025	250A	4-pole	B4	automatic ch/over switch	160	395	244	**52 900.00**
9553 4040	400A	4-pole	B4	automatic ch/over switch	170	395	244	**69 900.00**
9553 4063	630A	4-pole	B5	automatic ch/over switch	260	454	321	**77 300.00**
9553 4080	800A	4-pole	B6	automatic ch/over switch	321	584	392	**137 000.00**
9553 4100	1000A	4-pole	B6	automatic ch/over switch	321	584	392	**149 000.00**
9553 4120	1250A	4-pole	B6	automatic ch/over switch	330	584	392	**159 000.00**
9553 4160	1600A	4-pole	B7	automatic ch/over switch	288	716	392	**192 000.00**

Larger sizes (up to 3200A) available on request

Above ZAR prices do not include VAT. E&OE

Changeover switch accessories

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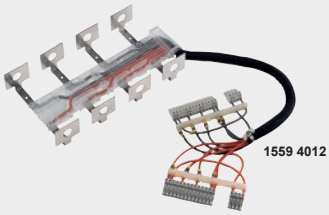

1559 4012

9509 5120

2694 4051

Accessories for ATyS changeover switches

type	poles	description	for switch frame	for switch (A)	price
Bridging bars for switches					
• Supplied with all mounting accessories for bridging power terminals on the outgoing side of the switch					
4109 0019	bridge	1-pole	bridging bar for ch/over switches	B3	160A	**341.00**
4109 0025	bridge	1-pole	bridging bar for ch/over switches	B4	250A	**392.00**
4109 0039	bridge	1-pole	bridging bar for ch/over switches	B4	400A	**490.00**
4109 0063	bridge	1-pole	bridging bar for ch/over switches	B5	630A	**968.00**
4109 0080	bridge	1-pole	bridging bar for ch/over switches	B6	800 - 1000A	**1 420.00**
4109 0120	bridge	1-pole	bridging bar for ch/over switches	B6	1250A	**2 300.00**
4109 0160	bridge	1-pole	bridging bar for ch/over switches	B7	1600A	**3 190.00**
For 3-pole device order 3 bridging bars, for a 4-pole device order 4 bridging bars					
For optimal performance, it is recommended to use original bridging bars from Socomec					
Voltage sensing and power supply harness					
The ATyS g voltage sensing kit is available as an accessory and is designed to tap directly off the power section on Switch I and Switch II terminals without the need to add protection fuses.					
The sensing kit is designed with optimised cable lengths and utilises silicon conductors held safely in an isolated mechanical support. The kit can be fitted on the top or bottom of the switch.					
1559 3012	harness	3-pole	voltage sense and p/supply harness	B3	160A	**2 400.00**
1559 3025	harness	3-pole	voltage sense and p/supply harness	B4	250A	**2 810.00**
1559 3040	harness	3-pole	voltage sense and p/supply harness	B4	400A	**3 180.00**
1559 3063	harness	3-pole	voltage sense and p/supply harness	B5	630A	**3 400.00**
1559 3080	harness	3-pole	voltage sense and p/supply harness	B6	800-1000A	**4 110.00**
1559 3120	harness	3-pole	voltage sense and p/supply harness	B6	1250A	**4 200.00**
1559 3160	harness	3-pole	voltage sense and p/supply harness	B7	1600A	**4 250.00**
1559 4012	N-right	4-pole	voltage sense and p/supply harness	B3	160A	**2 510.00**
1559 4025	N-right	4-pole	voltage sense and p/supply harness	B4	250A	**2 940.00**
1559 4040	N-right	4-pole	voltage sense and p/supply harness	B4	400A	**3 450.00**
1559 4063	N-right	4-pole	voltage sense and p/supply harness	B5	630A	**3 640.00**
1559 4080	N-right	4-pole	voltage sense and p/supply harness	B6	800-1000A	**4 420.00**
1559 4120	N-right	4-pole	voltage sense and p/supply harness	B6	1250A	**4 450.00**
1559 4160	N-right	4-pole	voltage sense and p/supply harness	B6	1600A	**4 470.00**
Power supplies					
1599 5112	24 VDC - 230 VAC power supply to operate switches with DC			all ATyS r/g/p	**14 700.00**
1599 4001	dual power supply permits remote transfer to any position			all ATyS r	**3 440.00**
Spare motor units					
The motor units of the ATyS r and g are easy to replace in case there is a problem, even when on-load.					
9509 5020	spare motor for ATyS switches			B3	160A	**16 300.00**
9509 5040	spare motor for ATyS switches			B4	250-400A	**19 000.00**
9509 5063	spare motor for ATyS switches			B5	630A	**25 100.00**
9509 5120	spare motor for ATyS switches			B6	800-1250A	**38 500.00**
9509 5160	spare motor for ATyS switches			B7	1600A	**40 900.00**
Auxiliary contacts for switches					
• Pre-breaking and signalling of positions I and II					
1599 0502	1 C/O	aux	auxiliary contact for switches	B3-5	160-630A	**2 170.00**
1599 0532	1 C/O	aux	auxiliary contact for switches	B6-8	800-3200A	**2 440.00**
Terminal shrouds and mounting accessories					
Terminal shrouds					
2694 3014	shroud	3-pole	terminal protection shroud	B3	160A	**588.00**
2694 3021	shroud	3-pole	terminal protection shroud	B4	250 - 400A	**664.00**
2694 3051	shroud	3-pole	terminal protection shroud	B5	630A	**991.00**
2694 4014	shroud	4-pole	terminal protection shroud	B3	160A	**717.00**
2694 4021	shroud	4-pole	terminal protection shroud	B4	250 - 400A	**903.00**
2694 4051	shroud	4-pole	terminal protection shroud	B5	630A	**1 330.00**
Door mounting frame *(to permit access to controller from front panel door)*					
1529 0012	frame	3/4-pole	door protective frame for ATyS r	B3-5	160-630A	**955.00**
1529 0080	frame	3/4-pole	door protective frame for ATyS r	B6-8	800-3200A	**1 090.00**
1539 0012	frame	3/4-pole	door protective frame for ATyS g	B3-5	160-630A	**1 530.00**
1539 0080	frame	3/4-pole	door protective frame for ATyS g	B6-7	800-1600A	**1 620.00**
1509 0001	10 mm	mounting spacers *(stackable)* to raise switch			*(2 per set)*	**499.00**
Communication module					
4825 0092	RS-485 MODBUS communication			for ATyS g	**1 500.00**

Enclosed automatic changeover panels

All the features of the ATyS ranges of switches build into an IP65 enclosure. with all wiring, bridging bars and fuses for ease of installation and time-saving.

ATyS p M - Enclosed automatic changeover switches 63 - 160A

ATyS p M Automatic Transfer Switching Equipment (ATSE) is designed for use in power systems for the safe transfer of a load supply between a normal and an alternate source.

The changeover is done in open transition and with minimum supply interruption during transfer ensuring full compliance with IEC 60947-6-1 and other international TSE standards.

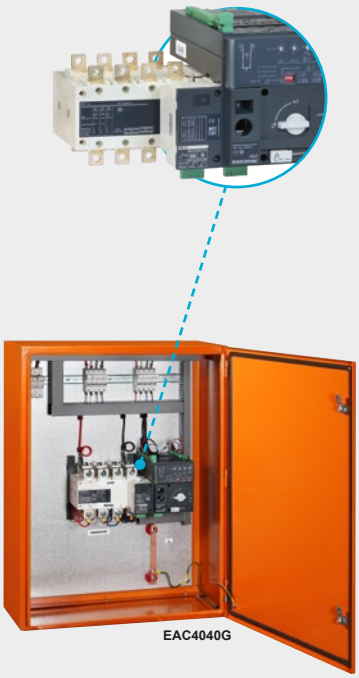
The ATyS p M is a full load break *(switch type)* derived transfer switching equipment where the main components are proven technology devices, also fulfilling requirements in IEC 60947-3 standards.

ATyS p M - Transfer switches ensure:

- Intuitive HMI for emergency / local operation
- Integrated and robust switch disconnection
- Programmable secure motorisation controls interface
- Constant pressure on the contacts non affected by network voltage
- Power control and safety between a normal and an alternate source
- Stable positions (I – 0 – II) non affected by typical vibration and shocks
- ATS configuration through a keypad as well as through EasyConfig programming software

type	AC-31 B 415V (A)	poles	description	dimensions (mm) (H)	(W)	(D)	price
General features:							
• A complete product delivered as a fully assembled and tested solution							
• An inherent failsafe mechanical interlock							
• Built in padlocking facility *(configurable)*							
• Colour: BS/EN06 E53 *(electric orange)*							
EAC4006P	63A	4-pole	enclosed ch/over switch	550	400	220	**44 600.00**
EAC4008P	80A	4-pole	enclosed ch/over switch	550	400	220	**49 500.00**
EAC4010P	100A	4-pole	enclosed ch/over switch	550	400	220	**51 400.00**
EAC4016P	160A	4-pole	enclosed ch/over switch	550	400	220	**57 900.00**

ATyS g - Enclosed automatic changeover switches 250 - 1600A



ATyS g Automatic Transfer Switching Equipment (ATSE) is designed for use in power systems for the safe transfer of a load supply between a normal and an alternate source.

The changeover is done in open transition and with minimum supply interruption during transfer ensuring full compliance with IEC 60947-6-1, GB 14048-11 and other international TSE standards as listed.

The ATyS g is a full load break *(switch type)* derived transfer switching equipment where the main components are proven technology devices also fulfilling requirements in IEC 60947-3 standards.

ATyS g - Motorised source changeover switches:

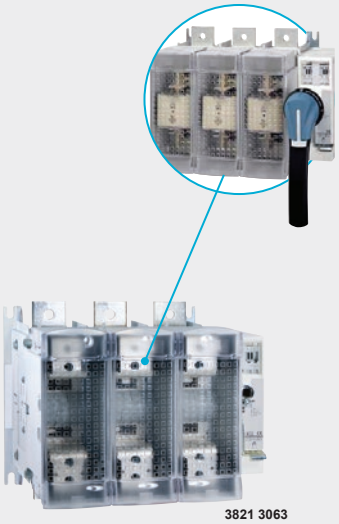
- Integrated and robust switch disconnection
- Integrated switch position auxiliary contacts
- Intuitive HMI for emergency / local operation
- Constant pressure on the contacts is not effected by network voltage
- Minimal downtime with the possibility to perform easy maintenance
- Straightforward ATS configuration for easy and fast commissioning
- Power control and safety between a normal and an alternate source
- Stable positions (I – 0 – II) non affected by typical vibration and shocks
- Quick, easy and safe dual “on-load” emergency manual operation *(Manual operation is functional with and without the motorization in place)*

type	AC-31 B 415V (A)	poles	description	dimensions (mm) (H)	(W)	(D)	price
General features:							
• A complete product delivered as a fully assembled and tested solution							
• An inherent failsafe mechanical interlock							
• Built-in padlocking facility *(configurable)*							
• Colour: BS/EN06 E53 *(electric orange)*							
EAC4025G	250A	4-pole	enclosed ch/over switch	950	700	330	**65 300.00**
EAC4040G	400A	4-pole	enclosed ch/over switch	950	700	330	**82 600.00**
EAC4063G	630A	4-pole	enclosed ch/over switch	1200	900	600	**107 000.00**
EAC4080G	800A	4-pole	enclosed ch/over switch	1200	900	600	**168 000.00**
EAC4100G	1000A	4-pole	enclosed ch/over switch	1200	900	600	**180 000.00**
EAC4125G	1250A	4-pole	enclosed ch/over switch	1200	900	600	**194 000.00**
EAC4160G	1600A	4-pole	enclosed ch/over switch	1200	900	600	**230 000.00**

Above ZAR prices do not include VAT. E&OE

3631 3003

3841 3003


3821 3063

1443 3111

1401 0540

3999 0600

FUSERBLOC - Fuse combination switches

FUSERBLOC are manually operated fuse combination switches. They make and break on load and provide safety isolation and protection against overcurrent in any low-voltage electrical circuit.

General features:

- Complete isolation of fuses with double breaking per pole *(top and bottom of fuse)* positive break indication
- "Test" position for testing control circuits without power *(enclosure door can be opened in "test" position)*
- External front operating handle and shaft *(to be ordered separately-see below)*
- IEC/EN 60947-3, IEC/EN 60269-1, IEC/EN 60269-2, VDE 0636-1, VDE 0660-107
- Consult product datasheet for DC utilisation category

Fuse combination switches - *3-pole*

type	AC-22 A 415V (A)	AC-23 A 400V	fuse type	description	dimensions (mm) (H)	(W)	(D)	price
NFC cylindrical fuses								
3631 3003	CD32A	15 kW	10 x 38	fuse combination switch	98	96	65	**2 140.00**
3831 3005	50A	25 kW	14 x 51	fuse combination switch	118	121	100	**2 690.00**
3831 3011	125A	63 kW	22 x 58	fuse combination switch	162	148	135	**4 220.00**
DIN pattern fuses								
3831 3006	63A	30 kW	000	fuse combination switch	118	136	125	**3 070.00**
3831 3012	125A	63 kW	00	fuse combination switch	162	148	135	**4 510.00**
3831 3015	160A	80 kW	00	fuse combination switch	162	148	135	**5 050.00**
3831 3024	250A	132 kW	1	fuse combination switch	195	234	154	**7 350.00**
3831 3038	400A	220 kW	2	fuse combination switch	240	256	188	**9 950.00**
3811 3063	630A	355 kW	3	fuse combination switch	300	364	265	**20 200.00**
3811 3080	800A	450 kW	3	fuse combination switch	304	364	265	**23 600.00**
3811 3120	1250A	560 kW	4	fuse combination switch	304	442	289	**44 600.00**
BS88 pattern fuses								
3641 3001	CD32A	15 kW	A1	fuse combination switch	98	96	102	**2 270.00**
3841 3003	32A	15 kW	A1	fuse combination switch	118	121	100	**2 680.00**
3841 3006	63A	30 kW	A2 - A3	fuse combination switch	118	136	125	**3 090.00**
3841 3010	100A	51 kW	A4	fuse combination switch	162	148	135	**3 660.00**
3841 3015	160A	80 kW	A4	fuse combination switch	162	190	145	**5 340.00**
3841 3021	200A	100 kW	B1-B2	fuse combination switch	195	234	154	**6 640.00**
3841 3024	250A	132 kW	B1-B2-B3	fuse combination switch	195	234	154	**7 220.00**
3841 3031	315A	160 kW	B1-B2-B3	fuse combination switch	240	256	188	**9 440.00**
3841 3038	400A	220 kW	B2-B3-B4	fuse combination switch	240	256	188	**9 740.00**
3821 3063	630A	355 kW	C1-C2	fuse combination switch	300	364	265	**20 800.00**
3821 3080	800A	450 kW	C1-C2-C3	fuse combination switch	300	364	265	**24 200.00**
3821 3120	1250A	560 kW	D1	fuse combination switch	300	442	304	**43 200.00**

Operating handles and shafts for above switches

- External front operated, door interlocking, padlockable *(3 padlocks)* in "OFF" with "TEST" position

type	handle	colour		description	for switch	price
1413 2115	S1	black		pistol grip external operating handle	CD32 - 63A	**425.00**
1423 2115	S2	black		pistol grip external operating handle	100 - 400A	**528.00**
1433 3111	S3	black		pistol grip external operating handle	630 - 800A	**1 090.00**
1443 3111	S4	black		"T" grip external operating handle	1250A	**1 370.00**
1401 0532	S1	320 mm	□ 5	extension shaft for switch	CD32A	**473.00**
1401 0540	S1	400 mm	□ 5	extension shaft for switch	CD32A	**523.00**
1400 1020	S1/S2	200 mm	□ 10	extension shaft for switch	32 - 400A	**215.00**
1400 1032	S1/S2	320 mm	□ 10	extension shaft for switch	32 - 400A	**243.00**
1400 1050	S1/S2	500 mm	□ 10	extension shaft for switch	32 - 400A	**480.00**
1400 1232	S3/S4	320 mm	□ 12	extension shaft for switch	630 - 1250A	**659.00**
1400 1250	S3/S4	500 mm	□ 12	extension shaft for switch	630 - 1250A	**1 280.00**
1429 0000	guide			*(permits engaging of misaligned shaft with handle)*	*(all sizes)*	**155.00**
Auxiliary contacts for switch fuses						
3999 0701	1 NO	U type		auxiliary contact and support for switches	CD32 - 1250A	**259.00**
3999 0702	1 NC	U type		additional auxiliary contact fuse switches	CD32 - 1250A	**259.00**
3999 0710	holder			contact holder for 4 additional auxiliary contacts	CD32A	**743.00**
3999 0600	holder			contact holder for 4 additional auxiliary contacts	32 - 400A	**970.00**
Terminal shrouds				*(also provides phase separation for switches)*		
3998 3016	shroud	3-pole		terminal protection shroud for switches	100 - 160A	**550.00**
3998 3025	shroud	3-pole		terminal protection shroud for switches	200 - 250A	**729.00**
3898 3040	shroud	3-pole		terminal protection shroud for switches	315 - 400A	**687.00**
3898 3080	shroud	3-pole		terminal protection shroud for switches	630 - 800A	**1 980.00**
3898 3120	shroud	3-pole		terminal protection shroud for switches	1250A	**2 330.00**

5120025

5120315

PTF/78

PTF/45

PTF/50

PTF/30

PTF/35

Miniature glass fuses *(20 x 5 mm)*

- Miniature glass fuse-links with low breaking capacity, intended for small currents
- Protect against overloads and short circuits in electronic equipment, household, telecommunications and small transformers or motors
- Available with quick-acting (F) characteristics
- Manufactured according to IEC and EN standards with glass tube and nickel-plated copper alloy contact caps

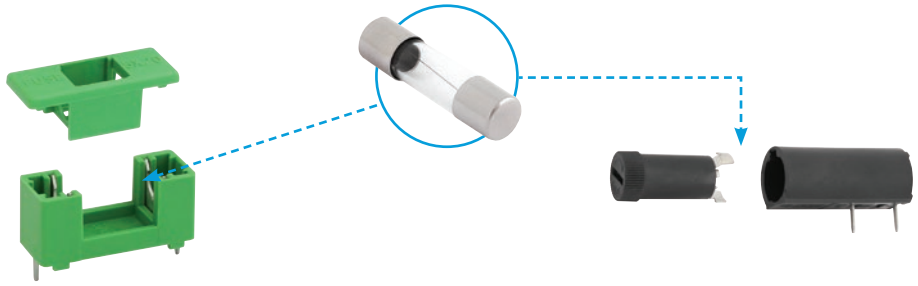
type	rated current	rated voltage	breaking capacity	description	dimensions (mm)	price Per pack
Standard glass fuses 20 x 5mm						*(10 pcs)*
5120025	0.25A	250V	35A	(F) fast acting cylindrical glass fuse	20 x 5	**56.00**
5120050	0.50A	250V	35A	(F) fast acting cylindrical glass fuse	20 x 5	**56.00**
5120063	0.63A	250V	35A	(F) fast acting cylindrical glass fuse	20 x 5	**74.00**
5120100	1.0A	250V	35A	(F) fast acting cylindrical glass fuse	20 x 5	**45.00**
5120125	1.25A	250V	35A	(F) fast acting cylindrical glass fuse	20 x 5	**51.00**
5120160	1.6A	250V	35A	(F) fast acting cylindrical glass fuse	20 x 5	**66.00**
5120200	2.0A	250V	35A	(F) fast acting cylindrical glass fuse	20 x 5	**45.00**
5120250	2.5A	250V	35A	(F) fast acting cylindrical glass fuse	20 x 5	**51.00**
5120315	3.15A	250V	35A	(F) fast acting cylindrical glass fuse	20 x 5	**51.00**
5120400	4.0A	250V	10 x In	(F) fast acting cylindrical glass fuse	20 x 5	**45.00**
5120500	5.0A	250V	10 x In	(F) fast acting cylindrical glass fuse	20 x 5	**45.00**
5120630	6.3A	250V	10 x In	(F) fast acting cylindrical glass fuse	20 x 5	**45.00**
5021000	10A	250V	10 x In	(F) fast acting cylindrical glass fuse	20 x 5	**45.00**
5021600	16A	250V	10 x In	(F) fast acting cylindrical glass fuse	20 x 5	**70.00**

Fuse holders for 20 x 5 mm glass fuses

- Protection against electric shock: I-II
- Impulse withstand bet. Terminals: > 4.0 kV
- Admissable ambient temperature: -30°C to 85°C
- Pollution degree: 3
- Flame class rating: UL 94 VO

type	rated current	rated voltage	mounting	description	for fuse (mm)	price each
PCB mount fuse holders						
PTF/78	6.3A	250V	PCB	PCB mount fuse holder	20 x 5	**4.20**
BS232VE	cover			protection cover for above PTF/78 fuse holder		**1.70**
PTF/45	10A	250V	PCB	PCB vertical mounting fuse holder	20 x 5	**16.70**
PTF/50	10A	250V	PCB	PCB horizontal mounting fuse holder	20 x 5	**18.20**
Panel mount fuse holder						
• Knurled knob access • L 34.2 mm extends 11 mm outside panel						
PTF/30	10A	250V	panel	panel mount Ø13 mm fuse holder	20 x 5	**23.10**
Panel mount fuse holder						
• Flat blade access - • L 37.5 mm extends 5.5 mm outside panel						
PTF/35	10A	250V	panel	panel mount Ø12.7 mm fuse holder	20 x 5	**25.60**
In-line shock safe fuse holder						
PTF/80A	6.3A	250V	in-line	in-line shock safe fuse holder	20 x 5	**19.40**

Standard glass fuse + holders



Above ZAR prices do not include VAT. E&OE

CYL 10x38 14x51 22x58

gG class - Cylindrical fuse-links Standards: IEC/EN 60269-1, IEC/EN 60269-2

Cylindrical fuse-links with high withstand to internal pressure and thermal shock, permitting very high breaking capacities in a compact fuse design. Melting elements are designed to avoid ageing, thus maintaining their electrical characteristics over time.

4210...

4212...

4220...

4222...

type	rated current	rated voltage	breaking capacity	class	description	dimension (mm)	price
gG Class cylindrical fuse-links							
General protection of overloads and short circuits, protection of cables, power lines and equipment							
10 x 38 mm cylindrical fuses							
420000	0.5A	500V	120kA	gG	cylindrical fuse-link	10 x 38	**13.50**
420001	1A	500V	120kA	gG	cylindrical fuse-link	10 x 38	**12.20**
420002	2A	500V	120kA	gG	cylindrical fuse-link	10 x 38	**12.20**
420004	4A	500V	120kA	gG	cylindrical fuse-link	10 x 38	**12.20**
420006	6A	500V	120kA	gG	cylindrical fuse-link	10 x 38	**12.20**
420010	10A	500V	120kA	gG	cylindrical fuse-link	10 x 38	**12.20**
420016	16A	500V	120kA	gG	cylindrical fuse-link	10 x 38	**12.20**
420020	20A	500V	120kA	gG	cylindrical fuse-link	10 x 38	**12.20**
420025	25A	500V	120kA	gG	cylindrical fuse-link	10 x 38	**13.50**
420032	32A	400V	120kA	gG	cylindrical fuse-link	10 x 38	**13.50**
14 x 51 mm cylindrical fuses							
421010	10A	690V	80kA	gG	cylindrical fuse-link	14 x 51	**22.30**
421016	16A	690V	80kA	gG	cylindrical fuse-link	14 x 51	**22.30**
421020	20A	690V	80kA	gG	cylindrical fuse-link	14 x 51	**22.30**
421025	25A	690V	80kA	gG	cylindrical fuse-link	14 x 51	**22.30**
421032	32A	500V	120kA	gG	cylindrical fuse-link	14 x 51	**22.30**
421040	40A	500V	120kA	gG	cylindrical fuse-link	14 x 51	**23.60**
421050	50A	400V	120kA	gG	cylindrical fuse-link	14 x 51	**24.30**
With striker - *for use with fuse holder incorporating a micro switch for remote "fuse blown" indication*							
421202	2A	500V	120kA	gG	fuse-link with striker	14 x 51	**71.00**
421204	4A	500V	120kA	gG	fuse-link with striker	14 x 51	**75.00**
421206	6A	500V	120kA	gG	fuse-link with striker	14 x 51	**75.00**
421210	10A	500V	120kA	gG	fuse-link with striker	14 x 51	**75.00**
421216	16A	500V	120kA	gG	fuse-link with striker	14 x 51	**75.00**
421220	20A	500V	120kA	gG	fuse-link with striker	14 x 51	**75.00**
421225	25A	500V	120kA	gG	fuse-link with striker	14 x 51	**75.00**
421232	32A	500V	120kA	gG	fuse-link with striker	14 x 51	**80.00**
421240	40A	500V	120kA	gG	fuse-link with striker	14 x 51	**80.00**
421250	50A	400V	120kA	gG	fuse-link with striker	14 x 51	**80.00**
22 x 58 mm cylindrical fuses							
422032	32A	690V	80kA	gG	cylindrical fuse-link	22 x 58	**68.00**
422040	40A	690V	80kA	gG	cylindrical fuse-link	22 x 58	**68.00**
422050	50A	690V	80kA	gG	cylindrical fuse-link	22 x 58	**68.00**
422063	63A	690V	80kA	gG	cylindrical fuse-link	22 x 58	**62.00**
422080	80A	500V	120kA	gG	cylindrical fuse-link	22 x 58	**62.00**
422000	100A	500V	120kA	gG	cylindrical fuse-link	22 x 58	**62.00**
422015	125A	500V	120kA	gG	cylindrical fuse-link	22 x 58	**62.00**
With striker - *for use with fuse holder incorporating a micro switch for remote "fuse blown" indication*							
422232	32A	690V	80kA	gG	fuse-link with striker	22 x 58	**111.00**
422240	40A	690V	80kA	gG	fuse-link with striker	22 x 58	**111.00**
422250	50A	690V	80kA	gG	fuse-link with striker	22 x 58	**116.00**
422263	63A	690V	80kA	gG	fuse-link with striker	22 x 58	**116.00**
422280	80A	500V	120kA	gG	fuse-link with striker	22 x 58	**125.00**
422200	100A	500V	120kA	gG	fuse-link with striker	22 x 58	**125.00**
422215	125A	400V	120kA	gG	fuse-link with striker	22 x 58	**125.00**

DC application for DF gG fuse-links *(L/R = 15ms)*

Fuses are generally suitable for both AC and DC applications, however voltage ratings will differ and therefore have to be taken into consideration.

For higher DC voltage application see photovoltaic fuse-links

Fuse size	rated current	maximum DC voltage	DC breaking capacity
10 x 38	0.5A…16A	250 VDC	15 kA
	20A…32A	80 VDC	
14 x 51	1A…25A	440 VDC	15 kA
	32A…40A	150 VDC	
	50A	48 VDC	
22 x 58	2A…63A	440 VDC	15 kA
	80A…100A	150 VDC	
	125A	48 VDC	

CYL 10x38 14x51 22x58 10x85

Cylindrical fuse-links **aM class** are intended for short circuit protection of motors, transformers and other loads with high inrush currents. Protection of switchgear *(contactor, thermal overload)* due to excellent current limiting capability and low I^2t values.

These fuse-links should be associated with a thermal overload protection device as a disconnector. Made of ceramic tube with high withstand internal pressure and thermal shock, offering high breaking capacity in a reduced dimension. Melting elements are silverplated to avoid aging, keeping electric characteristics unchanged.

440...

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415040

485705

433...

432...

431...

type	rated current	rated voltage	breaking capacity	class	description	dimension (mm)	price
aM *(motor protection)* fuse-links							
10 x 38 mm cylindrical fuses							
440000	0.5A	500V	120 kA	aM	cylindrical fuse-link	10 x 38	**12.80**
440001	1A	500V	120 kA	aM	cylindrical fuse-link	10 x 38	**12.80**
440002	2A	500V	120 kA	aM	cylindrical fuse-link	10 x 38	**12.80**
440004	4A	500V	120 kA	aM	cylindrical fuse-link	10 x 38	**12.80**
440006	6A	500V	120 kA	aM	cylindrical fuse-link	10 x 38	**12.80**
440010	10A	500V	120 kA	aM	cylindrical fuse-link	10 x 38	**12.80**
440016	16A	500V	120 kA	aM	cylindrical fuse-link	10 x 38	**12.80**
440020	20A	400V	120 kA	aM	cylindrical fuse-link	10 x 38	**12.80**
440025	25A	400V	120 kA	aM	cylindrical fuse-link	10 x 38	**12.80**
440032	32A	400V	120 kA	aM	cylindrical fuse-link	10 x 38	**12.80**
14 x 51 mm cylindrical fuses							
441020	20A	690V	80 kA	aM	cylindrical fuse-link	14 x 51	**27.00**
441025	25A	690V	80 kA	aM	cylindrical fuse-link	14 x 51	**27.00**
441032	32A	500V	120 kA	aM	cylindrical fuse-link	14 x 51	**27.00**
441040	40A	500V	120 kA	aM	cylindrical fuse-link	14 x 51	**25.00**
441050	50A	400V	120 kA	aM	cylindrical fuse-link	14 x 51	**29.00**
22 x 58 mm cylindrical fuses							
442032	32A	690V	80 kA	aM	cylindrical fuse-link	22 x 58	**48.00**
442040	40A	690V	80 kA	aM	cylindrical fuse-link	22 x 58	**48.00**
442050	50A	690V	80 kA	aM	cylindrical fuse-link	22 x 58	**48.00**
442063	63A	690V	80 kA	aM	cylindrical fuse-link	22 x 58	**54.00**
442080	80A	500V	120 kA	aM	cylindrical fuse-link	22 x 58	**54.00**
442000	100A	500V	120 kA	aM	cylindrical fuse-link	22 x 58	**54.00**
442015	125A	400V	120 kA	aM	cylindrical fuse-link	22 x 58	**54.00**

Medium voltage (MV) fuse-links for public lighting 1500 VAC

Public lighting systems in urban streets, roads, tunnels and motorways experience voltage drop problems and high energy losses leading to the use of high cross section conductors in very long lines.

To avoid this inconvenience, higher voltage supply networks are usually used by means of special transformers designed for this purpose which increase the voltage for transmission, then reducing to adequate levels at the destination.

It is necessary to use fuse links with adequate rated voltages, for protection of these networks on the medium voltage side.

415010	3.15A	1500V	20 kA	g	MV cylindrical fuse-link	10 x 85	**408.00**
415015	4A	1500V	20 kA	g	MV cylindrical fuse-link	10 x 85	**385.00**
415020	5A	1500V	20 kA	g	MV cylindrical fuse-link	10 x 85	**385.00**
415025	6.3A	1500V	20 kA	g	MV cylindrical fuse-link	10 x 85	**385.00**
415030	8A	1500V	20 kA	g	MV cylindrical fuse-link	10 x 85	**385.00**
415035	10A	1500V	20 kA	g	MV cylindrical fuse-link	10 x 85	**385.00**
415040	12A	1500V	20 kA	g	MV cylindrical fuse-link	10 x 85	**439.00**

Longer body fuses (150/180 mm) for higher voltages 2500,3200,5500V available on request

PMLe series MV fuse holder 1000 VAC/1500 VDC *(H) 130 x (W) 24 x (D) 58 mm*

10/14 x 85 mm fuse holder

485705	32A	1500V	1-pole	industrial MV cylindrical fuseholder	10/14 x 85	**141.00**

Accessories for above MV fuse holder

480005	pin	body pins for multi-pole assembly of fuse holders	**4.80**
485050	ties	handle ties for multi-pole assembly of fuse holders	**3.40**

Solid neutral links *(cylindrical)*

431000	32A	–	–	gG/aM	solid neutral link	10 x 38	**10.80**
432000	50A	–	–	gG/aM	solid neutral link	14 x 51	**18.20**
433000	125A	–	–	gG/aM	solid neutral link	22 x 58	**31.00**

Above ZAR prices do not include VAT. E&OE

CYL 10x38 14x51 10x85 14x85 PV

gPV photovoltaic fuse-links

Made of ceramic tube with high withstand to internal pressure and thermal shock, permitting a high breaking capacity in a reduced physical space.

Contacts are made of silverplated copper and melting elements are of pure silver to avoid aging and maintain electric characteristics over time.

Standards: gPV class according to IEC60269-6

type	rated current	rated voltage	breaking capacity	class	description	dimension (mm)	price
gPV photovoltaic cylindrical fuse-links				**600/1000 VDC**			
gPV 10 x 38 and 14 x 51 cylindrical fuse-links have been developed to offer compact, safety and economic protection of photovoltaic modules *(array protection)* with voltages up to 1000 VDC. Provide protection against overloads and short-circuits.							
491601	1A	1000 VDC	30 kA	gPV	photovoltaic fuse-link	10 x 38	**66.00**
491602	2A	1000 VDC	30 kA	gPV	photovoltaic fuse-link	10 x 38	**66.00**
491604	3A	1000 VDC	30 kA	gPV	photovoltaic fuse-link	10 x 38	**66.00**
491605	4A	1000 VDC	30 kA	gPV	photovoltaic fuse-link	10 x 38	**66.00**
491606	5A	1000 VDC	30 kA	gPV	photovoltaic fuse-link	10 x 38	**66.00**
491610	6A	1000 VDC	30 kA	gPV	photovoltaic fuse-link	10 x 38	**66.00**
491615	8A	1000 VDC	30 kA	gPV	photovoltaic fuse-link	10 x 38	**66.00**
491620	10A	1000 VDC	30 kA	gPV	photovoltaic fuse-link	10 x 38	**66.00**
491625	12A	1000 VDC	30 kA	gPV	photovoltaic fuse-link	10 x 38	**66.00**
491630	16A	1000 VDC	30 kA	gPV	photovoltaic fuse-link	10 x 38	**66.00**
491635	20A	1000 VDC	30 kA	gPV	photovoltaic fuse-link	10 x 38	**66.00**
491940	25A	600 VDC	30 kA	gPV	photovoltaic fuse-link	10 x 38	**75.00**
491945	32A	600 VDC	30 kA	gPV	photovoltaic fuse-link	10 x 38	**75.00**
Above fuse-links we recommend the utilization of 10 x 38 PV fuse holders **485150/485152/485151**							
491650	25A	1000 VDC	30 kA	gPV	photovoltaic fuse-link	14 x 51	**143.00**
491655	32A	1000 VDC	30 kA	gPV	photovoltaic fuse-link	14 x 51	**157.00**
Above fuse fuse-links we recommend the utilization of 14 x 51 PV fuse holders **485250**							
For ambient temperatures higher than 25ºC, a derating in maximum current must be applied							
gPV photovoltaic cylindrical fuse-links				**1200/1500 VDC**			
gPV 10 x 85 & 10/14 x 85 cylindrical fuse-links from DF Electric have been developed to offer a compact, safety and economic protection of photovoltaic modules *(array protection)* with voltages up to 1500 VDC.							
492202	2A	1500 VDC	30 kA	gPV	photovoltaic fuse-link	10 x 85	**105.00**
492205	4A	1500 VDC	30 kA	gPV	photovoltaic fuse-link	10 x 85	**105.00**
492210	6A	1500 VDC	30 kA	gPV	photovoltaic fuse-link	10 x 85	**105.00**
492215	8A	1500 VDC	30 kA	gPV	photovoltaic fuse-link	10 x 85	**105.00**
492220	10A	1500 VDC	30 kA	gPV	photovoltaic fuse-link	10 x 85	**105.00**
492225	12A	1500 VDC	30 kA	gPV	photovoltaic fuse-link	10 x 85	**105.00**
492230	16A	1500 VDC	30 kA	gPV	photovoltaic fuse-link	10 x 85	**105.00**
492250	20A	1500 VDC	10 kA	gPV	photovoltaic fuse-link	10/14 x 85	**165.00**
492255	25A	1500 VDC	10 kA	gPV	photovoltaic fuse-link	10/14 x 85	**165.00**
492262	32A	1500 VDC	10 kA	gPV	photovoltaic fuse-link	10/14 x 85	**165.00**
Above fuse-links we recommend the utilization of **485705** fuse holders							
For ambient temperatures higher than 25ºC, a derating in maximum current must be applied							

Fuse holders for Photovoltaic applications 1000/1500 VDC

- Fuse holder for cylindrical fuse-link size 10 x 85 gPV and 14 x 85
- Modern compact design
- Ventilation zones optimized for a improved heat dissipation
- Manufactured with a high quality materials
- Silver plated copper contacts
- Plastic materials with high temperature resistance and self-extinguishable

type	rated current	for fuse size (mm)	poles		description		price
485150	32A	1000 VDC	1-pole	gPV	photovoltaic fuse holder	10 x 38	**73.00**
485152*	32A	1000 VDC	1-pole	gPV	photovoltaic fuse holder	10 x 38	**72.00**
485151	32A	1000 VDC	2-pole	gPV	photovoltaic fuse holder	10 x 38	**151.00**
485250	50A	1000 VDC	1-pole	gPV	photovoltaic fuse holder	14 x 51	**191.00**
485705	32A	1500 VDC	1-pole	gPV	photovoltaic fuse holder	10/14 x 85	**141.00**

* *Indicator*

CYL 10x38 14x51 22x58

Semiconductor cylindrical fuse-links

Semi-conductor fuse-links intended to clear short-circuits and have been designed with very low I^2t values and reduced arc voltages, guaranteeing optimum protection of semiconductors with exceptional cycling ability.

Typical applications are protection of semiconductors *(diodes, thyristors, triacs, etc)* used in power rectifiers, UPS, converters, motor drives, soft starters, solid state relays, photovoltaic and welding inverters and any application where necessary to protect semiconductor devices.

- Standards: IEC/EN 60269-1, IEC/EN 60269-4, UL248 standard (file Nr. E477155)

492004

492123

492139

451260 + 451275

type	rated current	rated voltage	breaking capacity	class	description	dimension (mm)	price
RAPIDPLUS gR high speed fuse-links for semiconductors							
RAPIDPLUS gR fuse-links are capable of clearing all types of overcurrents, overloads and short-circuits, protecting semiconductors, cables and associated switchgear within the installation.							
10 x 38mm gR cylindrical fuses							
492003	4A	690V	200 kA	gR	semiconductor fuse-link	10 x 38	**68.00**
492004	6A	690V	200 kA	gR	semiconductor fuse-link	10 x 38	**68.00**
492006	10A	690V	200 kA	gR	semiconductor fuse-link	10 x 38	**68.00**
492008	16A	690V	200 kA	gR	semiconductor fuse-link	10 x 38	**68.00**
492009	20A	690V	200 kA	gR	semiconductor fuse-link	10 x 38	**68.00**
492010	25A	690V	200 kA	gR	semiconductor fuse-link	10 x 38	**68.00**
492011	32A	690V	200 kA	gR	semiconductor fuse-link	10 x 38	**68.00**
14 x 51mm gR cylindrical fuses							
492022	32A	690V	200 kA	gR	semiconductor fuse-link	14 x 51	**115.00**
492023	40A	690V	200 kA	gR	semiconductor fuse-link	14 x 51	**115.00**
492024	50A	690V	200 kA	gR	semiconductor fuse-link	14 x 51	**115.00**
With "striker" - *for use with fuse holder micro switch for remote "fuse blown" indication*							
492117	10A	690V	200 kA	gR	SC fuse-link with striker	14 x 51	**174.00**
492118	12A	690V	200 kA	gR	SC fuse-link with striker	14 x 51	**174.00**
492119	16A	690V	200 kA	gR	SC fuse-link with striker	14 x 51	**174.00**
492120	20A	690V	200 kA	gR	SC fuse-link with striker	14 x 51	**174.00**
492121	25A	690V	200 kA	gR	SC fuse-link with striker	14 x 51	**174.00**
492122	32A	690V	200 kA	gR	SC fuse-link with striker	14 x 51	**174.00**
492123	40A	690V	200 kA	gR	SC fuse-link with striker	14 x 51	**202.00**
492124	50A	690V	200 kA	gR	SC fuse-link with striker	14 x 51	**202.00**
22 x 58 mm gR cylindrical fuses							
492037	50A	690V	200 kA	gR	semiconductor fuse-link	22 x 58	**142.00**
492038	63A	690V	200 kA	gR	semiconductor fuse-link	22 x 58	**208.00**
492039	80A	690V	200 kA	gR	semiconductor fuse-link	22 x 58	**208.00**
492040	100A	690V	200 kA	gR	semiconductor fuse-link	22 x 58	**249.00**
With "striker" - *for use with fuse holder micro switch for remote "fuse blown" indication*							
492137	50A	690V	200 kA	gR	semiconductor fuse-link	22 x 58	**220.00**
492138	63A	690V	200 kA	gR	semiconductor fuse-link	22 x 58	**285.00**
492139	80A	690V	200 kA	gR	semiconductor fuse-link	22 x 58	**285.00**
492140	100A	690V	200 kA	gR	semiconductor fuse-link	22 x 58	**303.00**

BAC open-type fuse bases *for cylindrical fuses*

Industrial OPEN TYPE fuse bases for cylindrical fuse-links, suitable for semiconductor protection fuselinks with a high dissipated power, facilitate exceptional heat dissipation characteristics. Manufactured with high quality silver plated copper contacts and high temperature self-extinguishing plastic materials.

- DIN-rail or screw fix mounting
- Microswitch accessory for fuses with striker to monitor fusing

type	rated current	rated voltage	poles	description	for fuse size (mm)	price
10 x 38 mm				(H) 75 x (W)22 x (D) 38 mm		
451250	32A	690V	1-pole	open type cylindrical fuse holder	10 x 38	**89.00**
14 x 51 mm				(H) 92 x (W)27 x (D) 50 mm		
451260	50A	690V	1-pole	open type cylindrical fuse holder	14 x 51	**164.00**
22 x 58 mm				(H) 118 x (W)36 x (D) 41 mm		
451270	100A	690V	1-pole	open type cylindrical fuse holder	22 x 58	**232.00**
"Fuse blown" indication micro switch - *for 14 x 51 and 22 x 58 mm fuse-links*						
451275		micro switch		accessory used with fuses with "striker"	14 x 51/22 x 58	**114.00**

Above ZAR prices do not include VAT. E&OE

CYL 10x38 14x51 22x58

Semiconductor cylindrical fuse-links

RAPIDPLUS aR fuse-links are intended to clear short-circuits, designed to have very low I^2t values and reduced arc voltages guaranteeing, optimum protection of semiconductors with excellent cycling abilities.

Made of ceramic high internal pressure withstand and thermal shock capabilities with silver-plated copper contacts.

Typical applications include protection of semiconductors *(diodes, thyristors, triacs, etc)* used in power rectifiers, UPS, converters, motor drives, soft starters, solid state relays, photovoltaic inverters, welding inverters and any application where necessary to protect semiconductor devices.

UL certification according to UL248 standard. UL file Nr. E477155

491155

491770

491835

type	rated current	rated voltage	breaking capacity	class	description	dimension (mm)	price
RAPIDPLUS aR high speed fuse-links for semiconductors							
10 x 38 mm aR cylindrical fuses							
491107	2A	690V	200 kA	aR	semiconductor fuse-link	10 x 38	**83.00**
491110	3A	690V	200 kA	aR	semiconductor fuse-link	10 x 38	**83.00**
491113	4A	690V	200 kA	aR	semiconductor fuse-link	10 x 38	**83.00**
491115	6A	690V	200 kA	aR	semiconductor fuse-link	10 x 38	**83.00**
491120	8A	690V	200 kA	aR	semiconductor fuse-link	10 x 38	**83.00**
491125	10A	690V	200 kA	aR	semiconductor fuse-link	10 x 38	**83.00**
491130	12A	690V	200 kA	aR	semiconductor fuse-link	10 x 38	**83.00**
491135	16A	690V	200 kA	aR	semiconductor fuse-link	10 x 38	**83.00**
491140	20A	690V	200 kA	aR	semiconductor fuse-link	10 x 38	**83.00**
491145	25A	690V	200 kA	aR	semiconductor fuse-link	10 x 38	**83.00**
491155	32A	690V	200 kA	aR	semiconductor fuse-link	10 x 38	**83.00**
14 x 51 mm aR cylindrical fuses with "striker"							
- For use with fuse holder incorporating a micro switch for remote "fuse blown" indication							
491730	8A	690V	200 kA	aR	semiconductor fuse-link	14 x 51	**286.00**
491735	10A	690V	200 kA	aR	semiconductor fuse-link	14 x 51	**286.00**
491737	12A	690V	200 kA	aR	semiconductor fuse-link	14 x 51	**286.00**
491741	16A	690V	200 kA	aR	semiconductor fuse-link	14 x 51	**277.00**
491745	20A	690V	200 kA	aR	semiconductor fuse-link	14 x 51	**311.00**
491750	25A	690V	200 kA	aR	semiconductor fuse-link	14 x 51	**311.00**
491760	32A	690V	200 kA	aR	semiconductor fuse-link	14 x 51	**311.00**
491765	40A	690V	200 kA	aR	semiconductor fuse-link	14 x 51	**400.00**
491770	50A	690V	200 kA	aR	semiconductor fuse-link	14 x 51	**459.00**
22 x 58 mm aR cylindrical fuses with "striker"							
- For use with fuse holder incorporating a micro switch for remote "fuse blown" indication							
491820	50A	690V	200 kA	aR	semiconductor fuse-link	22 x 58	**484.00**
491825	63A	690V	200 kA	aR	semiconductor fuse-link	22 x 58	**536.00**
491830	80A	690V	200 kA	aR	semiconductor fuse-link	22 x 58	**597.00**
491835	100A	690V	200 kA	aR	semiconductor fuse-link	22 x 58	**649.00**

485108

485120

PMX series - Modular fuse holders *(for above fuses)*

- Modular, compact fuse holder DIN-rail mountable for cylindrical fuses
- Incorporated, hinged transparent label holder for positive circuit identification
- Optimized ventilation zones for improved heat dissipation
- High temperature resistance, self-extinguishing-halogen free body / silver plated copper contacts
- Standards: IEC/EN 60269-1, IEC/EN 60269-2, IEC/EN 60947-3, CSA C22.2 4248-1, UL4248-1

type	rated current	for fuse size (mm)	poles	description	width in 17.5 (mm)	price
10 x 38 mm fuse holders			690VAC / 750VDC	*(H) 88.8 x (D) 58 mm*		
485101	32A	10 x 38	1-pole	industrial cylindrical fuse holder	1	**55.00**
485108	32A	10 x 38	1-pole	with 120-690V neon indication	1	**120.00**
485120	32A	10 x 38	1-pole+N	industrial cylindrical fuse holder	1	**113.00**
485104	32A	10 x 38	2-pole	industrial cylindrical fuse holder	2	**154.00**
485105	32A	10 x 38	3-pole	industrial cylindrical fuse holder	3	**228.00**
485107	32A	10 x 38	4-pole	industrial cylindrical fuse holder	4	**304.00**
14 x 51 mm fuse holders			690 VAC	*(H) 110 x (D) 76 mm*		
485201	50A	14 x 51	1-pole	industrial cylindrical fuse holder	1.5	**153.00**
485208	50A	14 x 51	1-pole	with 120-690V neon indication	1.5	**200.00**
485203	50A	14 x 51	1-pole+N	industrial cylindrical fuse holder	3	**331.00**
485205	50A	14 x 51	3-pole	industrial cylindrical fuse holder	4.5	**493.00**

For 22 x 58 mm fuse holders, see next page

485120

485205

485305

485356

480005

485359

485360

483530

483534

PMX series - Modular fuse holders

- Modular, compact fuse holder DIN-rail mountable for cylindrical fuses
- Incorporated, hinged transparent label holder for positive circuit identification
- Optimized ventilation zones for improved heat dissipation
- High-temperature resistance, self-extinguishing-halogen free body / silver plated copper contacts
- Standards: IEC/EN 60269-1, IEC/EN 60269-2, IEC/EN 60947-3, CSA C22.2 4248-1, UL4248-1

type	rated current	for fuse size (mm)	poles	description	width in 17.5 (mm)	price
10 x 38 mm fuse holders			690 VAC / 750 VDC	*(H) 88.8 x (D) 58 mm*		
485101	32A	10 x 38	1-pole	industrial cylindrical fuse holder	1	**55.00**
485108	32A	10 x 38	1-pole	with 120-690V neon indication	1	**120.00**
485120	32A	10 x 38	1-pole+N	industrial cylindrical fuse holder	1	**113.00**
485104	32A	10 x 38	2-pole	industrial cylindrical fuse holder	2	**154.00**
485105	32A	10 x 38	3-pole	industrial cylindrical fuse holder	3	**228.00**
485107	32A	10 x 38	4-pole	industrial cylindrical fuse holder	4	**304.00**
Accessories for 10 x 38 mm fuse holders						
480005	pin	10 x 38/85		body pins for multi-pole assembly of fuse holders		**4.80**
485050	ties	10 x 38/85		handle ties for multi-pole assembly of fuse holders		**3.40**
485051	lock	10 x 38/85		lock support to padlock fuse holders in "open" position		**37.10**
485053	barrier	10 x 38		phase separator accessory for fuse holders		**9.50**
485054	neon	10 x 38		fusing neon indicator 120-690V for fuse holders		**31.00**
14 x 51 mm fuse holders			690 VAC	*(H) 110 x (D) 76 mm*		
485201	50A	14 x 51	1-pole	industrial cylindrical fuse holder	1.5	**153.00**
485208	50A	14 x 51	1-pole	with 120-690V neon indication	1.5	**200.00**
485203	50A	14 x 51	1-pole+N	industrial cylindrical fuse holder	3	**331.00**
485205	50A	14 x 51	3-pole	industrial cylindrical fuse holder	4.5	**493.00**
Accessories for 14 x 51 mm fuse holders						
480005	pin	14 x 51		body pins for multi-pole assembly of fuse holders		**4.80**
485356	ties	14 x 51		handle ties for multi-pole assembly of fuse holders		**6.10**
485357	ties	14 x 51		handle ties for micro switch assembly of fuse holders		**9.50**
485258	lock	14 x 51		lock support to padlock fuse holders in "open" position		**24.30**
485259	micro	14 x 51	1-pole	micro switch for use with "striker" fuses		**120.00**
485260	micro	14 x 51	3-pole	micro switch for use with "striker" fuses		**149.00**
485262	micro	14 x 51	1-pole	micro sw extension for 2/4 pole requirements		**49.00**
485264	neon	14 x 51		fusing neon indicator 120-690V for fuse holders		**74.00**
22 x 58 mm fuse holders			690 VAC	*(H) 126.5 x (D) 76.5 mm*		
485301	125A	22 x 58	1-pole	industrial cylindrical fuse holder	2	**270.00**
485308	125A	22 x 58	1-pole	with 120-690V neon indication	2	**398.00**
485303	125A	22 x 58	1-pole+N	industrial cylindrical fuse holder	4	**600.00**
485305	125A	22 x 58	3-pole	industrial cylindrical fuse holder	6	**958.00**
*22 x 58 fuse holders are rated at **125A**, they are marked at **100A** to conform to IEC/EN 60269-2 requirements*						
Accessories for 22 x 58 mm fuse holders						
480005	pin	22 x 58		body pins for multi-pole assembly of fuse holders		**4.80**
485356	ties	22 x 58		handle ties for multi-pole assembly of fuse holders		**6.10**
485357	ties	22 x 58		handle ties for micro switch assembly of fuse holders		**9.50**
485358	lock	22 x 58		lock support to padlock fuse holders in "open" position		**28.30**
485359	micro	22 x 58	1-pole	micro switch for use with "striker" fuses		**127.00**
485360	micro	22 x 58	3-pole	micro switch for use with "striker" fuses		**155.00**
485362	micro	22 x 58	1-pole	micro sw extension for 2/4 pole requirements		**27.00**
485364	neon	22 x 58		fusing neon indicator 120-690V for fuse holders		**64.00**
PMC series - "Compact" modular fuse holders				*(H) 82.7 x (D) 38.5 mm*		
Compact fuse holder with shallow dimension - for installation in low-profile enclosures						
10 x 38 mm compact fuse holder - *low profile (38.5 mm)*						
483530	32A	10 x 38	1-pole	compact cylindrical fuse holder	1	**70.00**
483534	32A	10 x 38	1-pole+N	compact cylindrical fuse holder	1	**113.00**
Accessories for compact 10 x 38 mm fuse holder						
483552	kit	10 x 38		PMC multi-pole assembly kit for fuse holders		**175.00**
PMLe series - MV fuse holder			1000 VAC/1500 VDC	*(H) 130 x (W) 24 x (D) 58 mm*		
10/14 x 85 mm fuse holder						
485705	32A	10 x 85	1-pole	industrial cylindrical fuse holder	*(24 mm)*	**141.00**
480005	pin	10 x 85		body pins for multi-pole assembly of fuse holders		**4.80**
485050	ties	10 x 85		handle ties for multi-pole assembly of fuse holders		**3.40**

Above ZAR prices do not include VAT. E&OE

NH | NH000 | NH00 | NH1 | NH2 | NH3 | NH4

NH industrial HRC fuse-links for general applications

Designed to offer robust and reliable protection across a wide spectrum of electrical applications. These fuses are characterised by their high rupturing capacity (HRC) and are rated gG, making them suitable for both overload and short-circuit protection.

Class gG for general use with high breaking capacity for protection of cables, power lines and equipment.

Specification:

- gG class for use as general protection against overloads and short circuits
- For protection of cables, power lines and equipment
- Fusing indicator on top of fuse-link
- Standards: IEC/EN60269-1, IEC/EN 60269-2, VDE0636, DIN43620

381065

381270

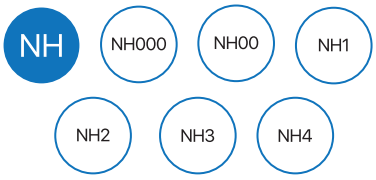
381530

382370

type	rated current	rated voltage	breaking capacity	class size	fuse	description	price
gG NH HRC fuse-links 500V			*top indicator*				
381010	6A	500V	120 kA	gG	NH000	DIN HRC fuse-link	**82.00**
381015	10A	500V	120 kA	gG	NH000	DIN HRC fuse-link	**82.00**
381020	16A	500V	120 kA	gG	NH000	DIN HRC fuse-link	**82.00**
381025	20A	500V	120 kA	gG	NH000	DIN HRC fuse-link	**82.00**
381030	25A	500V	120 kA	gG	NH000	DIN HRC fuse-link	**70.00**
381035	32A	500V	120 kA	gG	NH000	DIN HRC fuse-link	**70.00**
381045	40A	500V	120 kA	gG	NH000	DIN HRC fuse-link	**70.00**
381050	50A	500V	120 kA	gG	NH000	DIN HRC fuse-link	**70.00**
381055	63A	500V	120 kA	gG	NH000	DIN HRC fuse-link	**70.00**
381060	80A	500V	120 kA	gG	NH000	DIN HRC fuse-link	**70.00**
381065	100A	500V	120 kA	gG	NH000	DIN HRC fuse-link	**70.00**
381070	125A	500V	120 kA	gG	NH00	DIN HRC fuse-link	**104.00**
381075	160A	500V	120 kA	gG	NH00	DIN HRC fuse-link	**104.00**
381255	160A	500V	120 kA	gG	NHC1	DIN HRC fuse-link	**138.00**
381260	200A	500V	120 kA	gG	NH1	DIN HRC fuse-link	**236.00**
381270	250A	500V	120 kA	gG	NH1	DIN HRC fuse-link	**236.00**
381280	315A	500V	120 kA	gG	NH1	DIN HRC fuse-link	**236.00**
381285	355A	500V	120 kA	gG	NH1	DIN HRC fuse-link	**236.00**
381370	315A	500V	120 kA	gG	NH2	DIN HRC fuse-link	**443.00**
381375	355A	500V	120 kA	gG	NH2	DIN HRC fuse-link	**455.00**
381380	400A	500V	120 kA	gG	NH2	DIN HRC fuse-link	**460.00**
381390	500A	500V	120 kA	gG	NH2	DIN HRC fuse-link	**586.00**
381465	500A	500V	120 kA	gG	NH3	DIN HRC fuse-link	**927.00**
381470	630A	500V	120 kA	gG	NH3	DIN HRC fuse-link	**971.00**
381475	800A	500V	120 kA	gG	NH3	DIN HRC fuse-link	**1 020.00**
381525	800A	500V	120 kA	gG	NH4	DIN HRC fuse-link	**2 720.00**
381530	1000A	500V	120 kA	gG	NH4	DIN HRC fuse-link	**2 840.00**
381535	1250A	500V	120 kA	gG	NH4	DIN HRC fuse-link	**3 540.00**
gG NH HRC fuse-links 690V			*top indicator*				
382010	6A	690V	80 kA	gG	NH000	DIN HRC fuse-link	**179.00**
382015	10A	690V	80 kA	gG	NH000	DIN HRC fuse-link	**171.00**
382020	16A	690V	80 kA	gG	NH000	DIN HRC fuse-link	**171.00**
382025	20A	690V	80 kA	gG	NH000	DIN HRC fuse-link	**173.00**
382030	25A	690V	80 kA	gG	NH000	DIN HRC fuse-link	**176.00**
382035	32A	690V	80 kA	gG	NH000	DIN HRC fuse-link	**176.00**
382045	40A	690V	80 kA	gG	NH000	DIN HRC fuse-link	**176.00**
382050	50A	690V	80 kA	gG	NH00	DIN HRC fuse-link	**180.00**
382055	63A	690V	80 kA	gG	NH00	DIN HRC fuse-link	**180.00**
382060	80A	690V	80 kA	gG	NH00	DIN HRC fuse-link	**180.00**
382065	100A	690V	80 kA	gG	NH00	DIN HRC fuse-link	**180.00**
382250	125A	690V	80 kA	gG	NH1	DIN HRC fuse-link	**323.00**
382255	160A	690V	80 kA	gG	NH1	DIN HRC fuse-link	**329.00**
382260	200A	690V	80 kA	gG	NH1	DIN HRC fuse-link	**337.00**
382360	250A	690V	80 kA	gG	NH2	DIN HRC fuse-link	**500.00**
382370	315A	690V	80 kA	gG	NH2	DIN HRC fuse-link	**528.00**
382450	355A	690V	80 kA	gG	NH3	DIN HRC fuse-link	**807.00**
382455	400A	690V	80 kA	gG	NH3	DIN HRC fuse-link	**818.00**
382465	500A	690V	80 kA	gG	NH3	DIN HRC fuse-link	**856.00**
382520	630A	690V	80 kA	gG	NH4	DIN HRC fuse-link	**3 300.00**
382525	800A	690V	80 kA	gG	NH4	DIN HRC fuse-link	**3 340.00**

Fuses are generally suitable for both AC and DC applications, however voltage ratings will differ and therefore have to be taken into consideration. *(See **Annex-7**)*

See accessory page for fuse bases and accessories



aM NH - HRC fuse-links *(motor protection)*

aM class (NH) high-breaking capacity fuse-links are intended for short circuit protection of motors, transformers and other loads with high inrush currents, with rated voltages up to 690 VAC.

Offers excellent protection of switchgear due to the excellent current limiting capability and low I^2t values.

Specification:

- Rated voltage: 500/690 VAC
- Breaking capacity: 120/80 kA
- Fusing indicator: Top of fuse-link
- Standards: IEC/EN 60269-1, IEC/EN 60269-2 and VDE43620

384045

384065

384375

385435

type	rated current	rated voltage	breaking capacity	class size	fuse	description	price
aM Class NH motor protection fuse-links 500/690V *(top indicator)*							
384010	6A	690V	80 kA	aM	NH000	DIN HRC fuse-link	**188.00**
384015	10A	690V	80 kA	aM	NH000	DIN HRC fuse-link	**181.00**
384020	16A	690V	80 kA	aM	NH000	DIN HRC fuse-link	**181.00**
384025	20A	690V	80 kA	aM	NH000	DIN HRC fuse-link	**183.00**
384030	25A	690V	80 kA	aM	NH000	DIN HRC fuse-link	**183.00**
384035	32A	690V	80 kA	aM	NH000	DIN HRC fuse-link	**183.00**
384045	40A	690V	80 kA	aM	NH000	DIN HRC fuse-link	**183.00**
384050	50A	690V	80 kA	aM	NH00	DIN HRC fuse-link	**194.00**
384055	63A	690V	80 kA	aM	NH00	DIN HRC fuse-link	**194.00**
384060	80A	690V	80 kA	aM	NH00	DIN HRC fuse-link	**196.00**
384065	100A	690V	80 kA	aM	NH00	DIN HRC fuse-link	**210.00**
383070	125A	500V	120 kA	aM	NH00	DIN HRC fuse-link	**208.00**
383075	160A	500V	120 kA	aM	NH00	DIN HRC fuse-link	**216.00**
384260	200A	690V	80 kA	aM	NH1	DIN HRC fuse-link	**339.00**
383270	250A	500V	120 kA	aM	NH1	DIN HRC fuse-link	**357.00**
384370	315A	690V	80 kA	aM	NH2	DIN HRC fuse-link	**540.00**
384375	355A	690V	80 kA	aM	NH2	DIN HRC fuse-link	**562.00**
383380	400A	500V	120 kA	aM	NH2	DIN HRC fuse-link	**544.00**
384465	500A	690V	80 kA	aM	NH3	DIN HRC fuse-link	**1 050.00**
383470	630A	500V	120 kA	aM	NH3	DIN HRC fuse-link	**1 120.00**
383525	800A	500V	120 kA	aM	NH4	DIN HRC fuse-link	**2 820.00**
383530	1000A	500V	120 kA	aM	NH4	DIN HRC fuse-link	**2 880.00**
383535	1250A	500V	120 kA	aM	NH4	DIN HRC fuse-link	**3 620.00**

NH fuse-links for output side of new generation photovoltaic inverters

Knife-type (NH) fuse-links with high breaking capacity intended for line protection on the output side of new generation photovoltaic string inverters.

Provides protection against overloads and short-circuits with rated voltages up to 800V +10% with a breaking capacity of 80 kA and low power dissipation values.

Specification:

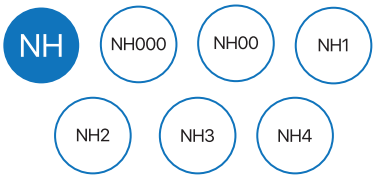
- Rated voltage: 800 VAC +10%
- Breaking capacity: 80 kA
- Fusing indicator: Top of fuse-link
- Standards: IEC/EN60269-1, IEC/EN 60269-2

Gs/gG NH - HRC fuse-links 800V *(top indicator)*

NH fuse-links 800V

369035	32A	800V	80 kA	gS	NH00	DIN HRC fuse-link	**449.00**
369045	40A	800V	80 kA	gS	NH00	DIN HRC fuse-link	**449.00**
369050	50A	800V	80 kA	gS	NH00	DIN HRC fuse-link	**449.00**
369055	63A	800V	80 kA	gS	NH00	DIN HRC fuse-link	**449.00**
369060	80A	800V	80 kA	gS	NH00	DIN HRC fuse-link	**449.00**
385245	100A	800V	80 kA	gG	NH00	DIN HRC fuse-link	**395.00**
385250	125A	800V	80 kA	gG	NH1	DIN HRC fuse-link	**395.00**
385255	160A	800V	80 kA	gG	NH1	DIN HRC fuse-link	**395.00**
385425	200A	800V	80 kA	gG	NH3	DIN HRC fuse-link	**1 170.00**
385435	250A	800V	80 kA	gG	NH3	DIN HRC fuse-link	**1 170.00**
385445	315A	800V	80 kA	gG	NH3	DIN HRC fuse-link	**1 170.00**
385450	355A	800V	80 kA	gG	NH3	DIN HRC fuse-link	**1 170.00**
385455	400A	800V	80 kA	gG	NH3	DIN HRC fuse-link	**1 170.00**

Above ZAR prices do not include VAT. E&OE



gPV Class NH Photovoltaic fuse-links - 1000 VDC

NH gPV fuse-links for photovoltaic installations have been developed to offer a safety protection solution in sub-array, array or inverter DC input of photovoltaic installations. Providing protection against overloads as well as short circuits with a minimum fusing current of 1.35·In.

- Utilisation category: gPV
- Min. interrupt rating: 1.35 In
- Standards: IEC/EN 60269-1, IEC/EN60269-6, UL248-1, UL248-19, RoHS compliant

373260

370075

type	rated current	rated voltage	breaking capacity	class size	fuse	description	price
gPV photovoltaic NH fuse-links					**1000 VDC**		
373215	32A	1000 VDC	30 kA	gPV	NH1	photovoltaic fuse-link	**1 240.00**
373225	40A	1000 VDC	30 kA	gPV	NH1	photovoltaic fuse-link	**1 240.00**
373230	50A	1000 VDC	30 kA	gPV	NH1	photovoltaic fuse-link	**1 240.00**
373235	63A	1000 VDC	30 kA	gPV	NH1	photovoltaic fuse-link	**1 240.00**
373240	80A	1000 VDC	30 kA	gPV	NH1	photovoltaic fuse-link	**1 240.00**
373245	100A	1000 VDC	30 kA	gPV	NH1	photovoltaic fuse-link	**1 240.00**
373250	125A	1000 VDC	30 kA	gPV	NH1	photovoltaic fuse-link	**1 240.00**
373255	160A	1000 VDC	30 kA	gPV	NH1	photovoltaic fuse-link	**1 240.00**
373260	200A	1000 VDC	30 kA	gPV	NH1	photovoltaic fuse-link	**1 240.00**
373360	250A	1000 VDC	30 kA	gPV	NH2	photovoltaic fuse-link	**1 920.00**
373425	200A	1000 VDC	30 kA	gPV	NH3	photovoltaic fuse-link	**2 070.00**
373435	250A	1000 VDC	30 kA	gPV	NH3	photovoltaic fuse-link	**2 070.00**
373445	315A	1000 VDC	30 kA	gPV	NH3	photovoltaic fuse-link	**2 070.00**
373450	355A	1000 VDC	30 kA	gPV	NH3	photovoltaic fuse-link	**2 300.00**
373455	400A	1000 VDC	30 kA	gPV	NH3	photovoltaic fuse-link	**2 300.00**

Above NH fuses available at 1500V DC (XL-longer body) available on request

gBat Class - Battery storage protection NH fuse-links

NH gBat fuse-links are specifically designed for the protection of battery systems. Manufactured with similar techniques as semiconductor fuse-links, providing high speed operation and excellent performance under continuous charge/discharge cycles. Capable to clearing all types of overcurrents, overloads and short-circuits, protecting batteries, cables and installation switchgear.

- Utilisation category: gBAT
- Standards: IEC/EN 60269-1, IEC/EN60269-7, UL248-1, RoHS compliant

370380

370035	32A	440 VDC	30 kA	gBat	NH000	DIN HRC fuse-link	**313.00**
370045	40A	440 VDC	30 kA	gBat	NH000	DIN HRC fuse-link	**319.00**
370050	50A	440 VDC	30 kA	gBat	NH000	DIN HRC fuse-link	**326.00**
370055	63A	440 VDC	30 kA	gBat	NH000	DIN HRC fuse-link	**340.00**
370060	80A	440 VDC	30 kA	gBat	NH000	DIN HRC fuse-link	**357.00**
370065	100A	440 VDC	30 kA	gBat	NH000	DIN HRC fuse-link	**379.00**
370070	125A	440 VDC	30 kA	gBat	NH00	DIN HRC fuse-link	**490.00**
370075	160A	440 VDC	30 kA	gBat	NH00	DIN HRC fuse-link	**542.00**
370260	200A	550 VDC	30 kA	gBat	NH1	DIN HRC fuse-link	**809.00**
370270	250A	550 VDC	30 kA	gBat	NH1	DIN HRC fuse-link	**935.00**
370370	315A	550 VDC	30 kA	gBat	NH2	DIN HRC fuse-link	**1 270.00**
370375	355A	550 VDC	30 kA	gBat	NH2	DIN HRC fuse-link	**1 510.00**
370380	400A	550 VDC	30 kA	gBat	NH2	DIN HRC fuse-link	**1 540.00**
370465	500A	550 VDC	30 kA	gBat	NH3	DIN HRC fuse-link	**2 180.00**
370470	630A	550 VDC	30 kA	gBat	NH3	DIN HRC fuse-link	**2 400.00**

357010

Accessories for NH fuse-links

340001

Microswitch for NH fuses *(mounts directly onto fuse-links)*

357010	5A	250 VAC	1-pole	micro switch for all sizes NH fuses	**462.00**
340001	handle	universal fuse replace/removal handle		for all sizes NH fuses	**396.00**

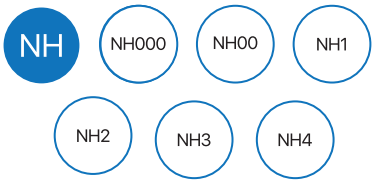
ST fuse holders for NH PV fuse-links - 1000 VDC

354172	250A	1000 VDC	1-pole	gPV	NH1	photovoltaic fuse base	**435.00**
354175	400A	1000 VDC	1-pole	gPV	NH2	photovoltaic fuse base	**880.00**
354180	500A	1000 VDC	1-pole	gPV	NH3	photovoltaic fuse base	**1 010.00**

Solid NH Neutral Links

341250

341100	160A	690V	1-pole	NH000/00	neutral link blades	**143.00**
341250	250A	690V	1-pole	NH1	neutral link blades	**219.00**
341400	400A	690V	1-pole	NH2	neutral link blades	**260.00**
341630	630A	690V	1-pole	NH3	neutral link blades	**330.00**
340125	1250A	690V	1-pole	NH4	neutral link blades	**1 220.00**



Semiconductor NH fuse-links

Semiconductor fuse-links designed for protection of semiconductors *(diodes, thyristors, triacs, etc)* used in power rectifiers, UPS, converters, motor drives, soft starters, solid state relays, photovoltaic inverters, welding inverters and any application where semiconductor protection is required.

Specification:

- Rated voltage: 690 VAC
- Breaking capacity: 100 kA
- Standards: IEC/EN 60269-1, IEC/EN 60269-4, UL248 standard

371270

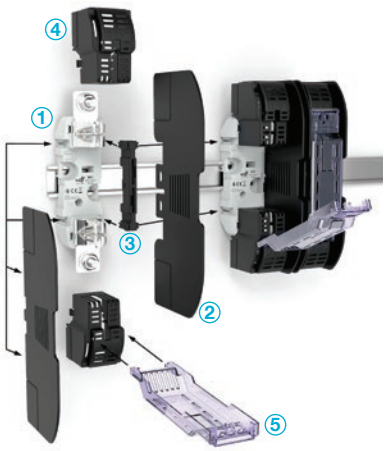
365070

365280

365395

type	rated current	rated voltage	breaking capacity	class size	fuse	description	price
RAPIDPLUS NH gS - *high-speed fuse-links for semiconductors*							
The NH gS series fuses are the optimal choice for ensuring the safety and reliability of electrical systems that require both semiconductor protection and full circuit coverage. **RAPIDPLUS NH gS** fuse-links are capable of clearing all types of overcurrents, overloads and short-circuits, protecting semiconductors, cables and associated switchgear in the installation.							
371025	20A	690V	100 kA	gS	NH000	semiconductor fuse-link	**504.00**
371030	25A	690V	100 kA	gS	NH000	semiconductor fuse-link	**402.00**
371035	32A	690V	100 kA	gS	NH000	semiconductor fuse-link	**408.00**
371045	40A	690V	100 kA	gS	NH000	semiconductor fuse-link	**415.00**
371050	50A	690V	100 kA	gS	NH000	semiconductor fuse-link	**415.00**
371055	63A	690V	100 kA	gS	NH000	semiconductor fuse-link	**440.00**
371060	80A	690V	100 kA	gS	NH000	semiconductor fuse-link	**473.00**
371065	100A	690V	100 kA	gS	NH000	semiconductor fuse-link	**496.00**
371070	125A	690V	100 kA	gS	NH00	semiconductor fuse-link	**624.00**
371075	160A	690V	100 kA	gS	NH00	semiconductor fuse-link	**673.00**
371260	200A	690V	100 kA	gS	NH1	semiconductor fuse-link	**962.00**
371270	250A	690V	100 kA	gS	NH1	semiconductor fuse-link	**1 090.00**
371370	315A	690V	100 kA	gS	NH2	semiconductor fuse-link	**1 630.00**
371375	355A	690V	100 kA	gS	NH2	semiconductor fuse-link	**1 730.00**
371380	400A	690V	100 kA	gS	NH2	semiconductor fuse-link	**1 920.00**
371465	500A	690V	100 kA	gS	NH3	semiconductor fuse-link	**2 510.00**
371470	630A	690V	100 kA	gS	NH3	semiconductor fuse-link	**3 030.00**
Fuse bases for above fuse-links (see next page)							
RAPIDPLUS NH aR - *high speed fuse-links for semiconductors*							
The NH aR series fuses are the go-to choice for ensuring the fast and reliable protection of semiconductor devices, offering specialized short-circuit protection in critical electrical systems. **RAPIDPLUS aR** fuses Intended for clearing short-circuits, specifically designed to have very low I²t values with reduced arc voltages, guaranteeing optimum semiconductor protection. **Specification:** • Rated voltage: 690 VAC • Breaking capacity: 120 kA • Standards: IEC/EN 60269-1, IEC/EN 60269-4, UL248 standard							
365020	16A	690V	120 kA	aR	NH000	semiconductor fuse-link	**440.00**
365025	20A	690V	120 kA	aR	NH000	semiconductor fuse-link	**442.00**
365030	25A	690V	120 kA	aR	NH000	semiconductor fuse-link	**443.00**
365035	32A	690V	120 kA	aR	NH000	semiconductor fuse-link	**433.00**
365045	40A	690V	120 kA	aR	NH000	semiconductor fuse-link	**438.00**
365050	50A	690V	120 kA	aR	NH000	semiconductor fuse-link	**454.00**
365055	63A	690V	120 kA	aR	NH000	semiconductor fuse-link	**454.00**
365060	80A	690V	120 kA	aR	NH000	semiconductor fuse-link	**469.00**
365065	100A	690V	120 kA	aR	NH000	semiconductor fuse-link	**492.00**
365070	125A	690V	120 kA	aR	NH000	semiconductor fuse-link	**523.00**
365075	160A	690V	120 kA	aR	NH000	semiconductor fuse-link	**640.00**
365080	200A	690V	120 kA	aR	NH000	semiconductor fuse-link	**675.00**
365085	250A	690V	120 kA	aR	NH000	semiconductor fuse-link	**741.00**
365270	250A	690V	120 kA	aR	NH1	semiconductor fuse-link	**873.00**
365280	315A	690V	120 kA	aR	NH1	semiconductor fuse-link	**948.00**
365282	350A	690V	120 kA	aR	NH1	semiconductor fuse-link	**1 010.00**
365290	400A	690V	120 kA	aR	NH1	semiconductor fuse-link	**1 140.00**
365380	400A	690V	120 kA	aR	NH2	semiconductor fuse-link	**1 400.00**
365390	500A	690V	120 kA	aR	NH2	semiconductor fuse-link	**1 540.00**
365395	630A	690V	120 kA	aR	NH2	semiconductor fuse-link	**1 820.00**
365475	800A	690V	120 kA	aR	NH3	semiconductor fuse-link	**2 540.00**
365485	1000A	690V	120 kA	aR	NH3	semiconductor fuse-link	**2 970.00**
*For semi-conductor derating tables, see **Annex-7***							

Above ZAR prices do not include VAT. E&OE



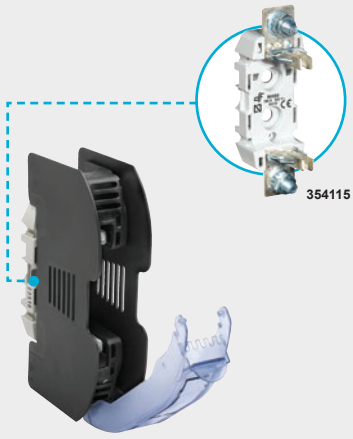
ST series - Fuse bases for NH fuse-links

- Rated voltage: 690/800V
- Self-extinguishing polyamide body / silver-plated copper contacts
- Standards: IEC/EN 60269-1, IEC/EN 60269-2, DIN43620

353102

326250

325250


354115

type	rated current	for fuse size	poles	description	qty per pack	price *(per pack)*
ST series NH fuse bases						
Single pole ①						
354115	160A	NH000/00	1-pole	industrial NH fuse base	1	**126.00**
352115*	160A	NH000/00	1-pole	industrial NH fuse base	1	**139.00**
352300	250A	NH1	1-pole	industrial NH fuse base	1	**371.00**
352400	400A	NH2	1-pole	industrial NH fuse base	1	**638.00**
352630	630A	NH3	1-pole	industrial NH fuse base	1	**815.00**
354125	1250A	NH4	1-pole	industrial NH fuse base	1	**3 190.00**
Three pole *(supplied with separating phase barriers between phases)* ①						
353102*	160A	NH000/00	3-pole	industrial NH fuse base	1	**404.00**
353300	250A	NH1	3-pole	industrial NH fuse base	1	**1 170.00**
353400	400A	NH2	3-pole	industrial NH fuse base	1	**2 130.00**
353630	630A	NH3	3-pole	industrial NH fuse base	1	**2 480.00**

* *DIN-rail or chassis mountable*

NH fuse holder accessories

Sectionable neutral NH bases

- Neutral link base *(can be mounted directly onto sides of fuse base)*

334103	160A	NH00	1-pole	sectionable neutral terminal	1	**143.00**
334160	250A	NH1	1-pole	sectionable neutral terminal	1	**191.00**
334251	630A	NH3	1-pole	sectionable neutral terminal	1	**324.00**

Partition walls - *(NH00/1/2/3 require connectors to mount)* ②

326100	160A	NH00	partition walls for fuse bases	2	**71.00**
326200	200A	NH1	partition walls for fuse bases	2	**124.00**
326250	250A	NH2	partition walls for fuse bases	2	**133.00**
326630	630A	NH3	partition walls for fuse bases	2	**250.00**
343125*	1250A	NH4	partition walls for fuse bases	1	**233.00**

* **343125** *screws directly onto chassis plate (does not mount onto fuse base)*

Connectors - *(to connect two bases together - accepts partition wall)* ③

325100	160A	NH00	separators for fuse bases	2	**30.30**
325250	250A	NH1	separators for fuse bases	2	**57.00**
325400	400A	NH2	separators for fuse bases	2	**54.00**
325630	630A	NH3	separators for fuse bases	2	**80.00**

Terminal covers - *(to protect connection terminals of fuse holders)* ④

325000	160A	NH00	1-pole	terminal cover for bases	6	**160.00**
325005	250A	NH1	1-pole	terminal cover for bases	6	**241.00**
325003	400A	NH2	1-pole	terminal cover for bases	6	**352.00**
325007	630A	NH3	1-pole	terminal cover for bases	6	**590.00**

Fuse-link covers - *(connects onto terminal covers)* ⑤

325010	160A	NH00	hinged covers for fuse-link	3	**116.00**
325018	160A	NH1	hinged covers for fuse-link	3	**99.00**
325020	250A	NH2	hinged covers for fuse-link	3	**174.00**
325025	630A	NH3	hinged covers for fuse-link	3	**252.00**

Complete fuse base protection kits *(for fuse and terminal insulation protection IP20)*

Fuse base kits offer a versatile and secure solution for mounting NH fuses, with comprehensive protection features that cater to a wide range of current ratings

- Comprises - partition walls - terminal cover - fuse cover

325009*	160A	NH00	3-pole	integral terminal cover	1	**126.00**
325030	160A	NH00	1-pole	IP20 full protection kit	1	**167.00**
325042	250A	NH1	3-pole	IP20 full protection kit	1	**593.00**
325046	400A	NH2	3-pole	IP20 full protection kit	1	**618.00**
325051	630A	NH3	3-pole	IP20 full protection kit	1	**1 180.00**

* Partition wall incorporated, *fuse covers **325010** to be ordered separately*

Energy storage system fuses - 1500 VDC

ESS fuses are designed specifically for DC networks with high voltage and short circuit levels. Developed to meet all requirements in Energy Storage applications, ensuring optimal protection, increased reliability and consistent performance over time, ensuring optimal protection of battery racks and connection panels against short circuits and overloads, surpassing protection and safety industry standards.

- For installations with potential short-circuit currents of up to 250kA and continuous voltages of up to 1500 VDC
- Silver-based composition protects from premature ageing, offering increased reliability ensuring consistent, premium performance over time for Energy Storage applications.

Conformity to standards: UL248-13, CSA C22.2 No. 248.1-11, IEC 60269-1 /-4/-7, GB/T 13539.4

HCHVT1500...59E

HCHVT1500...74E

HCHVT1500...159E

HCMS02501

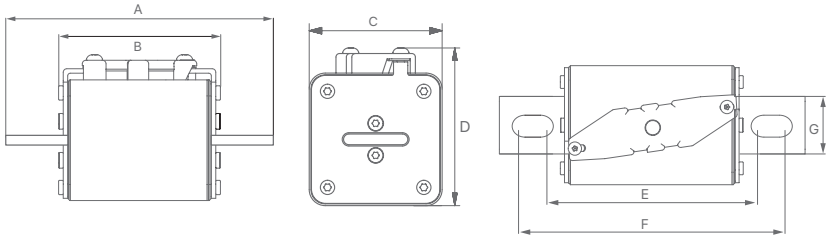
type	rated current	rated voltage	breaking capacity	fuse class	fuse size	description	price
Bolted blade fuses *(with striker)*			**160 - 1200A**				
250kA high voltage 1500 VDC fuses							
HCHVT1500-160B-59E	160A	1500 VDC	250kA	aR	2	battery storage fuse	**2 170.00**
HCHVT1500-200B-59E	200A	1500 VDC	250kA	aR	2	battery storage fuse	**2 280.00**
HCHVT1500-250B-59E	250A	1500 VDC	250kA	aR	2	battery storage fuse	**2 400.00**
HCHVT1500-315B-59E	315A	1500 VDC	250kA	aR	2	battery storage fuse	**2 570.00**
HCHVT1500-350B-59E	350A	1500 VDC	250kA	aR	2	battery storage fuse	**2 720.00**
HCHVT1500-400B-59E	400A	1500 VDC	250kA	aR	2	battery storage fuse	**2 890.00**
HCHVT1500-500B-74E	500A	1500 VDC	250kA	aR	3	battery storage fuse	**3 070.00**
HCHVT1500-550B-74E	550A	1500 VDC	250kA	aR	3	battery storage fuse	**3 170.00**
HCHVT1500-630B-74E	630A	1500 VDC	250kA	aR	3	battery storage fuse	**3 310.00**
HCHVT1500-700B-74E	700A	1500 VDC	250kA	aR	3	battery storage fuse	**3 590.00**
HCHVT1500-800B-74E	800A	1500 VDC	250kA	aR	3	battery storage fuse	**4 060.00**
HCHVT1500-900B-74E	900A	1500 VDC	250kA	aR	3	battery storage fuse	**5 360.00**
HCHVT1500-1000B-74E	1000A	1500 VDC	250kA	aR	3	battery storage fuse	**5 880.00**
HCHVT1500-1100B-74E	1100A	1500 VDC	250kA	aR	3	battery storage fuse	**6 390.00**
HCHVT1500-1200B-74E	1200A	1500 VDC	250kA	aR	3	battery storage fuse	**6 920.00**
Flush end fuses *(with striker)*			**1100 - 3000A**				
250kA high voltage 1500 VDC fuses							
HCHVT1500-1100S-105E	1100A	1500 VDC	250kA	aR	4	battery storage fuse	**8 690.00**
HCHVT1500-1250S-105E	1250A	1500 VDC	250kA	aR	4	battery storage fuse	**9 360.00**
HCHVT1500-1350S-105E	1350A	1500 VDC	250kA	aR	4	battery storage fuse	**9 980.00**
HCHVT1500-1500S-105E	1500A	1500 VDC	250kA	aR	4	battery storage fuse	**10 600.00**
HCHVT1500-1600S-105E	1600A	1500 VDC	250kA	aR	4	battery storage fuse	**11 100.00**
HCHVT1500-1800S-105E	1800A	1500 VDC	250kA	aR	4	battery storage fuse	**12 100.00**
HCHVT1500-2000A-159E	2000A	1500 VDC	250kA	aR	5	battery storage fuse	**18 300.00**
HCHVT1500-2500A-159E	2500A	1500 VDC	250kA	aR	5	battery storage fuse	**22 100.00**
HCHVT1500-3000A-159E	3000A	1500 VDC	250kA	aR	5	battery storage fuse	**25 000.00**
Micro switch for above fuses							
Micro switch simply clips onto support on the fuse to provide remote trip indication.							
Rated current:		2A - 250 VAC					
Dimensions:		(H) 34 x (W) 40 x (D) 16 mm					
HCMS02501	1 C/O	micro switch	fuse mounting			1 x changeover micro switch	**86.00**

Dimensions:

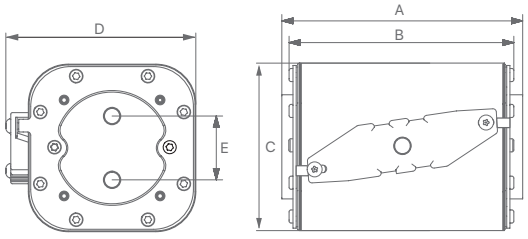
Fuse Size	A	B	C	D	E	F	G
dimensions (mm)							
Bolted blade fuses (with striker)							
2	207	140	59	73	163	182	30
3	218	140	75	89	172	192	40
Flush end fuses (with striker)							
4	153	137	105	122	40	–	–
5	159	144	163	180	63	–	–

Dimensions:

Bolted - Mount



Flush - Mount



Above ZAR prices do not include VAT. E&OE

INOSYS LBS Series

High-Performance Switches for Superior Safety

The INOSYS LBS Series offers advanced load break switches specifically designed for demanding DC applications, including renewable energy systems like photovoltaic (PV) and energy storage (ESS). These switches ensure reliable and safe disconnection of electrical circuits in high-voltage environments. Capable of handling up to 1500 VDC in just 2 poles, the INOSYS LBS stands out with its robust design, performing reliably even in extreme conditions. Ideal for critical power applications, and suited for the DC-PV2 utilisation.

- High performance switching
- Focus on Safety
- Application tested design
- Easy integration & modular solution

For a future that will be more **Electric**, more **Sustainable** and more focused on **DC**

Typical applications

- Renewable energy (PV, Battery protection, Energy storage)
- DC process, Drives and Power Electronics
- DC distribution
- E-mobility (EV, Marine)

socomec
Innovative Power Solutions

63-823191-021

63-823267-001

63-823234-041

63-001417-002

Horizontal fuse switch disconnectors

RBK fuse switch disconnectors are designed for distribution of electricity and protection of electrical equipment against short circuits and overloads using industrial NH fuse-links.
Intended for installation in low-voltage distribution boards, cable and metering cabinets.

- Rated operational voltage Un: 690 V
- Insulation voltage Ui: 1000 V
- Rated impulse withstand voltage Uimp: 8 kV
- Lid lock and lid seal: *(with optional accessories)*
- Voltage test facility: *(performed through test holes in fuselink cover)*
- Protection degree: IP 20 - (IP30 for RBP and RBK 1 units)
- Standards: IEC/EN 60947-1, IEC/EN 60947-3
- Consult product datasheet for DC utilisation category

type	model	No. poles	fuse size	rated current	cable terminal	dimensions (mm) (H)	(W)	(D)	price
RBK proS NH - Fuse switch disconnectors for installation on chassis plate									
• Mounting on plate/chassis by screws • Made of fibre glass reinforced, halogen-free flame-retardant polyamide									
63-823191-021	RBK 000 pro-M	3-pole	000	160A	M8	181	89	92	**837.00**
63-823256-121	RBK 00 pro-M	3-pole	00	160A	M8	182	106	81	**705.00**
63-811748-021	RBK 1 pro-M	3-pole	1	250A	M10	269	180	111	**2 850.00**
63-811685-061	RBK 2 pro-M	3-pole	2	400A	M10	298	208	130	**3 300.00**
63-811761-021	RBK 3 pro-M	3-pole	3	630A	M12	307	250	144	**4 540.00**
RBP proS *(53 mm wide)* **Compact fuse switch disconnectors 000**									
Slimline - width dimensions equal to half the width of RBK 00 pro, permitting more switches to be mounted in the same space. • Rated impulse withstand voltage Uimp: 6 kV									
63-823267-001	RBP 000 pro	3-pole	000	125A	clamp	216	53	83	**972.00**
RBK proS - Fuse switch disconnectors for installation on 60 mm busbar system									
• Mounting directly onto 60 mm busbar system - using hooked clamps within the fuse base • Made of fibreglass reinforced, halogen-free, flame-retardant polyamide • Termination: Bottom of switch *(top terminals available on request)*									
63-823234-041	RBK 000-SD-M	3-pole	000	160A	M8	191	89	112	**1 430.00**
63-823259-141	RBK 00 pro-SD-M	3-pole	00	160A	M8	214	106	110	**1 390.00**
63-811750-061	RBK 1 pro-SD-M	3-pole	1	250A	M10	243	180	140	**3 420.00**
63-811686-061	RBK 2 pro-SD-M	3-pole	2	400A	M10	298	208	154	**5 090.00**
63-028802-003	RBK 3 pro-SD-M	3-pole	3	630A	M12	307	250	137	**6 300.00**
RBP proS - Slimline *(53 mm wide)* **Compact fuse switch disconnectors 000**									
Slimline width dimensions equal to half the width of RBK 00 pro, permitting more switches to be mounted in the same space.									
63-823427-002	RBP 000 pro-SD	3-pole	000	125A	clamp	214	53	108	**1 290.00**
Accessories for above RBK fuse switch disconnectors									
1115296311T	Auxiliary contact	000/00			switch for door position status				**111.00**
1115296316	Auxiliary contact	1/2/3			switch for door position status				**149.00**
51-930160-011	extended cover	000			termination extended cover *(25 mm)*				**68.00**
51-930499-011	extended cover	00			termination extended cover *(25 mm)*				**68.00**
PBS - Vertical fuse rails for installation on 185 mm busbar system									
PBS fuse bases are designed for electrical distribution and protection against short circuits and overloads. Intended for direct installation on horizontal bus bar systems. Due to their modern, compact design installing is simple, providing exceptional space saving in distribution boards • Made of fibreglass reinforced, halogen-free, flame-retardant polyamide • IP 20 touch protection with fuse-link shrouds									
63-001417-002	PBS 00-SM	3-pole	00	160A	M8	674	49	162.5	**1 680.00**
63-500600-601	PBS 1-M	3-pole	1	250A	M12	657	100	144	**2 760.00**
63-500600-611	PBS 2-M	3-pole	2	400A	M12	657	100	144	**3 030.00**
63-500600-621	PBS 3-M	3-pole	3	630A	M12	657	100	144	**3 800.00**
Accessories for fuse rails									
51-001312-001	fuse-link shroud	1-pole	00		for PBS 00 fuse rail *(each)*				**57.00**
51-500600-108	fuse-link shroud	1-pole	1,2,3		for PBS 1/2/3 fuse rail *(each)*				**94.00**

Above ZAR prices do not include VAT. E&OE

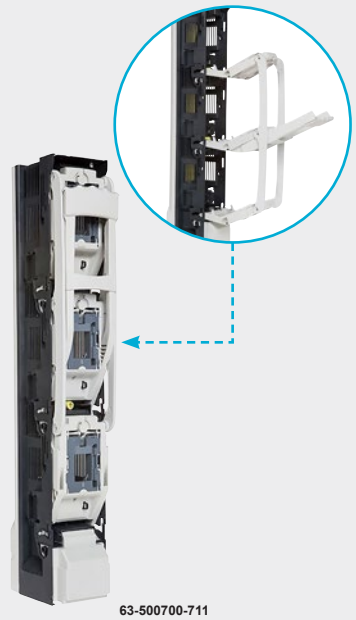
63-811628-041

ARS pro - Vertical fuse switch disconnectors

Vertical mounting fuse switch disconnectors are designed for distribution of electricity and protection against short circuits and overloads in three-phase alternative current circuits.
They are intended for direct installation on vertical busbar systems

- Making and breaking operations should be done with determined movement,
- Parallel moving, double contact system,
- Designed for installation on to 60 mm, 100 mm or 185 mm busbar systems

- Rated operational voltage Un: 690 V
- Insulation voltage Ui: 1000 V
- Rated impulse withstand voltage Uimp: 8 kV
- Padlockable: in parked and closed position
- Voltage test facility: *(performed through test holes in fuse-link cover)*
- Protection degree: IP 30
- Standards: IEC/EN 60947-1, IEC/EN 60947-3



63-500700-711

type	model	No. poles	fuse size	rated current	cable terminal	dimensions (mm) (H)	(W)	(D)	price
ARS pro - Vertical mounted fuse switch disconnectors									
ARS pro vertical fuse switch disconnectors are designed for electrical distribution and protection against short circuits and overloads in three-phase AC circuits. For direct installation on horizontal or vertical busbar systems in applications requiring reliability and safety for low voltage distribution boards, transformer substations, industrial assemblies and cable cabinets.									
• Switching 3-poles simultaneously									
ARS 00/60 - Fuse switch disconnectors for installation on 60 mm busbar system									
63-002354-001	ARS 00/60 M-pro	3-pole	00	160A	M8	401	50	132	**2 080.00**
ARS 00/100 - Fuse switch disconnectors for installation on 100 mm busbar system									
63-811628-041	ARS 00/100 M-pro	3-pole	00	160A	M8	423	50	127	**1 690.00**
ARS evo - Fuse switch disconnectors for installation on 185 mm busbar system									
The ARS evo range of fuse switch disconnectors are designed to incorporate the latest technology and many years of switchgear manufacturing experience, offering outstanding safety, functionality and flexibility.									
Safety: Stable and safe power distribution network Parking position Fuse-link removable without touching it Improved heat dissipation									
Functionality: Simple to install Non-parallel disconnector 3-pole simultaneous switching *(individual pole switching available on request)*									
Flexibility: Retractable handle Reversibility - top/bottom cable termination connection Padlockable in open or closed position									
• Rated operational voltage Un: 690 V									
• Insulation voltage Ui: 1000 V									
• Rated impulse withstand voltage Uimp: 8kV (ARS 00) 12kV (ARS2/3)									
63-500750-703	ARS 00-3-M evo	3-pole	00	160A	M8	684	50	155	**2 140.00**
63-500700-711	ARS 2-6-M evo	3-pole	2	400A	M12	667	100	174	**4 920.00**
63-500700-721	ARS 3-6-M evo	3-pole	3	630A	M12	667	100	174	**5 410.00**

63-073821-001

PV

smartARS pro-PV AC 800V for installation on 185 mm busbar system - PV solution

New smartARS pro-PV switch fuse disconnector developed to meet protection requirements on the output side of new generation photovoltaic inverters with an output voltage of 800 VAC.

- Rated operational voltage Un: 800 V
- Insulation voltage Ui: 1000 V
- Rated impulse withstand voltage Uimp: 8kV (00) / 12kV (2/3)

63-073821-001	smartARS 00 pro-PV	3-P	00	80A	M8	684	50	151	**2 830.00**
63-073822-003	smartARS 2-M pro-PV	3-P	1.2	200A	M12	686	99	19	**5 520.00**
63-073822-004	smartARS 3-M pro-PV	3-P	3	400A	M12	686	99	191	**6 010.00**
Accessories									
1115296318T	1 NO micro switch		2/3	–	–	–	–	–	**116.00**
1115296319T	1 NC micro switch		2/3	–	–	–	–	–	**116.00**
51-500700-109	terminal shroud		2/3	–	–	–	–	–	**85.00**

143017

143018

143119

106300

106538

MULTIBLOC series - NH-fuse switch disconnector *(for panel mounting)*

- Parking position of the switch cover *(even with inserted fuse-links)*
- Modular terminal covers can be extended as required
- Lid lock and lid seal *(with optional accessories)*

Utilization category to IEC/EN 60947-3	00	1	
Ue: AC 400V; Ie =	160A	250A	AC 23 B
Ue: AC 500V; Ie =	160A	250A	AC 22 B
Ue: AC 690V; Ie =	125A	200A	AC 21 B
Ue: DC 220V; Ie =	160A	250A	DC 22 B

type	No. poles	fuse size	max. current	cable terminal	description	dimensions (mm) (H)	(W)	(D)	price
NH - Fuse switch disconnector *(panel mounting)*					**IP30**				
• Rated operational voltage: 690 V • Rated impulse withstand Uimp: 8 kV					• Insulation voltage Ui: 1000 V				
NH00 - Fuse switch disconnector									
143017	1-pole	00	160A	M8	fuse switch disconnector	184	42	84	**560.00**
143018	2-pole	00	160A	M8	fuse switch disconnector	184	84	84	**980.00**
NH1 - Fuse switch disconnector									
143119	1-pole	1	250A	M10	fuse switch disconnector	184	71	84	**1 380.00**
143118	2-pole	1	250A	M10	fuse switch disconnector	184	142	84	**2 760.00**
Accessories for above switch disconnectors									
140149	1/2-pole	00			cable termination cover for NH00 switches			*(2 pcs)*	**123.00**
140354	1/2-pole	1			cable termination cover for NH1 switches			*(2 pcs)*	**269.00**
140155	1/2-pole	00/1			cover sealing set for switch disconnector			sizes 00 & 1	**245.00**
140852	1/2-pole				monitoring switch for door position status			all sizes	**278.00**
60 mm busbar system									
Busbar supports					*for busbars (W) 12 - 30 mm x (D) 5/10 mm*				
106300	3-pole				busbar support for 12 - 30 mm x 5/10 mm bars	185	17	43	**312.00**
106302*	1-pole				busbar support for 12 - 30 mm x 5/10 mm bars	77	17	43	**243.00**
* *1-pole unit can be attached for two pole or a 3-pole to make a 4-pole support*									
Busbar terminal protection covers									
106096	3-pole				busbar protection cover 16…50 mm²	201	54	44	**452.00**
106097	3-pole				busbar protection cover 16…70 mm²	201	108	80	**514.00**
106098	3-pole				busbar protection cover 16…185 mm²	201	108	80	**552.00**
Busbar mounting terminals									
116053	315A				5 mm terminal 10…50 mm²			for ***106096***	**55.00**
116054	400A				5 mm terminal 16…70 mm²			for ***106097***	**62.00**
116063	315A				10 mm terminal 16…70 mm²			for ***106096***	**64.00**
116064	400A				10 mm terminal 16…70 mm²			for ***106097***	**76.00**
116065	440A				10 mm terminal 16…120 mm²			for ***106098***	**128.00**
Component adaptors					*for direct mounting on 60 mm system busbars*				
106521	3-pole	1 rail	25A	4 mm²	component adaptor	207	45	–	**662.00**
106523	3-pole	2 rails	25A	4 mm²	component adaptor	260	45	–	**863.00**
106526	3-pole	1 rail	32A	6 mm²	component adaptor	207	54	–	**793.00**
106528	3-pole	2 rails	32A	6 mm²	component adaptor	260	54	–	**1 020.00**
106530	3-pole	1 rail	32A	6 mm²	component adaptor	207	72	–	**1 010.00**
106531	3-pole	2 rails	32A	6 mm²	component adaptor	260	72	–	**1 110.00**
106533	3-pole	1 rail	63A	10 mm²	component adaptor	207	54	–	**909.00**
106535	3-pole	2 rails	63A	10 mm²	component adaptor	260	54	–	**1 030.00**
106537	3-pole	1 rail	63A	10 mm²	component adaptor	207	72	–	**1 030.00**
106538	3-pole	2 rails	63A	10 mm²	component adaptor	260	72	–	**1 110.00**
106539	3-pole	2 rails	63A	10 mm²	component adaptor	207	81	–	**1 200.00**
106544	3-pole	2 rails	80A	16 mm²	component adaptor	260	72	–	**1 420.00**
Protection cover for 60 mm system									
126074	3-pole				bar mounted cover support bracket				**190.00**
126075	3-pole				panel front cover protection 1000 mm			2 meter	**1 090.00**
Busbar support for 100 and 185 mm system									
188100	3-pole	100 mm			busbar support for 30 - 60 mm x 10 mm bars	324	28	50	**784.00**
188101	3-pole	185 mm			busbar support for 30 - 120 mm x 10 mm bars	573	28	50	**1 010.00**
188102	1-pole	100/185			busbar support for 30 - 120 mm x 10 mm bars	224	25	50	**739.00**

Above ZAR prices do not include VAT. E&OE

FGN...

FSA

FSS...

FSDCP...

FSFP...

FSK...

FMF...

FTM...

Industrial protection HRC fuses

Rated voltage: 500 VAC
Rated breaking capacity: 80 kA
Standards specification: BS88-2, IEC 60269-2-1
Fuse class: gG/Q1

type	rated current	BS88 ref.	rated voltage	breaking capacity	fixing centres	body dia. (mm)	type (GEC)	price
Off-set blade tag fuses (F1)								
• Body length 60 mm								
FGN 02A	2A	F1/NP	500V	80 kA	offset blade	14.2 mm	NS	**32.20**
FGN 04A	4A	F1/NP	500V	80 kA	offset blade	14.2 mm	NS	**32.20**
FGN 06A	6A	F1/NP	500V	80 kA	offset blade	14.2 mm	NS	**32.20**
FGN 10A	10A	F1/NP	500V	80 kA	offset blade	14.2 mm	NS	**32.20**
FGN 16A	16A	F1/NP	500V	80 kA	offset blade	14.2 mm	NS	**32.20**
FGN 20A	20A	F1/NP	500V	80 kA	offset blade	14.2 mm	NS	**32.20**
FGN 25A	25A	F1/NP	500V	80 kA	offset blade	14.2 mm	NS	**32.20**
FGN 32A	32A	F1/NP	500V	80 kA	offset blade	14.2 mm	NS	**32.20**
Off-set bolted tag (A2)								
• Body length 86 mm								
FSA 02A	2A	A2	500V	80 kA	73 mm	21.5 mm	TIA	**55.00**
FSA 04A	4A	A2	500V	80 kA	73 mm	21.5 mm	TIA	**55.00**
FSA 06A	6A	A2	500V	80 kA	73 mm	21.5 mm	TIA	**55.00**
FSA 10A	10A	A2	500V	80 kA	73 mm	21.5 mm	TIA	**55.00**
FSA 16A	16A	A2	500V	80 kA	73 mm	21.5 mm	TIA	**55.00**
FSA 20A	20A	A2	500V	80 kA	73 mm	21.5 mm	TIA	**55.00**
FSA 25A	25A	A2	500V	80 kA	73 mm	21.5 mm	TIA	**55.00**
FSA 32A	32A	A2	500V	80 kA	73 mm	21.5 mm	TIA	**55.00**
Off-set bolted tag (A3)								
• Body length 90 mm								
FSS 40	40A	A3	500V	80 kA	73 mm	21.5 mm	TIS	**64.00**
FSS 50	50A	A3	500V	80 kA	73 mm	21.5 mm	TIS	**64.00**
FSS 63	63A	A3	500V	80 kA	73 mm	21.5 mm	TIS	**64.00**
Off-set bolted tag (A4)								
• Body length 111 mm								
FSDCP 63	63A	A4	500V	80kA	94 mm	32 mm	TCP	**136.00**
FSDCP 80	80A	A4	500V	80 kA	94 mm	32 mm	TCP	**136.00**
FSDCP 100	100A	A4	500V	80 kA	94 mm	32 mm	TCP	**136.00**
Off-set bolted tag (A4)								
• Body length 111 mm								
FSFP 125	125A	A4a	500V	80 kA	94 mm	39.5 mm	TFP	**199.00**
FSFP 160	160A	A4a	500V	80 kA	94 mm	39.5 mm	TFP	**199.00**
FSFP 200	200A	A4a	500V	80 kA	94 mm	39.5 mm	TFP	**199.00**
Central bolted tag (B2)								
• Body length 132 mm								
FSF 160	160A	B2	500V	80 kA	111 mm	39.5 mm	TF	**190.00**
FSF 200	200A	B2	500V	80 kA	111 mm	39.5 mm	TF	**190.00**
Central bolted tag (B3)								
• Body length 136 mm								
FSK 250	250A	B3	500V	120 kA	111 mm	50.5 mm	TKF	**334.00**
FSK 315	315A	B3	500V	120 kA	111 mm	50.5 mm	TKF	**334.00**
Central bolted tag (B4)								
• Body length 136 mm								
FMF 355	355A	B4	500V	80 kA	111 mm	50.5 mm	TMF	**318.00**
FMF 400	400A	B4	500V	80 kA	111 mm	50.5 mm	TMF	**318.00**
Central bolted tag (C2)								
• Body length 208 mm								
FTM 500	500A	C2	500V	80 kA	133/184 mm	70.2 mm	TTM	**461.00**
FTM 600	600A	C2	500V	80 kA	133/184 mm	70.2 mm	TTM	**461.00**

EGA 1 275/1+1 IR

EGA 1 275/3+1 IR

PSC2-25/230 TT IR

PSC4-25/400 TT IR

EGARA 1 275

EGA 1 Power Line SPDs - DIN-rail - IEC TYPE 1+2

The new EGA 1 series of Type 1+2 / Class I+II surge protection devices are designed to protect electrical installations from lightning strikes (10/350 µs) and induced voltage surges (8/20 µs) in accordance with IEC/EN 61643-11 and IEC/EN 61643-12 standards.

Intended to be used as the first level of protection in main switchboards, particularly in areas with a high risk of lightning strikes and areas with high atmospheric exposure where external protection against direct lightning strikes are already provided.

Features

- Lightning impulse current (10/350 µs): 12.5 kA per phase
- Nominal discharge current (8/20 µs): 20 kA per phase
- Maximum discharge current (8/20 µs): 50 kA
- Short-circuit current rating: 25 kA
- Network configuration: TT & TNS 230/400V
- Product standards: IEC/EN 61643-11, UL 1449 5th Edition
- Certifications: CE, Rohs, UKCA, KEMA-KEUR, ENEC
- Visual and remote end-of-life indication
- No back-up fuse required up to 315A
- Reinforced plug-in DIN-rail format
- Patented easy ergonomic cartridge plug-in and extraction mechanism
- Distributed PE & Equipotential EBB
- Shock withstand and vibration-proof remote microswitch and DIN-rail anchorage
- Advanced traceability and in-line automated quality controls of 100% of the SPDs

Applications

- Building
- Photovoltaic and BESS
- Water treatment
- E-Mobility - EV charging
- Telecom
- Industry

Type	limp L-N (10/350us)	In L-N (8/20us)	Imax (8/20us)	Uc max voltage	Up protection voltage	config.	width in 18 mm	price
EGA 1 series - Type 1+2 lightning current and surge arrestors								
EGA 1 series limp (10/350) 12.5kA per phase - I total 25kA (2-pole) and 50kA (4 pole)								
EGA 1 275/1+1	12.5 kA	20 kA	50 kA	275V	≤ 1.5 kV	1ph + N	2	**4 640.00**
EGA 1 275/1+1 IR	12.5 kA	20 kA	50 kA	275V	≤ 1.5 kV	1ph + N	2	**5 990.00**
EGA 1 275/3+1	12.5 kA	20 kA	50 kA	275V	≤ 1.5 kV	3ph + N	4	**10 200.00**
EGA 1 275/3+1 IR	12.5 kA	20 kA	50 kA	275V	≤ 1.5 kV	3ph + N	4	**12 400.00**
PSC 25 series - Type 1+2 lightning current and surge arrestors								

The PCS 25 range of combined surge protection devices are designed to discharge lightning currents (10/350 µs) and induced transient overvoltages (8/20 µs).

Suitable as the first level of protection in incoming power supply panels and areas with greater exposure to the atmosphere, where installations are usually provided with an external lightning protection system.

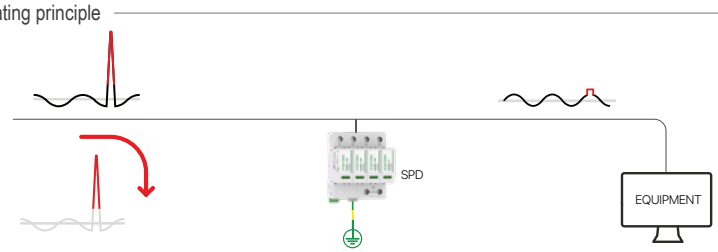
- Lightning impulse current (10/350 µs): 25 kA
- Nominal discharge current (8/20 µs): 25 kA
- Maximum discharge current (8/20 µs): 100 kA
- Short-circuit current rating: 25 kA
- Network configuration: TT & TNS 230/400V
- Product standards: IEC/EN 61643-11

PSC2-25/230 TT	25 kA	25 kA	100 kA	275V	≤ 1.5 kV	1ph + N	4	**8 790.00**
PSC2-25/230 TT IR	25 kA	25 kA	100 kA	275V	≤ 1.5 kV	1ph + N	4	**9 580.00**
PSC4-25/400 TT	25 kA	25 kA	100 kA	275V	≤ 1.5 kV	3ph + N	8	**16 300.00**
PSC4-25/400 TT IR	25 kA	25 kA	100 kA	275V	≤ 1.5 kV	3ph + N	8	**19 600.00**

Spare replacement plug-in cartridges

EGARA 1 275	spare replacement cartridge for	EGA 1 phase	**2 280.00**
PSC-25/230	spare replacement cartridge for	PSC 25 phase	**3 910.00**
EGARA 1 N	spare replacement cartridge for	EGA 1 neutral	**3 570.00**
PSC-100N	spare replacement cartridge for	PSC 25 neutral	**5 100.00**

SPD - Operating principle



EGA 2 Power Line SPDs - DIN-rail - IEC TYPE 2

The new EGA 2 series of Type 2 / Class II surge protection devices are designed to protect electrical installations from induced voltage surges (8/20 µs) in accordance with the IEC/EN 61643-11 and IEC/EN 61643-12 standards.

These devices are typically used in one of two scenarios: as a secondary level of defence in electrical installations where Type 1 surge protection devices are installed upstream or as the first line of defence where the electrical installations are situated in areas that are not directly exposed to lightning strikes and do not have external lightning protection systems in place.

EGA 2 275/1+0

Features

- Maximum discharge current (8/20 µs): 50 kA
- Nominal discharge current (8/20 µs): 20 kA
- Short-circuit withstand: 25 kA
- Network configuration: TT & TNS 230/400V
- Product standards: IEC/EN 61643-11, UL 1449 5th Edition
- Certifications: CE, Rohs, UKCA, KEMA-KEUR, ENEC
- Visual and remote end-of-life indication
- No back-up fuse required up to 315A
- Reinforced plug-in DIN-rail format
- Patented easy ergonomic cartridge plug-in and extraction mechanism
- Distributed PE & Equipotential EBB
- Shock withstand and vibration-proof remote microswitch and DIN-rail anchorage
- Advanced traceability and in-line automated quality controls of 100% of the SPDs

EGA 2 275/1+1 IR

Applications

- Building
- Photovoltaic and BESS
- Water treatment
- E-Mobility - EV charging
- Telecom
- Industry

EGA 2 275/3+1 IR

Type	limp L-N (10/350us)	In L-N (8/20us)	Imax (8/20us)	Uc max voltage	Up protection voltage	config.	width in 18 mm	price
EGA 2 series - Type 2 surge protection devices								
EGA 2 275/1+0	–	20 kA	50 kA	275V	≤ 1.5 kV	1P	1	**923.00**
EGA 2 N/0+1	–	50 kA	50 kA	255V	≤ 1.5 kV	N	1	**1 170.00**
EGA 2 275/1+1	–	20 kA	50 kA	275V	≤ 1.5 kV	1ph + N	2	**1 740.00**
EGA 2 275/1+1 IR	–	20 kA	50 kA	275V	≤ 1.5 kV	1ph + N	2	**2 590.00**
EGA 2 275/3+1	–	20 kA	50 kA	275V	≤ 1.5 kV	3ph + N	4	**3 240.00**
EGA 2 275/3+1 IR	–	20 kA	50 kA	275V	≤ 1.5 kV	3ph + N	4	**4 250.00**

PSM 20 series - Type 2+3 surge protection devices

The PSM 20 surge protection device range is designed to discharge induced transient overvoltages (type 2 + 3). Suitable the second and final steps of protection in panels where 2 protection devices are installed upstream. These devices should be installed as close as possible to the equipment being protected.

- Maximum discharge current (8/20 µs): 20 kA
- Nominal discharge current (8/20 µs): 10 kA
- Combined discharge voltage (Uoc): 10 kV
- Network configuration: TT & TNS 230/400V
- Product standards: IEC/EN 61643-11

PSM2-20/230 TT IR

PSM1-20/230	–	10 kA	20 kA	320V	≤ 1.4 kV	1P	1	**792.00**
PSM1-20N	–	10 kA	20 kA	255V	≤ 1.5 kV	N	1	**895.00**
PSM2-20/230 TT	–	10 kA	20 kA	320V	≤ 1.4 kV	1ph + N	2	**1 370.00**
PSM2-20/230 TT IR	–	10 kA	20 kA	320V	≤ 1.4 kV	1ph + N	2	**2 060.00**
PSM4-20/400 TT	–	10 kA	20 kA	320V	≤ 1.4 kV	3ph + N	4	**2 670.00**
PSM4-20/400 TT IR	–	10 kA	20 kA	320V	≤ 1.4 kV	3ph + N	4	**3 920.00**

PSM 30 series - Type 2 surge protection devices *(higher voltage applications 500-690V)*

Type 2 surge protection devices for protection of higher voltage electrical systems from induced transient overvoltages (8/20 µs).

- Maximum continuous operating voltage: 750V
- Product standards: IEC/EN 61643-11

PSM3-30/750 TNC IR

PSM1-30/750	–	15 kA	30 kA	750V	≤ 3 kV	1P	1	**1 370.00**
PSM1-30/750 IR	–	15 kA	30 kA	750V	≤ 3 kV	1P	1	**1 550.00**
PSM3-30/750 TNC	–	15 kA	30 kA	750V	≤ 3 kV	3P	3	**3 490.00**
PSM3-30/750 TNC IR	–	15 kA	30 kA	750V	≤ 3 kV	3P	3	**4 540.00**

Spare replacement plug-in cartridges

EGARA 2 275	spare replacement cartridge for	EGA 2 phase	**673.00**
PSM-20/230	spare replacement cartridge for	PSM 20 phase	**577.00**
PSM-30/750	spare replacement cartridge for	PSM 30 phase	**1 010.00**
EGARA 2 N	spare replacement cartridge for	EGA 2 neutral	**876.00**
PSM-20N	spare replacement cartridge for	PSM 20 neutral	**652.00**

Surge protection devices (SPDs) for photovoltaic applications

Due to their location, solar panels and in many cases, the inverters and energy storage systems they are connected to are particularly exposed and prone to direct or indirect lightning strikes.

As PV systems are directly connected to electrical networks, surge protection devices are a critical component for protection against lightning and overvoltages, which not only ensures the safety of people, goods and equipment, but also ensures continuity of installation services.

PSC3-5/1000 PV IR

PSM3-40/600 PV IR

Type	Iimp L-N (10/350us)	In L-N (8/20us)	Imax (8/20us)	Uc max voltage	Up protection voltage	config.	width in 18 mm	price
Type 1+2 photovoltaic surge protection devices								
PSC 5 PV series - DIN-rail - IEC Type 1+2 PV								
The PSC 5 PV range of combined Type 1+2 / Class I+II surge protection devices are intended for discharging lightning currents (10/350 µs) and protection against induced voltage surges (8/20 µs) within photovoltaic applications, in accordance with IEC 61643-31 standards.								
These lightning current and surge protection devices are suitable for all photovoltaic applications: large-scale, rooftop and self-consumption *(off-grid)* DC installations, especially in facilities provided with external LPS.								
• Lightning impulse current (10/350 µs): 5 kA								
• Maximum discharge current (8/20 µs): 40 kA								
• Nominal discharge current (8/20 µs): 20 kA								
• Maximum continuous operating voltage: 1060V & 1500V								
• Short-circuit withstand: 10 kA *(no back-up fuse required)*								
• Network configuration: PV								
• Product standards: IEC 61643-31								
• Plug-in DIN-rail format								
• Visual and remote end of life indication								
• Reversible chassis to allow cable entry from above or below								
• Dynamic thermal disconnection system with high breaking capacity, optimised for DC voltages								
PSC3-5/1000 PV	5 kA	20 kA	40 kA	1060V	≤ 4 kV	L+/PE/L-	3	**2 830.00**
PSC3-5/1000 PV IR	5 kA	20 kA	40 kA	1060V	≤ 4 kV	L+/PE/L-	3	**3 250.00**
PSC3-5/1500 PV	5 kA	20 kA	40 kA	1500V	≤ 5 kV	L+/PE/L-	3	**3 060.00**
PSC3-5/1500 PV IR	5 kA	20 kA	40 kA	1500V	≤ 5 kV	L+/PE/L-	3	**3 490.00**
Last two digits **IR** *- with signalling contacts for remote indication/monitoring of devices*								
Type 2 photovoltaic surge protection devices								
PSM 40 PV series - DIN-rail - IEC Type 2 PV								
The PSM 40 PV range of Type 2 / Class II surge protection devices are intended for discharging induced voltage surges (8/20 µs) within photovoltaic applications, in accordance with IEC 61643-31 standards.								
These surge protection devices are suitable for all photovoltaic applications: large-scale, rooftop and self-consumption *(off-grid)* DC installations.								
• Maximum discharge current (8/20 µs): 40 kA								
• Nominal discharge current (8/20 µs): 20 kA								
• Maximum continuous operating voltage: 660V, 1060V & 1500V								
• Short-circuit withstand: 10 kA *(no back-up fuse required)*								
• Network configuration: PV								
• Product standards: IEC 61643-31								
• Plug-in DIN-rail format								
• Visual and remote end of life indication								
• Reversible chassis to allow cable entry from above or below								
• Dynamic thermal disconnection system with high breaking capacity, optimised for DC voltages								
PSM3-40/600 PV	–	20 kA	40 kA	660V	≤ 2.6 kV	L+/PE/L-	3	**1 640.00**
PSM3-40/600 PV IR	–	20 kA	40 kA	660V	≤ 2.6 kV	L+/PE/L-	3	**2 100.00**
PSM3-40/1000 PV	–	20 kA	40 kA	1060V	≤ 4 kV	L+/PE/L-	3	**2 430.00**
PSM3-40/1000 PV IR	–	20 kA	40 kA	1060V	≤ 4 kV	L+/PE/L-	3	**3 020.00**
PSM3-40/1500 PV	–	15 kA	40 kA	1500V	≤ 5 kV	L+/PE/L-	3	**2 860.00**
PSM3-40/1500 PV IR	–	15 kA	40 kA	1500V	≤ 5 kV	L+/PE/L-	3	**3 220.00**

Spare replacement plug-in cartridges - for PV surge arrestors			
PSC-5/1000 PV	spare replacement cartridge for	PSC3-5/1000	**851.00**
PSC-5/1500 PV	spare replacement cartridge for	PSC3-5/1500	**925.00**
PSM-40/600 PV	spare replacement cartridge for	PSM3-40/600	**606.00**
PSM-40/1000 PV	spare replacement cartridge for	PSM3-40/1000	**655.00**
PSM-40/1500 PV	spare replacement cartridge for	PSM3-40/1500	**711.00**

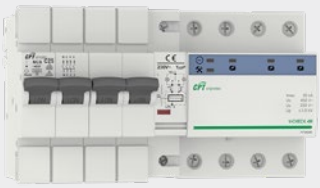
Above ZAR prices do not include VAT. E&OE

V-CHECK MR - Surge protection + POP + integrated self reclose MCB

V-CHECK MR devices are a range of combined surge and power frequency overvoltage protection devices (SPD + POP), complete with automatic reclosing MCB.

These units protect electrical networks against transient voltage spikes (8/20 µs) as well as voltage increases which last for indefinate periods. Ideal for installation panels requiring continuity of service and for second homes.

- SPD type: Type 2 / Class II
- Network: 1-Phase + N / 3-Phase + N
- Actuation method: Integrated auto reclosing MCB
- Product standards: EN 50550; IEC 63052; EN 61643-11



V-Check 4MR-63

type	type 2 surge protection In L-N (8/20us)	Imax (8/20us)	Uc max voltage	C-curve MCB Up protection voltage	In nominal current	Icn breaking capacity	configuration	width in 18 mm	price
V-Check 2MR-25	5 kA	20 kA	400V	≤ 1.8 kV	40A	10 kA	1ph + N	5	**6 560.00**
V-Check 2MR-40	5 kA	20 kA	400V	≤ 1.8 kV	40A	10 kA	1ph + N	5	**7 320.00**
V-Check 4MR-16	5 kA	20 kA	275V	≤ 1.5 kV	16A	6 kA	3ph + N	9	**12 300.00**
V-Check 4MR-63	5 kA	20 kA	275V	≤ 1.5 kV	63A	6 kA	3ph + N	9	**15 900.00**

V-Check RC - SPD+POP protection disconnecting the circuit via a contactor

V-Check 4RC

V-Check 4RC	15 kA	40 kA	400V	≤ 1.8 kV	–	–	3ph + N	4	**8 810.00**

G-CHECK - Ground monitoring device

The G-CHECK is a control device that continuously monitors the state of the ground connection to ensure proper operation of surge protection devices and the protection of personnel against indirect contacts. By the loop resistance calculation method, G-CHECK checks the impedance of the actual leakage path of an indirect contact, enabling it to detect:

- Deterioration of the ground connection
- Breakage or incorrect wiring of the neutral cable

PSM4-40/230 SG

type	Un rated voltage	frequency	alarm activation value	max measured value	outputs	output rated current	price
G-CHECK 230	230V	50Hz	adjustable	500 ohm	1	0.3A	**9 640.00**

SAFEGROUND - Power line monitoring SPD with ground monitoring

The **SAFEGROUND®** series are Type 2 / Class II surge protection with integrated ground monitoring intended to protect against induced voltage surges (8/20 µs) in accordance to IEC/EN 61643-11 standards.

The integrated ground monitoring feature, based on patented loop impedance technology:

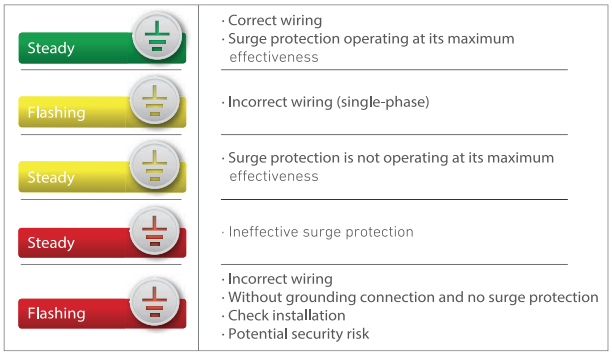
- Confirms the device is properly installed
- Reports on the effectiveness of the surge protection
- Provides safety information in the event of indirect contact
- Indication of the status of the earth loop is displayed via a multi-state LED

PSM4-40/400 SG

type	limp L-N (10/350us)	In L-N (8/20us)	Imax (8/20us)	Uc max voltage	Up protection voltage	config.	width in 18 mm	price
PSM2-40/230 SG	–	20 kA	40 kA	275V	≤ 1.3 kV	1ph + N	2	**5 170.00**
PSM4-40/400 SG	–	20 kA	40 kA	275V	≤ 1.3 kV	3ph + N	4	**7 060.00**

SAFEGROUND® - Indications

Main indications



Additional indications

954315

961180

952070

952315

900453

For the protection of low voltage equipment against transient voltage and current surges mainly from atmospheric origin *(lightning)* and transient produced by switching characteristics such as in switching of distribution networks, transformers, motors, etc.

type	Iimp L-N (10/350us)	In L-N (8/20us)	Imax (8/20us)	Uc max voltage	Up protection voltage	config.	width in 18 mm	price
DEHN Type 1+2 combined lightning current and surge protection *(in a single unit)*								
• Clamps voltage to less than 1500V as per SANS 10142-1:2008 table L1 • Prewired spark-gap-based type 1 and 2 combined lightning current and surge arrester								
941110	12.5kA	12.5kA	25kA	255V	≤ 1.5 kV	1ph + N	2	**6 560.00**
951115*	25kA	25kA	50kA	264V	≤ 1.5 kV	1ph + N	4	**23 300.00**
941310	12.5kA	12.5kA	50kA	255V	≤ 1.5 kV	3ph + N	4	**12 000.00**
951315*	25kA	25kA	100kA	264V	≤ 1.5 kV	3ph + N	8	**39 600.00**
DEHN Type 1+2 combined lightning current and surge protection *with integrated back up fuse*								
961200	25kA	25kA	25kA	255V	≤ 1.5 kV	1P	2	**10 000.00**
961205*	25kA	25kA	25kA	255V	≤ 1.5 kV	1P	2	**10 900.00**
Type 1 lightning current protection *with integrated backup fuse*								
961146*	35kA	–	35kA	440V	≤ 2.5 kV	1P	3	**15 400.00**
961176*	35kA	–	35kA	760V	≤ 4 kV	1P	3	**16 700.00**
Type 1 lightning current protection *without integrated backup fuse*								
961145*	35kA	–	35kA	440V	≤ 2.5 kV	1P	3	**10 900.00**
DEHN N-PE								
961180	100kA	–	100kA	255V	≤ 1.5 kV	N	2	**9 050.00**
961185*	100kA	–	100kA	255V	≤ 1.5 kV	N	2	**9 790.00**
952030	12kA	20kA	40kA	255V	≤ 1.5 kV	N	1	**1 870.00**
952035*	12kA	20kA	40kA	255V	≤ 1.5 kV	N	1	**3 320.00**
DEHN Type 2 surge protection devices *without integrated back up fuse*								
Minimum requirement as per SANS 10142-1:2008 anex L for use in all electrical distribution boards and sub boards. For installation in conformity with the lightning protection zone. • Replaceable plug-in modules • Visual fault indication • Clamps voltage to less than 1500V as per SANS 10142-1:2008 table L1								
DEHN guard Type 2 surge protection device *without integrated back up fuse*								
952070	–	20kA	40kA	275V	≤ 1.5 kV	1P	1	**1 300.00**
952090*	–	20kA	40kA	275V	≤ 1.5 kV	1P	1	**2 170.00**
952110	12kA	20kA	40kA	275V	≤ 1.5 kV	1ph + N	2	**3 090.00**
952115*	12kA	20kA	40kA	275V	≤ 1.5 kV	1ph + N	2	**3 690.00**
952310	12kA	20kA	40kA	275V	≤ 1.5 kV	3ph + N	4	**5 450.00**
952315*	12kA	20kA	40kA	275V	≤ 1.5 kV	3ph + N	4	**6 250.00**
DEHN S/M ACI 275 Type 2 arrester protection device ACI *(Advanced Circuit Interruption)*								
With its new integrated switch/spark gap combination, ACI *(Advanced Circuit Interruption)* technology reduces complexity, improves system availability and saves time, space and material costs. Function reliably and systems are always available.								
952341*	–	20kA	20kA	275V	≤ 1.5 kV	1ph + N	2	**9 570.00**
952121*	–	20kA	20kA	275V	≤ 1.5 kV	1ph + N	2	**5 610.00**
952100*	–	20kA	20kA	275V	≤ 1.5 kV	1P	1	**2 520.00**
* *With signalling contacts for remote indication/monitoring of devices*								
DEHN Type 2 surge protection device *(non plug-in modules)*								
900453	–	5kA	10kA	275V	≤ 1.2 kV	1ph + N	2	**1 220.00**
900454	–	10kA	20kA	275V	≤ 1.3 kV	1ph + N	2	**1 310.00**
900463	–	10kA	20kA	275V	≤ 1.3 kV	3ph + N	4	**2 050.00**
DEHN Type 2 with build in fault indicator								
900430	–	5kA	10kA	275V	≤ 1.5 kV	1ph + N	–	**1 760.00**
DEHNrail modular Type 3 surge protection devices								
• Replaceable plug-in protection modules • High discharge capacity due to heavy-duty oxide varistor / spark gap combination • Energy coordination with other arrestors								
953200	–	3kA	5kA	255V	≤ 1.25 kV	1ph + N	1	**2 500.00**

Above ZAR prices do not include VAT. E&OE

900071

950531

920300

920244

927244

929121

929221

Photovoltaic Surge Protection Devices

Due to their location, solar panels and in many cases, the inverters they are connected to are exposed to and particularly prone to direct or indirect lightning strikes. As PV systems are directly connected to the electrical networks of buildings surge protection is essential.

type	limp) L-N (10/350us	In L-N (8/20us)	Imax (8/20us)	Uc max voltage	Up protection voltage	config.	width in 18 mm	price
DEHNguard Type 1+2 PV (SPD) with SCI *(non-plug-in modules)*								
• Combined lightning current and surge arrestor for use in Photovoltaic systems								
900070	6.25kA	20kA	40kA	1200V	≤ 3.8 kV	L+/PE/L-	4	**2 990.00**
900075*	6.25kA	20kA	40kA	1200V	≤ 3.8 kV	L+/PE/L-	4	**3 430.00**
900071	6.25kA	20kA	40kA	1500V	≤ 4.5 kV	L+/PE/L-	4	**3 230.00**
900076*	6.25kA	20kA	40kA	1500V	≤ 4.5 kV	L+/PE/L-	4	**3 680.00**
DEHNguard Type 2 PV (SPD) with SCI *(non-plug-in modules)*								
• Short circuit interruption (SCI) technology for maximum safety in PV systems								
950531	–	12.5kA	25kA	600V	≤ 2.5 kV	L+/PE/L-	3	**4 900.00**
950530	–	12.5kA	25kA	1000V	≤ 4 kV	L+/PE/L-	3	**5 040.00**
DEHNguard Type 2+3 PV (SPD) with SCI								
• Plug-in cartridges for easy replacement								
• Safe replacement of protection modules without arc formation due to integrated DC fuses								
952515*	–	12.5kA	25kA	1000V	≤ 4 kV	L+/PE/L-	3	**4 300.00**
952520	–	12.5kA	25kA	1500V	≤ 6 kV	L+/PE/L-	4.5	**11 700.00**

* *With signalling contacts for remote indication/monitoring of devices*

Surge protection devices for data networks

BLITZDUCTOR XT

The BLITZDUCTOR XT range are pluggable and universal multipole DIN-rail mounted lightning current and surge arresters for protecting measuring and control circuits, bus systems and telecommunication systems

- LifeCheck SPD monitoring function
- Optimal protection for one pair of unearthed balanced interfaces, with direct or indirect shield earthing

920244	2.5kA	10kA	20kA	33 VDC	≤ 52V	4P	2/3	**2 370.00**
920300	DIN-rail mount socket for above BLITZDUCTOR XT protection module							**1 100.00**

BLITZDUCTORconnect

The **BLITZDUCTORconnect** series of combined lightning current and surge arresters are designed for universal use and system protection in the field of automation or measuring and control technology.

- Space-saving, modular combined arrester with a width of 6 mm
- Push-in connection technology with status indication
- With signal disconnection for maintenance purposes

927224	1.5kA	5kA	20kA	33 VDC	≤ 90V	2P	1/3	**2 600.00**
927244*	1.5kA	5kA	20kA	36 VDC	≤ 57V	2P	1/3	**2 600.00**

* *For unearthed balanced interfaces*

DEHNpatch Type 2 SPD for Ethernet applications

The **DEHNpatch** is a universal arrester for Industrial Ethernet, Power over Ethernet (PoE+ according to IEEE 802.3at up to 57 V) and similar applications in structured cabling systems according to class E up to 250 MHz.

- Fully shielded adapter with sockets for DIN-rail mounting

929121	0.5kA	150A	10kA	48 VDC	≤ 180V	RJ45	1	**2 720.00**

DEHNpatch outdoor Type 2 SPD IP66

Universal surge arrester for GBit Ethernet applications, Power over Ethernet (IEEE 802.3 compliant up to PoE++ / 4PPoE) and similar applications in structured cabling systems up to class E.

- IP66 rated enclosure permits outdoor use
- Universal mounting bracket for pole and wall mounting

929221	0.8kA	400A	10kA	8.5 VDC	≤ 170V	RJ45	–	**5 340.00**

LYTE II

CliQ II

DRF-24V120W1GBA

DRF-24V480W3GBA

Industrial Power Supplies

Delta - the worlds leading power supply manufacturer offers state-of-the-art designs made to withstand harsh industrial environments in accordance with ATEX requirements. The rugged ultra-compact case is both shock and vibration-resistant according to IEC 60068-2.

Product features:

- DIN-rail mounting *(RoHS compliant)*
- Wide input voltage range 85 to 264 VAC *(1 phase)* / 320 to 600 VAC *(3 phase)*
- Provides - overload, overvoltage and thermal protection
- Power boost - *(enables reserve power for reliable start-up of loads with high inrush currents)*
- Conforms to harmonic current IEC/EN 61000-3-2, Class A
- Certification: UL508, EN 60950, cULus 60950, EN 50178, EN 60204, GS, CCS Aus

type	input voltage	output voltage *(adj)*	rated load (W)	rated load (A)	housing	dimensions (mm) (H)	(W)	(D)	price
LYTE II series	DIN-rail mounting, ultra slim power supplies for general applications								
• Universal input range: 85...264 VAC									
• Efficiency: up to 90.0% *(at 230 VAC)*									
• Operating temperature: -20°C to +70°C									
• Built-in constant current circuit for reactive loads									
DRL-12V75W1AZ	85 - 264 VAC	12 VDC	75	6.3	plastic	124	27	102	**660.00**
DRL-12V120W1EN	90 - 264 VAC	12 VDC	120	10.0	aluminium	124	30	117	**767.00**
DRL-12V240W1EN	90 - 264 VAC	12 VDC	240	20.0	aluminium	124	40	117	**1 940.00**
DRL-24V75W1AZ	85 - 264 VAC	24 VDC	75	3.1	plastic	124	27	102	**544.00**
DRL-24V120W1EN	90 - 264 VAC	24 VDC	120	5.0	aluminium	124	30	117	**656.00**
DRL-24V240W1EN	90 - 264 VAC	24 VDC	240	10.0	aluminium	124	40	117	**1 280.00**
DRL-24V480W1EN	90 - 264 VAC	24 VDC	480	20.0	aluminium	124	56	117	**3 070.00**
DRL-48V75W1AZ	85 - 264 VAC	48 VDC	75	1.6	plastic	124	27	102	**676.00**
DRL-48V120W1EN	90 - 264 VAC	48 VDC	120	2.5	aluminium	124	30	117	**1 110.00**
DRL-48V240W1EN	90 - 264 VAC	48 VDC	240	5.0	aluminium	124	40	117	**2 070.00**
CliQ II series	DIN-rail mounting, high specification series power supplies								
• Efficiency: High efficiency - up to 92.0% *(at 230 VAC)*									
• Power boost: 150% for 5 seconds *(480W: 200% for 2 seconds)*									
• Operating temp: -25°C to +80°C									
• Full-corrosion resistant aluminium casing									
• Conformal coating on PCBAs to protect against chemical and dust pollutants									
Single-phase	Input voltage range: 85 - 264 VAC / 120 - 375 VDC								
DRP024V060W1BN	85 - 264 VAC	24 VDC	60	2.5	aluminium	121	32	125	**1 160.00**
DRP024V120W1BN	85 - 264 VAC	24 VDC	120	5.0	aluminium	121	50	125	**1 800.00**
DRP024V240W1BN	85 - 264 VAC	24 VDC	240	10.0	aluminium	121	85	125	**2 550.00**
DRP024V480W1BN	85 - 264 VAC	24 VDC	480	20.0	aluminium	121	144	119	**3 930.00**
DRP048V120W1BN	85 - 264 VAC	48 VDC	120	2.5	aluminium	121	50	125	**2 150.00**
DRP048V240W1BN	85 - 264 VAC	48 VDC	240	5.0	aluminium	121	85	125	**3 140.00**
DRP048V480W1BN	85 - 264 VAC	48 VDC	480	10.0	aluminium	121	144	119	**4 740.00**
Two-phase	Input voltage range: 2 × 180 - 550 VAC DC input range 254 - 780 VDC								
DRP024V120W2BN	180-550 VAC	24 VDC	120	5	aluminium	124	40	117	**2 130.00**
Three-phase	Input voltage range: 3 × 320 - 600 VAC / 450 - 800 VDC								
DRP024V060W3BN	320 - 600 VAC	24 VDC	60	2.5	aluminium	121	50	118	**2 210.00**
DRP024V120W3BN	320 - 600 VAC	24 VDC	120	5.0	aluminium	121	50	118	**1 980.00**
DRP024V240W3BN	320 - 600 VAC	24 VDC	240	10.0	aluminium	121	70	118	**3 730.00**
DRP024V480W3BN	320 - 600 VAC	24 VDC	480	20.0	aluminium	121	140	118	**5 250.00**
DRP024V960W3BN	320 - 600 VAC	24 VDC	960	40.0	aluminium	121	255	118	**8 980.00**
FORCE-GT series	DIN-rail mounting, high specification series power supplies								
• Efficiency: High efficiency - up to 95.0% *(at 230 VAC)*									
• Operating temp: -30°C to +70°C									
• Built-in constant current circuit for charging applications									
• Conformal coating on PCBAs to protect against chemical and dust pollutants									
Single-phase	Input voltage range: 90 - 264 VAC								
DRF-12V120W1GBA	90 - 264VAC	12 VDC	120	10.0	aluminium	124	30	117	**1 700.00**
DRF-24V120W1GBA	90 - 264VAC	24 VDC	120	5.0	aluminium	124	30	117	**1 700.00**
DRF-24V240W1GBA	90 - 264VAC	24 VDC	240	10.0	aluminium	124	40	117	**2 320.00**
DRF-24V480W1GBA	90 - 264VAC	24 VDC	480	20.0	aluminium	124	56	117	**3 680.00**
Three-phase	Input voltage range: 3 × 320 - 575 VAC								
DRF-24V120W3GBA	320 - 575VAC	24 VDC	120	5.0	aluminium	124	38	126	**2 500.00**
DRF-24V240W3GBA	320 - 575VAC	24 VDC	240	10.0	aluminium	124	50	126	**4 350.00**
DRF-24V480W3GBA	320 - 575VAC	24 VDC	480	20.0	aluminium	124	65	128	**6 280.00**

Above ZAR prices do not include VAT. E&OE

PMT

PMT2 series - Panel mounting *(chassis type) enclosed power supplies (single phase)*

PMT panel-mount power supplies with a wide operating temperature range, withstand shock and vibration according to IEC 60068-2. They offer overvoltage and over-current protection and meet price competitive demand without compromising quality of components and product specifications.

- Household appliance approvals to IEC/EN 60335-1, IEC/EN 61558-1 and IEC/EN 61558-2-16
- Low profile design: 30 mm height
- Over Voltage Category III, Pollution Degree 3
- Universal AC input voltage without power de-rating
- Short Circuit / Overvoltage / Overload / Over Temperature Protection

type	input voltage	output voltage *(adj)*	rated load (W)	rated load (A)	housing	dimensions (mm) (H)	(W)	(D)	price
PMT-5V350W1AM	180 - 264 VAC	5 VDC	300	60	aluminium	50	115	215	**1 560.00**
PMT-12V35W2BA	90 - 264 VAC	12 VDC	36	3.0	aluminium	30	82	99	**340.00**
PMT-12V50W2BA	90 - 264 VAC	12 VDC	50	4.2	aluminium	30	82	99	**360.00**
PMT-12V100W2BA	90 - 264 VAC	12 VDC	102	8.5	aluminium	30	97	129	**499.00**
PMT-12V150W2BA	90 - 264 VAC	12 VDC	150	12.5	aluminium	30	97	159	**614.00**
PMT-24V35W2BA	90 - 264 VAC	24 VDC	36	1.5	aluminium	30	98	98	**340.00**
PMT-24V50W2BA	90 - 264 VAC	24 VDC	53	2.2	aluminium	30	82	99	**425.00**
PMT-24V100W2BA	90 - 264 VAC	24 VDC	108	4.5	aluminium	30	97	129	**490.00**
PMT-24V150W2BA	90 - 264 VAC	24 VDC	150	6.3	aluminium	30	97	159	**719.00**
PMT-24V200W2BR	90 - 264 VAC	24 VDC	211	8.8	aluminium	30	97	159	**777.00**
PMT-24V350W2BR	90 - 264 VAC	24 VDC	350	14.6	aluminium	30	115	215	**1 190.00**

DRR-20N

Complementary modules — DIN-rail mounting

Redundancy module — *built-in 2-channel DC OK signal and alarm relay contact*

Redundancy modules provide additional protection against potential failure of the 24 VDC supply. Two power supplies are decoupled via a redundancy module, which continually monitors the feeding power supply units and when one unit fails, automatically switches to the other.

- Wide input and output range of 22 - 60 VDC
- Built-in 2-channel DC OK signal and alarm relay contact
- Conformal coating on PCBAs to protect against common dust and chemical pollutants

DRR-20N	22 - 60 VDC	22 - 60 VDC	–	20A	aluminium	121	50	122	**886.00**
DRR-40N	22 - 60 VDC	22 - 60 VDC	–	40A	aluminium	121	50	122	**1 090.00**

Buffer module — *for protection against short power failures*

Allows a system to continue operating during power disruptions lasting from milliseconds to seconds

- Buffering time 250ms to 10s *(depending on load current)*
- Supports parallel connection to extended buffering time
- Conformal coating on PCBAs to protect against common dust and chemical pollutants

DRB-24V020ABN	23 - 28.8 VDC	24 VDC	–	20A	aluminium	121	50	120	**3 810.00**

DC-UPS module *(without battery)* — *Suitable for 24V system up to 40A*

DC-UPS module in a modular DIN-rail mounting format occupy the same profile as standard miniature circuit breakers (MCBs), suited for mounting into distribution boards with a 45 mm frontal cutout.

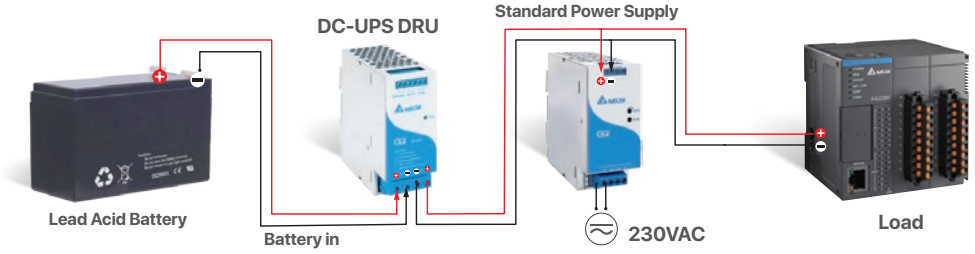
- High MTBF > 500,000 hours per Telcordia SR-332
- Zero switch over time from loss of DC input to battery operation
- Built-in diagnostic monitoring for DC OK, discharge and battery failure by relay contacts
- LED indicator for DC OK, Battery Charging, Battery Discharging, Battery Fail and Battery Reverse Polarity
- Conformal coating on PCBAs to protect against common dust and chemical pollutants

DRU-24V10ACZ	DC-UPS	23 - 28 VDC	240	10A	plastic	91	71	56	**903.00**
DRU-24V40ABN	DC-UPS	23 - 28 VDC	960	40A	aluminium	121	50	118	**1 410.00**

DRU-24V40ABN

Delta 24V DC power supply - Backup solution

– The Delta DRU UPS seamlessly integrates with a 24V DC power supply setup to ensure continuous operation during AC source interruptions or failures.



DIN-rail mounting power supplies

- Universal AC input range
- DC output voltage *(adjustable)*
- 100% full load burn-in test
- Safety standards: UL 508, IEC62368-1, BS/EN62368-1
- EMC standards: EN 55032, EN 61000-3-2,-3 EN61000-4-2,3,4,5,6,8,11

YSD15S...

YSD30S...

type	input voltage	DC output voltage (adj)	rated load (W)	rated load (A)	housing	dimensions (mm) (H)	(W)	(D)	price
YSD..S series - Modular DIN-rail mounting power supplies									
YSD..S series modular, DIN-rail mountable AC-DC power supply specifically designed to occupy the same profile as a standard miniature circuit breaker (MCB), making it perfect for installation in distribution boards with a 45mm frontal cutout. DIN-rail mounting permits easy installation alongside other control and protection devices, making it an ideal choice for industrial automation, telecommunications, and distribution board applications.									
• Universal input range *(90 - 264 VAC, 127 - 370 VDC)* • Class II isolation • Overvoltage category III • Protection: Short circuit / Overload / Overvoltage									
YSD15S-0502400	90 - 264 VAC	5V	12	2.40	plastic	90	18	58	**334.00**
YSD15S-1201250	90 - 264 VAC	12V	15	1.25	plastic	90	18	58	**334.00**
YSD30S-1202000	90 - 264 VAC	12V	24	2.00	plastic	90	35	58	**425.00**
YSD60S-1204500	90 - 264 VAC	12V	54	4.50	plastic	90	52.5	58	**648.00**
YSD100S-1207100	90 - 264 VAC	12V	85	7.10	plastic	90	70	58	**931.00**
YSD15S-2400630	90 - 264 VAC	24V	15	0.63	plastic	90	18	58	**334.00**
YSD30S-2401500	90 - 264 VAC	24V	36	1.50	plastic	90	35	58	**425.00**
YSD60S-2402500	90 - 264 VAC	24V	60	2.50	plastic	90	52.5	58	**648.00**
YSD100S-2404170	90 - 264 VAC	24V	100	4.17	plastic	90	70	58	**931.00**
YSD150S-24	90 - 264 VAC	24V	150	6.25	plastic	90	105	58	**1 290.00**

YDL20L...

YSD..L series - Slim-line DIN-rail mounting power supplies

The YSD..L series features slim-line AC-DC power supplies designed for applications that demand both space efficiency and reliable power delivery. Classified as Class 2 and Pass LPS (Limited Power Source), these power supplies meet stringent safety standards, significantly reducing the risk of electric shock or fire.

- Universal input range *(90 - 264 VAC, 127 - 370 VDC)*
- Class 2/ Pass LPS
- Built-in "DC OK" relay contact and frontal LED indication
- Protection: Short circuit / Overload / Overvoltage

YSD20L-0503000	90 - 264 VAC	5V	15	3.00	plastic	92	23	100	**481.00**
YSD60L-05006000	90 - 264 VAC	5V	30	5.00	plastic	92	41	100	**643.00**
YSD20L-1201670	90 - 264 VAC	12V	20	1.67	plastic	92	23	100	**481.00**
YSD60L-12005000	90 - 264 VAC	12V	60	5.00	plastic	92	41	100	**737.00**
YSD20L-2401000	90 - 264 VAC	24V	24	1.00	plastic	92	23	100	**481.00**
YSD60L-24001700	90 - 264 VAC	24V	41	1.70	plastic	92	41	100	**643.00**
YSD60L-24002500	90 - 264 VAC	24V	60	2.50	plastic	92	41	100	**737.00**
YSD100L-2404000	90 - 264 VAC	24V	96	4.00	plastic	92	55	100	**1 220.00**
YSD60L-48001250	90 - 264 VAC	48V	60	1.25	plastic	92	41	100	**737.00**
YSD100L-4802000	90 - 264 VAC	48V	96	2.00	plastic	92	55	100	**1 220.00**

YSDW240-24

YSDW series - DIN-rail mounting power supplies *(wide input voltage)*

The YSDW series offers versatile and reliable wide input range AC-DC power supplies designed for demanding applications. Featuring a **built-in DC OK** relay contact for real-time voltage monitoring and a full corrosion-resistant aluminium casing for enhanced durability, these power supplies ensure stable DC output and long-lasting performance. Ideal for industrial automation, renewable energy systems, and remote locations

- Single and two-phase wide input range *(180 - 550 VAC, 254 - 780 VDC)*
- Built-in constant current limiting circuit
- Built-in "DC OK" relay contact and frontal LED indication
- Full corrosion-resistant aluminium casing
- Protection: Short circuit / Overload / Over voltage / Over temperature
- Safety standards: UL 61010, BS/IEC/EN 61010-1

YSDW60-12	180 - 550 VAC	12V	60	5.00	aluminium	125	32	114	**1 250.00**
YSDW60-24	180 - 550 VAC	24V	60	2.50	aluminium	125	32	114	**1 250.00**
YSDW120-24	180 - 550 VAC	24V	120	5.00	aluminium	125	40	126	**2 020.00**
YSDW240-24	180 - 550 VAC	24V	240	10.00	aluminium	125	63	126	**3 830.00**
YSDW120-48	180 - 550 VAC	48V	120	2.50	aluminium	125	40	126	**2 020.00**

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DIN-rail mounting power supplies

- DC output voltage *(adjustable)*
- 100% full load burn-in test
- Safety standards: UL 508, IEC62368-1, BS/EN62368-1
- EMC standards: EN 55032, EN 61000-3-2,-3 EN61000-4-2,3,4,5,6,8,11

YDD-120-12A

YDC100-27.6

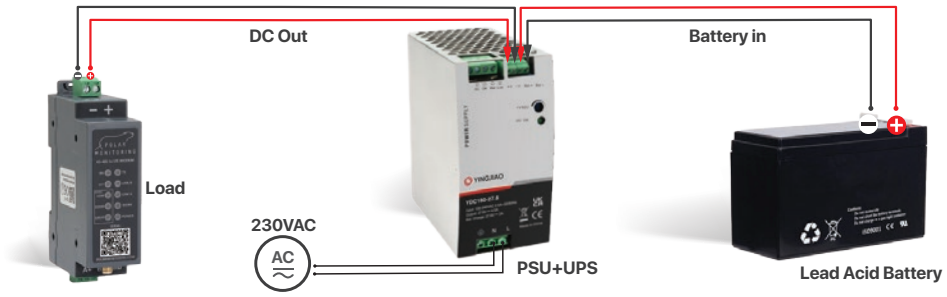
YDC180-27.6

YSDU40-24

type	input voltage	DC output voltage *(adj)*	rated load (W)	rated load (A)	housing	dimensions (mm) (H)	(W)	(D)	price
YDD series - DIN-rail mounting power supplies *(DC - DC)*									
Versatile DC-DC converters offering stable DC output, ideal for critical telecommunications and industrial automation, ensuring reliable performance in sensitive environments.									
• 150% peak load capability									
• Protections: Short circuit / Over load / Over voltage / Input reverse polarity / under voltage protection									
• DC output voltage adjustable									
YDD-120-12A	9 - 18 VDC	12V	100	8.3	aluminium	126	32	98	**2 430.00**
YDD-120-12B	17 - 33.6 VDC	12V	120	10	aluminium	126	32	98	**2 430.00**
YDD-120-12C	33.6 - 67 VDC	12V	120	10	aluminium	126	32	98	**2 430.00**
YDD-120-24A	9 - 18 VDC	24V	100	4.2	aluminium	126	32	98	**2 430.00**
YDD-120-24B	17 - 33.6 VDC	24V	120	5	aluminium	126	32	98	**2 430.00**
YDD-120-24C	33.6 - 67 VDC	24V	120	5	aluminium	126	32	98	**2 430.00**
YDC series - DIN-rail mounting power supplies *(DC-UPS)*									
Power supply - UPS - Battery charger *(all-in-one)*									
Provides UPS functionality with an external battery *(not supplied)*. Automatically switches to battery during mains failure, maintaining uninterrupted DC output. A secondary DC output recharges the battery when mains power returns.									
• Universal input range *(90 - 264 VAC, 127 - 370 VDC)*									
• Protection: Short circuit / Overload / Over voltage / Battery low / Reverse polarity *(by fuse)*									
• Alarm signal for "AC OK" and "Battery low" with frontal LED indication of "DC OK"									
12VDC systems									
YDC40-13.8	90 - 264 VAC	13.8V	40	1.90	1.00	92	41	100	**885.00**
24VDC systems									
YDC40-27.6	90 - 264 VAC	27.6V	40	0.95	0.50	92	41	100	**885.00**
YDC60-27.6	90 - 264 VAC	27.6V	59	1.40	0.75	92	41	100	**1 040.00**
YDC100-27.6	90 - 264 VAC	27.6V	96	2.25	1.25	92	55	100	**1 460.00**
YDC180-27.6	90 - 264 VAC	27.6V	180	4.55	2.00	125	63	127	**2 790.00**
YSDU series - Uninterruptible DC-UPS controller									
Combines power supply and battery *(not supplied)* backup, ensuring operational continuity during power loss. Ideal for automation and telecoms, with automatic battery charging when power is restored.									
• Parallel connection to DC BUS									
• Suitable for 24V systems, up to 40A									
• 2A battery charging current									
• Allows 4 - 135AH battery capacities									
• LED signal status indicators									
• Complete diagnostic and monitoring for DC BUS OK, battery discharge and battery failure									
YSDU40-24	24 - 29 VDC	21-29V	–	40	2.00	125	63	127	**1 200.00**

All-in-One Solution - DC Power Delivery and Backup

– The YDC series power supplies offer a comprehensive solution for both power delivery and backup.



TR28
2.2

TR28 series - Control and safety or isolating transformers

Control and safety or isolating single-phase transformers supply high instantaneous power for the correct operation of contactors and other control and switchgear.

- DIN-rail mountable *(up to 400VA)*
- High flexibility - several primary rated voltages (with regulation taps +20V or -20V)
- Serial-parallel secondary bridge pieces for ease of connection
- High capacity clamp terminals *(10 mm² up to 400VA / 25 mm² up to 1250VA)*

Primary voltages:	240V - 400V - 525V *(with regulation taps + and - 20V)*
Secondary voltages:	12 - 24V (or) 115 - 230V
Protection degree:	IP20 protection *(finger safe)*
Thermal class:	B (130°C)
Class:	Class I
Frequency:	50/60 Hz
Dielectric strength:	Primary - secondary > 4.5kV
Standards:	IEC/EN 61558-1, IEC/EN 61558-2-2 /-2-4 /-2-6

680100040

680320042

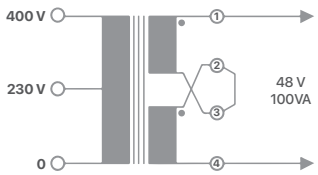
680630042

type	power (VA) t_a 25°C	power (VA) t_a 40°C	inrush VA	secondary voltage	dimensions (mm) (H)	(W)	(D)	weight kg	price
TR 28 - Secondary voltage: 12 - 24V									
- Primary voltage:	240V - 400V - 525V								
680040040	40	25	75	12 - 24V	113	84	96	1.17	**1 330.00**
680063040	63	40	120	12 - 24V	113	84	105	1.48	**1 380.00**
680100040	100	63	150	12 - 24V	113	84	112	1.83	**1 510.00**
680200040	200	160	350	12 - 24V	113	84	131	2.73	**1 930.00**
680320040	320	250	600	12 - 24V	135	108	138	4.45	**2 730.00**
680400040	400	320	800	12 - 24V	135	108	148	5.00	**2 990.00**
680630040	630	500	1275	12 - 24V	152	120	156	7.08	**3 820.00**
680800040	800	630	1700	12 - 24V	177	150	140	8.68	**5 610.00**
681000040	1000	800	2100	12 - 24V	177	150	160	11.50	**6 040.00**
681250040	1250	1000	3300	12 - 24V	177	150	183	14.40	**9 130.00**
TR 28 - Secondary voltage: 115 - 230V									
- Primary voltage:	240V - 400V - 525V								
680040042	40	25	75	115 - 230V	113	84	96	1.17	**1 340.00**
680063042	63	40	120	115 - 230V	113	84	105	1.48	**1 420.00**
680100042	100	63	150	115 - 230V	113	84	112	1.83	**1 530.00**
680130042	130	100	230	115 - 230V	113	84	116	1.83	**1 670.00**
680200042	200	160	350	115 - 230V	113	84	131	2.73	**1 940.00**
680320042	320	250	600	115 - 230V	135	108	138	4.45	**2 770.00**
680400042	400	320	800	115 - 230V	135	108	148	5.00	**3 000.00**
680630042	630	500	1275	115 - 230V	152	120	156	7.08	**3 880.00**
680800042	800	630	1700	115 - 230V	177	150	140	8.68	**5 540.00**
681000042	1000	800	2100	115 - 230V	177	150	160	11.50	**6 430.00**
681250042	1250	1000	3300	115 - 230V	177	150	183	14.40	**8 230.00**

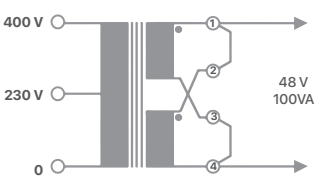
Secondary connection

* TRANSFORMER 0-230-400V // 24-48V 100VA
REF 610100044

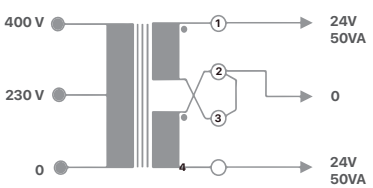
SERIAL CONNECTION



PARALLEL CONNECTION



WITH MIDDLE TAP



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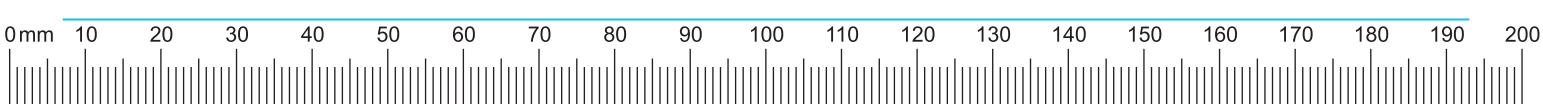
Notes


0 mm
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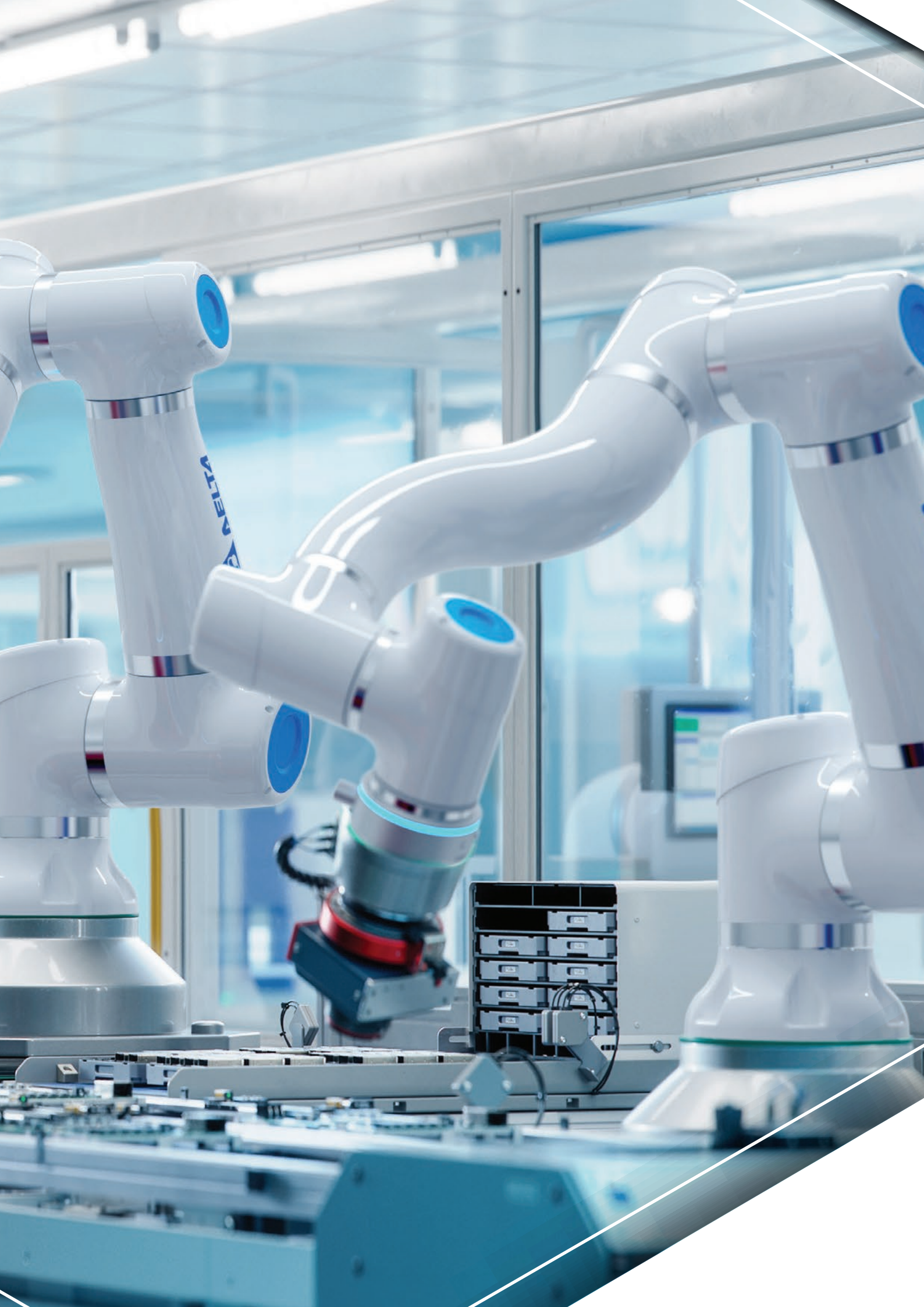
DELTA

C

Automation

Interactive Catalogue

C

Automation

Programmable logic controllers (slim-type)

C-1...4

Programmable logic controllers (brick-type)

C-5...6/24

Programmable logic controllers (mid-range)

C-7...10

Programmable logic controllers (high-performance)

C-11...12

Human machine interface (touch screens)

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Gearboxes for servo motors

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Optical encoders

C-23

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DVP14SS...

Programmable Logic Controllers (PLCs) - SS2/SA2 series

The **Delta DVP series** Programmable Logic Controllers (PLCs) offer high-speed, stable, and highly reliable control in various industrial automation applications. In addition to fast logic operation, bountiful instructions and multiple function cards, the cost-effective DVP-PLC supports various communication protocols. The DVP-SS2 series is an economical and compact model.

The module-type unit affords tremendous space-saving, allowing simple, clip-on expansion possibilities. The PLC's high performance and extensive I/O units represent a high-value solution for machine control and industrial automation.

Common characteristics:

- 32-bit CPU for high-speed processing
- Software: ISPSoft
- Plug-in terminals for ease of wiring and maintenance
- Built-in high-speed counters up to 100 kHz *(model dependent)*
- Compact dimensions *(H) 90 mm x (D) 60 mm* - DIN-rail mounting
- Clip-on extension modules - general *(right-side)* - high-speed *(left-side)* ***SA2 only***
- Supports Modbus RS485: Can connect up to 16 slave devices (VFD, temp controller, PLC)
- Program language: (IL) Instruction list, (LD) Ladder diagram, (SFC) Sequential function chart

type	supply	inputs (DI)	outputs (DO)	description	output type	price
SS2 series - Economic, compact ultra-slim PLC				(H) 90 x (D) 60 mm		

DVP12SA2...

The compact and economic DVP-SS2 series slim-type PLC provides basic sequential control functions with fast execution speed and enhanced real-time monitoring capability. For use in applications such as textile machines,conveyor belts and winding machines.

Accepts - general *(right-side)* expansion modules only

- Ultra-slim: 25.2 mm
- Max. I/O: 480 points
- Data register: 5k words
- Program capacity: 8k steps
- Built-in RS-232 and RS-485 ports *(Master/Slave)*
- Max. execution speed of basic instructions: 0.35 µs
- Supports standard MODBUS ASCII / RTU protocol and PLC Link function

Motion control functions:

- 4 points of 10kHz pulse output
- 8 points of high-speed counters: 20 kHz / 4 points, 10 kHz / 4 points

DVP14SS211R	24 VDC	8	6	compact ultra-slim PLC	relay	**2 770.00**
DVP14SS211T	24 VDC	8	6	compact ultra-slim PLC	transistor (NPN)	**2 770.00**
DVP12SS211S	24 VDC	8	4	compact ultra-slim PLC	transistor (PNP)	**2 770.00**
SA2 series - Advanced compact slim PLC				(H) 90 x (D) 60 mm		

DVP28SA211R

DVP-SA2 series offers larger program capacity and execution efficiency, offering 100 kHz high-speed output and counting functions. It is expandable with DVP-S series left-side and right-side extension modules. For use in applications such as printing machines, dying machines, container fillers and workstation monitoring in the production line.

DVP12SA supports general *(right-side)* and high-speed *(left-side)* expansion modules
DVP28SA supports general expansion modules *(right-side)* only

- Data register: 10k words
- Program capacity: 16k steps
- Ultra-slim: DVP12SA... / 37.4 mm wide
- Ultra-slim: DVP28SA... / 46 mm wide
- Max. execution speed of basic instructions: 0.35 µs
- Built-in 1 x RS-232 and 2 x RS485 ports *(12SA only)*
- Supports standard Modbus ASCII / RTU protocol and PLC Link function
- No battery required: RTC function operates for up to 15 days after power off

Motion control functions:

- Supports 2-axis linear and arc interpolation
- 4 points of high-speed pulse output: 100 kHz / 2 points, 10 kHz / 2 points
- 8 points of high-speed pulse input: 100 kHz / 2 points, 10 kHz / 6 points, 1 set of A/B phase 50 kHz

type	supply	inputs (DI)	outputs (DO)	description	output type	price
DVP12SA211R	24 VDC	8	4	advanced slim PLC	relay	**3 920.00**
DVP12SA211T	24 VDC	8	4	advanced slim PLC	transistor (NPN)	**3 920.00**
DVP28SA211R*	24 VDC	16	12	advanced slim PLC	relay	**4 510.00**
DVP28SA211T*	24 VDC	16	12	advanced slim PLC	transistor (NPN)	**4 510.00**

* *Right-hand side expansion only, 1 x RS485 port*
Programming cables, see communication cables for PLCs and HMIs page

Above ZAR prices do not include VAT. E&OE

DVP12SE11R

Programmable Logic Controllers (PLCs) - SE/SV3/SX3 series

Delta DVP series PLCs now expanded to include the new 3rd generation of SX3 and SV3 PLCs delivering more innovative products while meeting the requirements of various applications. Delta PLCs offer a broad range of controllers and modules featuring high-performance CPUs, multiple built-in functions and efficient program editing tools.

In addition to the user-friendly programming software (DIADesigner) and faster execution speed, Delta provides complete industry-focused motion control and industrial fieldbus solutions with new 3rd generation PLC series.

- Compact dimensions - DIN-rail mounting
- Clip-on extension modules - general *(right-side)* - high-speed *(left-side)*

type	supply	digital		analog		description	output type	price
		inputs	outputs	inputs	outputs			
SE series - Network type slim PLC						built-in Ethernet	(H) 90 x (D) 60 mm	
DVP12SE11R	24 VDC	8	4	–	–	network type PLC	relay	**6 550.00**
DVP12SE11T	24 VDC	8	4	–	–	network type PLC	transistor (NPN)	**6 550.00**
DVP26SE11R*	24 VDC	14	12	–	–	network type PLC	relay	**7 340.00**
DVP26SE11T*	24 VDC	14	12	–	–	network type PLC	transistor (NPN)	**7 340.00**

Most complete network type slim PLC in the industry.
Typical applications include remote device monitoring, production line monitoring, building automation, printing machines and container fillers.

- Program capacity: 16k steps Data register: 12k words
- Software: ISPSoft
- Ultra slim: **DVP12SE** - 37.4 mm / **DVP26SE** - 46 mm wide
- No battery required: RTC function operates for up to 15 days after power off
- 2 x RS485 ports, Ethernet port supports Modbus TCP and EtherNet/IP *(explicit message)*

* *Right-hand side expansion only, 1 x RS485 port, supports Ethernet/IP adaptor*

New

DVP28SV3...

DIADesigner

type	supply	digital		analog		description	output type	price
		inputs	outputs	inputs	outputs			
SV3/SX3 series - High performance slim PLC							(H) 90 x (D) 60 mm	
DVP28SV311R	24 VDC	16	12	–	–	high perform. PLC	relay	**8 610.00**
DVP28SV311T	24 VDC	16	12	–	–	high perform. PLC	transistor (NPN)	**8 610.00**
DVP28SV311S	24 VDC	16	12	–	–	high perform. PLC	transistor (PNP)	**8 610.00**

SV3/SX3 series high-end PLC providing larger program capacities and data registers for more demanding, complex applications. Increases many motion control instructions to meet high-speed applications, high-precision positioning control for labelling, packaging and printing machines.

- Program capacity: 64k steps Data register: 64k words
- Software: DIADesigner
- Execution speed: 25 ns, support AS APIs
- Delta special driver: Controls 8 Delta servos and 8 Delta motor drives via CANopen
- Built-in mini USB, Micro SD card, 2x RS-485 com ports, CANbus port
- Supports EtherNet/IP, Modbus TCP, CANopen DS301 *(controls up to 64 slaves)*
- Motion control functions high-speed pulse output: 4 axes of 200 kHz pulse output

type	supply	digital		analog		description	output type	price
		inputs	outputs	inputs	outputs			
SX3 series - Analog I/O slim PLC						*with highly efficient PID control*		
DVP20SX311R	24 VDC	8	6	4	2	analog PLC	relay	**8 610.00**
DVP20SX311T	24 VDC	8	6	4	2	analog PLC	transistor (NPN)	**8 610.00**
DVP20SX311S	24 VDC	8	6	4	2	analog PLC	transistor (PNP)	**8 610.00**

The **SX3** series is a compact PLC with built-in analog functions.

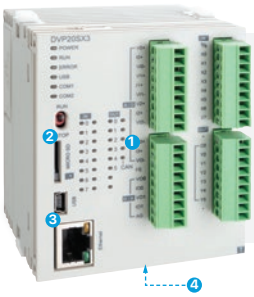
- Built-in 4 analog inputs / 2 analog outputs *(12-bit resolution)*

DVP20SX3...

DIADesigner

SV3/SX3 - Delta's new 3rd Gen. PLC

– Enhance your machinery with the Delta DVP 3rd generation PLC, featuring a more powerful CPU, expanded program capacity and advanced communication capabilities.



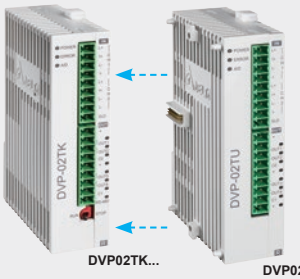
1. Powered by Delta 32 bit CPU 64k steps, supported in **DIADesigner**
2. SD card support for data logging and PLC program backup
3. Ethernet port for Industrial communication, Ethernet/IP / ModbusTCP
4. Built-in CANopen / CANbus

CANopen Modbus EtherNet/IP DIADesigner

DVP08SM11N

DVP04DA-S2

DVP04PT-S



DVP02TK... DVP02TU...

DVPDT01-S

Extension modules for SS/SA/SE/SX/SV/MC PLCs

Extension modules simply clip onto CPUs to add many additional functions, including additional digital and/or analog I/O's, industrial communication, temperature measurement and load cell monitoring.

General extension modules *(right-side mounting)*

type	supply	inputs (DI)	outputs (DO)	description	output type	price
Digital input extension modules						
DVP08SM11N	24 VDC	8	–	extension module	–	**1 220.00**
DVP16SM11N	24 VDC	16	–	extension module	–	**2 030.00**
DVP32SM11N*	24 VDC	32	–	extension module	–	**2 610.00**
UB-10-ID32A	MIL con	32		terminal module for above	DVP32SM	**1 190.00**
UC-ET010-24A	MIL con	1 met		I/O connection cable for above	DVP32SM/SN	**601.00**
Digital output extension modules						
DVP06SN11R	24 VDC	–	6	extension module	relay (6A)	**2 420.00**
DVP08SN11R	24 VDC	–	8	extension module	relay (1.5A)	**1 820.00**
DVP08SN11T	24 VDC	–	8	extension module	transist (NPN)	**1 820.00**
DVP16SN11T	24 VDC	–	16	extension module	transist (NPN)	**2 490.00**
DVP16SN11TS	24 VDC	–	16	extension module	transist (PNP)	**2 490.00**
DVP32SN11TN*	24 VDC	–	32	extension module	transist (NPN)	**2 870.00**
* *Pinhead terminations, see page* ***C-18***						
Digital I/O extension modules						
DVP08SP11R	24 VDC	4	4	extension module	relay (1.5A)	**1 900.00**
DVP16SP11R	24 VDC	8	8	extension module	relay (1.5A)	**2 010.00**
DVP08SP11T	24 VDC	4	4	extension module	transist (NPN)	**1 900.00**
DVP16SP11T	24 VDC	8	8	extension module	transist (NPN)	**2 110.00**
DVP16SP11TS	24 VDC	8	8	extension module	transist (PNP)	**2 270.00**
Analog I/O extension modules	*±10V / ±20mA (output: 0 to 10V or 0/4 to 20 mA)*					
• Built-in RS-485 interface		(AI)	(AO)			
DVP04AD-S2	24 VDC	4	–	extension module	–	**4 110.00**
DVP06AD-S	24 VDC	6	–	extension module	–	**4 450.00**
DVP04DA-S2	24 VDC	–	4	extension module	analog	**6 230.00**
DVP06XA-S2	24 VDC	4	2	extension module	analog	**4 610.00**
Temperature measurement modules						
• Resolution:	0.1°C	inputs	outputs		sensor	
DVP04PT-S*	24 VDC	4	–	RTD temperature module	PT100/1000	**4 940.00**
DVP06PT-S	24 VDC	6	–	RTD temperature module	PT100/1000	**5 780.00**
DVP04TC-S*	24 VDC	4	–	thermocouple temp. module	(J,K,R,S,T)	**4 950.00**
* *Built-in RS-485 interface for stand-alone applications*						

DVP02 series - Temperature control modules *(universal input)*

DVP02 series offers reliable and flexible integration into complex automation systems, ensuring accurate and optimal temperature regulation.

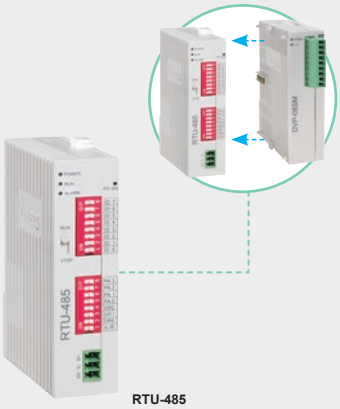
- Analog inputs: 0 - 10V, 0 - 5V, 0 - 50mV, 0 - 20mA, 4 - 20mA
- Resolution: Analog 16-bit, Sensor: 0.1°C
- Thermocouple: J, K, R, S, T, E, N, B, C, L, U, TXK, PLII
- Control modes: Built-in PID program control / manual control
- RTD: Pt100, JPt100, Pt1000, Cu50, Cu100, Ni100, Ni1000, LG-Ni1000
- Configuration: Using TKSoft *(embedded in ISPSoft)*

DVP02TK series - *Built-in RTU-485*		(AI)	(AO)			
DVP02TKL-S	24 VDC	2	2	analog output	voltage/current	**4 140.00**
DVP02TKN-S	24 VDC	2	–	NPN output	4 x digital out	**4 060.00**
DVP02TKR-S	24 VDC	2	–	relay output	4 x digital out	**4 060.00**
DVP02TU series						
• Expandable:	Expansion module for DVP02TK Series (Max. 8 modules)					
DVP02TUL-S	24 VDC	2	2	analog output	voltage/current	**3 380.00**
DVP02TUN-S	24 VDC	2	–	NPN output	4 x digital out	**3 380.00**
DVP02TUR-S	24 VDC	2	–	relay output	4 x digital out	**3 380.00**
Positioning control module	*(single axis, 200kHz)*					
DVP01PU-S	single-axis, 200kHz			servo/stepper position control module		**6 730.00**
Communication modules						
DVPDT01-S	DeviceNet			slave communication module		**6 480.00**
DVPPF01-S	PROFIBUS-DP			slave communication module		**9 860.00**

Above ZAR prices do not include VAT. E&OE

EtherCAT Modbus EtherNet/IP

DVP202LC -SL


RTU-485

RTU-ECAT

DVP08ST11N

High-speed extension modules for SA/SE/SX/SV PLCs *(left-side mount)*

Extension modules simply clip onto CPUs to add many additional functions, additional analog I/Os, communication and load cell monitoring.

- Simply clips onto and derives supply from main the CPU - analogue cards require seperate supply

type	supply	inputs (AI)	outputs (AO)	description	output type	price
Analog I/O extension modules *(left-side high-speed)*						
• Signal range:	Input: 1- 5V, 0 - 5V, ±5V, 0 -10V, ±10V, 4 - 20mA, 0 - 20mA, ± 20mA Output: 0 - 10V, ±10V, 4 - 20mA, 0 - 20mA					
• Resolution:	16-bit					
• Conversion time:	250 µs / Channel					
DVP04AD-SL	24 VDC	4	–	extension module	–	**5 650.00**
DVP04DA-SL	24 VDC	–	4	extension module	analog	**8 090.00**
Load cell modules *(left-side high-speed)*						
• Resolution:	24-bit					
• Measurable range:	0 - 80mV/V					
• Connectable to:	4-wire / 6-wire load cell sensor					
• Easy to use LCSoft for configuration and monitoring load cell module (RS-232, RS-485)						
• DVP211LC-SL has programmable DI/O *(tare, max etc.)* and AO *(retransmission)*						
DVP201LC-SL	24 VDC	1	–	load cell input module	–	**5 870.00**
DVP211LC-SL	24 VDC	1	1	load cell input module	2DI / 4DO	**9 160.00**
DVP202LC-SL	24 VDC	2	–	load cell input module	–	**8 270.00**
Communication modules *(left-side high-speed)*						
DVPEN01-SL	Ethernet / Modbus TCP			communication module	10/100Mbps	**6 560.00**
DVPDNET-SL	DeviceNet			communication module	500kbps	**6 520.00**
DVPCOPM-SL	CANopen			communication module	1Mbps	**6 520.00**
DVPSCM12-SL	RS-485/RS-422			serial communication module	460kbps	**7 720.00**
DVPSCM52-SL	BACnet MS/TP			slave communication module	460kbps	**15 900.00**
Remote I/O communication modules						
RTU-485	Modbus RS-485			max. 8 special modules and 128DI and 128DO		**2 640.00**
RTU-EN01	Modbus TCP/IP			max. 8 special modules and 128DI and 128DO		**7 950.00**
RTU-PD01	PROFIBUS-DP			max. 8 special modules and 128DI and 128DO		**10 600.00**
RTU-ECAT	EtherCAT			max. 8 special modules and 128DI and 128DO		**3 960.00**
Accessories *for S series PLCs*						
Power supply modules *(DIN-rail mounting)*	input	output				
DVPPS01	100-240 VAC	24 VDC	1A	power supply module		**895.00**
DVPPS02	100-240 VAC	24 VDC	2A	power supply module		**1 160.00**
DVPPS05	100-240 VAC	24 VDC	5A	power supply module		**2 140.00**
Accessories and cables						
UC-PRG020-12A	8-pin mini-DIN+female DB9 connector to USB *(type A)* connector				2 meter	**959.00**
UC-PRG030-01A	mini USB connector to USB *(type A)* connector				3 meter	**242.00**
UC-MS030-01A	8-pin mini-DIN connector to female DB9 connector RS-232				3 meter	**216.00**
IFD6500	RS-485 to USB (type A) converter module					**1 080.00**
DVP08ST11N	8-point input selector switch module for DVP-S series					**2 180.00**
DVPPCC01	program-data backup memory card for all DVP series *(64k words)*					**1 970.00**

DIAStudio

Smart Machine Suite

DIAStudio is a unified engineering platform by Delta that streamlines automation system development. It integrates programming, parameter configuration, and HMI programming, simplifying processes and saving time and costs

DVP PLC ES3/EX3 series is the latest version of Delta's brick-type PLC range. Features include a new, enhanced processing unit, larger programming capacity and multiple communication ports with robust network functions and compatibility with DIAStudio. Compared with the previous generation, the ES3 series offers a larger capacity, faster execution speed, and enhanced interoperability.

Common characteristics:

- 32-bit CPU for high-speed processing
- Program capacity: 64k steps — Data register: 64k words
- Software: — DIADesigner / ISPSoft
- Min. execution time of basic instruction: 25ns
- Built-in Ethernet port, 2x RS-485 ports, USB port, CANopen port, Micro SD card interface.
- Supports EtherNet/IP, Modbus TCP, CANopen DS301 *(64 Devices)*
- Removable terminal blocks

Excellent motion control:

- High-speed counter: 200 kHz x 4 *(A/B phase)*
- High-speed pulse out: 200 kHz x 4 *(pulse + direction)*
- 2-axis interpolation *(linear and arc)*
- 8 axes CANopen point-to-point motion control *(with Delta servo drives only)*

DVP32ES300R

type	supply	inputs (DI)	outputs (DO)	width (mm)	description	output type	price
ES3 series - Brick-type PLC	230 VAC				(H) 90 x (D) 78 mm		

Delta's third generation DVP ES3 series employs the AS series PLCs 32-bit high-speed processor, provides a user-friendly programming interface, 4-high-speed counter inputs, and up to 4-axis control outputs *(pulse)*.

Applications:

Packaging machines, precision textile machines, large-scale warehousing, logistics systems etc...

Relay output

DVP32ES300R	100-240 VAC	16	16	165	brick-type PLC	relay	**10 100.00**
DVP48ES300R	100-240 VAC	24	24	216	brick-type PLC	relay	**10 900.00**
DVP64ES300R	100-240 VAC	32	32	267	brick-type PLC	relay	**12 100.00**
DVP80ES300R	100-240 VAC	40	40	310	brick-type PLC	relay	**14 300.00**

Transistor output

DVP32ES300T	100-240 VAC	16	16	165	brick-type PLC	transist (NPN)	**10 100.00**
DVP48ES300T	100-240 VAC	24	24	216	brick-type PLC	transist (NPN)	**10 900.00**
DVP64ES300T	100-240 VAC	32	32	267	brick-type PLC	transist (NPN)	**12 100.00**
DVP80ES300T	100-240 VAC	40	40	310	brick-type PLC	transist (NPN)	**14 300.00**

DVP36EX300R

EX3 series - Analog I/O PLC	230 VAC					(H) 90 x (D) 78 mm	

Delta's third generation DVP EX3 series employs the AS series PLCs 32-bit high-speed processor with a user-friendly programming interface, built-in analog I/O, and multiple communication ports.

Applications:

Processing machines, injection moulding machines, packaging machines, precision textile machines.

- Built-in 2 x 12-bit analog inputs and 2 x 12-bit analog outputs (DVP36EX)
- Built-in PID auto-tuning function, offering a complete analog control solution

					AI	AO		
DVP22EX300R	100-240 VAC	12	8	165	2	–	relay	**11 500.00**
DVP36EX300R	100-240 VAC	16	16	216	2	2	relay	**16 300.00**
DVP22EX300T	100-240 VAC	12	8	165	2	–	transist (NPN)	**11 500.00**
DVP36EX300T	100-240 VAC	16	16	216	2	2	transist (NPN)	**16 300.00**

I/O extension modules for ES/EX series						(H) 90 x (D) 78 mm	

- Plugs directly into PLC - 24 VDC - supply derived from MPU *(limited to 12W)*

DVP16XP2...

Digital input/output modules

DVP08XM211N	24 VDC	8	–	45	expansion module	–	**1 520.00**
DVP16XM211N	24 VDC	16	–	70	expansion module	–	**2 710.00**
DVP08XN211R	24 VDC	–	8	45	expansion module	relay	**2 460.00**
DVP16XN211R	24 VDC	–	16	70	expansion module	relay	**3 820.00**
DVP08XP211R	24 VDC	4	4	45	expansion module	relay	**1 960.00**
DVP16XP211R	24 VDC	8	8	70	expansion module	relay	**3 630.00**
DVP08XN211T	24 VDC	–	8	45	expansion module	transist (NPN)	**2 460.00**
DVP16XN211T	24 VDC	–	16	70	expansion module	transist (NPN)	**3 820.00**
DVP08XP211T	24 VDC	4	4	45	expansion module	transist (NPN)	**1 960.00**
DVP16XP211T	24 VDC	8	8	70	expansion module	transist (NPN)	**3 630.00**

Above ZAR prices do not include VAT. E&OE

DVP24XN...

DVP04AD-E2

DVP04PT-E2

DVP16EC00R3

DVPPCC01

I/O extension modules for ES and EX

- Plugs directly into PLC - 24 VDC - supply derived from MPU *(limited to 12W)*

type	supply	inputs (DI)	outputs (DO)	width (mm)	description	output type	price
I/O 24/32 modules for ES/EX series - *230 VAC power supply required*						(H) 90 x (D) 78 mm	
• Incorporates 24 VDC output supply 100mA (2.4W) for other modules							
DVP24XN200R	24 VDC	–	24	145	expansion module	relay	**5 300.00**
DVP24XP200R	24 VDC	16	8	145	expansion module	relay	**4 580.00**
DVP32XP200R	24 VDC	16	16	145	expansion module	relay	**6 010.00**
DVP24XN200T	24 VDC	–	24	145	expansion module	transist (NPN)	**5 300.00**
DVP24XP200T	24 VDC	16	8	145	expansion module	transist (NPN)	**4 580.00**
DVP32XP200T	24 VDC	16	16	145	expansion module	transist (NPN)	**6 010.00**
Analog I/O extension modules for ES/EX series						(H) 90 x (D) 78 mm	
Analog extension modules for ES/EX series							
• Analog input: Voltage: (±10V, ±5V) / Current: (±20mA, 0 - 20mA, 4 - 20mA)							
• Analog output: Voltage: (±10V) / Current: (0 - 20mA, 4 - 20mA)							
• Resolution: 14-bit							
		AI	AO				
DVP04AD-E2	24 VDC	4	–	70	expansion module	analog inputs	**4 240.00**
DVP02DA-E2	24 VDC	–	2	70	expansion module	analog outputs	**4 940.00**
DVP04DA-E2	24 VDC	–	4	70	expansion module	analog outputs	**5 910.00**
DVP06XA-E2	24 VDC	4	2	70	expansion module	analog I/O	**5 910.00**
Temperature measurement modules for ES/EX						(H) 90 x (D) 78 mm	
RTD	**Pt100, Pt1000, Ni100, Ni1000** - *sensor input / 0-300Ω resistance input*						
• Resolution: 16-bit							
• With PID temperature control							
DVP04PT-E2	24 VDC	4 points		70	resistance Pt100/1000, Ni100/1000		**5 480.00**
Thermocouple	**type J, K, R, S, T, E, N** - *sensor input / -80mV...+80mV voltage input*						
• Resolution: 20-bit							
• With PID temperature control							
DVP04TC-E2	24 VDC	4 points		70	thermocouple J,K,R,S,T,E,N		**5 480.00**
DVP-EC3 series PLC *(Basic)*	230 VAC					*(H) 90 x (D) 78 mm*	

DVP-EC3 series is the most economical solution for sequential control and communication monitoring for smaller applications with simple RS-485/MODBUS communication.

- Program capacity: 4k steps
- Mounting: DIN-rail or chassis mounting
- Built-in high-speed counters: 20 kHz x 2 / 10kHz x 2 *(single phase)* or 4kHz x 1 *(A/B phase)*
- MPU I/O points: 10/16/24/32/40 points *(not expandable)*
- COM ports: built-in RS-232 & RS-485 *(only for 16/24/32/40 points)*

type	supply	inputs (DI)	outputs (DO)	width (mm)	description	output type	price
DVP-EC3 series PLC *(Basic)*							
DVP10EC00R3	100-240 VAC	6	4	95	standard econo PLC	relay	**3 430.00**
DVP16EC00R3	100-240 VAC	8	8	95	standard econo PLC	relay	**4 250.00**
DVP24EC00R3	100-240 VAC	12	12	150	standard econo PLC	relay	**5 240.00**
DVP32EC00R3	100-240 VAC	16	16	150	standard econo PLC	relay	**6 120.00**
DVP40EC00R3	100-240 VAC	24	16	164	standard econo PLC	relay	**6 820.00**

Accessories for DVP-ES/EX/EC PLC

DVPPCC01	program-data backup memory card	DVP with RS232		*(64k words)*	**1 970.00**
UC-PRG020-12A	mini-DIN to USB (type-A)	programming cable	2 m	PLC to PC	**959.00**
UC-MS030-01A	male mini-DIN to female DB9	programming cable	3 m	PLC to HMI	**216.00**
DVPAEXT01-E2	extends distance between I/O modules			DVP-ES/EX	**2 200.00**

DIAStudio

DIASelector Product selection

DIADesigner PLC VFD Servo

DIADesigner-AX Codesys

DIAScreen HMI

The AS series - Compact modular mid-range PLC

The AS series is a high-performance multi-purpose controller designed for all types of automated equipment. It features 32-bit SoC CPUs for enhanced execution speed (40k steps/ms), supporting up to 32 extension modules or up to 1,024 inputs/outputs. Providing accurate positioning control for up to 8 axes via CANopen motion network and 6 axes via pulse control (200kHz). Widely used in diverse automated equipment, electronics manufacturing, labelling, food packaging, and textile machines.

Equipped with CANopen and EtherNet/IP network communication for high-speed data transmission. The professional yet simple editing software DIADesigner delivers quick hardware and network configuration with built-in function blocks for different industries with multi-layer password protection for enhanced system security.

New

- 32-bit CPU for high-speed processing
- Max. execution speed of basic instructions: 25 ns
- Built-in mini USB, micro SD slot RS-232 / 2x RS-485 com ports *(Master/Slave)*, Ethernet IP *(Adaptor and scanner)*
- Rackless design (no-backplane) direct DIN-rail mounting, patented DIN-rail clips for fast module installation

AS164...

type	supply	digital inputs	digital output	analog inputs	analog output	description	output type	price
AS100 series - CPU		*(64k steps / 64k words)*				(H) 88 x (W) 156/207/250 x (D) 75mm		
• Communication ports:		USB, Ethernet, 2 x RS-485, CANopen						
• PLC width:		**AS13** *(156 mm)* / **AS14** *(207 mm)* / **AS16** *(250 mm)*						
AS132R-A	100-240 VAC	16	16	–	–	AS100 CPU module	relay	**11 700.00**
AS132P-A	100-240 VAC	16	16	–	–	AS100 CPU module	transist (PNP)	**11 700.00**
AS148R-A	100-240 VAC	24	24	–	–	AS100 CPU module	relay	**13 700.00**
AS148P-A	100-240 VAC	24	24	–	–	AS100 CPU module	transist (PNP)	**13 700.00**
AS164R-A	100-240 VAC	32	32	–	–	AS100 CPU module	relay	**15 700.00**
AS164P-A	100-240 VAC	32	32	–	–	AS100 CPU module	transist (PNP)	**15 700.00**
AS200 series - CPU		*(64k steps / 64k words)*				(H) 88 x (W) 88 x (D) 96mm		
• Communication ports:		USB, Ethernet, 2 x RS-485, CANopen						
• Plug-in terminals:		Screwless *(push-in)* terminals for ease of wiring and maintenance						
AS228R-A	24 VDC	16	12	–	–	AS200 CPU module	relay	**10 600.00**
AS228T-A	24 VDC	16	12	–	–	AS200 CPU module	transist (NPN)	**10 600.00**
AS228P-A	24 VDC	16	12	–	–	AS200 CPU module	transist (PNP)	**10 600.00**
AS218RX-A	24 VDC	8	6	2	2	AS200 CPU module	relay	**10 600.00**
AS218TX-A	24 VDC	8	6	2	2	AS200 CPU module	transist (NPN)	**10 600.00**
AS218PX-A	24 VDC	8	6	2	2	AS200 CPU module	transist (PNP)	**10 600.00**
AS300 series - CPU		*(128k steps / 64k words)*				(H) 88 x (W) 88 x (D) 96mm		
• Communication ports:		USB, Ethernet, 2 x RS-485, *(accepts 2 x AS-F function cards)*						
• Plug-in terminals:		Screwless *(push-in)* terminals for ease of wiring and maintenance						
AS300N-A	24 VDC	–	–	–	–	AS300 CPU module	–	**7 410.00**
AS320T-B	24 VDC	8	12	–	–	AS300 CPU module	transist (NPN)	**10 600.00**
AS320P-B	24 VDC	8	12	–	–	AS300 CPU module	transist (PNP)	**10 600.00**
AS332T-A*	24 VDC	16	16	–	–	AS300 CPU module	transist (NPN)	**13 000.00**
AS332P-A*	24 VDC	16	16	–	–	AS300 CPU module	transist (PNP)	**13 000.00**
AS324MT-A❖	24 VDC	12	12	–	–	AS300 CPU module	differential type	**13 000.00**

AS228R-A

* *Highdensity MIL terminal block, see page* ***C-18***

❖ *2 axes 4MHz + 4 axes 200kHz output / 2 channels 4MHz + 4 channels 200kHz input*

AX-3 CODESYS solution		*(8MB program capacity)*						
• Communication ports:		USB, RS-232/485, Ethernet *(switch)*, EtherCAT *(**AX-3xxE** only)*						
• Built-in encoder interface:		2 x Incremental encoder / 1 x SSI absolute encoder						
• Pulse train interface:		200kHz pulse output: 4 axes / 200kHz high-speed counters: 6 CHs						
• Basic instruction:		5 ns						
• Plug-in terminals:		Screwless *(push-in)* terminals for ease of wiring and maintenance						
AX-300NA0PA1	24 VDC	–	–	–	–	AX3 CPU module	transist (PNP)	**18 900.00**
AX-324NA0PA1P	24 VDC	16	8	–	–	AX3 CPU module	transist (PNP)	**22 400.00**
EtherCAT CPU								
AX-304ELA0PA1P	24 VDC	16	8	–	–	4 axes P2P CPU	transist (PNP)	**22 400.00**
AX-308EA0MA1T	24 VDC	16	8	–	–	8 axes AX3 CPU	transist (NPN)	**31 000.00**
AX-8 motion control system		*(1GB program capacity)*						
• Motion control:		Supports up to 16 Delta EtherCAT servos *(min. sync time: 1ms/ 16 axes)*						
• Motion commands:		Position, velocity, torque, multi-axis interpolation, E-gear, E-CAM, G-code						
• Communication ports:		USB, Ethernet, RS232, RS485, EtherCAT, Profinet slave						
• Built-in encoder interface:		1 x incremental encoder / 1 x SSI absolute encoder						
AX-816EP0CB1P	24 VDC	8	8	–	–	16 axes AX8 CPU	transist (PNP)	**51 200.00**
Up to 128 axes on request								

CODESYS AX

New

AX-304ELA0PA1P

Above ZAR prices do not include VAT. E&OE

AS series - Input/output *(I/O) modules and accessories*

Includes digital I/O modules *(output/input/mix),* analog I/O modules *(output/input/mix),* temperature measurement modules, load cell modules, communication modules and function cards.

type	supply	inputs	output	module width	description	output type	price
Digital I/O modules						(H) 88 x (D) 92 mm	
• Plug-in, screwless *(push-in)* terminals *(32 and 64 I/O modules have high-density MIL connectors)*							
Input modules							
AS08AM10N-A	24 VDC	8 DI	–	25 mm	digital input module	–	**1 480.00**
AS16AM10N-A	24 VDC	16 DI	–	35 mm	digital input module	–	**3 140.00**
AS32AM10N-A*	24 VDC	32 DI	–	25 mm	digital input module	–	**4 710.00**
AS64AM10N-A*	24 VDC	64 DI	–	35 mm	digital input module	–	**7 010.00**
Digital output modules							
AS08AN01R-A	24 VDC	–	8 DO	25 mm	digital output mod.	relay (2A)	**2 220.00**
AS08AN01T-A	24 VDC	–	8 DO	25 mm	digital output mod.	transist (NPN)	**2 220.00**
AS08AN01P-A	24 VDC	–	8 DO	25 mm	digital output mod.	transist (PNP)	**2 220.00**
AS16AN01R-A	24 VDC	–	16 DO	35 mm	digital output mod.	relay (2A)	**3 330.00**
AS16AN01T-A	24 VDC	–	16 DO	35 mm	digital output mod.	transist (NPN)	**3 330.00**
AS16AN01P-A	24 VDC	–	16 DO	35 mm	digital output mod.	transist (PNP)	**3 330.00**
AS32AN02T-A*	24 VDC	–	32 DO	25 mm	digital output mod.	transist (NPN)	**4 900.00**
AS64AN02T-A*	24 VDC	–	64 DO	35 mm	digital output mod.	transist (NPN)	**7 390.00**
* *High-density MIL terminal block, see page* ***C-18***							
Digital mixed I/O modules							
AS16AP11R-A	24 VDC	8 DI	8 DO	35 mm	digital I/O mod.	relay (2A)	**3 140.00**
AS16AP11T-A	24 VDC	8 DI	8 DO	35 mm	digital I/O mod.	transist (NPN)	**3 140.00**
AS16AP11P-A	24 VDC	8 DI	8 DO	35 mm	digital I/O mod.	transist (PNP)	**3 140.00**
Analog I/O modules						(H) 88 x (W) 35 x (D) 95 mm	
• Single channel on/off setting to enhance overall conversion efficiency							
• Wire break detection at 1-5V and 4-20mA							
• **Voltage in:** 1-5V, 0-5V, -5...5V, 0-10V, -10...10V					**Current in:** 4-20mA, 0-20mA, -20...20mA		
• **Voltage out:** 0-10VDC, ±10VDC					**Current out:** 4-20mA, 0-20mA		
Analog input module		*Hardware resolution: 16-bit*					
AS02ADH-A	24 VDC	2 AI	–		(20μs) conversion time	voltage and current input	**6 930.00**
AS04AD-A	24 VDC	4 AI	–			voltage and current input	**4 710.00**
AS08AD-B	24 VDC	8 AI	–			voltage input	**7 410.00**
AS08AD-C	24 VDC	8 AI	–			current input	**7 410.00**
Analog output module		*Hardware resolution: 12-bit*					
AS04DA-A	24 VDC	–	4 AO	35 mm		voltage and current output	**6 280.00**
Analog mixed I/O module		*Hardware resolution: 16-bit (input) / 12-bit (output)*					
AS06XA-A	24 VDC	4 AI	2 AO	35 mm		voltage and current input/output	**5 360.00**
Temperature measurement modules		*resolution: 0.1°C*				(H) 88 x (W) 35 x (D) 95 mm	
Pt, Ni temperature sensor						*±0.1% overall accuracy*	
• Pt100/1000, Ni100/1000, JPt100, LG-Ni1000, Cu50/100, resistor 0-300/3000Ω							
AS04RTD-A	24 VDC	4 CH		35 mm		Pt, Ni temperature sensor module	**5 450.00**
AS06RTD-A	24 VDC	6 CH		35 mm		Pt, Ni temperature sensor module	**6 790.00**
Thermocouple temperature sensor						±0.5% overall accuracy	
• Thermocouple - J, K, R, S, T, E, N, B; ±100mV							
AS04TC-A	24 VDC	4 CH		35 mm		Thermocouple temperature sensor module	**5 450.00**
AS08TC-A	24 VDC	8 CH		35 mm		Thermocouple temperature sensor module	**8 160.00**
Power supply modules *(clips onto left-side of CPU)*						(H) 88 x (D) 92 mm	
AS-PS02	100-240 VAC	24VDC	2A	70 mm		power supply	**1 570.00**
AS-PS02A	100-240 VAC	24VDC	1.5A	70 mm	0.5A for external I/O	power supply	**1 850.00**
AS-ATXB*	moves the CPU power connector from left-side to the bottom					power adaptor	**531.00**
* *Used with external power supplies for PLC racks requiring more than 2A supply*							

AS04AD-A

AS08TC-A

AS-PS02

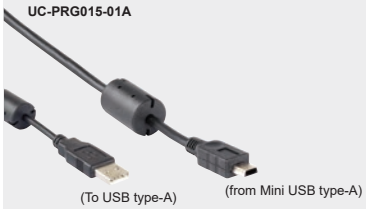
AS series - Input/output *(I/O) modules and accessories*

Includes digital I/O *(output/input/mix)*, analog I/O *(output/input/mix)*, temperature measurement, load cell, communication and function cards.

For applications including electronics manufacturing, labelling, food packaging, and textile machines.

type	supply	inputs	output	description	price
Communication and function modules				(H) 88 x (W) 56 x (D) 75 mm	
Communication extension module				*accepts 2 x AS-F communication and/or analog function cards*	
• Supports standard Modbus protocols and user-defined protocols					
AS00SCM-A	24 VDC			function card module for CPU / remote I/O interface	**3 870.00**
above **AS00SCM-A** *can receive 2x optional communication / function cards (below)*					
Communication / Function cards *(isolated)*				(H) 37 x (W) 24 x (D) 59.3 mm	
• Plug directly into AS300 main CPU or AS00SCM-A extension module					
Communication cards					
AS-F232	RS-232			RS-232 interface for AS300 or AS00SCM-A	**920.00**
AS-F485	RS-485			RS-485 interface for AS300 or AS00SCM-A	**1 020.00**
AS-FCOPM	CANopen			Canopen DS301 interface for AS300 or AS00SCM-A	**2 310.00**
AS-FPFN02*	Profinet			Profinet Slave interface for AS300 or AS00SCM-A	**6 460.00**
AS-FEN02*	Ethernet			E/IP adaptor or Modbus TCP interface for AS300 or AS00SCM-A	**3 670.00**
AS-FFTP01*	Ethernet			MQTT Client, FTP, OPC-UA and Web Servers for AS300	**4 880.00**
AS-FECAT*	EtherCAT			Ethercat 16 Axes point-to-point positioning for AS300	**7 470.00**
* *Occupies both function card slots*					
Analog I/O function cards				*plug directly into main* **AS300** *CPU or* **AS00SCM-A** *module*	
AS-F2AD	analog	2 AI	–	0-10V (12-bit), 4-20mA (11-bit)	**1 850.00**
AS-F2DA	analog	–	2 AO	0-10V, 4-20mA (12-bit)	**2 220.00**
DeviceNet communication module				(H) 88 x (W) 35 x (D) 84 mm	
• DeviceNet protocol					
• Master / Slave modes					
• RTU function					
AS01DNET-A	DeviceNet			supports master / slave modes, supports RTU function	**6 490.00**
EtherCAT remote I/O module				(H) 88 x (W) 56 x (D) 95 mm	
• EtherCAT Protocol					
• Supports PDO, SDO, Hot connect					
• Built-in 8 DI *(2CH 200kHz)* / 8 DO *(2 axes 200kHz)*					
• Supports right-side extension with AS series modules					
ASRTU-EC16AP1TA	EtherCAT	8 DI	8 DO	EtherCAT remote I/O module NPN	**7 390.00**
ASRTU-EC16AP1PA	EtherCAT	8 DI	8 DO	EtherCAT remote I/O module PNP	**7 390.00**
Load cell module				(H) 88 x (W) 35 x (D) 95 mm	
• Max load cell distance: 100m					
• Selectable signal input ranges: 0…1 / 2 / 4 / 20 / 40 / 80 mV/V					
• High-speed dynamic measurement: 2.5 - 400 ms conversion time					
• Supports 4 wire / 6 wire load cell sensor					
AS02LC-A	24 VDC	2 CH		16bit load cell module	**8 950.00**
IO-Link module				(H) 88 x (W) 35 x (D) 95 mm	
• 4 IO-link ports					
• Supported baud rates: 4.8 / 38.4 / 230.4 kbps					
• Max. process data size: 32 bytes *(channel)* / 128 bytes *(module)*					
AS04SIL-A	24 VDC	4 CH		I/O link master module	**6 300.00**
Motion modules				(H) 88 x (W) 35 x (D) 95 mm	
Position module *(pulse unit module)*					
• Output: 200 kHz x2					
• Input: 200 kHz x 1					
AS02PU-A	24 VDC	2 CH		differential pulse/position module	**6 980.00**
High-speed counter module					
• Open collector / Differential					
• Incremental / absolute (SSI)					
AS02HC-A	24 VDC	2 CH		200kHz, high-speed counter module	**8 240.00**

Above ZAR prices do not include VAT. E&OE



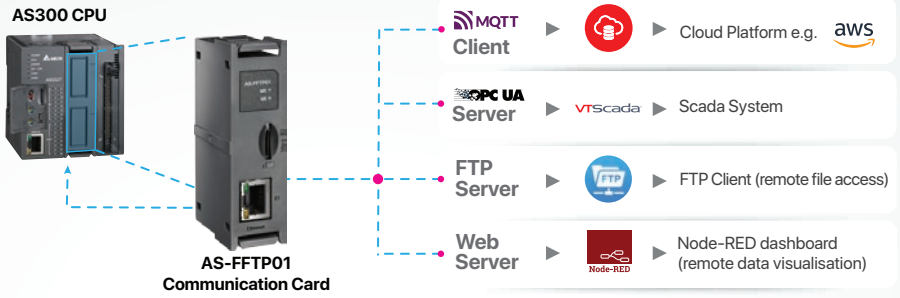
AS series - Cables and termination accessories

type	from connector	description	to connector	cable length	price
I/O Cables for AS series PLCs					
PLC programming cables					
UC-PRG015-01A	mini USB	PLC to PC communication cable	USB type A	1.5 m	**216.00**
UC-PRG030-01A	mini USB	PLC to PC communication cable	USB type A	3 m	**242.00**
UC-PRG030-20A	RJ45	PLC/HMI to PC comm. cable	RJ45	3 m	**548.00**
Network cables					
UC-CMC003-01A	RJ45	CANopen / DeviceNet / DMCNET	RJ45	0.3 m	**157.00**
UC-CMC005-01A	RJ45	CANopen / DeviceNet / DMCNET	RJ45	0.5 m	**157.00**
UC-CMC010-01A	RJ45	CANopen / DeviceNet / DMCNET	RJ45	1 m	**203.00**
UC-CMC020-01A	RJ45	CANopen / DeviceNet / DMCNET	RJ45	2 m	**301.00**
UC-CMC030-01A	RJ45	CANopen / DeviceNet / DMCNET	RJ45	3 m	**542.00**
UC-EMC005-02C	RJ45	EtherCAT *(high noise immunity)*	RJ45	0.5 m	**1 490.00**
UC-EMC010-02C	RJ45	EtherCAT *(high noise immunity)*	RJ45	1 m	**1 600.00**
UC-EMC020-02C	RJ45	EtherCAT *(high noise immunity)*	RJ45	2 m	**1 810.00**
UC-EMC050-02C	RJ45	EtherCAT *(high noise immunity)*	RJ45	5 m	**2 310.00**
UC-EMC005-02B	RJ45	EtherCAT communication cable	RJ45	0.5 m	**346.00**
UC-EMC010-02B	RJ45	EtherCAT communication cable	RJ45	1 m	**460.00**
UC-EMC020-02B	RJ45	EtherCAT communication cable	RJ45	2 m	**644.00**
I/O extension cables		for connecting I/O modules and external terminal modules			
UC-ET020-24B	ID 40pin	I/O extension cable *(shielded)*	ID 40pin	2 m	**1 440.00**
UC-ET030-24B	ID 40pin	I/O extension cable *(shielded)*	ID 40pin	3 m	**1 680.00**
UC-ET020-24D	ID 40pin	I/O extension cable *(shielded)*	2x ID20pin	2 m	**2 160.00**
UC-ET030-24D	ID 40pin	I/O extension cable *(shielded)*	2x ID20pin	3 m	**2 520.00**
External terminal modules		external terminal modules for digital modules		H x W	
UB-10-OR16A	ID 20pin	16 relay outputs *(NPN to relay)*	screw	87 x 113	**2 300.00**
UB-10-OR16B	ID 20pin	16 relay outputs *(PNP to relay)*	screw	87 x 113	**2 300.00**
UB-10-ID16A	ID 20pin	16 inputs/outputs *(NPN / PNP)*	screw	87 x 67	**835.00**
UB-10-ID32A	ID 40pin	32 inputs	screw	87 x 113	**1 190.00**
UB-10-OT32A	ID 40pin	32 transistor outputs *(NPN out)*	screw	87 x 113	**1 190.00**
UB-10-IO32D	ID 40pin	32 transistor outputs *(NPN out)*	screw	87 x 113	**2 030.00**

Communications modules - AS300 series

Industrial Internet of Things (IIoT) Solution:

AS-FFTP01 communication card allows for remote data access, connectivity to SCADA via OPC-UA, and connectivity to cloud via MQTT



EtherCAT P2P Positioning Solution:

AS-FECAT communication card provides up to 16 axes P2P positioning with Delta Drives and remote I/Os via Ethercat

AH500 series - Programmable Logic Controllers (PLCs)

AH Series PLC provides automation solutions for high-level applications. Modular hardware structure, advanced functions and highly integrated software provides system solutions for advanced process control. In addition to various function blocks, excellent performance ratio and an abundant selection of extension modules providing exceptional system expansion ability, greatly reducing system cost for a broad range of applications.

- LD / SFC / FBD / IL / ST languages with ISP soft
- Enhanced flexibility: Max. 100 meters between 2 local extension racks
- Redundant system and hot-swapping function keeps systems running for improved maintainability
- CPU built-in with fully isolated RS-232/422/485, Mini-USB, Ethernet, SDHC Card slot
- Expansion modules: DIO, AIO, temperature measurement, network, pulse-train and Ethercat motion control
- Max. I/O points: DIO: Max. 4.352 points AIO: Max. 544 channels
  RIO: Max. 125.440 digital points / 3.920 analog channels
- Program capacity: Max. 1M steps (4 MB) / Data register (D+L) 512K words
- Excellent program execution speed: LD execution speed 0.02 μs

AHCPU500-RS2

type	local I/O (points)	program capacity (steps)	data register (K words) D	L	B	function blocks	extension backplane	price
RS2 series - CPU modules built-in RS-232/422/485 multi-modes communication port x 2								
AHCPU500-RS2	768	48k (196 KB)	24	24	512	512	0	**11 200.00**
AHCPU511-RS2	1280	96k (384 KB)	48	48	1024	1024	1	**12 900.00**
EN series - CPU modules *(with built-in EtherNet communication port 100Mbps)*								
• WEB/E-mail/IP Filter function • Built-in Ethernet communication port								
AHCPU511-EN	1280	96k (384 KB)	48	48	1024	1024	1	**28 600.00**
AHCPU521-EN	2304	192k (768 KB)	96	96	2048	2048	3	**32 300.00**
AHCPU531-EN	4352	384k (1.5 MB)	128	128	4096	4096	7	**36 200.00**

AHCPU521-EN

Backplanes

type	slots	description	price
AHBP04M1-5A	4	main backplane supports CPU, remote I/O modules	**5 000.00**
AHBP06M1-5A	6	main backplane supports CPU, remote I/O modules	**6 570.00**
AHBP08M1-5A	8	main backplane supports CPU, remote I/O modules	**7 820.00**
AHBP12M1-5A	12	main backplane supports CPU, remote I/O modules	**11 000.00**
AHBP06E1-5A	6	extension backplane supports CPU, remote I/O modules	**7 500.00**
AHBP08E1-5A	8	extension backplane supports CPU, remote I/O modules	**8 750.00**

Power supply modules

- Power supply for the modules on the racks

AHPS05-5A	60W	100 - 240 VAC	50/60Hz	power supply module	**5 630.00**
AHPS15-5A	36W	24 VDC		power supply module	**5 390.00**

AHBP06M1-5A

Digital I/O modules supports hot-swapping function

type	points in	out	signals	terminal type	description	price
Input modules • PNP/NPN mixed mode design • Individual LED status indicator						
AH16AM10N-5A	16	–	24 VDC 5mA	JIS removable	digital input module	**4 020.00**
AH16AM30N-5A	16	–	120 - 240 VAC	JIS removable	digital input module	**5 940.00**
AH32AM10N-5A	32	–	24 VDC 5mA	DB33	digital input module	**7 830.00**
AH32AM10N-5C*	32	–	24 VDC 5mA	MIL terminal	digital input module	**7 540.00**
AH64AM10N-5C*	64	–	24 VDC 3.2mA	MIL terminal	digital input module	**12 100.00**
Output modules						
AH16AN01R-5A	–	16	Relay (2A)	JIS removable	digital output module	**5 610.00**
AH16AN01T-5A	–	16	NPN *(Sink)*	JIS removable	digital output module	**4 450.00**
AH16AN01P-5A	–	16	PNP *(Source)*	JIS removable	digital output module	**5 170.00**
AH16AN01S-5A	–	16	TRIAC	JIS removable	digital output module	**6 040.00**
AH32AN02T-5A	–	32	NPN *(Sink)*	JIS removable	digital output module	**8 130.00**
AH32AN02T-5C	–	32	NPN *(Sink)*	EU Removable	digital output module	**7 540.00**
AH32AN02P-5C*	–	32	PNP *(Source)*	MIL terminal	digital output module	**8 620.00**
AH64AN02T-5C*	–	64	NPN *(Sink)*	MIL terminal	digital output module	**12 100.00**
AH64AN02P-5C*	–	64	PNP *(Source)*	MIL terminal	digital output module	**13 800.00**
Mixed input/output						
AH16AP11R-5A	8	8	Relay (2A)	JIS removable	digital I/O module	**4 820.00**
AH16AP11T-5A	8	8	NPN *(Sink)*	JIS removable	digital I/O module	**4 240.00**
AH16AP11P-5A	8	8	PNP *(Source)*	JIS removable	digital I/O module	**4 590.00**

AHPS05-5A

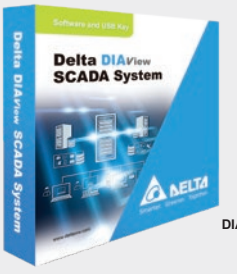
* *Highdensity MIL terminal block, see page* ***C-18***

Above ZAR prices do not include VAT. E&OE

AH16AM30N-5A

AH32AN02T-5C

AH16AP11R-5A



DIAV...

AH500 series - Extension modules

type	points in	points out	signals	terminal type	description	price
Analog I/O modules				supports hot-swapping function		
Analog input modules				Hardware resolution: 16-bit		
AH04AD-5A	4	–	0/1-5V, 0-10V, 0/4-20mA	JIS removable	analog input module	**12 300.00**
AH08AD-5B	8	–	0/1-5V, 0-10V, ±10V	JIS removable	analog input module	**18 400.00**
AH08AD-5C	8	–	0/4-20mA, ±20mA	JIS removable	analog input module	**18 500.00**
Analog output modules				Hardware resolution: 16-bit		
AH04DA-5A	–	4	0/1-5V, 0-10V, 0/4-20mA	JIS removable	analog output module	**16 500.00**
AH08DA-5B	–	8	0/1-5V, 0-10V	JIS removable	analog output module	**19 500.00**
AH08DA-5C	–	8	0/4-20mA	JIS removable	analog output module	**19 400.00**
Mixed analog input/output				Hardware resolution: 16-bit		
AH06XA-5A	4	2	0/1-5V, 0-10V, 0/4-20mA	JIS removable	analog I/O module	**18 100.00**
Temperature measurement modules				hardware resolution: 20-bit		
2/3/4-wire RTD input						
AH04PT-5A	4	–	PT100/1000, Ni100/1000, 0-300Ω	JIS removable	temperature module	**18 300.00**
Thermocouple						
AH04TC-5A	4	–	J,K,R,S,T,E,N	JIS removable	temperature module	**13 300.00**
AH08TC-5A	8	–	J,K,R,S,T,E,N	JIS removable	temperature module	**17 200.00**

AH500 accessories

type	signals	terminal type	description	price
Network modules			Supports hot-swapping function	
AH10EN-5A	Ethernet		ModbusTCP/Ethernet IP	**19 700.00**
AH10SCM-5A	RS485		Modbus / BacNet *(slave)*	**14 800.00**
Remote I/O RTU modules			module status LED indicator	
• Installed on main backplane • Supports max. speed of 1Mbps • Supports 7 extension backplanes				
AHRTU-ETHN-5A		Ethernet IP	remote I/O module	**8 360.00**
Motion control modules			module status LED indicator	
• UD/PD/AB/4AB modes				
High-speed counters				
AH02HC-5A	2-channel	EU terminal	2 high-speed counter channels	**19 700.00**
AH04HC-5A	4-channel	HDC terminal	4 high-speed counter channels	**29 400.00**
Pulse train motion control modules			module status LED indicator	
AH10PM-5A		HDC terminal	6-axis pulse train motion control module	**35 300.00**

Cables and accessories for AH500 PLC

type	standard length	connector type for which modules	price
AHACAB06-5A	0.6 meter	all main extension backplanes	**1 940.00**
AHACAB10-5A	1.0 meter	all main extension backplanes	**2 160.00**
AHACAB15-5A	1.5 meter	all main extension backplanes	**2 450.00**
AHACAB30-5A	3.0 meter	all main extension backplanes	**3 450.00**
AHASP01-5A		dummy module to protect empty backplane slots	**464.00**
AHADINADP1-5A		DIN-rail adaptor for rack installation	**365.00**
FMC-SD001G		SD memory card capacity 1GB	**2 940.00**
HASP-20-OPC01		Delta OPC server for AH500 series	**9 050.00**

DIAview standalone SCADA system

DIAview provides seamless integration with Delta PLCs, flexible variable management, a robust alarm system, easy VBScript language. Scalable I/O points and USB key-based licensing.

type	license	description	tags	price
DIAV-010640000C	64 points	DIAview SCADA license for	64 tags	**7 440.00**
DIAV-015120000C	512 points	DIAview SCADA license for	512 tags	**45 800.00**
DIAV-0000005UPC	upgrade	additional client licences	x 5	**6 600.00**
DIAV-0000010UPC	upgrade	additional client licences	x 10	**14 900.00**
DIAV-0300005UPA	upgrade	additional web browser licences	x 5	**35 300.00**
DIAV-0300010UPA	upgrade	additional web browser licences	x 10	**45 800.00**

DOP-100 series - HMI *(Human Machine Interface) touch screens*

DOP-100 series HMIs are a versatile and robust touch screen interface that can be combined with over 30 other 3rd party brands and models of PLCs or controllers for effortless communication and reliable operation.

- Pressing Times: >10 000,000
- FTP/email supported: Simple data transmission and real-time status updates-support gmail
- PCB coating: Coating for enhanced durability and to protect against humidity and dust
- Power isolation: Built-in power isolation circuits provides protection against accidental external spikes
- Isolated comm. Interface: built-in serial communication port and Ethernet isolation circuits to protect against noise
- Supports VNC: For remote operation

DOP-103BQ

DOP-107WV

DOP-115MX

type	display size	version	Ethernet	host ports SD/USB	description	price
DOP-103				(H) 103 x (W) 137 x (D) 37.1 mm		
• Resolution:	480 x 272 pixels					
• Panel cutout:	92.8 x 118.8 mm					
DOP-103BQ	**4.3”**	basic	–	USB	2x COM ports	**5 370.00**
DOP-103WQ	**4.3”**	advanced	Yes	USB	2x COM ports	**6 870.00**
DOP-107				(H) 161 x (W) 215 x (D) 26.2 mm (BV) / 51.2 mm (EV)		
• Resolution:	800 x 480 pixels					
• Panel cutout:	142.9 x 196.9 mm					
DOP-107BV	**7”**	basic	–	USB	2x COM ports	**5 870.00**
DOP-107EV	**7”**	standard	Yes	USB	3x COM ports	**7 730.00**
Squared version	(H) 144 x (W) 184 x (D) 42.8 mm					
• Panel cutout:	132.4 x 172.4 mm					
DOP-107EG	**7”**	standard	Yes	SD/USB	3x COM ports	**9 300.00**
Narrow border	(H) 136 x (W) 196 x (D) 32 mm					
• Panel cutout:	*126.8 x 186.8 mm*					
DOP-107WV	**7”**	advanced	Yes	SD/USB	3x COM ports	**9 500.00**
DOP-110				(H) 200 x (W) 272 x (D) 51.9 mm (CS) / 46mm (IS)		
• Resolution:	1024 x 600 pixels					
• Panel cutout:	189.3 x 261.3 mm					
DOP-110CS	**10”**	basic	–	–	3x COM ports	**12 900.00**
DOP-110IS	**10”**	standard	Yes	SD/USB	3x COM ports	**13 600.00**
Narrow border	(H) 180 x (W) 270 x (D) 39 mm					
• Panel cutout:	170.5 x 255.5 mm					
DOP-110WS	**10”**	advanced	Yes	SD/USB	3x COM ports	**16 900.00**

DOP100-MX *Multi-media type*

DOP100-MX series adopts a "narrow frame", wide screen design with advanced communication capabilities *(multilingual inputs)* and enhanced multi-media functions.

- 1024 x 768 pixel 8GB ROM
- 1G RAM DDR3 1000Mhz
- Colour - 24bit
- Dual core 1GHz processor for higher computing performance
- Multi-media functions: Camera *(analog / IP)*,video playback , VGA input, event trigger
- Multiple Interfaces: 4 COM ports, 2 Ethernet ports, 1 Mini USB Slave 2.0 / 1 USB Host 2.0

12-inch	(H) 246.4 x (W) 317.4 x (D) 44 mm					
• Panel cutout:	228.7 x 302.7 mm					
DOP-112MX	**12"**	advanced	Yes	SD/USB	4 x COM ports	**36 700.00**
15-inch	(H) 295.7 x (W) x 387.7 (D) 55 mm					
• Panel cutout:	283.7 x 372.4 mm					
DOP-115MX	**15"**	advanced	Yes	SD/USB	4 x COM ports	**41 700.00**

DIAScreen - New intergrated software platform for DOP100 HMI's - download via DIAStudio

DIAScreen

The DIAScreen application, part of the DIAStudio software suite, allows configuration of Delta DOP, TP, and AX series soft-HMI controllers.

Key features include variable tag sharing with DIADesigner, a user-friendly interface with a 3D image library, improved software download speeds, support for various control elements and functions including recipes and macros, multilingual support, and enhanced security with password and permission features

Above ZAR prices do not include VAT. E&OE

TP04G-AS2

TP08G-BT2

TP04P-16TP1R

TP70P-16TP1R

TP series - Text Panel HMI

Text Panel monochrome text and graphical panel interface between people and machines. Although it is not a vivid and colourful graphical interface, it can still convert many program codes into text and graphics to display on the Text Panel.

Simple operation and control functions, the entire series supports various communication protocols. Light-weight and cost-effective allows users to quickly and easily control the system.

TP series - Operation interface panel

type	display size inch / (mm)	function keys	text lines	description	price
General features:					
• Lines of text displayed: 2, 4, 5, or 8 lines text depending on model					
• Can connect panels to windows and setup and control the panel using freely available DIAScreen software					
• Programmable function keys					
• Memory storage card slot to transfer programs between panels					
• STN LCD single-colour					
• Built-in real-time clock					
• 256K flash memory *(1M for TP08)*					
• RS-232/422/485 communication ports					
• Numerical keys with user defined functions available					
TP04G-AS2	3.0" (67 x 32)	12	4-line	operational interface panel	**5 170.00**
TP04G-AL2	4.1" (102 x 35)	10	4-line	operational interface panel	**4 670.00**
TP04G-AL-C*	4.1" (102 x 35)	10	4-line	operational interface panel	**4 010.00**
TP08G-BT2	3.8" (83 x 41)	24	8-line	operational interface panel	**5 670.00**

* *With RS-232 communication port only*

Text Panel with built-in PLC functionality *4.1" STN-LCD*

The TP04P series is a 4-Line Text Panel HMI with built-in PLC. It adopts a built-in DIO/AIO and combines the functions of a programmable logic controller and touch panel in one device.

The screen displays text or messages with four lines at the same time. It is lightweight, flexible, provides easy-to-control operation, and supports various communication protocols.

General features:
- Built-in real-time clock
- Screen size 4.1" *(102 x 35 mm)*
- 2 x RS-485 communication ports
- Program capacity: 8K steps / 5K words
- Built-in USB port for program upload/download
- Integrated PLC and TP in one panel
- PLC link capable

type	digital		analog		function keys	description	price
	inputs	outputs	inputs	outputs			
TP04P-16TP1R	8	8	–	–	10	text panel/PLC	**4 690.00**
TP04P-22XA1R	8	8	4	2	10	text panel/PLC	**5 890.00**
TP04P-32TP1R	16	16	–	–	10	text panel/PLC	**5 360.00**

Touch panel HMI with built-in PLC *7" (65 535 colour LCD touchscreen)*

TP70P HMI/PLC adopts the core of DVP series PLC combined with a 7-inch HMI touch panel.

General features:
- Built-in real-time clock
- Screen resolution 800 x 480
- Built-in USB and 2 communication ports
- Provides 2 sets 10kHz high-speed pulse input
- Adopts core of **DVP** series PLC with a program of 8K steps and D devices of 5K words

type	digital		analog		PT100 inputs	description	price
	inputs	outputs	inputs	outputs			
TP70P-16TP1R	8	8	–	–	–	combination HMI/PLC	**7 160.00**
TP70P-32TP1R	16	16	–	–	–	combination HMI/PLC	**8 150.00**
TP70P-21EX1R*	8	8	2	1	2	combination HMI/PLC	**9 560.00**
TP70P-22XA1R	8	8	4	2	–	combination HMI/PLC	**8 430.00**

* *Only mA analogs*

Accessories

UC-PRG020-12A	TP series program upload/download cable (RS-232)	**959.00**
UC-PRG030-02A	USB type B to USB type A - programming TP-04P/70P	**242.00**

D-Bot

Unleashing Potential

Where Smart Technology Meets Industrial Precision

Maximum Accuracy

Cost Effectiveness

Technological Flexibility

Delta collaborative robots (cobots) are designed to enhance automation with high performance, robust construction, and advanced safety features.

- **High Performance:** Integrated 24-bit encoders and high-precision mechanics
- **Robust Design:** IP66 rating for dust and water resistance and easy cleaning
- **Safety Features:** Advanced safety architecture with collision detection
- **Accuracy:** Secure handling of delicate parts and precise assembly
- **Cost-Effective:** Customizable configurations and easy setup
- **User-Friendly Interface:** no coding experience required

Synchronisation Powered by CODESYS

The **AX-8** and **CODESYS** solution make it easy and efficient for Cobots to work together seamlessly.

Which Application Fits You Best ?

Machine Tending | Material Handling | Packaging | Assembly | Pick & Place | IP66

RedDot Winner

Scan to watch

Intel I3/5 | Fanless cooling | 12-36V | IP65 waterproof

RoHS

Industrial Panel PC (PPC)

Unlike regular PCs, industrial panel PCs (PPC) are built to withstand harsh conditions such as extreme temperatures, moisture, dust, and vibration. It is often used in manufacturing plants, warehouses, transportation systems, and other industrial settings where standard computers would be unsuitable.

TPC range of panel PC are designed *(all-in-one structure)* with an integrated industrial monitor and a fanless embedded PC. With capacitive touchscreens for easy interaction, allowing operators to control machinery or monitor processes without the need for external peripherals like keyboards or mice.

Advantages of Industrial Panel PC

Durability: Offer a combination of durability, usability, and functionality for a wide range of industrial applications, contributing to increased efficiency, productivity, and safety in industrial environments.

Versatility: Options for different screen sizes, processor capabilities, input / output ports, and expansion slots allow for tailored solutions for various industrial applications.

Integration: Panel PCs seamless integration with industrial equipment such as PLCs *(Programmable Logic Controllers)* and SCADA *(Supervisory Control and Data Acquisition)* systems. This allows for real-time monitoring and control of industrial processes, improving efficiency and productivity.

VTScada: Discover the perfect synergy between TPC Industrial Panel PCs and VTScada software. Designed to meet and exceed all recommended system requirements, ensuring seamless and optimal performance for VTScada operations.
*See **Category G** for more information*

TPC150-W1010

Applications:
- Factory and warehouse digitalisation
- Logistic applications
- Inspection and monitoring of electronic equipment
- Equipment monitoring systems

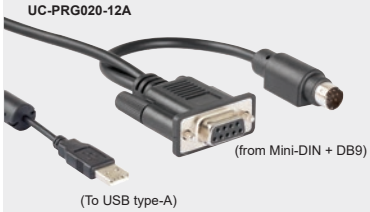
TPC238-W1010

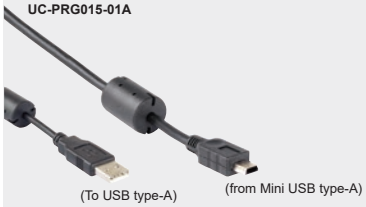
type	display size	hard drive capacity	(OS) system	CPU intel	dimensions (mm) (H)	(W)	(D)	price
Industrial Panel PC (PPC) series								
The overall use of a flat aluminium alloy panel, a fanless, fully enclosed integrated design, meets different equipment requirements in various environments. - 3 mm super thin front bezel *(best for embedded cabinet)* - Pure flat panel IP65 dust-proof and waterproof - High-precision aluminium alloy material - Self-developed fanless X86 architecture industrial motherboard								
General features: • CPU core: I3 2-core (2.10 GHz) / I5 4-core (1.6 Ghz) • RAM: **15"** - 8BG / **19"**, **23"** - 16GB • Serial COM 2 x RS232 • Operating system: Win 11 included • Resolution (pixels): **15"** - 1024 x 768 / **19"** - 1440 x 900 / **23"** - 1920 x 1080 TFT LCD • Supports Mini-PCIe bus: for WiFi communication expansion and more • Built-in ports 4 x USB 3.0 / 2 x Intel® I211 Gigabit Ethernet Controller RJ45								
Standard Panel PC (PPC)			*(capacitive touch)*				**IP65** (front panel)	
TPC150-W1010	15"	512GB SSD	Win 11	I3 (10th GEN)	298	379	65	**43 000.00**
Advanced Panel PC (PPC)			*(capacitive touch)*				**IP65** (front panel)	
TPC190-W1010	19"	1TB M.2	Win 11	I5 (10th GEN)	380	451	63	**54 500.00**
TPC238-W1010	23"	1TB M.2	Win 11	I5 (10th GEN)	308	475	57	**58 400.00**

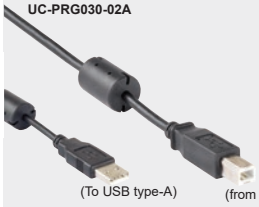
Panel PC - Features

Wifi	Industrial terminal	GNDU	POWER	DC 12-36V	USB-2.0
SB 3.0	LAN	HD/SM	VGA	Audio Out	COM

- **Built for Harsh Environments**
  Designed with industrial-grade protection, capable of performing in extreme and rugged conditions
- **IP65-Rated Dust and Water Protection**
  Pure flat-panel construction with IP65 certification, providing robust resistance to dust and water
- **High-Quality Aluminium Alloy Build**
  Crafted from precision aluminium alloy for superior durability and strength
- **Fanless X86 Industrial Motherboard**
  Self-engineered, fanless X86 architecture ensures quiet, reliable operation in industrial settings







Communication cables for PLCs

from	8-pin mini-DIN (male)	DB9 (female)	DB9 (male)	RS-485	RS-422	RJ45	Mini USB	USB Type-B	to	DB9 (female)	DB9 (male)	USB Type-A	RS-232	RJ45	Length (met)	for PLC/ HMI	DVP-SS2/SA2/SV2	DVP-ES2/EX2/EC3	DVP-SV3/SX3	DVP-SE	DVP-MC	AS200/300	AH500	TP SERIES	DOP-100	DOP-112 / DOP-115	price
Programming cables																										
UC-PRG020-12A	•	•										•			2		•	•			•		•	•			**959.00**
UC-PRG015-01A							•					•			1.5					•	•		•	•		•	**216.00**
UC-PRG030-01A							•					•			3					•	•		•	•		•	**242.00**
UC-PRG030-02A								•				•			3									•	•		**242.00**
UC-PRG030-10A		•								•					3								•	•			**359.00**
UC-PRG030-20A						•								•	3					•	•	•	•		•	•	**548.00**
IFD6500				•								•					•	•	•	•	•	•	•	•			**1 080.00**
IFD8500-A				•	•								•				•	•		•			•	•			**1 170.00**
Communication cables																										
UC-MS010-02A*	•									•					1		•	•			•				•		**216.00**
UC-MS020-06A	•									•					2		•	•			•			•	•		**216.00**
UC-MS030-01A	•										•				3		•	•			•			•	•		**216.00**
UC-MS030-03A		•									•				3									•	•		**372.00**
UC-MS030-04A			•								•				3										•		**372.00**
UC-MS030-06A	•										•				3		•	•			•				•		**242.00**

* *90° angled connector*

Programming cables — PLC to PC \ HMI to PC

type	from	to	description	length	price
For PLCs - SS, SA, SV, SX, SX, MC, ES, EC, AS200/300, AH500 *(need male -> male adaptor)*					
UC-PRG020-12A	mini-DIN	USB (type-A)	program. cable PLC to PC	2 meter	**959.00**
For PLCs - *SE, SX, AS200/300, AH500, DOP-100*					
UC-PRG015-01A	mini-USB	USB (type-A)	program. cable PLC to PC	1.5 meter	**216.00**
UC-PRG030-01A	mini-USB	USB (type-A)	program. cable PLC to PC	3 meter	**242.00**
UC-PRG030-02A	USB (type-B)	USB (type-A)	program. cable HMI to PC	3 meter	**242.00**
UC-PRG030-20A	RJ45	RJ45	program. cable HMI to PC	3 meter	**548.00**
UC-PRG030-10A	DB9 (female)	DB9 (female)	RS-232 program. cable	3 meter	**359.00**

Communication cables *(RS-232)* — PLC to HMI

For PLCs - SS, SA, SV, SX, MC, ES, EC, MC					
UC-MS010-02A*	male mini-DIN	female DB9	cable PLC to HMI	1 meter	**216.00**
UC-MS030-01A	male mini-DIN	female DB9	cable PLC to HMI	3 meter	**216.00**
UC-MS030-03A	female DB9	male DB9	cable PLC to HMI	3 meter	**372.00**
UC-MS030-04A	male DB9	male DB9	cable PLC to HMI	3 meter	**372.00**

* *90° mini-DIN plug (male)*

Exclusive to DOP103 HMI *(RS-232)*					
UC-MS020-06A	male mini-DIN	male DB9	cable PLC to HMI	2 meter	**216.00**
UC-MS030-06A	male mini-DIN	male DB9	cable PLC to HMI	3 meter	**242.00**

Industrial network cables

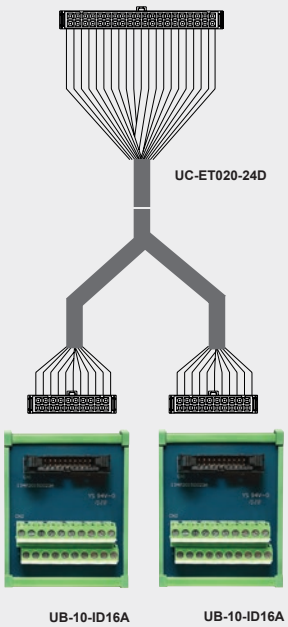
UC-CMC003-01A	RJ45	RJ45	CANopen comm. cable	0.3 meter	**157.00**
UC-CMC005-01A	RJ45	RJ45	CANopen comm. cable	0.5 meter	**157.00**
UC-CMC010-01A	RJ45	RJ45	CANopen comm. cable	1 meter	**203.00**
UC-CMC020-01A	RJ45	RJ45	CANopen comm. cable	2 meter	**301.00**
UC-CMC030-01A	RJ45	RJ45	CANopen comm. cable	3 meter	**542.00**

Adaptors, splitters and terminal resistors

TAP-CN03	DeviceNet CANopen distribution box, *(RJ45)* 1 to 4 *(Terminator 121Ω)*	**1 600.00**
TAP-TR01	CANopen *(Terminator, 121 W)*	**66.00**

Communication cables - Connector's type

Above ZAR prices do not include VAT. E&OE



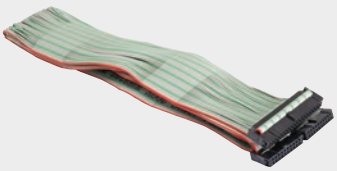
I/O external screw terminal module

terminal module	Input unit	Output unit	applicable module / CPU	cable	price
UB-10-ID16A *Supports I/O cards through terminal*	16	16	AS332 CPU, AS32AM, AS32AN AS64AM, AS64AN, DVP32SN11TN AH32AN, AH64AN	UC-ET0◆0-24D UC-ET010-24C	**835.00**
UB-10-ID32A *Supports I/O cards through terminal*	32	–	AS32AM, AS64AM, DVP32SM AH32AM10N-5C, AH64AM10N-5C	UC-ET0◆0-24B UC-ET010-24A	**1 190.00**
UB-10-OR16A *Supports Output Cards NPN switching*	–	16 relay	AS332T-A, AS32AN02T-A, AS64AN02T-A, DVP32SN11TN, AH32AN02T-5C, AH64AN02T-5C	UC-ET0◆0-24D UC-ET010-24C	**2 300.00**
UB-10-OR16B *Supports Output Cards PNP switching*	–	16 relay	AS332P-A, AH32AN02P-5C, AH64AN02P-5C	UC-ET0◆0-24D UC-ET010-24C	**2 300.00**
UB-10-OT32A *Supports I/O cards through terminal*	–	32	AS32AN02T-A, AS64AN02T-A DVP32SN11TN, AH32AN02T-5C, AH32AN02P-5C, AH64AN02T-5C, AH64AN02P-5C	UC-ET0◆0-24B UC-ET010-24A	**1 190.00**
UB-10-IO32D *Supports I/O cards through terminal*	16 and 16		AS332 CPU	Adaptor board	**2 030.00**

Note: *Replace (◆) **2** (meters) or **3** (meters) to the part number*

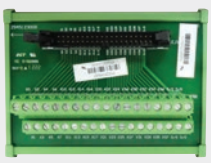
Cables for terminal modules PLC to terminal board

type	from	to	description	length	price
UC-ET010-24C	32 ID40	2 x 16 ID20	ribbon cable for terminal module	1 meter	**659.00**
UC-ET020-24D	32 ID40	2 x 16 ID20	shielded cable for term. module	2 meter	**2 160.00**
UC-ET030-24D	32 ID40	2 x 16 ID20	shielded cable for term. module	3 meter	**2 520.00**
UC-ET010-24A	32 ID40	32 ID40	ribbon cable for terminal module	1 meter	**601.00**
UC-ET020-24B	32 ID40	32 ID40	shielded cable for term. module	2 meter	**1 440.00**
UC-ET030-24B	32 ID40	32 ID40	shielded cable for term. module	3 meter	**1 680.00**
UC-ET010-13B	MDR36	MDR36	cable for **UB-10-IO16C** board	1 meter	**2 180.00**
UC-ET010-15B	MDR50	MDR50	cable for **UB-10-IO24C** board	2 meter	**2 640.00**



For motion control modules

type	inputs conn.	outputs conn.	output type	cable type		price
UB-10-IO16C	differential	MDR36	transistor	**UC-ET010-13B**	–	**1 200.00**
UB-10-IO24C	differential	MDR50	transistor	**UC-ET010-15B**	–	**1 320.00**

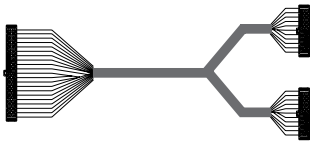


Accessory selection for high-density modules

Part number

AS332T-A
AS332P-A
AS324MT-A

UC-ET010-24 C(1M)
UC-ET010-24 D(1M)
UC-ET020-24 D(2M)
UC-ET030-24 D(3M)



UB-10-ID16 A

UB-10-ID16A (NPN/PNP)
UB-10-OR16A (NPN to Relay)
UB-10-OR16B (PNP to Relay)

or

ASD series - Servo drives (100 W - 15 kW) *(high-precision, total control)*

The Standard Delta Servo System features high tolerance, stable operation, and high-precision motion control functions. Creating a highly efficient, user-friendly operating environment for equipment while optimising production efficiency and output value.

- Optimised performance - high response bandwidth
- Vibration suppression functions
- For servo cable selection chart, *see* ***Annex-10***
- Self-Diagnosis and adaptation

series	part No last digit	PT Mode pulse train	PR Mode	RS-485	analog voltage control	Ether CAT	CAN open	full closed loop control	E-CAM	STO
B3A	-E *(EtherCAT)*	•	•	–	•	•	–	–	–	•
	-M *(CANopen)*	•	•	•	•	–	•	–	–	•
A2	-M *(CANopen)*	•	•	•	•	–	•	•	•	–
A3	-E *(EtherCAT)*	–	•	–	–	•	–	•	•	•
	-M *(CANopen)*	•	•	•	•	–	•	•	•	•

ASD-B3A-0421-E

ASD-A3-0421-E

ASD-A3-1521-M

ASD-A3-2043-M

type	input power	supply	frequency response	motion network	price
B3A series - Econo servo drives					
CANopen - M	PT/PR mode, RS-485, analog voltage control, CANopen, STO				
ASD-B3A-0421-M	400 W	220V 1ph	3.1kHz	CANopen motion control	**10 900.00**
ASD-B3A-0721-M	750 W	220V 1ph	3.1kHz	CANopen motion control	**12 200.00**
ASD-B3A-1021-M	1.0 kW	220V 1ph	3.1kHz	CANopen motion control	**12 300.00**
ASD-B3A-1521-M	1.5 kW	220V 1ph	3.1kHz	CANopen motion control	**15 600.00**
EtherCAT - E	PT/PR mode, analog voltage control, EtherCAT, STO				
ASD-B3A-0421-E	400 W	220V 1ph	3.1kHz	EtherCAT motion control	**12 600.00**
ASD-B3A-0721-E	750 W	220V 1ph	3.1kHz	EtherCAT motion control	**13 900.00**
ASD-B3A-1021-E	1.0 kW	220V 1ph	3.1kHz	EtherCAT motion control	**14 100.00**
ASD-B3A-1521-E	1.5 kW	220V 1ph	3.1kHz	EtherCAT motion control	**17 300.00**
A2 series - Advanced servo drives					
CANopen - M					
• PT/PR mode, RS-485, analog voltage control, CANopen, full closed loop control, E-CAM					
ASD-A2-0121-M	100 W	220V 1ph	1kHz	CANopen motion control	**14 800.00**
ASD-A2-0421-M	400 W	220V 1ph	1kHz	CANopen motion control	**15 300.00**
ASD-A2-0721-M	750 W	220V 1ph	1kHz	CANopen motion control	**16 400.00**
ASD-A2-1021-M	1.0 kW	220V 1ph	1kHz	CANopen motion control	**16 900.00**
ASD-A2-1521-M	1.5 kW	220V 1ph	1kHz	CANopen motion control	**21 300.00**
A3 series - Advanced servo drives			3rd generation slim-line servo drive		
EtherCAT - E					
• PR mode, EtherCAT, Full closed loop control, E-CAM, STO					
ASD-A3-0121-E	100 W	220V 1ph	3.1kHz	EtherCAT motion control	**12 400.00**
ASD-A3-0421-E	400 W	220V 1ph	3.1kHz	EtherCAT motion control	**12 600.00**
ASD-A3-0721-E	750 W	220V 1ph	3.1kHz	EtherCAT motion control	**14 200.00**
ASD-A3-1021-E	1.0 kW	220V 1ph	3.1kHz	EtherCAT motion control	**14 800.00**
ASD-A3-1521-E	1.5 kW	220V 1ph	3.1kHz	EtherCAT motion control	**17 700.00**
ASD-A3-2043-E	2.0 kW	400V 3ph	3.1kHz	EtherCAT motion control	**22 400.00**
ASD-A3-3043-E	3.0 kW	400V 3ph	3.1kHz	EtherCAT motion control	**26 600.00**
ASD-A3-4543-E	4.5 kW	400V 3ph	3.1kHz	EtherCAT motion control	**26 200.00**
ASD-A3-5543-E	5.5 kW	400V 3ph	3.1kHz	EtherCAT motion control	**33 700.00**
ASD-A3-7543-E	7.5 kW	400V 3ph	3.1kHz	EtherCAT motion control	**52 800.00**
ASD-A3-1B43-E	11.0 kW	400V 3ph	3.1kHz	EtherCAT motion control	**52 700.00**
ASD-A3-1F43-E	15.0 kW	400V 3ph	3.1kHz	EtherCAT motion control	**61 800.00**
CANopen - M					
• PT/PR mode, RS-485, analog voltage control, CANopen, full closed loop control, E-CAM, STO					
ASD-A3-0121-M	100 W	220V 1ph	3.1kHz	CANopen motion control	**12 300.00**
ASD-A3-0421-M	400 W	220V 1ph	3.1kHz	CANopen motion control	**12 300.00**
ASD-A3-0721-M	750 W	220V 1ph	3.1kHz	CANopen motion control	**14 000.00**
ASD-A3-1021-M	1.0 kW	220V 1ph	3.1kHz	CANopen motion control	**14 500.00**
ASD-A3-1521-M	1.5 kW	220V 1ph	3.1kHz	CANopen motion control	**17 400.00**
ASD-A3-2043-M	2.0 kW	400V 3ph	3.1kHz	CANopen motion control	**21 500.00**
ASD-A3-3043-M	3.0 kW	400V 3ph	3.1kHz	CANopen motion control	**25 700.00**
ASD-A3-4543-M	4.5 kW	400V 3ph	3.1kHz	CANopen motion control	**25 300.00**
ASD-A3-5543-M	5.5 kW	400V 3ph	3.1kHz	CANopen motion control	**32 800.00**
ASD-A3-7543-M	7.5 kW	400V 3ph	3.1kHz	CANopen motion control	**51 900.00**
ASD-A3-1B43-M	11.0 kW	400V 3ph	3.1kHz	CANopen motion control	**52 100.00**
ASD-A3-1F43-M	15.0 kW	400V 3ph	3.1kHz	CANopen motion control	**61 100.00**

Above ZAR prices do not include VAT. E&OE

ECM-B3M-CM0604RJ1

ECM-B3M-E21315RS1

ECMA-E11315RS

ECMA Motors *(for B3A, A2, A3 servo drives)*

type	output power	rated speed rpm	rated torque (Nm)	max. torque (Nm)	dimensions (mm) PCD	flange	shaft Ø	price
A3/B3 servo motors - 24 bit incremental optical encoder						**IP67** connector		
Motors for single-phase 220 VAC servo drives								
ECM-B3L-CM0401RJ1*	100 W	3000	0.32	1.12	46	40 x 40	8	**6 760.00**
ECM-B3M-CM0604RJ1*	400 W	3000	1.27	4.45	70	60 x 60	14	**6 760.00**
ECM-B3M-CM0807RJ1*	750 W	3000	2.40	8.40	90	80 x 80	19	**7 540.00**
ECM-B3M-C21010RS1	1.0 kW	3000	3.18	9.54	115	100 x 100	22	**11 800.00**
ECM-B3M-E21315RS1	1.5 kW	3000	4.77	14.30	145	130 x 130	22	**16 100.00**
Motors for single-phase 220 VAC servo drives- *with built-in 24VDC brake*								
ECM-B3M-CM0604SJ1*	400 W	3000	1.27	4.45	70	60 x 60	14	**13 000.00**
ECM-B3M-CM0807SJ1*	750 W	3000	2.40	8.40	90	80 x 80	19	**13 700.00**
Motors for three-phase 400 VAC servo drives								
ECM-B3M-K21320RS1	2.0 kW	2000	9.55	28.65	145	130 x 130	22	**15 900.00**
ECM-B3M-L21830RS1	3.0 kW	1500	19.1	57.29	200	180 x 180	35	**30 000.00**
ECM-B3M-L21845RS1	4.5 kW	1500	28.65	71.6	200	180 x 180	35	**36 800.00**
ECM-B3M-L21855R31	5.5 kW	1500	35.01	105	200	180 x 180	42	**46 900.00**
ECM-B3M-LA1875R31	7.5 kW	1500	47.75	119	200	180 x 180	42	**60 200.00**
ECM-B3M-LA221BR31	11 kW	1500	70.03	175	235	220 x 220	42	**91 500.00**
ECM-B3M-LA221FR31	15 kW	1500	95.49	238.5	235	220 x 220	55	**119 000.00**
A2/A3/B3 servo motors - 20 bit incremental encoder								
Motors for single-phase 220 VAC servo drives								
ECMA-C10401RS	100 W	3000	0.32	0.96	46	40 x 40	8	**8 060.00**
ECMA-C10604RS	400 W	3000	1.27	3.82	70	60 x 60	14	**10 200.00**
ECMA-C10807RS	750 W	3000	2.39	7.16	90	80 x 80	19	**11 100.00**
ECMA-C11010RS	1.0 kW	3000	3.18	9.54	115	100 x 100	22	**16 500.00**
ECMA-E11315RS	1.5 kW	2000	7.16	21.48	145	130 x 130	22	**20 800.00**
Motors for single-phase 220 VAC servo drives- *with 24 VDC brake*								
ECMA-C10807SS	750 W	3000	2.39	7.16	90	80 x 80	19	**21 400.00**
ECMA-C11010SS	1.0 kW	3000	3.18	9.54	115	100 x 100	22	**25 100.00**
ECMA-E11315SS	1.5 kW	2000	7.16	21.48	145	130 x 130	22	**31 000.00**
Motors for three-phase 400 VAC servo drives - *with 24 VDC brake*								
ECMA-K11320SS	2.0 kW	2000	9.55	28.65	145	130 x 130	22	**30 900.00**
ECMA-L11830SS	3.0 kW	1500	19.10	57.29	200	180 x 180	35	**50 000.00**
ECMA-L11845SS	4.5 kW	1500	28.65	71.6	200	180 x 180	35	**61 400.00**

* *17-bit magnetic encoder*

Delta A3 Servo Series:

Unmatched Precision and Performance for Modern Automation

As the market of automated manufacturing rapidly develops, the need for servo products with higher performance, speed, precision, bandwidth, and functionality is widely increasing. To meet the requirements of the motion control market for industrial manufacturing machines, Delta presents a new high-end AC servo system, the ASDA-A3 series, with features such as multi-functionality, high-performance, energy-efficiency (DC-Bus sharing), and compact design.

Scan here

ASD-CAPWA205

ASD-CAEN1105

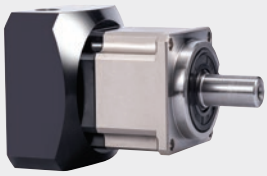
ASD-CAEN1005

ASD-BM-50A

Cables and accessories for Servo drives and motors

type	for drive	motor frame size	motor rating	with brake	description	cable length	price
Power cables							
ACS3-CAPW1105	A3/B3	F40-80	100-750 W	–	motor power cable	5 m	**804.00**
ACS3-CAPW5105	A3/B3	F40-80	100-750 W	–	IP67 motor power cable	5 m	**1 380.00**
ACS3-CAPWA205	A3/B3	F100-130	1-2 kW	–	motor power cable	5 m	**2 950.00**
ACS3-CRPWA305	A3/B3	F100-130	1-2 kW	–	cable with 90º connector	5 m	**4 010.00**
ACS3-CAPWC405	A3	F180	3/4.5 kW	–	motor power cable	5 m	**4 160.00**
ACS3-CRPWC405	A3	F180	3/4.5 kW	–	cable with 90º connector	5 m	**4 130.00**
ACS3-CAPWE605	A3	F180-220	5.5-15 kW	–	motor power cable	5 m	**8 930.00**
ASD-ABPW0005	A2	F40-80	100-750 W	–	motor power cable	5 m	**1 510.00**
ASD-CAPW1005	A2	F100-130	1/1.5 kW	–	motor power cable	5 m	**2 160.00**
Brake cables							
ACS3-CAPW2105	A3/B3	F40-80	100-750 W	yes	motor brake cable	5 m	**862.00**
ACS3-CAPW6105	A3/B3	F40-80	100-750 W	yes	IP67 motor brake cable	5 m	**1 640.00**
ASD-ABPW0105	A2	F40-80	100-750 W	yes	motor brake cable	5 m	**1 560.00**
ASD-CAPW1105	A2	F100-130	1-1.5 kW	yes	motor brake cable	5 m	**2 600.00**
ASD-CAPW1305	A2	F130	2 kW	yes	motor brake cable	5 m	**3 690.00**
ASD-CAPW2305	A2	F180	3-4.5 kW	yes	motor brake cable	5 m	**4 500.00**
Encoder cables							
ACS3-CAEN0105	A3/B3	F40-80	100-750 W		standard encoder cable	5 m	**1 960.00**
ACS3-CAEN1105	A3/B3	F40-80	100-750 W		encoder cable IP67 conn.	5 m	**1 870.00**
ACS3-CAENA105	A3/B3	F100-220	1-15 kW		standard encoder cable	5 m	**2 240.00**
ASD-ABEN0005	A2	F40-80	100-750 W		standard encoder cable	5 m	**1 500.00**
ASD-CAEN1005	A2	F100-130	1-1.5 kW		standard encoder cable	5 m	**2 420.00**
Power connectors - for servo drives and motors							
ASDBCAPW0000	A2/A3/B3	F40-80	100-750 W	–	std power connector		**58.00**
ASDBCAPW0100	A2/A3/B3	F40-80	100-750 W	yes	brake power connector		**100.00**
ACS3-CNPW1A00	A3/B3	F40-80	100-750 W	yes	IP67 power connector		**340.00**
ACS3-CAPWA000	A3/B3	F100-130	1-2 kW	–	Mil-spec power conn.		**580.00**
ACS3-CRPWA000	A3/B3	F100-130	1-2 kW	–	90º Mil-spec power conn.		**663.00**
ACS3-CAPWC000	A3/B3	F180	3-4.5 kW	–	Mil-spec power conn.		**787.00**
ACS3-CAPWE000	A3/B3	F180-220	7.5-15 kW	–	Mil-spec power conn.		**2 290.00**
ASD-CAPW1000	A2	F100-130	1-2 kW	yes	Mil-spec power conn.		**1 050.00**
ASD-CAPW2000	A2	F180-220	3-7.5 kW	yes	Mil-spec power conn.		**1 390.00**
Encoder connectors							
ACS3-CNENC200	A3/B3	F40-220	0.1-15 kW		encoder connection to drive		**199.00**
ACS3-CNEN2A00	A3/B3	F40-80	100-750 W		IP67 connection to motor		**373.00**
ACS3-CAENA000	A3/B3	F100-180	1-15 kW		Mil-spec power conn.		**539.00**
ASD-ABEN0000	A2	F40-80	100-750 W		connection to motor		**597.00**
ASD-CAEN1000	A2	F100-130	1-1.5 kW		connection to motor		**1 500.00**
Servo drive accessories							
ASD-CNSC0050	50-pin solder plug			for series	ASD-A2		**522.00**
ASD-IF-SC5020	20-pin adaptor			for series	ASD-A2		**1 160.00**
ASD-BM-50A	50-pin breakout board			for series	ASD-A2		**3 750.00**
ACS3-CNADC150	50-pin CN1 I/O connector			for series	ASD-A3-M		**531.00**
ASD-CNSC0026	26-pin CN1 I/O connector			for series	ASD-A3-E		**655.00**
ACS3-IFSC5020	20-pin CN1 quick connector			for series	ASD-A3-M		**1 060.00**
ACS3-MDTB5000	50-pin CN1 break out module			for series	ASD-A3-M		**4 100.00**
ACS3-CAADC1	A2 to A3 CN1 conversion cable			for series	ASD-A3		**2 730.00**
ACS3-CAADC2	A2 to A3 CN2 conversion cable			for series	ASD-A3		**2 850.00**
ACS3-CAADC5	A2 to A3 CN5 conversion cable			for series	ASD-A3		**241.00**
ACS3-CNTB0500	26-pin CN1 I/O connector			for series	ASD-B3A		**150.00**
ACS3-IFSC2626	26-pin CN1 quick connector			for series	ASD-B3A		**1 120.00**
ACS3-MDTD2600	26-pin CN1 break out module			for series	ASD-B3A		**2 630.00**
ACS3-CABDC2	B2 to B3 CN2 conversion cable			for series	ASD-B3A		**870.00**
UC-CMC010-01A	CANopen comms cable RJ45			for series	ASD-M	1 m	**203.00**
UC-EMC010-02B	EtherCAT comms cable RJ45			for series	ASD-E	1 m	**460.00**
TAP-CN03	Canopen distribution box			for series	ASD-A2-M		**1 600.00**
UC-PRG030-02A	USB type A - USB type B			for series	ASD-A2-M		**242.00**
ASD-CARS0003	9-pin D-SUB female - Firewire			for series	ASD-A2-M		**398.00**
ASD-CNIE0B06	RS-485 Splitter 2x RJ45			for series	ASD-A2-M		**340.00**

Above ZAR prices do not include VAT. E&OE



WAB...

Gearboxes for ECMA series servo motors

High-precision gearboxes are widely used in robotics, machine tools and other industrial automation. Gearboxes in precision positioning applications are used to provide higher torques and higher resolutions in a compact package and at reduced power requirements.

A geared motor will output more running and holding torque than an ungeared, standard motor with higher torque output and strengthened rigidity.

Products features:

- Low noise, helical gears allow for smooth and quiet gear meshing
- Planetary wheel with needle design increases the contact area to improve the rigidity and output torque
- Synthetic lubricating grease and sealed IP65 design requires no maintenance during the product's lifetime
- Gears are carburised and quenched to HRC62 with low carbon steel surface for optimum wear and impact toughness

type	ECMA motor	ratio	rated torque	backlash arcmin	dimensions (mm) PCD	flange	shaft Ø	price
Straight gearboxes	*(helical gears)*							
WAB-060-005-K-P1	200 - 400 W	5:1	60	≤3	70	60 x 60	16	**10 900.00**
WAB-060-007-K-P1	200 - 400 W	7:1	50	≤3	70	60 x 60	16	**10 900.00**
WAB-060-010-K-P1	200 - 400 W	10:1	40	≤3	70	60 x 60	16	**10 900.00**
WAB-090-003-K-P1	750 W	3:1	130	≤3	100	90 x 90	22	**15 200.00**
WAB-090-007-K-P1	750 W	7:1	140	≤3	100	90 x 90	22	**15 200.00**
WAB-090-010-K-P1	750 W	10:1	100	≤3	100	90 x 90	22	**15 200.00**
WAB-090-020-K-P1	750 W	20:1	140	≤3	100	90 x 90	22	**19 900.00**
WAB-090-040-K-P1	750 W	40:1	120	≤3	100	90 x 90	22	**19 900.00**
WAB-115-003-K-P1	1.5 - 2 kW	3:1	208	≤3	130	115 x 115	32	**22 900.00**
WAB-115-010-K-P1	1.5 - 2 kW	10:1	230	≤3	130	115 x 115	32	**22 900.00**
WAB-142-003-K-P1	3 - 4.5 kW	3:1	342	≤3	165	142 x 142	40	**35 700.00**
WAB-180-003-K-P1	5.5 kW	3:1	588	≤3	165	142 x 142	40	**56 700.00**
Straight and angled gearbox accessories								
WAB115-DZ-95-115-M8	1 kW F100 adaptor frame for WAB-115							**1 900.00**

Assembling the **Planetary Gearbox with Motor**

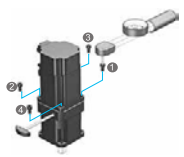
01 Confirm the compatibility of motor model and gearbox spec and clean the mounting surface

02 Remove the motor key

03 Check the motor shaft size (Insert the bushing into the input bore if necessary)

04 Remove the plug into the adapter plate. Loosen the set collar with a torque wrench and align with the bolt

05 Vertically insert motor from the gearbox



06 Tighten the mounting bolts from bolt 1 to bolt 4 with the torque wrench

07 Tighten the set collar bolt with the torque wrench

08 Assemble with the screw plug

HTR-3A...

HTR series - Incremental encoders

Incremental encoders are devices that convert the angular motion or position of a shaft into an analog or digital value to determine position or motion. They are among the most commonly used rotary encoders, offering excellent speed and distance feedback. With fewer sensors involved, incremental encoders are both simple and cost-effective. However, incremental encoders are limited to providing only relative movement data, meaning a reference device is needed to determine absolute motion or position.

The range includes various optical encoders, such as solid shaft and hollow shaft models, with both light-duty and heavy-duty options. The HTR series encoders deliver precise positioning and speed-sensing capabilities, converting rotary motion or position data into electronic pulses for accurate speed and position detection. These high-quality incremental optical encoders are ideal for translating rotary or linear motion into a digital signal for monitoring or controlling speed, direction, distance, or position.

Common characteristics

- Output phase: ABZ phase *(std)*
- Output form: **P**: Push Pull — **HL:** Line Driver 5 - 26 VDC
- Resolution: 5 - 5000 ppr *(pulse per revolution)* — *model and output dependant*
- Protection: against polarity reversal

HTR-5B...

HPN-6A-2500-3-PP

HTR-HN...

type	resolution (ppr)	supply voltage	detection system	description	dimensions body	Ø mm shaft	price
Solid shaft type							
Medium-duty incremental encoders			*(IP50)*	*push-pull type*			
HTR-3A-100A-P	100	5 - 26 VDC	incremental	rotary encoder	38	6	**2 780.00**
HTR-3A-360A-P	360	5 - 26 VDC	incremental	rotary encoder	38	6	**2 780.00**
HTR-3A-500A-P	500	5 - 26 VDC	incremental	rotary encoder	38	6	**2 780.00**
HTR-3A-1024A-P	1024	5 - 26 VDC	incremental	rotary encoder	38	6	**3 440.00**
HTR-5B-360A-P	360	5 - 26 VDC	incremental	rotary encoder	50	8	**2 780.00**
HTR-5B-1024A-P	1024	5 - 26 VDC	incremental	rotary encoder	50	8	**3 440.00**
HTR-5B-2000A-P	2000	5 - 26 VDC	incremental	rotary encoder	50	8	**4 860.00**
Medium-duty incremental encoders			*(IP50)*	*line driver type*			
HTR-5B-360A-H	360	5 - 26 VDC	incremental	rotary encoder	50	8	**3 320.00**
HTR-5B-1024A-H	1024	5 - 26 VDC	incremental	rotary encoder	50	8	**4 010.00**
HTR-5B-2000A-H	2000	5 - 26 VDC	incremental	rotary encoder	50	8	**5 430.00**
Other resolution (ppr) available on request							
Heavy-duty incremental encoders			*(IP64)*	*push-pull type*			
• HPN square flange mount *(63.5 x 63.5 mm)*							
HPN-6A-2500-3-PP	2500	5 - 26 VDC	incremental	rotary encoder	63.5 □	10	**8 880.00**
Other resolution (ppr) available on request							
Hollow shaft incremental encoders			**IP50**	*push-pull type*		*hole*	
HTR-HN-8-360A-P	360	5 - 26 VDC	incremental	rotary encoder	38	8	**3 380.00**
HTR-HN-8-500A-P	500	5 - 26 VDC	incremental	rotary encoder	38	8	**3 380.00**
HTR-HN-8-1024A-P	1024	5 - 26 VDC	incremental	rotary encoder	38	8	**3 600.00**
HTR-HM15-600-3-PP	600	5 - 26 VDC	incremental	rotary encoder	59	15	**8 380.00**
HTR-HM15-1024-3-PP	1024	5 - 26 VDC	incremental	rotary encoder	59	15	**7 880.00**
HTR-HD30-600-3-PP	600	8 - 26 VDC	incremental	rotary encoder	100	30	**8 730.00**
HTR-HD30-1024-3-PP	1024	8 - 26 VDC	incremental	rotary encoder	100	30	**9 370.00**
Other resolution (ppr) available on request							

A series - Absolute encoders — IP50

- Signal output — **G:** Gray code
- Output form — **C:** NPN open-collector

A2-G-256-C	256	10 - 26 VDC	absolute	rotary encoder	44	6	**5 900.00**

Other resolution (ppr) available on request

HJ-6X6

SCT...

Encoder accessories

type	material	rated torque (N.m)	bore (mm) hole Ø1	bore (mm) hole Ø2	wrench torque (N.m)	dimensions Ø mm body Ø	dimensions Ø mm length	price
Flexible couplings								
HJ-6X6	plastic	1.0	6	6	0.3	16	23	**395.00**
SCT-16-6X6	aluminium	0.3	6	6	0.7	16	23	**789.00**
SCT-20-8X8	aluminium	0.5	8	8	0.7	20	26	**947.00**
SCT-25-8X10	aluminium	1.0	8	10	1.7	25	31	**1 110.00**
SCT-25-10X10	aluminium	2.0	10	10	1.7	25	31	**1 110.00**

Above ZAR prices do not include VAT. E&OE

LRD10RA240

Micro Programmable Logic Controllers (PLCs)

The Lovato's micro PLC is a compact, flexible, easy to use and highly cost-effective "intelligent relay". Base units with 10, 12 or 20 I/O points and can be expanded up to 44 digital I/O points with plug-in expansion modules.

Programming is simple and intuitive and can be done directly with the built-in keypad/display or by personal computer with **LRXSW** software and **LRXC03** programming USB cable.

Two common language logics are available for programming:
- LD *(relay ladder)* up to 300 lines of four instructions each
- FBD *(function block diagram)* up to 260 programmable blocks

Advantages:

System control and supervision
- Contact status viewing in simple and small screen display
- Possibility to add the micro PLC equipped with **LREP00** Modbus to systems integrated on data networks by using Synergy *(supervision and energy management software)*

Quick control board installation
- Fewer number of components
- Less wiring with minor number of connections

Repetitiveness
- Less errors during panel building
- Considerable time-saving

Flexibility
- Quick correction of abnormal conditions at final testing
- Fast changes on control boards

LRD20R...

type	supply	inputs	outputs	description	price
Base units					
• Addition-Subtraction on variables • Multiplication-Division on variables • Comparator on variables • HMI display for parameter viewing and programming • PWM output • High-speed input (1kHz) • PID function					
LRD10RA240	100 - 240 VAC	6	4	intelligent relay	**4 560.00**
LRD20RA240	100 - 240 VAC	12	8	intelligent relay	**6 390.00**
LRD12RD024	24 VDC	8*	4	intelligent relay	**4 340.00**
LRD20RD024	24 VDC	12*	8	intelligent relay	**6 390.00**
LRD20RD012	12 VDC	12*	8	intelligent relay	**8 970.00**
LRD20RD024P1❖	24 VDC	12*	8	intelligent relay	**7 670.00**

* *2/4 inputs can be analog (0-10 VDC)*
❖ *With* built-in RS-485 modbus port

Expansion modules *(plug-in)*

LRE08R...

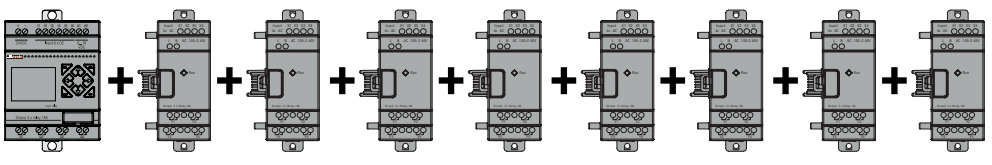
Inputs and outputs of the base relay unit can be increased with plug-in expansion modules. Up to three expansion modules can be added.

LRE08RA240	100 - 240 VAC	4	4	expansion module	**2 530.00**
LRE08RD024	24 VDC	4	4	expansion module	**2 580.00**
LREP00				modbus - RTU protocol communication unit	**9 670.00**

Accessories

LRXC03	cable: PC (USB) to LRD relay connecting cable *(1.5 meters)*	**3 340.00**
LRXSW	programming and supervision software (CD-ROM)	**372.00**
LRXM00	plug-in program backup memory module	**841.00**
LRXP01	HMI operator panel, 24 VDC, RS-232, RS-485	**7 540.00**
LRXSWP01	LRXP01 editor software (CD-ROM)	**372.00**
LRXC02	cable: PC (RS-232) - LRXP01 programming cable	**903.00**

Maximum combinations



Base relay unit 12 inputs + 8 outputs	4 inputs + 4 outputs	4 inputs + 4 outputs	4 inputs + 4 outputs	4 PT100 temperature sensor inputs	2 outputs, 0...10V or 0...20mA	2 outputs, 0...10V or 0...20mA	4 inputs, 0...10V or 0...20mA	RS485 Modbus®-RTU

- 24 digital inputs (4 configurable as analog 0-10V input)
- 20 digital outputs (relay, transistor or mixed)
- 4 analog inputs for PT100 temperature sensors
- 4 analog outputs configurable as 0...10V or 0/4...20mA
- 4 analog inputs configurable as 0...10V or 0/4...20mA
- 1 RS485 slave communication module.

N.B. The sequence of the products given above must be respected for correct operation.

RUN
TRIP
LOC REM
OFF
MAN AUTO

D

Control & Signalling

Interactive Catalogue

Control & Signalling

D

Pushbuttons & Selector switches

D-1...8

Metal pushbuttons & Selector switches

D-4...6

One-piece control devices

D-9...10

Rotary cam switches

D-12...13

Indicating devices

D-14...17

Pendant control stations

D-19...20

Joystick controllers

D-21...22

Signalling devices

D-25...32/34...36

Industrial sirens

D-33

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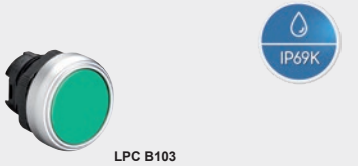
Scan the QR code for a short tutorial video.

PLatinum Series



LPC B103

LPC B204

LPC B2104

LPC B6144

LPC B6644

LPC B6844

LPC B7191

LPC B7223

LPC B7355

Platinum series Ø22 mm pushbuttons and selector switches

LPC series *(chromed plastic) - mounting by threaded ring*

General features:

- Elegant style ergonomic design *(combining aesthetics with industrial durability)*
- IP66, IP67 and IP69K degree of protection for use even in extreme temperatures -25°C...+70°C
- Material resistant to oils, solvents and hydrocarbons.
- Contact blocks and **LPX AU120** support *(see control device accessories)*

Actuators supplied without ***LPX AU120*** contact block support *(to be ordered separately)*

type	colour	symbol	description	action	price
Pushbutton actuators					
LPC B102	black	–	flush momentary pushbutton actuator	spring return	**114.00**
LPC B103	green	–	flush momentary pushbutton actuator	spring return	**114.00**
LPC B104	red	–	flush momentary pushbutton actuator	spring return	**114.00**
LPC B105	yellow	–	flush momentary pushbutton actuator	spring return	**114.00**
LPC B106	blue	–	flush momentary pushbutton actuator	spring return	**114.00**
LPC B202	black	–	projecting head pushbutton actuator	spring return	**143.00**
LPC B203	green	–	projecting head pushbutton actuator	spring return	**143.00**
LPC B204	red	–	projecting head pushbutton actuator	spring return	**143.00**
LPC B205	yellow	–	projecting head pushbutton actuator	spring return	**143.00**
LPC B206	blue	–	projecting head pushbutton actuator	spring return	**143.00**
Pushbutton actuators (with symbols on button)					
LPC B1104	red	O	flush momentary pushbutton actuator	spring return	**147.00**
LPC B1113	green	I	flush momentary pushbutton actuator	spring return	**147.00**
LPC B1134	red	STOP	flush momentary pushbutton actuator	spring return	**147.00**
LPC B1163	green	START	flush momentary pushbutton actuator	spring return	**147.00**
LPC B1142	black	←	flush momentary pushbutton actuator	spring return	**147.00**
LPC B1152	black	↑	flush momentary pushbutton actuator	spring return	**147.00**
LPC B1196	blue	RESET	flush momentary pushbutton actuator	spring return	**147.00**
LPC B2104	red	O	extended head pushbutton actuator	spring return	**186.00**
Alternate action pushbutton actuator *(push-on / push-off)*					
LPC Q102	black	–	flush alternate action p/button actuator	alternate	**238.00**
LPC Q103	green	–	flush alternate action p/button actuator	alternate	**238.00**
LPC Q104	red	–	flush alternate action p/button actuator	alternate	**238.00**
LPC Q105	yellow	–	flush alternate action p/button actuator	alternate	**238.00**
LPC Q106	blue	–	flush alternate action p/button actuator	alternate	**238.00**
LPC Q202	black	–	projecting head pushbutton actuator	alternate	**300.00**
LPC Q203	green	–	projecting head pushbutton actuator	alternate	**300.00**
LPC Q204	red	–	projecting head pushbutton actuator	alternate	**300.00**
LPC Q205	yellow	–	projecting head pushbutton actuator	alternate	**300.00**
LPC Q206	blue	–	projecting head pushbutton actuator	alternate	**300.00**
*Use only contact blocks **LPX C10A** (NO) and **LPX C01** (NC) on above alternate action pushbuttons.*					
Mushroom head pushbutton actuators					
LPC B6144	red	Ø40 mm	mushroom pushbutton actuator	spring return	**257.00**
LPC B6164	red	Ø60 mm	mushroom pushbutton actuator	spring return	**353.00**
LPC B6344	red	Ø40 mm	latching mushroom pushbutton actuator	twist release	**310.00**
Emergency stopping (ISO 13850 compliant)					
LPC B6634	red	Ø30 mm	latching mushroom pushbutton actuator	twist release	**503.00**
LPC B6644	red	Ø40 mm	latching mushroom pushbutton actuator	twist release	**450.00**
LPC B6744	red	Ø40 mm	latching mushroom pushbutton actuator	pull release	**481.00**
LPC B6844	red	Ø40 mm	latching mushroom pushbutton actuator	key release	**957.00**
Multi pushbutton actuators					
Double-touch pushbutton actuators					
LPC B7113	grn/red	–	double touch pushbutton actuator *(flush)*	spring return	**221.00**
LPC B7191	blk/blk	↓↑	double touch pushbutton actuator *(flush)*	spring return	**285.00**
LPC B71S02	grn/grn	+ –	double touch pushbutton actuator *(flush)*	spring return	**371.00**
LPC B7223	grn/red	I-O	double touch actuator *(ext. red button)*	spring return	**299.00**
LPC BL7223	grn/red	I-O	double touch + indicator *(ext. red button)*	spring return	**405.00**
Triple-touch pushbutton actuators *(red extended stop button)*					
LPC B7345	grn/grn	I-STOP-II	triple-touch pushbutton actuator	spring return	**328.00**
LPC B7355	grn/grn	↑-STOP-↓	triple-touch pushbutton actuator	spring return	**328.00**
LPC B7365	grn/grn	←-STOP-→	triple-touch pushbutton actuator	spring return	**328.00**
LPC B7375	grn/grn	↙-STOP-↗	triple-touch pushbutton actuator	spring return	**264.00**

Above ZAR prices do not include VAT. E&OE

PLatinum Series

LPC series *(chromed plastic) - mounting by threaded ring*

LPC S120

LPC S230

LPC S320

LPL 3

LPC BL103

LPC BL204

LPC BL6644

type	colour	positions		description	spring return	price
Selector switch actuators						
LPC S120	black	2 position	O - I	selector switch actuator	–	**254.00**
LPC S121	black	2 position	O - I	selector switch actuator	from Right	**276.00**
LPC S130	black	3 position	I - O - II	selector switch actuator	–	**263.00**
LPC S131	black	3 position	I - O - II	selector switch actuator	from L+R	**307.00**
LPC S132	black	3 position	I - O - II	selector switch actuator	from Left	**307.00**
LPC S133	black	3 position	I - O - II	selector switch actuator	from Right	**307.00**
Long lever selector switch actuators						
LPC S220	black	2 position	O - I	lever selector actuator	–	**264.00**
LPC S221	black	2 position	O - I	lever selector actuator	from Right	**287.00**
LPC S230	black	3 position	I - O - II	lever selector actuator	–	**292.00**
LPC S231	black	3 position	I - O - II	lever selector actuator	from L+R	**319.00**
LPC S232	black	3 position	I - O - II	lever selector actuator	from Left	**319.00**
LPC S233	black	3 position	I - O - II	lever selector actuator	from Right	**319.00**

Key selector switch actuators

type	colour	positions	key remove	description	spring return	price
LPC S320	black	2 pos (O-I)	Left	key switch actuator	–	**572.00**
LPC S321	black	2 pos (O-I)	L+R	key switch actuator	–	**572.00**
LPC S340	black	2 pos (O-I)	Left	key switch actuator	from Right	**637.00**
LPC S330	black	3 pos (I-O-II)	Centre	key switch actuator	–	**636.00**
LPC S331	black	3 pos (I-O-II)	L+C+R	key switch actuator	–	**636.00**
LPC S332	black	3 pos (I-O-II)	Left	key switch actuator	–	**636.00**
LPC S333	black	3 pos (I-O-II)	Right	key switch actuator	–	**636.00**
LPC S360	black	3 pos (I-O-II)	Centre	key switch actuator	from Right	**657.00**
LPC S370	black	3 pos (I-O-II)	Centre	key switch actuator	from L+R	**657.00**

Versions with different key codes available on request

Illuminated Ø22 mm control devices

Pilot light heads - Ø22 mm

LPL 3	green	illuminated	Ø22 mm pilot light head only	pilot light	**86.00**
LPL 4	red	illuminated	Ø22 mm pilot light head only	pilot light	**86.00**
LPL 5	yellow	illuminated	Ø22 mm pilot light head only	pilot light	**86.00**
LPL 6	blue	illuminated	Ø22 mm pilot light head only	pilot light	**86.00**
LPL 7	t/parent	illuminated	Ø22 mm pilot light head only	pilot light	**86.00**

Flush illuminated pushbutton actuators

LPC BL103	green	illuminated	flush momentary pushbutton actuator	spring return	**208.00**
LPC BL104	red	illuminated	flush momentary pushbutton actuator	spring return	**208.00**
LPC BL105	yellow	illuminated	flush momentary pushbutton actuator	spring return	**208.00**
LPC BL106	blue	illuminated	flush momentary pushbutton actuator	spring return	**208.00**

Alternate action pushbutton actuators *(push-on/push-off)*

LPC QL103	green	illuminated	flush alternate action p/button actuator	alternate	**436.00**
LPC QL104	red	illuminated	flush alternate action p/button actuator	alternate	**436.00**
LPC QL105	yellow	illuminated	flush alternate action p/button actuator	alternate	**436.00**
LPC QL106	blue	illuminated	flush alternate action p/button actuator	alternate	**436.00**

Extended head illuminated pushbutton actuators

LPC BL203	green	illuminated	projecting head pushbutton actuator	spring return	**261.00**
LPC BL204	red	illuminated	projecting head pushbutton actuator	spring return	**261.00**
LPC BL205	yellow	illuminated	projecting head pushbutton actuator	spring return	**261.00**
LPC BL206	blue	illuminated	projecting head pushbutton actuator	spring return	**261.00**
LPC BL207	t/parent	illuminated	projecting head pushbutton actuator	spring return	**261.00**

Alternate action pushbutton actuators *(push-on/push-off)*

LPC QL203	green	illuminated	projecting head alternate action	alternate	**548.00**
LPC QL204	red	illuminated	projecting head alternate action	alternate	**548.00**
LPC QL205	yellow	illuminated	projecting head alternate action	alternate	**548.00**
LPC QL206	blue	illuminated	projecting head alternate action	alternate	**548.00**
LPC QL207	t/parent	illuminated	projecting head alternate action	alternate	**548.00**

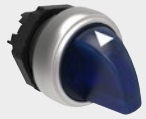
Illuminated mushroom head pushbutton actuators

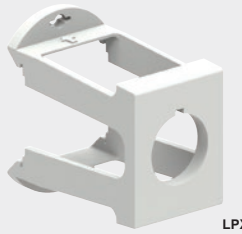
LPC BL6144	red	illuminated	Ø40 mm mushroom head actuator	spring return	**469.00**
LPC BL6644	red	illuminated	Ø40 mm latching mushroom actuator	twist release	**874.00**

PLatinum SERIES

Platinum LPC series *(chromed plastic)* illuminated Ø22 mm control devices

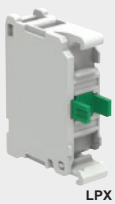
LPC SL1215

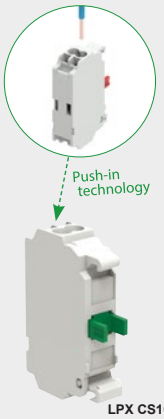

LPC SL1306


LPX DIN

LPC R1196

LPX AU120M

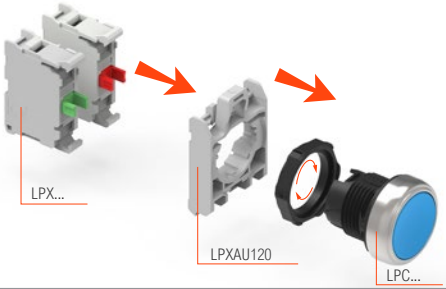

LPX C10



LPX CS10

type	colour	positions	description	action	price
Illuminated selector switch actuators					
LPC SL1203	green	2 position	illuminated selector switch actuator	O - I	**354.00**
LPC SL1204	red	2 position	illuminated selector switch actuator	O - I	**354.00**
LPC SL1205	yellow	2 position	illuminated selector switch actuator	O - I	**354.00**
LPC SL1206	blue	2 position	illuminated selector switch actuator	O - I	**354.00**
LPC SL1208	white	2 position	illuminated selector switch actuator	O - I	**354.00**
LPC SL1213	green	2 position	illuminated selector switch actuator	spring return from Right	**387.00**
LPC SL1214	red	2 position	illuminated selector switch actuator		**387.00**
LPC SL1215	yellow	2 position	illuminated selector switch actuator		**387.00**
LPC SL1216	blue	2 position	illuminated selector switch actuator		**387.00**
LPC SL1218	white	2 position	illuminated selector switch actuator		**387.00**
LPC SL1303	green	3 position	illuminated selector switch actuator	I - O - II	**392.00**
LPC SL1304	red	3 position	illuminated selector switch actuator	I - O - II	**392.00**
LPC SL1305	yellow	3 position	illuminated selector switch actuator	I - O - II	**392.00**
LPC SL1306	blue	3 position	illuminated selector switch actuator	I - O - II	**392.00**
LPC SL1308	white	3 position	illuminated selector switch actuator	I - O - II	**392.00**
LPC SL1313	green	3 position	illuminated selector switch actuator	spring return from L+R	**428.00**
LPC SL1314	red	3 position	illuminated selector switch actuator		**428.00**
LPC SL1315	yellow	3 position	illuminated selector switch actuator		**428.00**
LPC SL1316	blue	3 position	illuminated selector switch actuator		**428.00**
LPC SL1318	white	3 position	illuminated selector switch actuator		**428.00**
DIN-rail mount adaptor for control devices					
• To mount Ø22 mm control devices on DIN-rail.					
• Same profile as standard MCBs fits into standard distribution boards with *(45 mm cut-out)*					
LPX DIN	grey	DIN-rail	mounting adaptor for Ø22 mm pushbuttons		**61.00**
Mechanical reset pushbuttons *(fine depth adjustment through face of button)*					
• Complete with shaft *(adjustable length 0 - 15 mm)*					
• Fine rod adjustment *(1 - 4 mm)* on front with screwdriver by removing actuator cap					
LPC R1002	black	–	mechanical reset button *(adj. length)*	0-150 mm	**197.00**
LPC R1004	red	–	mechanical reset button *(adj. length)*	0-150 mm	**197.00**
LPC R1006	blue	–	mechanical reset button *(adj. length)*	0-150 mm	**197.00**
LPC R1196	blue	(RESET)	mechanical reset button *(adj. length)*	0-150 mm	**256.00**
Contact blocks and accessories for **LPC / LPS / LPF** series					
Contact block support for *above series*					
LPX AU120	support		contact block support for **LPC** - chromed plastic actuators		**50.00**
LPX AU120M	support		contact block support for **LPS** and **LPF** - metallic actuators		**64.00**
Contact blocks			*(require LPXAU120M for metal actuators)*		
• Self-cleaning, dual scrape/oscillating action contacts					
• Thermal current Ith: 10A - IEC rated insulation voltage: 690V (**C20 / C02 / C11:** 250V)					
• Can be clipped onto the back of another contact block					
LPX C10	1 x NO	standard	screw	terminal contact block for control devices	**93.00**
LPX C01	1 x NC	standard	screw	terminal contact block for control devices	**93.00**
LPX C20	2 x NO	standard	screw	terminal contact block for control devices	**212.00**
LPX C02	2 x NC	standard	screw	terminal contact block for control devices	**212.00**
LPX C11	1NO+1NC	standard	screw	terminal contact block for control devices	**212.00**
LPX C10A	1 x NO	early make	screw	terminal contact block for control devices	**156.00**
LPX C01D	1 x NC	late break	screw	terminal contact block for control devices	**156.00**
Push-in terminals for cables with ferrules *(no tool required for insertion)* *guaranteed retaining force over time even in the presence of vibration and/or impact*					
LPX CS10	1 x NO	standard	push-in	terminal contact block for control devices	**130.00**
LPX CS01	1 x NC	standard	push-in	terminal contact block for control devices	**130.00**

Ø22MM - Chromed plastic



Above ZAR prices do not include VAT. E&OE

PLatinum Series

LPS B102

LPS B203

LPS B2104

LPS B6144

LPS B6644

LPS B6844

LPS B7191

LPS B7223

LPS B7355

LPS S120

LPS S320

Platinum LPS series *(metal) - mounting securely by two screws*

The popular Ø22 mm chromed plastic version is complemented by a robust, impact-resistant Ø22 mm metal version and a Ø30 mm flat metal version with modern, attractive styling.

- Elegant style ergonomic design *(combining aesthetics with industrial durability)*
- IP66, IP67 and IP69K degree of protection for use even in extreme temperatures -25°C - +70°C
- Material resistant to oils, solvents and hydrocarbons
- Contact blocks and **LPX AU120M** support *(see control device accessories)*

Supplied without **LPX AU120M** mounting adaptor/contact support *(to be ordered separately)*

type	colour	symbol	description	action	price
Pushbutton actuators			**Ø22 mm**		
LPS B102	black	–	flush momentary pushbutton actuator	spring ret.	**139.00**
LPS B103	green	–	flush momentary pushbutton actuator	spring ret.	**139.00**
LPS B104	red	–	flush momentary pushbutton actuator	spring ret.	**139.00**
LPS B105	yellow	–	flush momentary pushbutton actuator	spring ret.	**139.00**
LPS B106	blue	–	flush momentary pushbutton actuator	spring ret.	**139.00**
LPS B202	black	–	projecting head pushbutton actuator	spring ret.	**175.00**
LPS B203	green	–	projecting head pushbutton actuator	spring ret.	**175.00**
LPS B204	red	–	projecting head pushbutton actuator	spring ret.	**175.00**
Pushbutton actuators *(with symbols on button)*			**Ø22 mm**		
LPS B1104	red	O	flush momentary pushbutton actuator	spring ret.	**180.00**
LPS B1113	green	I	flush momentary pushbutton actuator	spring ret.	**180.00**
LPS B1134	red	STOP	flush momentary pushbutton actuator	spring ret.	**180.00**
LPS B1163	green	START	flush momentary pushbutton actuator	spring ret.	**180.00**
LPS B1142	black	←	flush momentary pushbutton actuator	spring ret.	**180.00**
LPS B1152	black	↑	flush momentary pushbutton actuator	spring ret.	**180.00**
LPS B1196	blue	RESET	flush momentary pushbutton actuator	spring ret.	**180.00**
LPS B2104	red	O	extended head pushbutton actuator	spring ret.	**227.00**
Mushroom head pushbutton actuators					
LPS B6144	red	Ø40 mm	mushroom pushbutton actuator	spring ret.	**315.00**
Emergency stopping *(ISO 13850 compliant)*					
LPS B6634	red	Ø30 mm	latching mushroom pushbutton actuator	twist release	**617.00**
LPS B6644	red	Ø40 mm	latching mushroom pushbutton actuator	twist release	**587.00**
LPS B6844	red	Ø40 mm	latching mushroom pushbutton actuator	key release	**1 180.00**
Multi pushbutton actuators			**Ø22 mm**		
Double-touch pushbutton actuators					
LPS B7113	grn/red	–	double touch pushbutton actuator (flush)	spring ret.	**270.00**
LPS B7191	blk/blk	↓↑	double touch pushbutton actuator (flush)	spring ret.	**349.00**
LPS B7223	grn/red	I-O	double touch actuator (ext. red button)	spring ret.	**366.00**
Triple-touch pushbutton actuators *(red extended stop button)*					
LPS B7345	grn/grn	I-STOP-II	triple-touch pushbutton actuator	spring ret.	**402.00**
LPS B7355	grn/grn	↑-STOP-↓	triple-touch pushbutton actuator	spring ret.	**402.00**
LPS B7365	grn/grn	←-STOP-→	triple-touch pushbutton actuator	spring ret.	**402.00**
LPS B7375	grn/grn	↙-STOP-↗	triple-touch pushbutton actuator	spring ret.	**402.00**

Selector switch actuators				**Ø22 mm**	spring ret.	
LPS S120	black	O - I	2 position	selector switch actuator	–	**311.00**
LPS S121	black	O - I	2 position	selector switch actuator	from Right	**338.00**
LPS S130	black	I - O - II	3 position	selector switch actuator	–	**344.00**
LPS S131	black	I - O - II	3 position	selector switch actuator	from L+R	**375.00**
LPS S132	black	I - O - II	3 position	selector switch actuator	from Left	**375.00**
LPS S133	black	I - O - II	3 position	selector switch actuator	from Right	**375.00**

Key selector switch actuators *versions with different key codes available on request*

type	colour	positions	key remove	description	spring return	price
LPS S320	black	O - I	Left	2 pos key switch actuator	–	**702.00**
LPS S321	black	O - I	L+R	2 pos key switch actuator	–	**702.00**
LPS S340	black	O - I	Left	2 pos key switch actuator	from Right	**782.00**
LPS S330	black	I - O - II	Centre	3 pos key switch actuator	–	**779.00**
LPS S331	black	I - O - II	L+C+R	3 pos key switch actuator	–	**779.00**
LPS S333	black	I - O - II	Right	3 pos key switch actuator	–	**779.00**
LPS S360	black	I - O - II	Centre	3 pos key switch actuator	from Right	**805.00**
LPS S370	black	I - O - II	Centre	3 pos key switch actuator	from L+R	**805.00**

PLatinum SERIES

LPS J400

LPS J210

LPX AU109EN

LPSL3

LPS BL103

LPS BL204

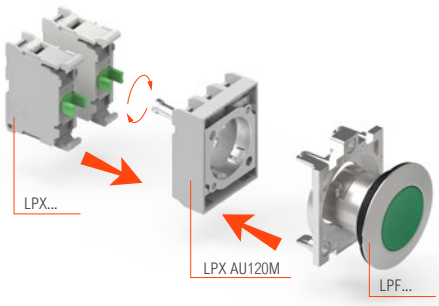
LPS SL1205

Platinum LPS series Ø22 mm *(metal) - mounting securely by two screws*

type	colour	positions	contacts	description	operation	price
Joystick operators			**Ø22 mm**			
Supplied complete with contact block support and contact blocks						
Without mechanical interlock						
LPS J200	black	2 position	2 NO	joystick control no interlock	spring ret.	**1 180.00**
LPS J201	black	2 position	2 NO	joystick control no interlock	latch	**1 180.00**
LPS J400	black	4 position	4 NO	joystick control no interlock	spring ret.	**1 590.00**
LPS J401	black	4 position	4 NO	joystick control no interlock	latch	**1 590.00**
With mechanical interlock - in centre position						
LPS J210	black	2 position	2 NO	joystick control interlocked	spring ret.	**1 420.00**
LPS J211	black	2 position	2 NO	joystick control interlocked	latch	**1 420.00**
LPS J410	black	4 position	4 NO	joystick control interlocked	spring ret.	**1 910.00**
LPS J411	black	4 position	4 NO	joystick control interlocked	latch	**1 910.00**
LPX AU101	black	Ø22 mm		legend holder for joystick controllers	*12 mm (H)*	**88.00**
LPX AU109	silver	engraveable		clip-in label for *(above)* holders	*12 mm (H)*	**25.70**
LPX AU109EN	silver	engraved		label *(provide required engraving)*	*12 mm (H)*	**24.20**
Illuminated control devices			**Ø22 mm**			
LPXAU120M mounting adaptor/contact support *(to be ordered separately)*						
Pilot light heads - Ø22mm						
LPS L3	green	illuminated	Ø22 mm	pilot light head only	pilot light	**149.00**
LPS L4	red	illuminated	Ø22 mm	pilot light head only	pilot light	**149.00**
LPS L5	yellow	illuminated	Ø22 mm	pilot light head only	pilot light	**149.00**
LPS L6	blue	illuminated	Ø22 mm	pilot light head only	pilot light	**149.00**
LPS L7	t/parent	illuminated	Ø22 mm	pilot light head only	pilot light	**149.00**
Illuminated pushbutton actuators			**Ø22 mm**			
LPS BL103	green	illuminated		flush head pushbutton actuator	spring ret.	**255.00**
LPS BL104	red	illuminated		flush head pushbutton actuator	spring ret.	**255.00**
LPS BL105	yellow	illuminated		flush head pushbutton actuator	spring ret.	**255.00**
LPS BL106	blue	illuminated		flush head pushbutton actuator	spring ret.	**255.00**
LPS BL203	green	illuminated		projecting head pushbutton actuator	spring ret.	**320.00**
LPS BL204	red	illuminated		projecting head pushbutton actuator	spring ret.	**320.00**
LPS BL205	yellow	illuminated		projecting head pushbutton actuator	spring ret.	**320.00**
LPS BL206	blue	illuminated		projecting head pushbutton actuator	spring ret.	**320.00**
Illuminated mushroom head pushbutton actuators Ø40 mm						
LPS BL6644	red	illuminated		latching mushroom head actuator	twist release	**1 080.00**
Illuminated selector switch actuators			**Ø22 mm**			

type	colour	positions	description	action	price
LPS SL1203	green	2 position	illuminated selector switch actuator	O - I	**433.00**
LPS SL1204	red	2 position	illuminated selector switch actuator	O - I	**433.00**
LPS SL1205	yellow	2 position	illuminated selector switch actuator	O - I	**433.00**
LPS SL1206	blue	2 position	illuminated selector switch actuator	O - I	**433.00**
LPS SL1303	green	3 position	illuminated selector switch actuator	I - O - II	**480.00**
LPS SL1304	red	3 position	illuminated selector switch actuator	I - O - II	**480.00**
LPS SL1305	yellow	3 position	illuminated selector switch actuator	I - O - II	**480.00**
LPS SL1306	blue	3 position	illuminated selector switch actuator	I - O - II	**480.00**

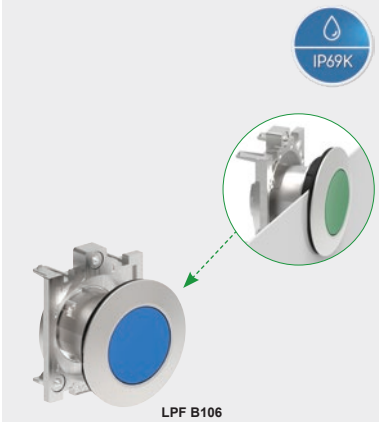
Ø30MM - Chromed metal



Refer to ***D-6...***

Above ZAR prices do not include VAT. E&OE

PLatinum Series



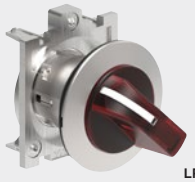
LPF B106

LPF B204

LPF S120

LPF S320

LPF L3


LPF SL1204

Platinum LPF - Ø30 mm series *(flat-metal)* - *Vandal proof*

- Actuator profile of only 4 mm
- Screw panel fixing by two screws for secure mounting and vandal-proof installation
- Elegant style ergonomic design *(combining aesthetics with industrial durability)*
- IP66, IP67 and IP69K degree of protection for use even in extreme temperatures -25°C...+70°C
- Contact blocks, LED modules and **LPX AU120M** support

Actuators are supplied without **LPX AU120M** contact block support *(to be ordered separately)*

type	colour	style	description	action	price
Pushbutton actuators			**Ø30 mm**		
LPF B102	black	flush	momentary action pushbutton actuator	spring return	**208.00**
LPF B103	green	flush	momentary action pushbutton actuator	spring return	**208.00**
LPF B104	red	flush	momentary action pushbutton actuator	spring return	**208.00**
LPF B105	yellow	flush	momentary action pushbutton actuator	spring return	**208.00**
LPF B106	blue	flush	momentary action pushbutton actuator	spring return	**208.00**
LPF B204	red	projecting	momentary action pushbutton actuator	spring return	**263.00**
Selector switch actuators			**Ø30 mm**	spring return	
LPF S120	black	2 position	O - I selector switch actuator	–	**466.00**
LPF S121	black	2 position	O - I selector switch actuator	from R	**507.00**
LPF S130	black	3 position	I - O - II selector switch actuator	–	**516.00**
LPF S131	black	3 position	I - O - II selector switch actuator	from L+R	**562.00**
LPF S133	black	3 position	I - O - II selector switch actuator	from R	**562.00**
Key switch actuators			**Ø30 mm**	key release	
LPF S320	black	2 position	(O-I) Left key switch actuator	–	**1 060.00**
LPF S321	black	2 position	(O-I) L+R key switch actuator	–	**1 060.00**
LPF S340	black	2 position	(O-I) Left key switch actuator	from Left	**1 180.00**
LPF S330	black	3 position	(I-O-II) Centre key switch actuator	–	**1 170.00**
LPF S331	black	3 position	(I-O-II) L+C+R key switch actuator	–	**1 170.00**
LPF S370	black	3 position	(I-O-II) Centre key switch actuator	from L+R	**1 210.00**
Illuminated control and signalling devices			**Ø30 mm**		
Pilot light head					
LPF L3	green	illuminated	pilot light head *(with diffuser)*	pilot light	**223.00**
LPF L4	red	illuminated	pilot light head *(with diffuser)*	pilot light	**223.00**
LPF L5	yellow	illuminated	pilot light head *(with diffuser)*	pilot light	**223.00**
LPF L6	blue	illuminated	pilot light head *(with diffuser)*	pilot light	**223.00**
Illuminated pushbuttons *(with side visibility)*					
LPF BL103	green	illuminated	flush momentary action actuator	spring return	**381.00**
LPF BL104	red	illuminated	flush momentary action actuator	spring return	**381.00**
LPF BL105	yellow	illuminated	flush momentary action actuator	spring return	**381.00**
LPF BL106	blue	illuminated	flush momentary action actuator	spring return	**381.00**
Illuminated selector switch actuators					
LPF SL1203	green	2 position	illuminated selector switch actuator	O - I	**650.00**
LPF SL1204	red	2 position	illuminated selector switch actuator	O - I	**650.00**
LPF SL1303	green	3 position	illuminated selector switch actuator	I - O - II	**720.00**

Other colours and configurations available on request.

Contact blocks and support for LPF series

LPX AU120M	support	contact block support for **LPS** and **LPF** - metallic actuators	**64.00**

Contact blocks - *require* **LPX AU120M** *for metal actuators*

- Self cleaning, dual scrape/oscillating action contacts
- Thermal current Ith: 10A - IEC rated insulation voltage: 690V (**C20 / C02 / C11:** 250V)

LPX C10	1 x NO	standard	screw	contact block for control devices	**93.00**
LPX C01	1 x NC	standard	screw	contact block for control devices	**93.00**
LPX C20	2 x NO	standard	screw	contact block for control devices	**212.00**
LPX C02	2 x NC	standard	screw	contact block for control devices	**212.00**
LPX C11	1NO+1NC	standard	screw	contact block for control devices	**212.00**
LPX CS10	1 x NO	standard	push-in	contact block for control devices	**130.00**
LPX CS01	1 x NC	standard	push-in	contact block for control devices	**130.00**

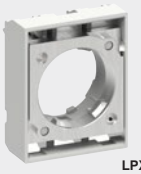
Accessories for above LPF actuators

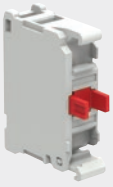
LPFX AU100G	black	holder	legend holder for AU109 labels	*12 mm (H)*	**31.70**
LPX AU109	silver	engravable	clip-in label for above holder	*12 mm (H)*	**25.70**
LPX AU109EN	silver	engraved	label *(provide required engraving)*	*12 mm (H)*	**24.20**

PLatinum Series

Contact blocks and accessories

LPX AU120


LPX AU120M


LPX C01

LPX C20

LPX LF...

LPX LPSB...

LPX LFB3

LPX LPSM...

type	contact	supply	description	price
Contact block supports - *for* **LPC**, **LPS** *and* **LPF** *series control devices*				
• Supports up to 9 contact blocks *(3 rows of 3 contact blocks)*				
LPX AU120	support	contact block support	for **LPC**	chromed plastic actuators	**50.00**
LPX AU120M	support	contact block support	**LPS/LPF**	metallic actuators	**64.00**
Contact blocks *require* ***LPX AU120*** *for plastic and* ***LPX AU120M*** *for metal actuators*				
All versions LPC, LPS, LPF use the same contact elements, LED light elements and a wide range of accessories.				
• Thermal current Ith: 10A - IEC rated insulation voltage: 690V (**C20 / C02 / C11:** 250V)				
• Self-cleaning, dual scrape/oscillating action contacts				
• Can be clipped onto the back of another contact block				
LPX C10	1 x NO	standard	screw terminal contact block for control devices	**93.00**
LPX C01	1 x NC	standard	screw terminal contact block for control devices	**93.00**
LPX C20	2 x NO	standard	screw terminal contact block for control devices	**212.00**
LPX C02	2 x NC	standard	screw terminal contact block for control devices	**212.00**
LPX C11	1NO+1NC	standard	screw terminal contact block for control devices	**212.00**
LPX C10A	1 x NO	early make	screw terminal contact block for control devices	**156.00**
LPX C01D	1 x NC	late break	screw terminal contact block for control devices	**156.00**
Push-in terminals - for cables with ferrules *(no tool required for insertion).* *Guaranteed retaining force over time even in the presence of vibration and/or impact.*				
LPX CS10	1 x NO	standard	push-in terminal contact block for control devices	**130.00**
LPX CS01	1 x NC	standard	push-in terminal contact block for control devices	**130.00**

New

LED indicating modules *(protected)* *for all control devices*

- Overvoltage protection
- Electrical life: 100.000 hours
- Total protection against overvoltage/stray currents in wiring, reduced flickering phenomenon
- Clips onto **LPXAU120** and **LPXAU120M** supports

type	colour	supply voltage	lamp	state	description	price
LED module *(steady light)*						
LPX LPB3	green	12 - 30 VAC/DC	LED	steady	integrated lamp module	**226.00**
LPX LPB4	red	12 - 30 VAC/DC	LED	steady	integrated lamp module	**226.00**
LPX LPB5	yellow	12 - 30 VAC/DC	LED	steady	integrated lamp module	**226.00**
LPX LPB6	blue	12 - 30 VAC/DC	LED	steady	integrated lamp module	**226.00**
LPX LPB8	white	12 - 30 VAC/DC	LED	steady	integrated lamp module	**226.00**
LPX LPE3	green	85 - 140 VAC	LED	steady	integrated lamp module	**321.00**
LPX LPE4	red	85 - 140 VAC	LED	steady	integrated lamp module	**321.00**
LPX LPE5	yellow	85 - 140 VAC	LED	steady	integrated lamp module	**321.00**
LPX LPE6	blue	85 - 140 VAC	LED	steady	integrated lamp module	**321.00**
LPX LPE8	white	85 - 140 VAC	LED	steady	integrated lamp module	**321.00**
LPX LPM3	green	185 - 265 VAC	LED	steady	integrated lamp module	**338.00**
LPX LPM4	red	185 - 265 VAC	LED	steady	integrated lamp module	**338.00**
LPX LPM5	yellow	185 - 265 VAC	LED	steady	integrated lamp module	**338.00**
LPX LPM6	blue	185 - 265 VAC	LED	steady	integrated lamp module	**338.00**
LPX LPM8	white	185 - 265 VAC	LED	steady	integrated lamp module	**338.00**
LED module *(flashing light)*						
LPX LFB3	green	18 - 30 VAC/DC	LED	flashing	integrated lamp module	**516.00**
LPX LFB4	red	18 - 30 VAC/DC	LED	flashing	integrated lamp module	**516.00**
LPX LFB5	yellow	18 - 30 VAC/DC	LED	flashing	integrated lamp module	**516.00**
LPX LFB6	blue	18 - 30 VAC/DC	LED	flashing	integrated lamp module	**516.00**
LPX LFB8	white	18 - 30 VAC/DC	LED	flashing	integrated lamp module	**516.00**
LPX LFM3	green	185 - 265 VAC	LED	flashing	integrated lamp module	**774.00**
LPX LFM4	red	185 - 265 VAC	LED	flashing	integrated lamp module	**774.00**
LPX LFM5	yellow	185 - 265 VAC	LED	flashing	integrated lamp module	**774.00**
LPX LFM6	blue	185 - 265 VAC	LED	flashing	integrated lamp module	**774.00**
LPX LFM8	white	185 - 265 VAC	LED	flashing	integrated lamp module	**774.00**
LED module *(push-in terminals)*						
• For cables with ferrules - simply push ferrule into terminals *(no tool required for insertion)* guaranteed retaining force over time even in presence of vibration and/or impact						
LPX LPSB*	*	12 - 30 VAC/DC	LED	steady	integrated lamp module	**258.00**
LPX LPSM*	*	185 - 265 VAC	LED	steady	integrated lamp module	**389.00**
LPX LFE*	*	85 - 140 VAC	LED	steady	integrated lamp module	**740.00**

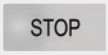
* *Replace with:* **3** *(green)* / **4** *(red)* / **5** *(yellow)* / **6** *(blue)* / **8** *(white)* - *for colours*

Above ZAR prices do not include VAT. E&OE

PLatinum Series

LPX AU100

LPX AU108



LPX AU109EN

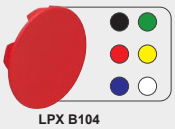
LPX DAU115...

LPX AU158

LPX AU113

LPX A200

LPX AU136



LPX B104

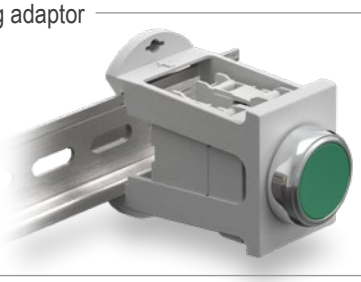
LPX DIN

Accessories for control and signalling devices

All versions LPC, LPS, LPF use the same contact elements, LED light elements and a wide range of accessories.

type	colour	supply	description		price
Legend plates and labels - *for* **LPC, LPS** *and* **LPF** *series control devices*					
LPX AU100	black	Ø22 mm	legend holder for AU109 labels	*12 mm (H)*	**21.50**
LPFX AU100G	black	Ø30 mm	legend holder for AU109 labels	*12 mm (H)*	**31.70**
LPX AU101	black	Ø22 mm	legend holder for joystick controllers	*12 mm (H)*	**88.00**
LPX AU109	silver	engraveable	clip-in label for *(above)* holders	*12 mm (H)*	**25.70**
LPX AU109EN	silver	engraved	label *(provide required engraving)*	*12 mm (H)*	**24.20**
LPX AU105	black	Ø22 mm	legend holder for AU108 labels	*15 mm (H)*	**26.90**
LPX AU108	silver	engraveable	clip-in label for *(above)* holders	*15 mm (H)*	**26.90**
LPX AU108EN	silver	engraved	label *(provide required engraving)*	*15 mm (H)*	**25.30**
Illuminated "Emergency Stop" disc - *for 22 mm mushroom head pushbuttons*					
• To enhance visibility of the emergency button ensuring its operation in conditions of low visibility • Two light functions: Steady or flashing *(selectable)*					
LPX DAU115024	yellow	24 VAC/DC	LED	illuminated emergency disc	Ø60 mm	**537.00**
LPX DAU115230	yellow	240 VAC	LED	illuminated emergency disc	Ø60 mm	**590.00**
Protection shrouds - *(to prevent inadvertent operation of mushroom pushbuttons)*					
LPX AU158	yellow	shroud	padlockable for latching mushroom pushbutton		**137.00**
LPX AU159	yellow	half shroud	prevents inadvertent operation of mushroom p/button		**244.00**
Emergency labels *(to be mounted behind mushroom pushbuttons)*					
LPX AU113	yellow	"emergency stop" plastic label/disc for pushbuttons		Ø90 mm	**75.00**
LPX AU115	yellow	"emergency stop" plastic label/disc for pushbuttons		Ø60 mm	**73.00**
LPX AU110	yellow	"emergency stop" adhesive label for pushbuttons		65 x 35 mm	**72.00**
Accessories for control and signalling device					
LPX A130	grey		Ø22 mm hole blanking plug *(threaded)*		**28.10**
LPX A140	grey		action plug for using central position on actuators		**16.20**
LPX A150	grey		spare rod *(150 mm)* for mechanical reset pushbuttons		**54.00**
LPX A170	silver	No. 455	replacement standard key set for key switches		**186.00**
LPX A170R*	silver		special key set for key switches with different keys		**241.00**
* *Add:* **421E, 458A, 520E, 3131A, 3433E** *(for different key requirement)*					
LPX AU00	black		spare plastic threaded nut for mounting plastic actuators		**14.40**
LPX AU01	silver		replacement ring *(steel)* with teeth to avoid turning when mounted		**61.00**
LPX A162	silver		reduction ring to mount Ø22 mm LPC through Ø30 mm hole		**159.00**
LPX A162M	silver		reduction ring to mount Ø22 mm LPS through Ø30 mm hole		**206.00**
LPX A200	silver		socket spanner for actuator fixing ring tightening		**311.00**
Rubber protection boots for pushbuttons					
LPX AU13*	*	rubber boot	protection boot for flush pushbutton actuators		**55.00**
LPX AU14*	*	rubber boot	rubber protection boot for extended pushbuttons		**59.00**
LPX AU157	t/parent	rubber boot	protection boot for double/triple touch pushbuttons		**166.00**
LPX AU167	t/parent	rubber boot	rubber protection boot for mushroom pushbuttons		**374.00**
LPX AU170	t/parent	rubber boot	protection cover *(hinged)* for Ø22 mm pushbuttons		**229.00**
* *Replace with:* **2** *(black)* / **3** *(green)* / **4** *(red)* / **5** *(yellow)* / **6** *(blue)* / **8** *(white)* - *for colours*					
Spares for pushbuttons					
LPX B10*	*		replacement front cap for flush pushbutton actuators		**18.60**
LPX B20*	*		replacement front cap for extended head pushbutton actuators		**22.10**
LPX BL10*	*		replacement lens for illuminated flush pushbutton actuators		**62.00**
LPX BL20*	*		replacement lens for illuminated ext. head pushbutton actuators		**78.00**
* *Replace with:* **2** *(black)* / **3** *(green)* / **4** *(red)* / **5** *(yellow)* / **6** *(blue)* / **8** *(white)* - *for colours*					
DIN-rail mount adaptor for control devices					
• To mount Ø22 mm control devices on DIN-rail • Same profile as standard MCBs fits into standard distribution boards with *(45 mm cut-out)*					
LPX DIN	grey	DIN-rail	mounting adaptor for Ø22 mm pushbuttons		**61.00**

Ø22MM - Mounting adaptor



Ø22 mm Monoblock control devices - Actuator with built-in contact arrangement

- Contact rating: 5A - 240 VAC
- Protection: **IP66/67/69K** *(rear terminals IP20)*

LMP B104T01

LMP B204T11

LMP B6144T11

LMP B6644T11

LMP S120T10

LMP S330T20

LPM LB3

LPM LB5

type	colour	contact		description	action	price
Pushbutton switches				Lens: Ø29 x 13 - Body: L 42.5 mm		
LMP B104T01	red	1 NO	flush	momentary pushbutton	spring ret.	**66.00**
LMP B103T10	green	1 NC	flush	momentary pushbutton	spring ret.	**66.00**
LMP B103T11	green	1NO + 1NC	flush	momentary pushbutton	spring ret.	**86.00**
LMP B104T11	red	1NO + 1NC	flush	momentary pushbutton	spring ret.	**86.00**
LMP B102T11	black	1NO + 1NC	flush	momentary pushbutton	spring ret.	**86.00**
LMP B108T11	white	1NO + 1NC	flush	momentary pushbutton	spring ret.	**86.00**
LMP B204T11	red	1NO + 1NC	project	projecting head pushbutton	spring ret.	**95.00**
Alternate action pushbutton actuator *(push-on / push-off)*						
LMP Q102T11	black	1NO + 1NC		flush alternate action p/button actuator	alternate	**165.00**
Mushroom head pushbutton switches				Lens: Ø40 x 21/33 - Body: L 42.5 mm		
LMP B6144T11	red	1NO + 1NC		mushroom head pushbutton	spring ret.	**86.00**
LMP B6644T01	red	1 NC	latching	mushroom head pushbutton	twist rel.	**102.00**
LMP B6644T11	red	1NO + 1NC	latching	mushroom head pushbutton	twist rel.	**120.00**
Selector switches				Lens: Ø29 x 26 - Body: L 42.5 mm		
2 position selector switches					spring ret.	
LMP S120T10	black	1NO	O - I	2 position selector switch	–	**75.00**
LMP S120T11	black	1NO + 1NC	O - I	2 position selector switch	–	**93.00**
3 position selector switches						
LMP S130T20	black	2 NO	I - O - II	3 position selector switch	–	**101.00**
LMP S131T20	black	2 NO	I - O - II	3 position selector switch	from L+R	**101.00**
Key operated selector switch				Lens: Ø29 x 46.2 - Body: L 42.5 mm		
2 position key switches				*(key removable from left position)*		
LMP S320T10	black	1NO	O - I	2 position key actuated selector switch		**282.00**
3 position key switches				*(key removable from centre position)*		
LMP S330T20	black	2 NO	I - O - II	3 position key actuated selector switch		**287.00**

Monoblock LED pilot lights

LPM series are designed as single units, integrating the LED light source, lens, and housing into a compact space-saving form factor. This makes them ideal for applications where space is limited or where multiple indicators need to be installed in close proximity.

- Electrical life: >30.000 hours
- Compliant with standards: IEC/EN 60947-1, IEC/EN60947-5-1, UL508, CSA C22.2 no 14
- Protection: IP66/67/69K *(rear terminals IP20)*

type	colour	supply			description	price
LPM LB1	orange	24 VAC/DC	Ø22 mm	monoblock	panel-mount LED pilot light	**98.00**
LPM LB3	green	24 VAC/DC	Ø22 mm	monoblock	panel-mount LED pilot light	**98.00**
LPM LB4	red	24 VAC/DC	Ø22 mm	monoblock	panel-mount LED pilot light	**98.00**
LPM LB5	yellow	24 VAC/DC	Ø22 mm	monoblock	panel-mount LED pilot light	**98.00**
LPM LB6	blue	24 VAC/DC	Ø22 mm	monoblock	panel-mount LED pilot light	**98.00**
LPM LB7	t/parent	24 VAC/DC	Ø22 mm	monoblock	panel-mount LED pilot light	**98.00**
LPM LE1	orange	110 VAC	Ø22 mm	monoblock	panel-mount LED pilot light	**261.00**
LPM LE3	green	110 VAC	Ø22 mm	monoblock	panel-mount LED pilot light	**261.00**
LPM LE4	red	110 VAC	Ø22 mm	monoblock	panel-mount LED pilot light	**261.00**
LPM LE5	yellow	110 VAC	Ø22 mm	monoblock	panel-mount LED pilot light	**261.00**
LPM LE6	blue	110 VAC	Ø22 mm	monoblock	panel-mount LED pilot light	**261.00**
LPM LE7	t/parent	110 VAC	Ø22 mm	monoblock	panel-mount LED pilot light	**261.00**
LPM LM1	orange	230 VAC	Ø22 mm	monoblock	panel-mount LED pilot light	**113.00**
LPM LM3	green	230 VAC	Ø22 mm	monoblock	panel-mount LED pilot light	**113.00**
LPM LM4	red	230 VAC	Ø22 mm	monoblock	panel-mount LED pilot light	**113.00**
LPM LM5	yellow	230 VAC	Ø22 mm	monoblock	panel-mount LED pilot light	**113.00**
LPM LM6	blue	230 VAC	Ø22 mm	monoblock	panel-mount LED pilot light	**113.00**
LPM LM7	t/parent	230 VAC	Ø22 mm	monoblock	panel-mount LED pilot light	**113.00**

Above ZAR prices do not include VAT. E&OE

PLatinum SERIES

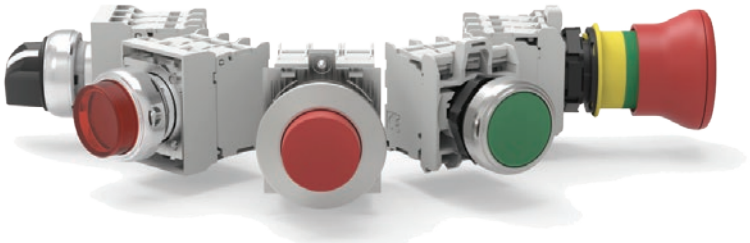
Monoblock control and signalling devices Ø22 mm

- Protection: **IP66, IP67** and **IP69K**
- Service life: >30.000 hours

Ø22 mm control and signalling devices

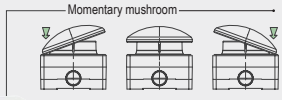
type	colour	supply voltage	IP	dB/10cm	description	price
Monoblock buzzers - Continuous or pulse tone sound						
Monoblock buzzers are used as acoustic indication in automation systems and on-board machinery in production processes and manufacturing environments.						
Long life - low consumption - compact dimensions						
• Continuous or pulse tone						
• Service life:		>30.000 hours *(permanently energised)*				
• Operating temperature:		-25...+70°C				
• Side cable entry						
IP40 version		(90 dB/10cm)				
LPC ZSA	black	9 - 15 VAC/DC	IP40	90dB	Ø22 mm panel-mount buzzer	**280.00**
LPC ZSB	black	18 - 30 VAC/DC	IP40	90dB	Ø22 mm panel-mount buzzer	**280.00**
LPC ZSM	black	185 - 265 VAC/DC	IP40	90dB	Ø22 mm panel-mount buzzer	**280.00**
IP66/67/69K version		(80 dB/10cm)				
LPC ZSAIP	black	9 - 15 VAC/DC	66-69K	80dB	Ø22 mm panel-mount buzzer	**1 060.00**
LPC ZSBIP	black	18 - 30 VAC/DC	66-69K	80dB	Ø22 mm panel-mount buzzer	**1 060.00**
LPC ZSMIP	black	185 - 265 VAC/DC	66-69K	80dB	Ø22 mm panel-mount buzzer	**1 210.00**
Monoblock potentiometers *UL-certified for use in demanding ambient conditions*						
Monoblock potentiometers are compact, single-unit potentiometers which consist of shafts and feature a rotary design, allowing users to adjust resistance by turning the knob. By integrating the shaft and knob into a single unit, making it more space-efficient and easier to install.						
Potentiometers are typically used for regulating parameters of many devices *(e.g. the speed of electric motors through static converters, temperature regulation etc.)*						
Mounts through standard **Ø22 mm** pushbutton mounting hole.						
• Protection degree:		**IP66, IP67** and **IP69K**				
• Monoblock body:		With 1-turn graduated scale				
• Insulation voltage Ui:		250 VAC				
• Resistance tolerance:		±10%				
• Operating temperature:		-25...+70°C				
• Cermet technology ensures stable, constant resistance values over time						
LPC PA001	black	0…1kΩ	66-69K		panel-mounting potentiometer	**422.00**
LPC PA005	black	0…5kΩ	66-69K		panel-mounting potentiometer	**422.00**
LPC PA010	black	0…10kΩ	66-69K		panel-mounting potentiometer	**422.00**
USB and RJ45 communication interfaces Ø22mm IP65 *(with cap closed)*						
USB and RJ45 communication interface connectors are used in industrial environments, which in recent years have seen an increase in the number of connections between machines, production lines, equipment and measuring instruments.						
These interfaces provide the transmission of data in both directions between the various devices. Overall these connectors offer reliable communication and connectivity within compact and durable monoblock designs, ensuring optimal performance in demanding environments.						
LPC D01	black	USB	A-A		panel-mount communication interface	**824.00**
LPC D03	black	USB	A-B		panel-mount communication interface	**824.00**
LPC D05	black	USB	B-A		panel-mount communication interface	**824.00**
LPC D06	black	RJ45	Ethernet		panel-mount communication interface	**914.00**

PLatinum SERIES



Scan to watch

LPZ P1B5600



LP9S01R

LPZ P2B8901

LPZ P1A5P

LPZP1A8

LPZ P3A8

LPZ M5A8

LPZ M4A8

LPZ M2A8

Polycarbonate pushbutton control stations

- High protection degree: IP66, IP67, IP69K
- New styling with incorporated anti-rotation facility for actuators
- M16 or M20/25 cable gland knock-outs on all sides and base
- Easy wiring with internal contact identification on cover and on base
- Contact blocks and lamp modules are base mounted with screw terminals facing forward

type	button colour	contact	cover colour	button symbol	description	dimensions(mm) (H)	(W)	(D)	price
Complete pushbutton stations									
1-way pushbutton stations									
LPZ P1B8100	green	1 x NO	grey	I	flush pushbutton station				**602.00**
LPZ P1B8102	red	1 x NC	grey	O	extended pushbutton station	72	72	56	**602.00**
LPZ P1B5600	red	1 x NC	yellow	–	latch mushroom twist release				**1 010.00**
LP9S01R	red	1 x NC	grey		palm pushbutton station	94	94	90	**714.00**
LP9P02R	red	2 x NC	yellow		palm latching pull release station				**1 010.00**
2-way pushbutton stations									
LPZ P2B8901	green red	1 x NO 1 x NC	grey grey	I O	flush pushbutton station extended pushbutton station	117	72	56	**1 030.00**
LPZ P2B802ZA*	green red	1 x NO 1 x NC	grey grey	I –	flush pushbutton latch mushroom twist release	151	72	56	**885.00**
3-way pushbutton stations									
LPZ P3B8907	green red green	1 x NO 1 x NC 1 x NO	grey grey grey	↑ O ↓	flush pushbutton extended pushbutton flush pushbutton	151	72	56	**1 410.00**

***** *Taller housing (H) 151 mm to accommodate padlock shroud* ***LPX AU158*** *(see page* ***D-8****)*

Empty pushbutton stations *(without actuators and contact blocks)*

type	holes	rows	cover	description	(H)	(W)	(D)	price
LPZ P1A5	1-hole	1	yellow	empty polycarb pushbutton station	72	72	56	**126.00**
LPZ P1A5P	1-hole	1	yellow	empty p/button station with shroud	73	72	56	**566.00**
LPZ P1A8	1-hole	1	grey	empty polycarb pushbutton station	72	72	56	**128.00**
LPZ P2A8	2-hole	1	grey	empty polycarb pushbutton station	117	72	56	**155.00**
LPZ P3A8	3-hole	1	grey	empty polycarb pushbutton station	151	72	56	**180.00**
LPZ P4A8	4-hole	1	grey	empty polycarb pushbutton station	186	72	56	**282.00**
LPZ P5A8	5-hole	1	grey	empty polycarb pushbutton station	220	72	56	**347.00**
LPZ P6A8	6-hole	1	grey	empty polycarb pushbutton station	256	72	56	**417.00**
LPZ XP5	4-piece set yellow screw protection caps for pushbutton stations						4pcs	**76.00**
LPZ XP8	4-piece set grey screw protection caps for pushbutton stations						4pcs	**76.00**

Base mounting contact blocks and indicating modules *for above stations*

LPX CB10	green	1 x NO	base-mount screw-terminal contact block for above stations **119.00**
LPX CB01	red	1 x NC	base-mount screw-terminal contact block for above stations **119.00**
LPX LPBB*	*	12 - 30 VAC/DC	base-mount LED-integrated lamp module for above stations **236.00**
LPX LPBM*	*	185 - 265 VAC	base-mount LED-integrated lamp module for above stations **355.00**

***** *Replace with:* ***3*** *(green) /* ***4*** *(red) /* ***5*** *(yellow) /* ***6*** *(blue) /* ***8*** *(white) - for colours*

Metallic control stations IP66, IP67

- Without actuators and contact blocks
- Enclosures made of aluminium alloy suitable for pushbuttons, selector switches and pilot lights
- Cable entry Ø21 mm *(for M20 or PG13.5 cable glands)*
  - No cable entry for 8/12/16-way

LPZ M1A5	1-hole	1	yellow	industrial metal pushbutton station	80	80	73	**691.00**
LPZ M1A5P	1-hole	1	yellow	p/button station *(with half shroud)*	80	80	73	**969.00**
LPZ M1A8	1-hole	1	grey	industrial metal pushbutton station	80	80	73	**691.00**
LPZ M2A8	2-hole	1	grey	industrial metal pushbutton station	130	80	73	**859.00**
LPZ M3A8	3-hole	1	grey	industrial metal pushbutton station	170	80	73	**1 030.00**
LPZ M4A8	4-hole	1	grey	industrial metal pushbutton station	170	80	73	**1 140.00**
LPZ M5A8	5-hole	1	grey	industrial metal pushbutton station	230	80	73	**1 500.00**
LPZ M6A8	6-hole	1	grey	industrial metal pushbutton station	230	80	73	**1 610.00**
LPZ M8CA8	8-hole	2 x 4	grey	industrial metal pushbutton station	160	160	90	**1 860.00**
LPZ M12CA8	12-hole	3 x 4	grey	industrial metal pushbutton station	170	190	90	**2 040.00**
LPZ M16CA8	16-hole	4 x 4	grey	industrial metal pushbutton station	190	250	90	**2 430.00**

Above ZAR prices do not include VAT. E&OE

GX16...

GX32...U25

GX16 52U

GXM6

GX series - Rotary cam switches

type	poles	contact rating AC1 (A)	contact rating AC23A (kW at 400V)	description	action	price
• **16A/20A** switches *(std. 48 x 48 mm)*, **32A/40A** switches *(std. 65 x 65 mm)* front plate						
ON/OFF switches						
GX16 90U	1-pole	16A	5.5 kW	on-off switch	(O-I)	**366.00**
GX16 91U	2-pole	16A	5.5 kW	on-off switch	(O-I)	**426.00**
GX16 10U	3-pole	16A	5.5 kW	on-off switch	(O-I)	**509.00**
GX16 92U	4-pole	16A	5.5 kW	on-off switch	(O-I)	**568.00**
GX20 90U	1-pole	20A	7.5 kW	on-off switch	(O-I)	**440.00**
GX20 91U	2-pole	20A	7.5 kW	on-off switch	(O-I)	**511.00**
GX20 10U	3-pole	20A	7.5 kW	on-off switch	(O-I)	**610.00**
GX20 92U	4-pole	20A	7.5 kW	on-off switch	(O-I)	**682.00**
GX32 90U	1-pole	32A	15 kW	on-off switch	(O-I)	**693.00**
GX32 91U	2-pole	32A	15 kW	on-off switch	(O-I)	**845.00**
GX32 10U	3-pole	32A	15 kW	on-off switch	(O-I)	**1 060.00**
GX32 92U	4-pole	32A	15 kW	on-off switch	(O-I)	**1 210.00**
GX40 90U	1-pole	40A	18.5 kW	on-off switch	(O-I)	**932.00**
GX40 91U	2-pole	40A	18.5 kW	on-off switch	(O-I)	**1 160.00**
GX40 10U	3-pole	40A	18.5 kW	on-off switch	(O-I)	**1 470.00**
GX40 92U	4-pole	40A	18.5 kW	on-off switch	(O-I)	**1 690.00**
ON/OFF isolators with padlockable red/yellow operating handle						
GX16 10U25	3-pole	16A	5.5 kW	main isolator	(0-I)	**605.00**
GX16 92U25	4-pole	16A	5.5 kW	main isolator	(0-I)	**664.00**
GX32 10U25	3-pole	32A	15 kW	main isolator	(0-I)	**978.00**
GX32 92U25	4-pole	32A	15 kW	main isolator	(0-I)	**1 320.00**
Changeover switches with "OFF" position						
GX16 51U	1-pole	16A	5.5 kW	changeover switch	(I-O-II)	**426.00**
GX16 52U	2-pole	16A	5.5 kW	changeover switch	(I-O-II)	**568.00**
GX16 53U	3-pole	16A	5.5 kW	changeover switch	(I-O-II)	**710.00**
GX16 75U	4-pole	16A	5.5 kW	changeover switch	(I-O-II)	**852.00**
GX20 51U	1-pole	20A	7.5 kW	changeover switch	(I-O-II)	**511.00**
GX20 52U	2-pole	20A	7.5 kW	changeover switch	(I-O-II)	**682.00**
GX20 53U	3-pole	20A	7.5 kW	changeover switch	(I-O-II)	**852.00**
GX20 75U	4-pole	20A	7.5 kW	changeover switch	(I-O-II)	**1 030.00**
GX32 51U	1-pole	32A	15 kW	changeover switch	(I-O-II)	**845.00**
GX32 52U	2-pole	32A	15 kW	changeover switch	(I-O-II)	**1 210.00**
GX32 53U	3-pole	32A	15 kW	changeover switch	(I-O-II)	**1 570.00**
GX32 75U	4-pole	32A	15 kW	changeover switch	(I-O-II)	**1 930.00**
GX40 51U	1-pole	40A	18.5 kW	changeover switch	(I-O-II)	**1 160.00**
GX40 52U	2-pole	40A	18.5 kW	changeover switch	(I-O-II)	**1 690.00**
GX40 53U	3-pole	40A	18.5 kW	changeover switch	(I-O-II)	**2 220.00**
GX40 75U	4-pole	40A	18.5 kW	changeover switch	(I-O-II)	**2 750.00**
Changeover switches without "OFF" position						
GX16 54U	1-pole	16A	5.5 kW	changeover switch	(I-II)	**426.00**
GX16 55U	2-pole	16A	5.5 kW	changeover switch	(I-II)	**568.00**
GX16 56U	3-pole	16A	5.5 kW	changeover switch	(I-II)	**710.00**
GX16 69U	4-pole	16A	5.5 kW	changeover switch	(I-II)	**852.00**
GX20 54U	1-pole	20A	7.5 kW	changeover switch	(I-II)	**511.00**
GX20 55U	2-pole	20A	7.5 kW	changeover switch	(I-II)	**682.00**
GX20 56U	3-pole	20A	7.5 kW	changeover switch	(I-II)	**852.00**
GX20 69U	4-pole	20A	7.5 kW	changeover switch	(I-II)	**1 030.00**
GX32 54U	1-pole	32A	15 kW	changeover switch	(I-II)	**845.00**
GX32 55U	2-pole	32A	15 kW	changeover switch	(I-II)	**1 210.00**
GX32 56U	3-pole	32A	15 kW	changeover switch	(I-II)	**1 570.00**
GX32 69U	4-pole	32A	15 kW	changeover switch	(I-II)	**1 930.00**
Voltmeter selector switches						
GX16 67U	–	16A		voltmeter selector switch	ph-ph + off	**453.00**
GX16 66U	–	16A		voltmeter selector switch	ph-ph/ph-n + off	**577.00**
Ammeter selector switches						
GX16 97U	–	16A		ammeter selector switch	direct reading	**1 260.00**
GX16 98U	–	16A		ammeter selector switch	for 3 CTs	**614.00**
Accessories for GX series cam switches						
GXM5	48 x 60 mm			front plate with legend for GX switches	16/20A	**172.00**
GXM6	65 x 80 mm			front plate with legend for GX switches	32/40A	**185.00**

227603

227622

227636

WE40

PR ONE series - Rotary cam switches

- 45° switching angle
- Forced opened contacts
- IP40 front protection, IP20 rear terminal *(finger protection)*
- Fulfils load break requirements up to 690V
- Operating temperature limits: -20°C...70°C
- Front bezel: 48 mm ☐ - engraved aluminium plate with black handle
- Standards: IEC EN 60947-1, 60947-3, UL508, UL-CSA

type	contact rating AC-21	(AC-23 at 400V)	poles	description	action	price
ON-OFF switches						
227600	16A	7.5 kW	1-pole	on-off rotary cam switch	(O-I)	**395.00**
227601	16A	7.5 kW	2-pole	on-off rotary cam switch	(O-I)	**463.00**
227602	16A	7.5 kW	3-pole	on-off rotary cam switch	(O-I)	**531.00**
227603	25A	11 kW	1-pole	on-off rotary cam switch	(O-I)	**542.00**
227604	25A	11 kW	2-pole	on-off rotary cam switch	(O-I)	**647.00**
227605	25A	11 kW	3-pole	on-off rotary cam switch	(O-I)	**776.00**
227606	32A	11 kW	1-pole	on-off rotary cam switch	(O-I)	**626.00**
227608	32A	11 kW	3-pole	on-off rotary cam switch	(O-I)	**977.00**
Change-over switches *(with "OFF" position)*						
227609	16A	7.5 kW	1-pole	changeover rotary cam switch	(I-O-II)	**463.00**
227610	16A	7.5 kW	2-pole	changeover rotary cam switch	(I-O-II)	**595.00**
227611	16A	7.5 kW	3-pole	changeover rotary cam switch	(I-O-II)	**751.00**
227612	25A	11 kW	1-pole	changeover rotary cam switch	(I-O-II)	**647.00**
227613	25A	11 kW	2-pole	changeover rotary cam switch	(I-O-II)	**864.00**
227614	25A	11 kW	3-pole	changeover rotary cam switch	(I-O-II)	**1 080.00**
227615	32A	11 kW	1-pole	changeover rotary cam switch	(I-O-II)	**773.00**
227616	32A	11 kW	2-pole	changeover rotary cam switch	(I-O-II)	**1 110.00**
227617	32A	11 kW	3-pole	changeover rotary cam switch	(I-O-II)	**1 470.00**
2 to 5 way switches with *(with "OFF" position)*						
2-way switches with OFF						
227618	16A	7.5 kW	1-pole	2-contact rotary cam switch	(O-I-II)	**463.00**
227619	16A	7.5 kW	2-pole	4-contact rotary cam switch	(O-I-II)	**595.00**
227620	16A	7.5 kW	3-pole	6-contact rotary cam switch	(O-I-II)	**751.00**
227624	25A	11 kW	1-pole	2-contact rotary cam switch	(O-I-II)	**647.00**
227625	25A	11 kW	2-pole	4-contact rotary cam switch	(O-I-II)	**864.00**
227626	25A	11 kW	3-pole	6-contact rotary cam switch	(O-I-II)	**1 080.00**
227630	32A	11 kW	1-pole	2-contact rotary cam switch	(O-I-II)	**773.00**
227631	32A	11 kW	2-pole	4-contact rotary cam switch	(O-I-II)	**1 110.00**
227632	32A	11 kW	3-pole	6-contact rotary cam switch	(O-I-II)	**1 470.00**
3-way switches with OFF						
227621	16A	7.5 kW	1-pole	3-contact rotary cam switch	O-I-2-3	**531.00**
227627	25A	11 kW	1-pole	3-contact rotary cam switch	O-I-2-3	**773.00**
4-way switches with OFF						
227622	16A	7.5 kW	1-pole	4-contact rotary cam switch	O-I-2-3-4	**595.00**
5-way switches with OFF						
227623	16A	7.5 kW	1-pole	5-contact rotary cam switch	O-I-2-3-4-5	**711.00**
Binary code switches *(Ideal for VSD panels up to 11 preset positions)*					(set point)	
N62338A	–	–	4-pole	binary cam switch	(0-3)	**749.00**
N13484A	–	–	4-pole	binary cam switch	(0-5)	**875.00**
NR56EQ10A	–	–	4-pole	binary cam switch	(0-7)	**848.00**
NR51UQ10A	–	–	4-pole	binary cam switch	(0-11)	**969.00**
Instrument switches						
Voltmeter switch, with neutral						
227636	16A	7.5 kW	1-pole	voltmeter selector switch (ph-ph/ph-N+off)		**751.00**
Ammeter switch, 3 CTs with common point						
227637	16A	7.5 kW	1-pole	ammeter selector switch *(for 3 CTs)*		**751.00**
Accessories for above cam switches						
WE40	☐ 48 mm		aluminium	engravable blank legend plate insert		**31.30**
Q048	☐ 48 mm		aluminium	engravable duty label for legend		**30.00**
IF9	–		aluminium	insert for above duty label		**52.00**

Above ZAR prices do not include VAT. E&OE

AD16-16DSR02

AD16-16DSY22

AD16-16DSG22

AD16-16MR22

AD22-22DSR01

AD22-22DSG02

AD22-22DSB38

AD22-22D/KW22

LED pilot lights - Super bright multi-chip LED pilot lights *(with diffuser/legend insert)*

- Shock resistant, low power consumption ≥ 20mA
- Brightness: ≥ 100cd/m²
- Long life ≥ 30.000 hrs

type	lens colour	voltage ± 20%	mounting hole Ø	description	price
Ø16 mm LED pilot lights *(high brightness)*				*Lens: Ø19 x 10 - Body: L 24 mm*	
• **IP65** *(IP20 terminal protection)*					
AD16-16DSR02	red	24 VAC/DC	Ø16 mm	panel-mount LED pilot light	**35.60**
AD16-16DSG02	green	24 VAC/DC	Ø16 mm	panel-mount LED pilot light	**35.60**
AD16-16DSY02	yellow	24 VAC/DC	Ø16 mm	panel-mount LED pilot light	**35.60**
AD16-16DSB02	blue	24 VAC/DC	Ø16 mm	panel-mount LED pilot light	**35.60**
AD16-16DSW02	white	24 VAC/DC	Ø16 mm	panel-mount LED pilot light	**35.60**
AD16-16DSR11	red	110 VAC/DC	Ø16 mm	panel-mount LED pilot light	**35.60**
AD16-16DSG11	green	110 VAC/DC	Ø16 mm	panel-mount LED pilot light	**35.60**
AD16-16DSY11	yellow	110 VAC/DC	Ø16 mm	panel-mount LED pilot light	**35.60**
AD16-16DSB11	blue	110 VAC/DC	Ø16 mm	panel-mount LED pilot light	**35.60**
AD16-16DSW11	white	110 VAC/DC	Ø16 mm	panel-mount LED pilot light	**35.60**
AD16-16DSR22	red	220 VAC	Ø16 mm	panel-mount LED pilot light	**35.60**
AD16-16DSG22	green	220 VAC	Ø16 mm	panel-mount LED pilot light	**35.60**
AD16-16DSY22	yellow	220 VAC	Ø16 mm	panel-mount LED pilot light	**35.60**
AD16-16DSB22	blue	220 VAC	Ø16 mm	panel-mount LED pilot light	**35.60**
AD16-16DSW22	white	220 VAC	Ø16 mm	panel-mount LED pilot light	**35.60**
Self-flashing LED pilot light and electronic buzzer				Lens: Ø19 x 10 - Body: L 41.5 mm	
AD16-16MR02	red	24 VAC/DC	Ø16 mm	self-flash LED p/light + buzzer	**72.00**
AD16-16MR22	red	220 VAC	Ø16 mm	self-flash LED p/light + buzzer	**72.00**
Ø22 mm LED pilot lights *(high brightness)* **-** *4 LEDs*				Lens: Ø29 x13 mm - Body: L 39 mm	
• **IP65** *(IP20 terminal protection)*					
AD22-22DSR01	red	12 VAC/DC	Ø22 mm	panel-mount LED pilot light	**35.60**
AD22-22DSG01	green	12 VAC/DC	Ø22 mm	panel-mount LED pilot light	**35.60**
AD22-22DSA01	amber	12 VAC/DC	Ø22 mm	panel-mount LED pilot light	**35.60**
AD22-22DSY01	yellow	12 VAC/DC	Ø22 mm	panel-mount LED pilot light	**35.60**
AD22-22DSB01	blue	12 VAC/DC	Ø22 mm	panel-mount LED pilot light	**35.60**
AD22-22DSW01	white	12 VAC/DC	Ø22 mm	panel-mount LED pilot light	**35.60**
AD22-22DSR02	red	24 VAC/DC	Ø22 mm	panel-mount LED pilot light	**35.60**
AD22-22DSG02	green	24 VAC/DC	Ø22 mm	panel-mount LED pilot light	**35.60**
AD22-22DSA02	amber	24 VAC/DC	Ø22 mm	panel-mount LED pilot light	**35.60**
AD22-22DSY02	yellow	24 VAC/DC	Ø22 mm	panel-mount LED pilot light	**35.60**
AD22-22DSB02	blue	24 VAC/DC	Ø22 mm	panel-mount LED pilot light	**35.60**
AD22-22DSW02	white	24 VAC/DC	Ø22 mm	panel-mount LED pilot light	**35.60**
AD22-22DSR11	red	110 VAC/DC	Ø22 mm	panel-mount LED pilot light	**35.60**
AD22-22DSG11	green	110 VAC/DC	Ø22 mm	panel-mount LED pilot light	**35.60**
AD22-22DSA11	amber	110 VAC/DC	Ø22 mm	panel-mount LED pilot light	**35.60**
AD22-22DSY11	yellow	110 VAC/DC	Ø22 mm	panel-mount LED pilot light	**35.60**
AD22-22DSB11	blue	110 VAC/DC	Ø22 mm	panel-mount LED pilot light	**35.60**
AD22-22DSW11	white	110 VAC/DC	Ø22 mm	panel-mount LED pilot light	**35.60**
AD22-22DSR22	red	220 VAC/DC	Ø22 mm	panel-mount LED pilot light	**35.60**
AD22-22DSG22	green	220 VAC/DC	Ø22 mm	panel-mount LED pilot light	**35.60**
AD22-22DSA22	amber	220 VAC/DC	Ø22 mm	panel-mount LED pilot light	**35.60**
AD22-22DSY22	yellow	220 VAC/DC	Ø22 mm	panel-mount LED pilot light	**35.60**
AD22-22DSB22	blue	220 VAC/DC	Ø22 mm	panel-mount LED pilot light	**35.60**
AD22-22DSW22	white	220 VAC/DC	Ø22 mm	panel-mount LED pilot light	**35.60**
AD22-22DSR38	red	380 VAC	Ø22 mm	panel-mount LED pilot light	**35.60**
AD22-22DSG38	green	380 VAC	Ø22 mm	panel-mount LED pilot light	**35.60**
AD22-22DSA38	amber	380 VAC	Ø22 mm	panel-mount LED pilot light	**35.60**
AD22-22DSY38	yellow	380 VAC	Ø22 mm	panel-mount LED pilot light	**35.60**
AD22-22DSB38	blue	380 VAC	Ø22 mm	panel-mount LED pilot light	**35.60**
AD22-22DSW38	white	380 VAC	Ø22 mm	panel-mount LED pilot light	**35.60**
Ø22 mm LED pilot lights with anti-interference				Longer body: L 50 mm	
• Longer body accommodates built-in anti-interference circuit *(threshold value - below 40V)*					
• Prevents unwanted illuminating in presence of slight voltage backfeed in certain applications					
AD22-22D/KR22	red	230 VAC	Ø22 mm	panel-mount LED pilot light	**50.00**
AD22-22D/KG22	green	230 VAC	Ø22 mm	panel-mount LED pilot light	**50.00**
AD22-22D/KA22	amber	230 VAC	Ø22 mm	panel-mount LED pilot light	**50.00**
AD22-22D/KY22	yellow	230 VAC	Ø22 mm	panel-mount LED pilot light	**50.00**
AD22-22D/KB22	blue	230 VAC	Ø22 mm	panel-mount LED pilot light	**50.00**
AD22-22D/KW22	white	230 VAC	Ø22 mm	panel-mount LED pilot light	**50.00**

AD22-22MR02

AD22-22MK02

RZ3A1A60S3

AD30-30DSG22

AD30-30MR02

Panel-mount control / indicating devices Ø22/30 mm

type	colour	voltage ± 20%	mounting hole Ø	description	price
Ø22 mm dual colour LED pilot light			**IP65**		
• Dual light - red or green LED indication on one pilot light *(white lens)*					
• Lens: Ø29 x 13 - Body: L 54 mm					
AD22-22DRG02	red/green	24 VAC/DC	Ø22 mm	panel-mount LED pilot light	**125.00**
AD22-22DRG11	red/green	110 VAC/DC	Ø22 mm	panel-mount LED pilot light	**125.00**
AD22-22DRG22	red/green	220 VAC	Ø22 mm	panel-mount LED pilot light	**125.00**
Self-flashing LED pilot light		*(intermittent flashing - 2 Hz)*			
AD22-22SR02	red	24 VAC/DC	Ø22 mm	self-flashing LED pilot light	**107.00**
AD22-22SR22	red	220 VAC	Ø22 mm	self-flashing LED pilot light	**107.00**
Ø22 mm panel-mount buzzer			**IP40**		
• Continuous sound buzzer *(80dB - 10 cm)*					
• Lens: Ø30 x 13 - Body: L 49 mm					
AD22-22MK02	black	24 VAC/DC	Ø22 mm	panel-mounting buzzer	**98.00**
AD22-22MK22	black	220 VAC	Ø22 mm	panel-mounting buzzer	**98.00**
Combination buzzer / flashing LED pilot light					
• Intermittent sound and flashing pilot light					
AD22-22MR02	red	24 VAC/DC	Ø22 mm	self-flash LED p/light + buzzer	**98.00**
AD22-22MR22	red	220 VAC	Ø22 mm	self-flash LED p/light + buzzer	**98.00**
Ø22 mm panel-mount electronic timer			**IP65**		
• Function:		On-delay timer range: 0 - 60 seconds			
• Mounting:		Mounts through standard Ø22.5 mm pushbutton hole			
• Supply voltage:		24 VDC			
• Switching current:		200 mA			
• Indication:		Facia illuminates - green during timing / red - at time lapse			
• Operating temp:		-5°C...+55°C			
RZ3A1A60S3	0...60 sec	10...30 VDC	Ø22 mm	on-delay p/mount analog timer	**509.00**
Ø30 mm panel-mount indicating devices			**IP65**		
• Ø30 mm LED pilot lights *(high brightness)*					
• Lens: *Ø36.2 x 15 - Body: L 40 mm*					
AD30-30DSR02	red	24 VAC/DC	Ø30 mm	panel-mount LED pilot light	**72.00**
AD30-30DSG02	green	24 VAC/DC	Ø30 mm	panel-mount LED pilot light	**72.00**
AD30-30DSY02	yellow	24 VAC/DC	Ø30 mm	panel-mount LED pilot light	**72.00**
AD30-30DSB02	blue	24 VAC/DC	Ø30 mm	panel-mount LED pilot light	**72.00**
AD30-30DSW02	white	24 VAC/DC	Ø30 mm	panel-mount LED pilot light	**72.00**
AD30-30DSR22	red	220 VAC/DC	Ø30 mm	panel-mount LED pilot light	**72.00**
AD30-30DSG22	green	220 VAC/DC	Ø30 mm	panel-mount LED pilot light	**72.00**
AD30-30DSY22	yellow	220 VAC/DC	Ø30 mm	panel-mount LED pilot light	**72.00**
AD30-30DSB22	blue	220 VAC/DC	Ø30 mm	panel-mount LED pilot light	**72.00**
AD30-30DSW22	white	220 VAC/DC	Ø30 mm	panel-mount LED pilot light	**72.00**
AD30-30DSR38	red	380 VAC	Ø30 mm	panel-mount LED pilot light	**72.00**
AD30-30DSG38	green	380 VAC	Ø30 mm	panel-mount LED pilot light	**72.00**
AD30-30DSY38	yellow	380 VAC	Ø30 mm	panel-mount LED pilot light	**72.00**
AD30-30DSB38	blue	380 VAC	Ø30 mm	panel-mount LED pilot light	**72.00**
AD30-30DSW38	white	380 VAC	Ø30 mm	panel-mount LED pilot light	**72.00**
Ø30 mm panel-mount buzzer			**IP40**		
Combination buzzer / flashing LED pilot light					
Combining a buzzer with a flashing LED pilot light into a single 22 mm unit offers space-saving convenience and dual alerting methods for improved safety in industrial environments.					
• Brightness:		≥ 100cd/m^2			
• Long life		≥ 30.000 hrs			
• Lens: Ø36.2 x 15 - Body: L 40 mm					
• Continuous sound buzzer (80dB - 10 cm)					
• Intermittent sound and flashing pilot light					
• Shock resistant, low power consumption ≥ 20mA					
• Super bright multi-chip LED pilot lights *(with diffuser / legend insert)*					
AD30-30MR02	red	24 VAC/DC	Ø22 mm	self-flash LED pilot light + buzzer	**125.00**
AD30-30MR22	red	220 VAC/DC	Ø22 mm	self-flash LED pilot light + buzzer	**125.00**

Above ZAR prices do not include VAT. E&OE

Panel-mount control / indicating devices Ø22 mm

AD101-22VMR

AD101-22AMG

AD101-22TMW

AD22-22VMG

AD22-22VAM...

type	colour	voltage ± 20%	mounting hole Ø	description	price
AD101 series - Ø22 mm panel meter indicators				Lens: Ø30 x 15 - Body: L 31 mm	
AD101 - Ø22 mm panel meter indicators with crystal screen offer large digit indication with sharp, defined, easy to read digits. Combination panel indicator/meter, providing indication such as Volts, Amps, Frequency or Temperature.					
Voltmeter indicator AC		20...500 VAC			
AD101-22VMR	red	20...500 VAC	Ø22 mm	voltmeter panel indicator	**98.00**
AD101-22VMG	green	20...500 VAC	Ø22 mm	voltmeter panel indicator	**98.00**
AD101-22VMY	yellow	20...500 VAC	Ø22 mm	voltmeter panel indicator	**98.00**
AD101-22VMB	blue	20...500 VAC	Ø22 mm	voltmeter panel indicator	**98.00**
AD101-22VMW	white	20...500 VAC	Ø22 mm	voltmeter panel indicator	**98.00**
Ammeter indicator AC		0...100A *(with mini current transformer)*			
AD101-22AMR	red	0...100A	Ø22 mm	ammeter panel indicator	**205.00**
AD101-22AMG	green	0...100A	Ø22 mm	ammeter panel indicator	**205.00**
AD101-22AMY	yellow	0...100A	Ø22 mm	ammeter panel indicator	**205.00**
AD101-22AMB	blue	0...100A	Ø22 mm	ammeter panel indicator	**205.00**
AD101-22AMW	white	0...100A	Ø22 mm	ammeter panel indicator	**205.00**
Frequency meter indicator		0…99Hz			
AD101-22HZR	red	0…99Hz	Ø22 mm	frequency panel indicator	**98.00**
AD101-22HZG	green	0…99Hz	Ø22 mm	frequency panel indicator	**98.00**
AD101-22HZY	yellow	0…99Hz	Ø22 mm	frequency panel indicator	**98.00**
AD101-22HZB	blue	0…99Hz	Ø22 mm	frequency panel indicator	**98.00**
AD101-22HZW	white	0…99Hz	Ø22 mm	frequency panel indicator	**98.00**
Temperature indicator		-22…+199°C			
AD101-22TMR	red	-22…+199°C	Ø22 mm	temperature panel indicator	**231.00**
AD101-22TMG	green	-22…+199°C	Ø22 mm	temperature panel indicator	**231.00**
AD101-22TMY	yellow	-22…+199°C	Ø22 mm	temperature panel indicator	**231.00**
AD101-22TMB	blue	-22…+199°C	Ø22 mm	temperature panel indicator	**231.00**
AD101-22TMW	white	-22…+199°C	Ø22 mm	temperature panel indicator	**231.00**
AD22 series - Ø22 mm panel-mount indicators				Lens: Ø30 x 15 - Body: L 36 mm	
Combination panel indicator / panel meter, providing indication as Volts, Amps, Frequency					
Voltmeter indicator AC		20...500 VAC			
AD22-22VMR	red	20...500 VAC	Ø22 mm	voltmeter panel indicator	**118.00**
AD22-22VMG	green	20...500 VAC	Ø22 mm	voltmeter panel indicator	**118.00**
AD22-22VMY	yellow	20...500 VAC	Ø22 mm	voltmeter panel indicator	**118.00**
AD22-22VMB	blue	20...500 VAC	Ø22 mm	voltmeter panel indicator	**118.00**
AD22-22VMW	white	20...500 VAC	Ø22 mm	voltmeter panel indicator	**118.00**
Voltmeter indicator DC		5...60 VDC			
AD22-22VBR	red	5...60 VDC	Ø22 mm	voltmeter panel indicator	**135.00**
AD22-22VBG	green	5...60 VDC	Ø22 mm	voltmeter panel indicator	**135.00**
AD22-22VBY	yellow	5...60 VDC	Ø22 mm	voltmeter panel indicator	**135.00**
AD22-22VBB	blue	5...60 VDC	Ø22 mm	voltmeter panel indicator	**135.00**
AD22-22VBW	white	5...60 VDC	Ø22 mm	voltmeter panel indicator	**135.00**
Ammeter indicator AC		0...100A *(with mini current transformer)*			
AD22-22AMR	red	0...100A	Ø22 mm	ammeter panel indicator	**222.00**
AD22-22AMG	green	0...100A	Ø22 mm	ammeter panel indicator	**222.00**
AD22-22AMY	yellow	0...100A	Ø22 mm	ammeter panel indicator	**222.00**
AD22-22AMB	blue	0...100A	Ø22 mm	ammeter panel indicator	**222.00**
AD22-22AMW	white	0...100A	Ø22 mm	ammeter panel indicator	**222.00**
Frequency meter indicator		0…99Hz			
AD22-22HZR	red	0…99Hz	Ø22 mm	frequency panel indicator	**118.00**
AD22-22HZG	green	0…99Hz	Ø22 mm	frequency panel indicator	**118.00**
AD22-22HZY	yellow	0…99Hz	Ø22 mm	frequency panel indicator	**118.00**
AD22-22HZB	blue	0…99Hz	Ø22 mm	frequency panel indicator	**118.00**
AD22-22HZW	white	0…99Hz	Ø22 mm	frequency panel indicator	**118.00**
Combination AC Volt / Ammeter		20...500V / 0...100A *(with mini current transformer)*			
AD22-22VAMR	red	500V/100A	Ø22 mm	volt/ammeter panel indicator	**302.00**
AD22-22VAMG	green	500V/100A	Ø22 mm	volt/ammeter panel indicator	**302.00**
AD22-22VAMY	yellow	500V/100A	Ø22 mm	volt/ammeter panel indicator	**302.00**
AD22-22VAMB	blue	500V/100A	Ø22 mm	volt/ammeter panel indicator	**302.00**
AD22-22VAMW	white	500V/100A	Ø22 mm	volt/ammeter panel indicator	**302.00**

GQ10T-JN/02/R

GQ10T-JN/22/G

GQ12T-JN/02/Y

GQ16T-LN/02/R

GQ22T-LN/02/G

AGQ22F-11/JS

AGQ22F-11/E/JS/22/R

HBD-T1

Indicator lights *(panel-mounting)* **IP67**

- Super bright LED pilot lights
- Long life ≥ 50.000 hrs

type	lens colour	voltage ± 20%	mounting hole Ø	description	price
HBD series - Metallic panel-mount LED pilot lights				**IP67**	
Ø10 mm mounting hole		*solder / push-on*		Lens: Ø11.5 x 1.5 mm - Body: L 30 mm	
GQ10T-JN/02/R	red	24 VAC/DC	Ø10 mm	panel-mount LED pilot light	**117.00**
GQ10T-JN/02/G	green	24 VAC/DC	Ø10 mm	panel-mount LED pilot light	**117.00**
GQ10T-JN/02/Y	yellow	24 VAC/DC	Ø10 mm	panel-mount LED pilot light	**117.00**
GQ10T-JN/02/B	blue	24 VAC/DC	Ø10 mm	panel-mount LED pilot light	**117.00**
GQ10T-JN/02/W	white	24 VAC/DC	Ø10 mm	panel-mount LED pilot light	**117.00**
GQ10T-JN/22/R	red	220 VAC/DC	Ø10 mm	panel-mount LED pilot light	**117.00**
GQ10T-JN/22/G	green	220 VAC/DC	Ø10 mm	panel-mount LED pilot light	**117.00**
GQ10T-JN/22/Y	yellow	220 VAC/DC	Ø10 mm	panel-mount LED pilot light	**117.00**
GQ10T-JN/22/B	blue	220 VAC/DC	Ø10 mm	panel-mount LED pilot light	**117.00**
GQ10T-JN/22/W	white	220 VAC/DC	Ø10 mm	panel-mount LED pilot light	**117.00**
Ø12 mm mounting hole		*solder / push-on*		Lens: Ø13.5 x 1.5 mm - Body: L 33 mm	
GQ12T-JN/02/R	red	24 VAC/DC	Ø12 mm	panel-mount LED pilot light	**128.00**
GQ12T-JN/02/G	green	24 VAC/DC	Ø12 mm	panel-mount LED pilot light	**128.00**
GQ12T-JN/02/Y	yellow	24 VAC/DC	Ø12 mm	panel-mount LED pilot light	**128.00**
GQ12T-JN/02/B	blue	24 VAC/DC	Ø12 mm	panel-mount LED pilot light	**128.00**
GQ12T-JN/02/W	white	24 VAC/DC	Ø12 mm	panel-mount LED pilot light	**128.00**
GQ12T-JN/22/R	red	220 VAC/DC	Ø12 mm	panel-mount LED pilot light	**128.00**
GQ12T-JN/22/G	green	220 VAC/DC	Ø12 mm	panel-mount LED pilot light	**128.00**
GQ12T-JN/22/Y	yellow	220 VAC/DC	Ø12 mm	panel-mount LED pilot light	**128.00**
GQ12T-JN/22/B	blue	220 VAC/DC	Ø12 mm	panel-mount LED pilot light	**128.00**
GQ12T-JN/22/W	white	220 VAC/DC	Ø12 mm	panel-mount LED pilot light	**128.00**
Ø16 mm mounting hole		*screw terminal*		Lens: Ø18 x 2 mm - Body: L 34 mm	
GQ16T-LN/02/R	red	24 VAC/DC	Ø16 mm	panel-mount LED pilot light	**148.00**
GQ16T-LN/02/G	green	24 VAC/DC	Ø16 mm	panel-mount LED pilot light	**148.00**
GQ16T-LN/02/Y	yellow	24 VAC/DC	Ø16 mm	panel-mount LED pilot light	**148.00**
GQ16T-LN/02/B	blue	24 VAC/DC	Ø16 mm	panel-mount LED pilot light	**148.00**
GQ16T-LN/02/W	white	24 VAC/DC	Ø16 mm	panel-mount LED pilot light	**148.00**
GQ16T-LN/22/R	red	220 VAC/DC	Ø16 mm	panel-mount LED pilot light	**148.00**
GQ16T-LN/22/G	green	220 VAC/DC	Ø16 mm	panel-mount LED pilot light	**148.00**
GQ16T-LN/22/Y	yellow	220 VAC/DC	Ø16 mm	panel-mount LED pilot light	**148.00**
GQ16T-LN/22/B	blue	220 VAC/DC	Ø16 mm	panel-mount LED pilot light	**148.00**
GQ16T-LN/22/W	white	220 VAC/DC	Ø16 mm	panel-mount LED pilot light	**148.00**
Ø22 mm mounting hole		*screw terminal*		Lens: Ø25 x 2.5 mm - Body: L 32 mm	
GQ22T-LN/02/R	red	24 VAC/DC	Ø22 mm	panel-mount LED pilot light	**235.00**
GQ22T-LN/02/G	green	24 VAC/DC	Ø22 mm	panel-mount LED pilot light	**235.00**
GQ22T-LN/02/Y	yellow	24 VAC/DC	Ø22 mm	panel-mount LED pilot light	**235.00**
GQ22T-LN/02/B	blue	24 VAC/DC	Ø22 mm	panel-mount LED pilot light	**235.00**
GQ22T-LN/02/W	white	24 VAC/DC	Ø22 mm	panel-mount LED pilot light	**235.00**
GQ22T-LN/22/R	red	220 VAC/DC	Ø22 mm	panel-mount LED pilot light	**235.00**
GQ22T-LN/22/G	green	220 VAC/DC	Ø22 mm	panel-mount LED pilot light	**235.00**
GQ22T-LN/22/Y	yellow	220 VAC/DC	Ø22 mm	panel-mount LED pilot light	**235.00**
GQ22T-LN/22/B	blue	220 VAC/DC	Ø22 mm	panel-mount LED pilot light	**235.00**
GQ22T-LN/22/W	white	220 VAC/DC	Ø22 mm	panel-mount LED pilot light	**235.00**
HBDS1 series - Vandal-proof 304 stainless steel pushbuttons				**IP67**	
Vandalproof stainless steel pushbuttons *(mount through standard Ø22 mm hole)*					
• 5A 250 VAC			• Termination: solder/push-on 2.8 x 0.5 mm		
AGQ22F-11/JS	silver	momentary	Ø22 mm	1NO + 1NC pushbutton only	**388.00**
AGQ22F-11/Z/JS	silver	alternate	Ø22 mm	1NO + 1NC pushbutton only	**436.00**
Illuminated pushbuttons *(ring type LED)*			*(momentary action)*		
Illuminated versions feature LED ring-type illumination with clear visibility from a distance.					
AGQ22F-11/E/JS/02/R	red	24 VAC/DC	Ø22 mm	1NO + 1NC illuminated p/button	**436.00**
AGQ22F-11/E/JS/02/G	green	24 VAC/DC	Ø22 mm	1NO + 1NC illuminated p/button	**436.00**
AGQ22F-11/E/JS/02/Y	yellow	24 VAC/DC	Ø22 mm	1NO + 1NC illuminated p/button	**436.00**
AGQ22F-11/E/JS/02/B	blue	24 VAC/DC	Ø22 mm	1NO + 1NC illuminated p/button	**436.00**
AGQ22F-11/E/JS/02/W	white	24 VAC/DC	Ø22 mm	1NO + 1NC illuminated p/button	**436.00**
AGQ22F-11/E/JS/22/R	red	220 VAC/DC	Ø22 mm	1NO + 1NC illuminated p/button	**436.00**
AGQ22F-11/E/JS/22/G	green	220 VAC/DC	Ø22 mm	1NO + 1NC illuminated p/button	**484.00**
AGQ22F-11/E/JS/22/Y	yellow	220 VAC/DC	Ø22 mm	1NO + 1NC illuminated p/button	**436.00**
AGQ22F-11/E/JS/22/B	blue	220 VAC/DC	Ø22 mm	1NO + 1NC illuminated p/button	**436.00**
AGQ22F-11/E/JS/22/W	white	220 VAC/DC	Ø22 mm	1NO + 1NC illuminated p/button	**436.00**
HBD-T1	connector		with 150 mm wire leads for connecting HBDS1 pushbuttons		**74.00**

Above ZAR prices do not include VAT. E&OE

Lovato electric

PV Interface Protection Unit

The PMVF81 is a reliable grid protection device designed to safely disconnect PV systems when they operate in parallel with the electric utility. It monitors voltage and frequency limits and complies with key industry standards. In case of grid issues, the PMVF81 trips the interface switch to isolate the system.

Features & Benefits:

- Compact design only 4 modules wide
- Manages both primary and backup interface switches
- Supports AC and DC power supplies, enhancing versatility
- Complies with key standards: VDE-AR-N4105
- Optional expansion modules for USB, RS-232, RS-485, and Ethernet
- Monitors voltage and frequency with programmable thresholds and delays

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F70AY...

F70BY...

F71EY00-1 + PRSL1880PI

F71GG00-1

(Shown populated)

Mike series - Pendant control stations

Mike pendant stations are designed for heavy-duty applications. Rubber pushbuttons guarantee total protection from dust and liquid penetration. Moulded two-colour button discs offer permanent, clear symbols and text. The ergonomic design, compact dimensions with antislip grooves reduce fatigue, improving ease of use under any working conditions. Wiring is improved by separating the actuators *(mounted on top cover)* from the contact blocks *(fixed to the base)* with the cable inlet.

- Weather-resistant materials with guaranteed protection against penetration of water and dust
- Additional actuator with up to 3 contacts can be mounted to the pendant station *(front or bottom base)*
- Operational ambient temperature limits: -40°C...+80°C
- Protection degree: IP66 / IP67 / IP69K
- Mechanical life: 10 x 10^6 operations
- Insulation category: Class II
- Conformity to standards: IEC/EN 60204-1, 60947-1, 60947-5-1/5, 60529, EN418, CSA-C22.2 No 14-13, UL 508

type	no. of ways	description	reset/ alarm **2NO**	Mushroom E/stop **1NC**	1 speed button **1NO**	2 speed button **1NO+1NO**	price
Mike series		*single row pendant control station*	**IP66**				
F70AY120200-2	4-way	pendant station	1	1	2	–	**2 330.00**
F70AY120002-2	4-way	pendant station	1	1	–	–	**2 720.00**
F70AY000400-1	4-way	pendant station	–	–	4	–	**2 140.00**
F70AY000202-5	4-way	pendant station	–	–	2	2	**2 530.00**
F70AY000004-1	4-way	pendant station	–	–	–	4	**2 890.00**
F70EY120400-1	6-way	pendant station	1	1	4	–	**2 790.00**
F70EY120004-1	6-way	pendant station	1	1	–	4	**3 570.00**
F70EY120202-2	6-way	pendant station	1	1	2	2	**3 180.00**
F70BY120600-2	8-way	pendant station	1	1	6	–	**3 280.00**
F70BY120006-2	8-way	pendant station	1	1	–	6	**4 450.00**
F70CY121000-2	12-way	pendant station	1	1	10	–	**4 570.00**
F70DY121200-2	14-way	pendant station	1	1	12	–	**5 120.00**

Extra charges *on request, standard elements can be replaced by others (see below)*

1/2 SPD	double depression 2-speed button and contact instead of 1 speed	**POR**
1/2 MSRM	double depression 2-speed button and contact instead of mushroom + reset	**POR**
1/1 MSRM	single depression 1-speed button and contact instead of mushroom + reset	**POR**

Accessories for Mike pendants stations *(above)* (W) 84.5 x (D) 59.5 x (H) mm

F70AY00-1	4-way	black/yellow	empty pendant housing only	427	**979.00**
F70EY00-1	6-way	black/yellow	empty pendant housing only	487	**1 560.00**
F70BY00-1	8-way	black/yellow	empty pendant housing only	547	**1 030.00**
F70CY00-1	12 way	black/yellow	empty pendant housing only	667	**1 600.00**
F70DY00-1	14-way	black/yellow	empty pendant housing only	727	**1 940.00**

Also available in all black colour on request

Victor series - Wall-mounted control stations *(empty housings)*

Victor has been designed to facilitate wiring and maintenance. Contact blocks are installed in the base together with the cable inlet and are separated from the actuators installed on the cover, reducing time, cost of installation and maintenance down time.

- Protection degree: IP66/IP67/IP69K
- Operational ambient temp: -40°C...+80°C
- Insulation category: Class II
- Cable entry: Cable clamp M20 x 1.5

type	holes	colour *(top cover)*	description *(W) 72.7 x (D) 61.9 x (H) mm*		price
F71EY00-1	1-hole	yellow	empty surface mnt control station	73	**858.00**
F71EG00-1	1-hole	grey	empty surface mnt control station	73	**464.00**
F71FG00-1	2-hole	grey	empty surface mnt control station	122	**632.00**
F71GG00-1	3-hole	grey	empty surface mnt control station	152	**681.00**
F71HG00-1	4-hole	grey	empty surface mnt control station	182	**666.00**
F71IG00-1	6-hole	grey	empty surface mnt control station	242	**1 010.00**
F71JG00-1	8-hole	grey	empty surface mnt control station	302	**1 050.00**

*Actuators - pushbuttons, selector switches on (page **D-20**) contact blocks (below)*

Contact blocks for pendant and control stations *(screw termination)*

- Rated operational current 3A (AC15) / voltage 250V
- Thermal current: 10A
- NC contact blocks are of positive operating type

PRSL1800PI	1 NO	contact block	for above control stations	**158.00**
PRSL1801PI	1 NC	contact block	for above control stations	**158.00**
PRSL1820PI	LED	24/48 VAC/DC	LED indicating lamp element	**1 260.00**
PRSL1821PI	LED	110/230 VAC	LED indicating lamp element	**1 260.00**

Above ZAR prices do not include VAT. E&OE

PRSL1811PI

PRSL1890PI

PRSL1858BIC

PRSL1831PI

PRTA...

PF3903...

type	colour return	positions remove	description	spring return	key remove	price
Actuators for Mike and Victor pendant stations						
PRSL1811PI	black	–	pushbutton actuator *(no disc)*	1-speed	–	**185.00**
PRSL1810PI	black	–	pushbutton actuator *(no disc)*	2-speed	–	**237.00**
PRSL1880PI	red	–	latch mushroom actuator	twist rel	–	**485.00**
PRSL1890PI	red	–	latch mushroom actuator	key rel	–	**949.00**
PRSL1885ROC	red	–	impulse mushroom actuator	–	–	**519.00**
PRSL1840PI	red	–	pilot light head only	–	–	**348.00**
PRSL1841PI	green	–	pilot light head only	–	–	**348.00**
PRSL1842PI	yellow	–	pilot light head only	–	–	**348.00**
PRSL1846PI	blue	–	pilot light head only	–	–	**348.00**
PRSL1856BIC	blk/wht	2 (0-1)	selector switch actuator	–	–	**764.00**
PRSL1862BIC	blk/wht	2 (1-2)	selector switch actuator	–	–	**764.00**
PRSL1858BIC	blk/wht	3 (1-0-2)	selector switch actuator	–	–	**764.00**
PRSL1868PI	–	2 (0-1)	key switch actuator	–	0 pos	**843.00**
PRSL1870PI	–	3 (1-0-2)	key switch actuator	–	0 pos	**843.00**

Accessories for control stations			
PRSL1850PI	interlock	mechanical interlock between two pushbuttons for pendant stations	**254.00**
PRSL8512PI	spacer	pushbutton to contact block spacer *(required for single pushbuttons)*	**74.00**
PRSL8750PI	support	contact block support *(3 contacts)* for additional pushbutton	**196.00**
PRSL1830PI	cover	shallow protection cover for bottom mounted actuators	**343.00**
PRSL1831PI	cover	deep protection cover for bottom mounted actuators	**359.00**
PRTR1035PE	clip	stainless steel pendant case securing spring clip	**224.00**
PRSL0145PE	sleeve	spare rubber cable sleeve for Mike pendants Ø14 - 26 mm	**386.00**
PRGA0012PE	hook	pendant hanging hook *(top or bottom mounting)*	**57.00**
PRET0215PE	label	label sheet with selection of pendant symbols	**418.00**
PRSL1845PI	black	blanking plug *(blind pushbutton)*	**180.00**

Colour discs with symbols for control station pushbuttons

type	background colour	symbol	description	price
PRTA001MPI	green	start	symbol disc insert for control stations	**79.00**
PRTA002MPI	red	stop	symbol disc insert for control stations	**79.00**
PRTA003MPI	yellow	alarm	symbol disc insert for control stations	**79.00**
PRTA004MPI	green	start alarm	symbol disc insert for control stations	**79.00**
PRTA005MPI	white	arrow	symbol disc insert for control stations	**79.00**
PRTA006MPI	black	arrow	symbol disc insert for control stations	**79.00**
PRTA007MPI	white	arrow-fast	symbol disc insert for control stations	**79.00**
PRTA008MPI	black	arrow-fast	symbol disc insert for control stations	**79.00**
PRTA011MPI	white	arrow-2 spd	symbol disc insert for control stations	**79.00**
PRTA012MPI	black	arrow-2 spd	symbol disc insert for control stations	**79.00**
PRTA018MPI	black	spin left	symbol disc insert for control stations	**79.00**
PRTA019MPI	white	spin right	symbol disc insert for control stations	**79.00**
PRTA022MPI	black	spin left-fast	symbol disc insert for control stations	**79.00**
PRTA023MPI	white	spin right-fast	symbol disc insert for control stations	**79.00**
PRTA026MPI	black	spin left-2 spd	symbol disc insert for control stations	**79.00**
PRTA027MPI	white	spin right-2 spd	symbol disc insert for control stations	**79.00**
PRTA095MPI*	red	plain colour	symbol disc insert for control stations	**79.00**

* *Replace the **5** with: **6**-green / **7**-yellow / **9**-black*

Charlie pendant control stations *double row pistol grip pendant* **IP65**

The Charlie Series introduces a compact-sized pendant station for auxiliary control, boasting a modern, user-friendly design engineered to minimize installation time, costs, and maintenance downtime.

type	description	m/room 1NC	reset/ alarm 2NO	1-speed 1NO+1NO + common	2-speed 1NO+1NO 1NO+com	price
PF39020001	2-way pendant station	–	–	2	–	**850.00**
PF39020002	2-way pendant station	–	–	–	2	**914.00**
PF39030001	3-way pendant station	1	–	2	–	**944.00**
PF39030002	3-way pendant station	1	–	–	2	**1 010.00**

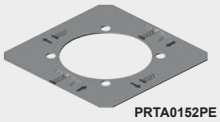
Spares and accessories for Charlie pendants

PRSL1000PI	contact	1 x NO	1 NO single contact element	**232.00**
PRSL1001PI	contact	1 x NC	1 NC single contact element	**232.00**
PRSL1002PI	contact	1-speed	1-speed double interlocked contact element	**301.00**
PRSL1003PI	contact	2-speed	2-speed double interlocked contact element	**523.00**
PRSL1009PI	stop		E\stop mushroom *(latching - twist release)*	**661.00**

F661...

F662AL...

PRVV9035PE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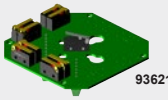

93621

PRSL0191PI

The **Hercules** joystick has a new design for applications in harsh environments. Attention to design, ergonomics, operation accuracy ensure reliability and extended mechanical life. Available with up to 5 speeds in each direction with cross or 360° movement.

- IP protection degree: IP65 *(enclosure dependant)*
- Ambient temperature: Operational -25°C...+70°C
- Mechanical life: 5 x 10^6 operations
- Connections: Screw type terminals • Utilisation category: AC 15
- Conformity to standards: IEC/EN 60204-1, 60947-1, 60947-5-1, 61000-6-2/3

type	no. steps ↕	no. steps ↔	movement 360°	movement cross	movement mech. interlock	description	price
Hercules - Version with micro switch-board *(rated thermal current 8A)*							
• Standard version with switch board and mounted high-reliability micro switches • Knob-type lever with **dead man safety** mechanically interlocked and 1CO contact • Inductive loads: 1A 125 VAC, 0.5A 250 VAC, 1A 30 VDC • Resistive loads: 3A 125 VAC, 2A 250 VAC, 3A 30 VDC							
F661AC0110	1	0		×	×	industrial joystick controller	**9 980.00**
F661AL0111	1	1	×		×	industrial joystick controller	**9 980.00**
F661AC0220	2	0		×	×	industrial joystick controller	**9 980.00**
F661AL0222	2	2	×		×	industrial joystick controller	**9 980.00**
F661AC0330	3	0		×	×	industrial joystick controller	**9 980.00**
F661AL0331	3	1	×		×	industrial joystick controller	**9 980.00**
F661AL0332	3	2	×		×	industrial joystick controller	**9 980.00**
F661AL0333	3	3	×		×	industrial joystick controller	**9 980.00**
F661AC0440	4	0		×	×	industrial joystick controller	**12 100.00**
F661AL0441	4	1	×		×	industrial joystick controller	**12 100.00**
F661AL0442	4	2	×		×	industrial joystick controller	**12 100.00**
F661AL0443	4	3	×		×	industrial joystick controller	**12 100.00**
F661AL0444	4	4	×		×	industrial joystick controller	**12 100.00**
F661AC0550	5	0		×	×	industrial joystick controller	**12 100.00**
F661AC0551	5	1	×		×	industrial joystick controller	**12 100.00**
F661AC0552	5	2	×		×	industrial joystick controller	**12 100.00**
F661AL0553	5	3	×		×	industrial joystick controller	**12 100.00**
F661AL0555	5	5	×		×	industrial joystick controller	**12 100.00**
Hercules-CK - Version with independent switches *(rated thermal current 10A)*							
• Knob-type lever mechanically interlock and 2 x NC contacts • Rated current: 3A 250 VAC							
F662AC0220	2	0		×	×	industrial joystick controller	**10 300.00**
F662AL0333	3	3	×		×	industrial joystick controller	**13 900.00**
F662AL0444	4	4	×		×	industrial joystick controller	**11 800.00**
F662AL0551	5	1		×	×	industrial joystick controller	**10 800.00**
F662AL0555	5	5	×		×	industrial joystick controller	**12 200.00**

Accessories for Hercules joysticks *(above)*

PA66301	mount kit		for 1 potentiometer onto Hercules joystick controller	**604.00**
PA66302	mount kit		for 2 potentiometer onto Hercules joystick controller	**1 050.00**
PA66303	mount kit		for 1 potentiometer onto Hercules-CK joystick controller	**996.00**
PA66304	mount kit		for 2 potentiometer onto Hercules-CK joystick controller	**1 810.00**
PRVV9035PE	2.2 kΩ		Megatron potentiometer for joystick controller	**6 450.00**
PRVV9020PE	4.7 kΩ		Megatron potentiometer for joystick controller	**6 070.00**
PRVV9025PE	10 kΩ		Megatron potentiometer for joystick controller	**6 070.00**
PRTA0150PE	label	blank	label/legend plate for joystick controller	**580.00**
PRTA0151PE	label	"lifting-traverse"	label/legend plate for joystick controller	**580.00**
PRTA0152PE	label	"trolley-rotation"	label/legend plate for joystick controller	**580.00**

Spares for above Hercules joystick switches

93621	switch board	3-speed *(8 switches)*	for Hercules joystick controller	**5 070.00**
93625	switch board	5-*speed (12 switches)*	for Hercules joystick controller	**6 990.00**
PRSL4540PI	switch	2 x NC	for Hercules-CK joystick controller	**608.00**
PRSL4541PI	2 x switches	2 x NC	for Hercules-CK joystick controller	**1 210.00**
PRSL0191PI	switch	2 x NC	interlock for Hercules-CK joystick controller	**265.00**
PRGU6050PE	bellows		spare rubber bellows for Hercules joystick controller	**1 220.00**
PRSL9890PI	half guide		half cross guide for lever of joysticks *(2 x required)*	**99.00**

Stepless proportional joystick *with buit-in analog actuator* *(resolution: 10 bit)*

- Supply voltage: 12 - 48 VAC/DC
- Proportional outputs: 2 x current 4 - 20mA (or) 2 x voltage 0 - 5 VDC
- Directional switches: 4 x directional switches

F661EC25555002	stepless	proportional output joystick controller	**23 000.00**

Above ZAR prices do not include VAT. E&OE

Juliet - Small-sized, compact joystick for control of industrial machinery. Controllers with different configurations are made up by using standard 3 or 5 step 4 direction units with lever guides which define final movement steps. Available with up to 5 speeds in each direction with cross or 360° movement.

- Ambient temperature: Operational -25°C...+70°C
- Mechanical life: 5x 10^6 operations
- Utilisation category: AC 15
- Rated operational current: 2 A • Thermal current: 8A
- Rated operational voltage: 48 VAC
- Conformity to standards: EN 60204-1, 60947-1, 60947-5-1

PF34...

type	no. steps ↕	no. steps ↔	movement 360°	movement cross	movement lever guide	description	price
Juliet series - Joystick control switches						IP65 *(enclosure dependant)*	
PF34021004	1	0		x	9872PI	Juliet joystick controller	**3 630.00**
PF34021101	1	1	x		9871PI	Juliet joystick controller	**3 630.00**
PF34022004	2	0		x	9880PI	Juliet joystick controller	**4 220.00**
PF34022201	2	2	x		9876PI	Juliet joystick controller	**4 330.00**
PF34023004	3	0		x	9824PI	Juliet joystick controller	**3 630.00**
PF34023301	3	3	x		9826PI	Juliet joystick controller	**5 030.00**
PF34024004	4	0		x	9835PI	Juliet joystick controller	**5 160.00**
PF34023501	3	5	x		9842PI	Juliet joystick controller	**6 560.00**
PF34025501	5	5	x		9830PI	Juliet joystick controller	**7 810.00**

PRSL9873PI

Replacement lever guides for other switching configurations					
PRSL9873PI	2	1	lever guide	for Juliet joystick controllers	**298.00**
PRSL9838PI	3	1	lever guide	for Juliet joystick controllers	**83.00**
PRSL9841PI	3	2	lever guide	for Juliet joystick controllers	**83.00**
PRSL9844PI	4	1	lever guide	for Juliet joystick controllers	**83.00**
PRSL9845PI	4	3	lever guide	for Juliet joystick controllers	**298.00**
PRSL9849PI	4	4	lever guide	for Juliet joystick controllers	**298.00**
PRSL9839PI	5	1	lever guide	for Juliet joystick controllers	**83.00**
PRSL9828PI	5	2	lever guide	for Juliet joystick controllers	**83.00**
PRSL9825PI	5	4	lever guide	for Juliet joystick controllers	**83.00**
PRTR0160PE	cross		cross lever guide	for Juliet joystick controllers	**88.00**

PRTR0160PE

Spares for Juliet joystick controllers				
93558	switch board	3-speed *(8 switches)*	for Juliet joystick controller	**4 530.00**
93547	switch board	5-speed *(12 switches)*	for Juliet joystick controller	**5 910.00**
PRSL0173PI	bellows	spare rubber bellows	for Juliet joystick controllers	**626.00**

PF21270100

Slip ring collectors *Suitable for AC currents only*

Slip ring collectors are sets of rings coupled with brushes designed to allow current to pass from a fixed to a rotating part. Used to supply crane motors and cable winders.

- Rated operational voltage: 400 V • Insulation voltage: 660 V
- Conformity to standards: EN 60204-1, EN60309-1, EN60529

type	current	No. of rings 30A	No. of rings 10A	description	price
10A series - Slip ring collectors		*6.6 mm faston connections*			
PF21270100	10A	–	4	slip ring collector with driving slot	**2 250.00**
PF21270101	10A	–	4	slip ring collector without driving slot	**2 230.00**

PF21270101

30A series - Slip ring collectors		*(or combined with 10A auxiliary contacts)*			
The 30A slip ring collectors can be supplied with additional 10A auxiliary rings. Shock-resistant thermoplastic protection preventing accidental contact of live parts.					
PF2304B001	30A	4	–	30A line slip ring collector	**9 210.00**
PF2306B002	30A	6	–	30A line slip ring collector	**10 400.00**
PF2309B002	30A	9	–	30A line slip ring collector	**13 300.00**
Combined 30A and 10A auxiliary rings					
PF2306B003	30A	4	2	combined 30/10A slip ring collector	**9 670.00**
PF2308B001	30A	4	4	combined 30/10A slip ring collector	**11 100.00**
PF2310B001	30A	4	6	combined 30/10A slip ring collector	**12 400.00**
Additional 30A rings *(up to a max. of 20 rings)*				price per ring *(on request only)*	**POR**
Additional 10A rings *(up to a max. of 40 rings)*				price per ring *(on request only)*	**POR**

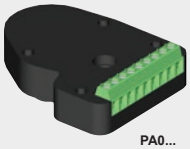
Larger sizes 50A - 300A - 500A available on request

PF23...

PFA9...

PFB9...

PFC9...


PA0...

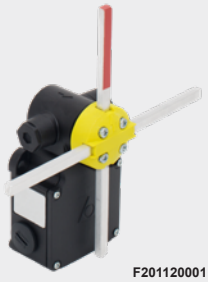
Rotary limit switches are used to control and measure movement of industrial machinery by reading the rotation angle and/or counting the number of revolutions of a shaft. They operate as an auxiliary controller for electric motors through a power interface. The switch shaft can be connected to a motor, after a preset number of revolutions the cams operate a switch.

Each cam can be set with high accuracy due to precision cam adjusting screws.

- Utilisation category: AC 15
- Rated operational voltage: 250 VAC
- Operational temperature -40°C...+80°C
- Rated current: 3A operational / 10A thermal
- Conformity to standards: EN 60204-1/35, 60947-1/5-1, 60529, CSA-C22.2 No 14-13, UL 508

type	ratio	no. micro's	description	price
Base series - Wormgear limit switches		**1 x CO**	(H) 84.5 x (W) 70 x (D) 106 mm	
• Protection degree: IP42				
• Mechanical life: 1 x 10^6 operations				
• Connections: Faston 6.3 mm				
PFA9142A0015001	15:1	2	Base miniature wormgear limit switch	**1 260.00**
PFA9142A0025001	25:1	2	Base miniature wormgear limit switch	**1 260.00**
PFA9142A0050001	50:1	2	Base miniature wormgear limit switch	**1 210.00**
PFA9142A0075001	75:1	2	Base miniature wormgear limit switch	**1 280.00**
PFA9142A0103001	100:1	2	Base miniature wormgear limit switch	**1 260.00**
PFA9142A0158001	150:1	2	Base miniature wormgear limit switch	**1 290.00**
Fox / Oscar series - Wormgear limit switches		**1NO + 1NC**		
• Protection degree: IP66, IP67, IP69K				
• Mechanical life: 10 x 10^6 operations				
• Connections: Screw-type terminals with self-raising clamps				
Fox series - Wormgear limit switches			(H) 117 x (W) 75 x (D) 141 mm	
PFB9067L0016010	15:1	2	Fox industrial wormgear limit switch	**2 940.00**
PFB9067L0027007	25:1	2	Fox industrial wormgear limit switch	**2 770.00**
PFB9067L0062033	50:1	2	Fox industrial wormgear limit switch	**2 660.00**
PFB9067L0103037	100:1	2	Fox industrial wormgear limit switch	**2 750.00**
PFB9067L0162007	150:1	2	Fox industrial wormgear limit switch	**2 750.00**
PFB9067L0222011	200:1	2	Fox industrial wormgear limit switch	**2 750.00**
PFB9067L0254019	250:1	2	Fox industrial wormgear limit switch	**3 600.00**
Cam set and switches can be replaced with a potentiometer or encoder (below) on Fox switches				
Oscar series - Wormgear limit switches			(H) 134.5 x (W) 119 x (D) 146.5 mm	
Can be equipped with up to two cam sets *(up to 10 switches)* with potentiometers *(alone or on top of cam sets with up to 3 switches)* and Yankee absolute encoders *(on top of cam sets with up to 4 switches)*				
PFC9067L0031032	25:1	2	Oscar industrial wormgear limit switch	**4 010.00**
PFC9067L0062004	50:1	2	Oscar industrial wormgear limit switch	**3 940.00**
PFC9067L0107014	100:1	2	Oscar industrial wormgear limit switch	**4 150.00**
PFC9067L0156004	150:1	2	Oscar industrial wormgear limit switch	**4 440.00**
PFC9067L0214004	200:1	2	Oscar industrial wormgear limit switch	**4 360.00**
PFC9067L0254004	250:1	2	Oscar industrial wormgear limit switch	**4 420.00**
PFC9067L0313023	300:1	2	Oscar industrial wormgear limit switch	**4 370.00**
Accessories for above Fox and Oscar switches				
Standard cam set and switches		*for Fox and Oscar switches*		
FCL20001	cam set	2	std. cam set with switches for Fox/Oscar	**1 450.00**
FCL40003	cam set	4	std. cam set with switches for Fox/Oscar	**2 320.00**
Potentiometer		**10 kΩ** - *others available on request*		
PA020001	10	kΩ	potentiometer with support for Fox/Oscar	**7 620.00**
Incremental encoders		**Push - Pull output**		
PA030001	36	pulses/rev	4.5 - 30 VDC encoder with support	**8 930.00**
PA030002	150	pulses/rev	4.5 - 30 VDC encoder with support	**11 800.00**
Yankee absolute encoders		**12 bit**	*4096 points per revolution*	
PA01AA01	current	4 - 20mA	12 - 48 VAC/DC absolute encoder	**6 270.00**
PA01AB01	voltage	0 - 10V	12 - 48 VAC/DC absolute encoder	**6 270.00**
PA01AC01	PWM	0 - 100%	12 - 48 VAC/DC absolute encoder	**5 660.00**
Mounting accessories for Base, Fox, Oscar limit switches				
PRSL0356PI	flange		mounting flange + screws and pins for Base/Fox/Oscar	**580.00**
PRSL0981PI	coupling		coupling with pin for Base/Fox/Oscar	**1 160.00**
PRSL0920PI	coupling		female coupling with pin for Base/Fox/Oscar	**174.00**
PRSL0919PI	coupling		male coupling with pin for Base/Fox/Oscar	**174.00**

Above ZAR prices do not include VAT. E&OE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F202210001

PF48...

PF26755100

Position limit switches

Cross-position limit switches are designed to control the movement of overhead travelling cranes, hoists and complex machine tools. Choice of materials and technical solutions adopted and heads with different types of rods and movements enable use in harsh operating conditions.

General features:

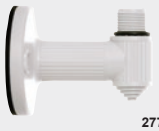
- Utilisation category: AC 15
- Rated operational voltage: 250 VAC
- Insulation voltage: 500 VAC
- Conformity to standards: EN 60421-1, EN 60947-1, EN60947-5-1, EN60529

type	actuators	positions	micro sw	description	price
Arke series - Position limit switches		**IP65, IP66, IP67**		**Class II**	
- Particularly suitable for use in harsh operating conditions with extreme temperature resistance - Cross rods with 4 maintained positions every 90° or single rod with 65° spring return movement - Enclosure and head in thermoplastic material *(Nylon reinforced with fibreglass)* - Positive opening NC contacts for safety functions • Thermal current: 10A • Rated operational current: 6A • Operating temperature: -40°C...+80°C • Mechanical life: 5 x 10^6 operations • Cable entry: Bottom or side (L or R) *(supplied with **M20** cable gland)* • Supplied with: 2 x *(6 x 8 mm)* aluminium rods (*200 mm*)					
F201110001	X-rod	4 *(fixed)* 90°	2NC *(1 staggered)*	stop at 180°	**4 400.00**
F201120001	X-rod	4 *(fixed)* 90°	2NC *(1 staggered)*	free rotation	**4 400.00**
F201110002	X-rod	3 *(fixed)* 90°	1NO + 1NC	position limit switch	**4 140.00**
F202210001	rod-roller	spring ret 65°	1NO + 1NC	position limit switch	**4 140.00**
Tango series - Position limit switches		**IP65**		**Class II**	
Cross-position limit switches are designed to control the movement of overhead travelling cranes, hoists and complex machine tools. - 3 rods with maintained positions every 60° - Equipped with 1NC double break slow action switches • Thermal current: 10A • Rated operational current: 3A • Operating temperature: -25°C...+70°C • Mechanical life: 1 x 10^6 operations • Cable entry: Bottom *(supplied with **M20** cable gland)* • Supplied with: Three 6 x 6 mm aluminium rods *(300 mm)*					
PF48020001	X-rod	4 *(fixed)* 60°	2NC	position limit switch	**2 120.00**
PF48030001	X-rod	4 *(fixed)* 60°	3NC	position limit switch	**2 270.00**
PF48040001	X-rod	4 *(fixed)* 60°	4NC	position limit switch	**2 420.00**
X-FSC series - Position limit switches		**IP65**		**Class II**	
- Features cross rods with 3 or 4 maintained positions - T rods with 3 maintained position every 90° - Equipped with 2 x 1NO + 1NC snap action switches - Enclosure and head in thermoplastic material *(Nylon reinforced with fibreglass)* • Thermal current: 10A • Rated operational current: 3A • Operating temperature: -25°C...+70°C • Mechanical life: 1 x 10^6 operations					
PF33710100	T-rod	3 *(fixed)* 90°	1NO+1NC	position limit switch	**2 600.00**
7551 series - Position limit switches		**IP65**		**Class I**	
Designed for the control of complex operating equipment. The choice of materials, technical solutions and ample dimensions make these switches ideal for use in strongly aggressive environments when exposed to severe operating conditions. - Rods with 4 maintained positions every 90° - Die-cast aluminium alloy to guarantee maximum resistance to violent impact, chemical aggression and rust • Thermal current: 10A • Rated operational current: 3A • Operating temperature: -40°C...+70°C • Mechanical life: 1 x 10^6 operations					
PF26755100	X-rod	4 *(fixed)* 90°	2 x 1NO+1NC	position limit switch	**4 610.00**

38603

38654

38792


27762

30107

Multifunctional technology, permitting different selectable signalling levels

Luminous devices engineered for industrial applications on machinery.

type	lens colour	dB @ 1 meter	supply voltage	description	dimensions (mm) Ø	dimensions (mm) ext.	price
MICROLAMP LED - LED signalling beacon - Surface mount						**IP54**	
• Double insulated							
• M16 cable gland entry *(gland supplied)*							
• Multi-voltage:			12/24 VAC/DC (or) 90 - 240 VAC				
• 2 light effects:			Steady - flashing (selectable via terminals)				
• LED flash rate:			140fpm ± 10%				
• Construction:			Polycarbonate base and lens				
• Luminous intensity *(Candela)*:			2 cd max				
38602	amber	–	12 - 24 VAC/DC	surface mnt signalling device	86	90	**1 630.00**
38603	red	–	12 - 24 VAC/DC	surface mnt signalling device	86	90	**1 630.00**
38604	green	–	12 - 24 VAC/DC	surface mnt signalling device	86	90	**1 630.00**
38622	amber	–	90 - 240 VAC	surface mnt signalling device	86	90	**1 850.00**
38623	red	–	90 - 240 VAC	surface mnt signalling device	86	90	**1 850.00**
38624	green	–	90 - 240 VAC	surface mnt signalling device	86	90	**1 850.00**
MICROLAMP LED and ACOUSTIC - signalling beacon						**IP30**	
• Tone: 2700Hz							
• Audible signal option with continuous or intermittent sound.							
• 2 alarm levels:			Continuous sound with steady light / intermittent sound with flashing light				
• Luminous intensity *(Candela)*:			2 cd max				
38632	amber	72	12 - 24 VAC/DC	surface mnt signalling device	86	111	**2 140.00**
38633	red	72	12 - 24 VAC/DC	surface mnt signalling device	86	111	**2 140.00**
38634	green	72	12 - 24 VAC/DC	surface mnt signalling device	86	111	**2 140.00**
38652	amber	72	90 - 240 VAC	surface mnt signalling device	86	111	**2 440.00**
38653	red	72	90 - 240 VAC	surface mnt signalling device	86	111	**2 440.00**
38654	green	72	90 - 240 VAC	surface mnt signalling device	86	111	**2 440.00**
Other colours available on request							
OVOLUX LED - Multifunctional LED signalling beacon						**IP66**	
• Bright LED with maximised performance							
• "R" panel-mount (through 1/2" NPT hole) or "M" surface mounting							
• Multi-voltage:			12/24 VAC/DC (or) 90 - 240 VAC				
• 4 light effects:			Steady - single - double - triple flash - *(selectable via dip-switches)*				
• Luminous intensity *(Candela)*:			35 cd max				
Panel-mount "R" version			*mounts through 1/2" NPT (22 mm) hole with (provided) lock ring*				
38782	amber	–	12 - 24 VAC/DC	panel-mount signalling device	76	69	**2 180.00**
38783	red	–	12 - 24 VAC/DC	panel-mount signalling device	76	69	**2 180.00**
38784	green	–	12 - 24 VAC/DC	panel-mount signalling device	76	69	**2 180.00**
38792	amber	–	90 - 240 VAC	panel-mount signalling device	76	69	**2 540.00**
38793	red	–	90 - 240 VAC	panel-mount signalling device	76	69	**2 540.00**
38794	green	–	90 - 240 VAC	panel-mount signalling device	76	69	**2 540.00**
Surface mount "M" version			*M16 cable gland entry*			*(IP65)*	
38802	amber	–	12 - 24 VAC/DC	surface mount signalling device	114	115	**2 450.00**
38803	red	–	12 - 24 VAC/DC	surface mount signalling device	114	115	**2 450.00**
38812	amber	–	90 - 240 VAC	surface mount signalling device	114	115	**2 810.00**
38813	red	–	90 - 240 VAC	surface mount signalling device	114	115	**2 810.00**
Other colours available on request							
OVOLUX RGB - multicolour steady light - LED beacon							
• Multi-coloured:			White, amber, red, yellow, green, magenta, blue (7 colours in one beacon)				
• Luminous intensity *(Candela)*:			10 cd max				
30107	multi	–	12 - 24 VAC/DC	panel-mount signalling device	76	69	**2 960.00**
30108	multi	–	90 - 240 VAC	panel-mount signalling device	76	69	**3 330.00**
Mounting accessories *(for above panel-mount beacons)*							
27697	adaptor		for mounting Ovolux beacons onto a foot or wall mount base				**173.00**
27762	wall		wall mounting bracket for Ovolux *(requires **27697** adaptor)*				**346.00**
27764	base		surface mount base with extended foot (100 mm) *(requires **27697** adaptor)*				**433.00**

Above ZAR prices do not include VAT. E&OE

66502

66513

66554

90063

Multifunctional technology permitting different selectable signalling levels

type	lens colour	supply voltage	description	dimensions (mm) Ø	ext.	price
MINIFLASH LED medium size multifunctional beacons				**IP54**		
Medium-size multifunctional LED beacon, developed with a multichannel technology. MINIFLASH LED is available in **MINIFLASH FLR** *(steady, flashing, rotating light)* or in **MINIFLASH SLR** *(flashing, strobe, random light)* version.						
• Surface mounting with M16 cable gland entry *(cable gland supplied)*						
• Dome-shaped Fresnel lens intensifies the luminous beam of these devices						
• 3 x lighting effects controllable via independent electric contacts						
MINIFLASH LED FLR						
• LEDs allows a rotating effect perfectly simulating traditional rotating beacon without moving parts						
• 32x bright LEDs						
• Luminous intensity *(Candela):* 50 cd max						
• Three luminous effects: Steady light, Flashing light, Rotating light						
66502	amber	12 - 24 VAC/DC	multifunctional LED beacon	99	146	**7 240.00**
66503	red	12 - 24 VAC/DC	multifunctional LED beacon	99	146	**7 240.00**
66504	green	12 - 24 VAC/DC	multifunctional LED beacon	99	146	**7 240.00**
66512	amber	90 - 240 VAC	multifunctional LED beacon	99	146	**7 240.00**
66513	red	90 - 240 VAC	multifunctional LED beacon	99	146	**7 240.00**
66514	green	90 - 240 VAC	multifunctional LED beacon	99	146	**7 240.00**
MINIFLASH LED SLR						
• SuperBright LEDs unique uneven flashing pattern designed for attracting attention						
• Luminous intensity *(Candela):* 230 cd max						
• Three luminous effects: Flashing light 1F, Strobe effect 5F, Random lighting effect						
66542	amber	12 - 24 VAC/DC	multifunctional LED beacon	99	146	**7 240.00**
66543	red	12 - 24 VAC/DC	multifunctional LED beacon	99	146	**7 240.00**
66544	green	12 - 24 VAC/DC	multifunctional LED beacon	99	146	**7 240.00**
66552	amber	90 - 240 VAC	multifunctional LED beacon	99	146	**7 240.00**
66553	red	90 - 240 VAC	multifunctional LED beacon	99	146	**7 240.00**
66554	green	90 - 240 VAC	multifunctional LED beacon	99	146	**7 240.00**
Other colours available on request						
Mounting accessories						
72692	grey		wall mounting bracket for above MINIFLASH beacons			**1 320.00**
ROTALLARM S LED multifunctional beacon				**IP65**		
ROTALLARM S LED features a powerful multivoltage/multifunction SMD LED electronic circuit offering outstanding performances together with the highest life expectancy in todays market. The structure guarantees high impact and vibration resistance.						
• PC/ABS base with M20 cable gland, self-extinguishing polycarbonate dome						
• Polyurethane gasket on base						
• 32 x 5050 bright LEDs for improved visibility						
• Luminous intensity *(Candela):* 40 cd max						
• Lighting effect: Steady, Rotating, Flashing						
ROTALLARM S LED rotating beacons				(H) 212 x Ø 142 mm		
90061	blue	12 - 24 VAC/DC	multifunctional LED beacon	142	212	**6 270.00**
90062	amber	12 - 24 VAC/DC	multifunctional LED beacon	142	212	**6 270.00**
90063	red	12 - 24 VAC/DC	multifunctional LED beacon	142	212	**6 270.00**
90064	green	12 - 24 VAC/DC	multifunctional LED beacon	142	212	**6 270.00**
90081	blue	90 - 240 VAC	multifunctional LED beacon	142	212	**8 620.00**
90082	amber	90 - 240 VAC	multifunctional LED beacon	142	212	**8 620.00**
90083	red	90 - 240 VAC	multifunctional LED beacon	142	212	**8 620.00**
90084	green	90 - 240 VAC	multifunctional LED beacon	142	212	**8 620.00**
Other colours available on request						
Mounting accessories						
72692	grey		wall mounting bracket for above ROTALLARM beacons			**1 320.00**

91363

P50 series - Panel-mount LED signalling devices Ø50 mm

Multifunctional technology permits different selectable alarm levels via independent electric contacts. Illuminated dome *(Ø50 mm)* provides easy-to-see operator guidance and indication.

- Mounts through Ø22 mm pushbutton hole

type	lens colour	dB @ 1 meter	supply voltage	description	dimensions (mm) Ø	dimensions (mm) ext.	price
P50 series - Panel-mount LED signalling devices Ø50 mm							**IP66**
• Mounts through Ø22 mm standard pushbutton hole secured with *(provided)* locking ring • Polycarbonate dome with 360° light-diffusion design - 6 bright LEDs • M12 4 PIN electrical connector *(plug and cable supplied separately)*							
P50 S - Multifunctional LED signalling panel beacon							**IP66**
• 7 different light effects - *(steady, slow / fast flashing, double / triple flash, strobe, random flash)* • Luminous intensity *(Candela):* 10 cd max							
91362	amber	–	12 - 24 VAC/DC	panel-mount signalling device	50	26.5	**3 210.00**
91363	red	–	12 - 24 VAC/DC	panel-mount signalling device	50	26.5	**3 210.00**
91364	green	–	12 - 24 VAC/DC	panel-mount signalling device	50	26.5	**3 210.00**

91364

P50 RGB - Multicolour LED panel beacon							**IP66**
• Steady light with 7 different selectable colours - *(white, amber, red, yellow, green, magenta, blue)* • Luminous intensity *(Candela):* 10 cd max							
91430	multi	–	24 VDC	multicoloured LED beacon	50	26.5	**2 860.00**
P50 A - Panel-mount piezoelectric acoustic sounder							**IP65**
• Seven different types of audible alarms *(controllable via independent electric contacts) (continuous, intermittent, double intermittent, triple intermittent, telegraph, random)*							
91367	grey	88/92	12 - 24 VAC/DC	panel-mount audible sounder	50	27.5	**3 080.00**
P50 A LED - Combination sounder and signal beacon							**IP65**
• Allows 7 different types of sound/light effects - *(controllable via independent electric contacts)* (Steady light, Continuous sound, Steady light + Continuous sound, 2/3 Flashes - sync sound/light, Intermittent - sync sound/light, Random) • Luminous intensity *(Candela):* 10 cd max							
91382	amber	88/92	12 - 24 VAC/DC	panel-mount sounder/beacon	50	27.5	**3 690.00**
91383	red	88/92	12 - 24 VAC/DC	panel-mount sounder/beacon	50	27.5	**3 690.00**
Other colours available on request							

91430

91153

P40 S - Multifunctional LED signalling panel beacon Ø41 mm IP65

- Mounts through Ø30 mm hole - *(internal depth max. 37 mm)*
- Light-diffusion through a light-concentrating lens for maximize frontal performance
- Screw terminal connection
- Ø41 mm domed lens 360°

type	lens colour	dB @ 1 meter	supply voltage	description	dimensions (mm) Ø	dimensions (mm) ext.	price
3 alarm levels: steady - flashing - strobe *(selectable via electrical contacts)*							
• Luminous intensity *(Candela):* 20 cd max							
91132	amber	–	12 - 24 VAC/DC	panel-mount signalling device	41	46	**2 400.00**
91133	red	–	12 - 24 VAC/DC	panel-mount signalling device	41	46	**2 400.00**
91134	green	–	12 - 24 VAC/DC	panel-mount signalling device	41	46	**2 400.00**
91152	amber	–	48 - 240 VAC	panel-mount signalling device	41	46	**2 400.00**
91153	red	–	48 - 240 VAC	panel-mount signalling device	41	46	**2 400.00**
91154	green	–	48 - 240 VAC	panel-mount signalling device	41	46	**2 400.00**
P40 A - Piezoelectric acoustic sounder - selectable continuous - intermittent sound							
91177	grey	85dB	12 - 24 VAC/DC	panel-mount audible sounder	41	34	**1 440.00**
91179	grey	85dB	48 - 240 VAC	panel-mount audible sounder	41	34	**1 900.00**
P40 A LED - Combination sounder and signal beacon							**IP65**
3 alarm levels: flashing only / flashing + intermittent sound / steady light + continuous sound							
• Luminous intensity *(Candela):* 20 cd max							
91182	amber	85dB	12 - 24 VAC/DC	panel-mount sounder/beacon	41	34	**1 700.00**
91183	red	85dB	12 - 24 VAC/DC	panel-mount sounder/beacon	41	34	**1 700.00**
91202	amber	85dB	48 - 240 VAC	panel-mount sounder/beacon	41	34	**2 170.00**
91203	red	85dB	48 - 240 VAC	panel-mount sounder/beacon	41	34	**2 170.00**
Other colours available on request							

91132

91177

91183

Above ZAR prices do not include VAT. E&OE

28241

28242

28246

36901

36900

E-LITE - Economic LED beacons IP66

LED signalling device available in 5 colours with steady light. Other luminous effects via PLC are possible. E-LITE offers virtually zero maintenance thanks to the built-in LED technology that guarantees up to 100.000 hours of product life.

Clear lens with coloured LED light source (14 LEDs). The vertically lined refractor allows a perfect light distribution over 360° *(steady light)*. Other luminous effects via PLC.

- Suitable for indoor or outdoor use
- Opaline *(no colour dome)* illuminated in the colour of internal LEDs
- Self-extinguishing PC body with high impact resistance IK06
- M12 - 4pin plug connection *(cable and plug supplied separately)*
- Integrated mounting base *(3 mounting holes 120°)*

type	lens colour	dB @ 1 meter	supply voltage	description	dimensions (mm) Ø	ext.	price
E-LITE series - Econo steady light LED beacon Ø70 mm					**IP66**		
• Available in 5 different steady light colours *(other luminous effects via a PLC are possible)*							
• Luminous intensity *(Candela):* 15 cd max							
28241	blue		24 VDC	econo LED steady signal light	70	56	**1 120.00**
28242	amber		24 VDC	econo LED steady signal light	70	56	**1 120.00**
28243	red		24 VDC	econo LED steady signal light	70	56	**1 120.00**
28244	green		24 VDC	econo LED steady signal light	70	56	**1 120.00**
28246	clear		24 VDC	econo LED steady signal light	70	56	**1 120.00**
E-LITE RGB - Multicolour LED panel beacon							
• 7 different selectable colours - *(white, amber, red, yellow, green, magenta, blue)* on one unit							
• Available in steady light or with flashing *(single flash)* versions							
• Luminous intensity *(Candela):* 2-11 cd *(colour dependant)*							
28323	multi	steady	24 VDC	multi coloured steady signal light	70	56	**2 340.00**
28325	multi	flashing	24 VDC	multi coloured flashing signal light	70	56	**2 340.00**

Accessories - *for above* **E-LITE and P50** *signalling devices*

type	gender	pin	term.	plug angle	description	price
120104-02-022	female	4	screw	straight	M12 connector	**188.00**
120104-02-024	female	4	screw	90º	M12 connector	**188.00**
120104-06-053	female	4	cable	straight	2 meter cable + M12 connector	**220.00**
120104-06-061	female	4	cable	straight	5 meter cable + M12 connector	**443.00**
120104-06-017	female	4	cable	90º	2 meter cable + M12 connector	**220.00**
120104-06-010	female	4	cable	90º	5 meter cable + M12 connector	**400.00**

For more connectors with cable see page ***K-23-24***

EOS WM series - LED stacklights Ø70 mm IP66, IP69K

Modular pre-assembled LED stacklight in versions with 2 or 3 steady light modules. Offers virtually zero maintenance thanks to built-in LED technology guaranteeing up to 100.000 hours life.

- Integrated LED steady light modules *(other luminous effects via PLC)*
- Opaline clear lens with coloured light source permits perfect light distribution over 360°
- Versions with piezoelectric sounder (75dB 1m)
- Smooth design that aides in dirt build-up on the surface
- Ideal for environments with high-brightness
- Clear distinction between ON and OFF state
- Luminous intensity *(Candela):* 4 cd max

Two module stacklight *(green / red)*					
36901	green / red	12 - 24 VAC/DC	econo LED steady light stacklight	70	208	**3 360.00**
36903	green / red	12 - 24 VAC/DC	econo LED stacklight with sounder	70	248	**4 310.00**
Three module stacklight *(green / amber / red)*					
36900	green/amber/red	12 - 24 VAC/DC	econo LED steady light stacklight	70	248	**4 230.00**
36904	green/amber/red	12 - 24 VAC/DC	econo LED stacklight with sounder	70	288	**5 130.00**
Multi-coloured (single) **stacklight with incorporated sounder**					
36909	multi-coloured	12 - 24 VAC/DC	econo LED stacklight with sounder	70	208	**4 100.00**
Mounting accessories for above EOS stacklights					
36911	light grey		wall mounting base for lateral mounting	61	97	**457.00**
27760	light grey		flat base for surface mounting	67.5	34	**260.00**
27761	light grey		extension for above flat base	*(100 mm)*		**247.00**

MLINE - Multivoltage - **M**ultifunction - **M**odular - **M**ultichannel *(NPN version)*

MLINE is a unique, flexible, modular concept permitting different audio and signalling devices to be combined with facilities to mount them in the most practical way.

Different **DOMES** *(audio, visual or both)* can be mounted on any of six different **BASES** which determines the supply voltage of the unit - **12 - 24 VAC/DC** or **120 - 240 VAC**

- LED technology - zero maintenance built-in LED guaranteeing up to 100.000 hours of productive life

Scan to watch video

DOMES - beacons/sounders or combinations of both - require **BASES** *(see overleaf)* to complete device

90823 + 90367

90504 + 90367

90351 + 90368

90363 + 90343

90362 + 90368

type	lens colour	dB @ 1meter	description	dimensions Ø	dimensions H	price
XLF S - Low profile beacon			**multifunctional LED signalling**			**IP66**
Selectable light effects:			- Steady light - Flashing *(single-flash 1F)* - Strobe effect *(5x flash)* - Random light effect			
Adjustable brightness *(3 levels)*						
Directional - Fresnel lens - *(for long distance signalisation)*						
• Luminous intensity *(Candela)*:			4200 cd max			
90821	blue	–	multifunctional low-profile LED beacon	92	42.5	**2 810.00**
90822	amber	–	multifunctional low-profile LED beacon	92	42.5	**2 810.00**
90823	red	–	multifunctional low-profile LED beacon	92	42.5	**2 810.00**
90824	green	–	multifunctional low-profile LED beacon	92	42.5	**2 810.00**
90826	clear	–	multifunctional low-profile LED beacon	92	42.5	**3 150.00**
Multi-coloured *red, green, blue, amber, yellow, cyan, violet, white selectable on one unit*						
90156	multi	*(85 cd)*	multifunction/colour low profile beacon	92	42.5	**3 700.00**
Proximity - Opaline lens - *(for close proximity signalisation)*						
• Luminous intensity *(Candela)*:			25 cd max			
90502	amber	–	multifunctional low profile LED beacon	92	42.5	**2 810.00**
90503	red	–	multifunctional low profile LED beacon	92	42.5	**2 810.00**
90504	green	–	multifunctional low profile LED beacon	92	42.5	**2 810.00**
FLR S - Tall beacon			high optical performance LED signalling			**IP66**
• 24 bright LEDs permit 3 selectable luminous effects						
• Luminous intensity *(Candela)*:			455 cd max			
Selectable light effects:			- Steady light - Flashing *(triple flash strobe effect)* - Rotating light *(simulates traditional rotating beacon)*			
90351	blue	–	multifunctional tall LED beacon	92	108	**4 340.00**
90352	amber	–	multifunctional tall LED beacon	92	108	**4 340.00**
90353	red	–	multifunctional tall LED beacon	92	108	**4 340.00**
90354	green	–	multifunctional tall LED beacon	92	108	**4 340.00**
SIR-E S - Multi-functional electronic sounder						**IP65**
• High acoustic performance - adjustable volume						
• Multi-tone 64 different sounds available *(selectable via internal dip switches)*						
• Two separate functions: pre-alarm - alarm *(controllable via separate electric contacts)*						
90360	grey	105 dB	multifunction sounder *(64 sounds)*	92	62	**2 590.00**
90358	red	105 dB	multifunction sounder *(64 sounds)*	92	62	**2 590.00**
SIR-E LED S - Combination beacon and sounder						
• Selectable light effects - steady or strobe light effect						
• Multi-tone 64 different sounds available *(selectable via internal dip switches)*						
90362	amber	105 dB	beacon and sounder *(64 sounds)*	92	62	**3 260.00**
90363	red	105 dB	beacon and sounder *(64 sounds)*	92	62	**3 160.00**
90361	blue	105 dB	beacon and sounder *(64 sounds)*	92	62	**3 260.00**
SIR-E LED MAX - Combination beacon and high output sounder						
90563	red	115 dB	beacon and sounder *(64 sounds)*	92	88	**6 850.00**
SIR-E LED JUNIOR - Econo combination beacon/sounder						
• Two lighting effects: steady - flashing						
90402	amber	100 dB	beacon and sounder *(16 sounds)*	92	62	**2 300.00**
90403	red	100 dB	beacon and sounder *(16 sounds)*	92	62	**2 300.00**
90404	green	100 dB	beacon and sounder *(16 sounds)*	92	62	**2 300.00**

Above ZAR prices do not include VAT. E&OE

90367

90368

90370

90610

90375

90512

90352 + 90367 + 90553

69786

69788

BASES - for MLINE beacons or sounders or combinations of both, provide a number of mounting options. On any of six different **BASES** which determine the supply voltage of the unit 12 - 24 VAC/DC or 120 - 240 VAC

type	lens colour		supply voltage	description	dimensions (mm) Ø	height	price
SHALLOW	compact low profile surface mount bottom cable entry						
90367	grey	**LT**	12-24 VAC/DC	shallow base for MLine domes	92	21	**340.00**
90343	red	**LT**	12-24 VAC/DC	shallow base for MLine domes	92	21	**340.00**
DEEP	surface mount base with 2 x **M20** side knockouts and compression glands						
90368	grey	**LT**	12 - 24 VAC/DC	deep base for MLine domes	92	46	**377.00**
90345	red	**LT**	12 - 24 VAC/DC	deep base for MLine domes	92	46	**377.00**
90369	grey	**HT**	120 - 240 VAC	deep base for MLine domes	92	46	**1 760.00**
90827*	grey	**HT**	120 - 240 VAC	deep base for MLine domes	92	46	**1 320.00**
WALL	lateral wall mount base with 2 x **M20** knockouts						
90370	grey	**LT**	12 - 24 VAC/DC	wall base for MLine domes	115	61	**450.00**
90347	red	**LT**	12 - 24 VAC/DC	wall base for MLine domes	115	61	**450.00**
90371	grey	**HT**	120 - 240 VAC	wall base for MLine domes	115	61	**2 020.00**
90828*	grey	**HT**	120 - 240 VAC	wall base for MLine domes	115	61	**1 460.00**
POLE	pole mount base for 1.5" NPT threaded pole						
90610	grey	**LT**	12 - 24 VAC/DC	pole mnt base for MLine domes	92	66	**504.00**
90612	grey	**HT**	120 - 240 VAC	pole mnt base for MLine domes	92	66	**2 270.00**
FLUSH	flush mount base for applications requiring low visual, discrete aesthetics						
90375	white	**LT**	12 - 24 VAC/DC	flush base for MLine domes	146	71	**599.00**
90376	white	**HT**	120- 240 VAC	flush base for MLine domes	146	71	**2 430.00**
DOUBLE	wall mount base accomodates 2 x warning and/or signalling devices						
90372	grey	**LT**	12 - 24 VAC/DC	double base for MLine domes	120	97	**673.00**
90373	red	**LT**	12 - 24 VAC/DC	double base for MLine domes	120	97	**673.00**
90512	grey	**HT**	120 - 240 VAC	double base for MLine domes	120	97	**2 550.00**

* *Junior economical base only permits one function to be selected*

Stainless steel protection grids *(heavy duty)* for **MLINE** beacons and sounders

type	size		**SHALLOW Base** 12 - 24 VAC/DC	**DEEP Base** 12 - 24 VAC/DC - 120 - 240 VAC	price
90557	size 0	for	XLF S/RGA	–	**1 900.00**
90551	size 1	for	SIR-E / SIR-E LED	XLF S/RGA	**1 740.00**
90552	size 2	for	SIR-E MAX/ SIR-E LED MAX	SIR-E / SIR-E LED	**1 810.00**
90553	size 3	for	FLR / SLR	SIR-E MAX/ SIR-E LED MAX	**2 090.00**
90554	size 4	for	–	FLR S / SLR S	**2 160.00**

TLINE series - LED industrial traffic lights IP66

TLINE traffic lights *(based on **MLINE** philosophy)*, providing reliable signalling and versatile solutions, that are engineered for parking and access points.

The LED technology allows for better resistance to vibrations, longer life product, drastically reducing operating and maintenance costs. The self-extinguishing polycarbonate body guarantees high impact resistance.

These industrial traffic lights offer high visibility thanks to their dome, engineered to intensify the light beam, and to the visors supplied with the product.
Easy installation *(two cable entries)*, a swivel fixing bracket or a pole mounting adapter are available as accessories.

- 3 luminous effects: steady light, flashing light, strobe effect *(controllable via separate contacts)*
- Luminous intensity *(Candela):* 4200 cd max

type	colours	supply	lens	description	price
TLINE 2 XLF	**2 light - green/red**			(H) 231 x (W) 120 x (D) 133 mm	
69786	red/green	12 - 24 VAC/DC	Fresnel	2-way industrial LED traffic light	**9 780.00**
69787	red/green	120 - 240 VAC	Fresnel	2-way industrial LED traffic light	**11 400.00**
TLINE 3 XLF	**3 light - green/amber/red**			(H) 342 x (W) 120 x (D) 133 mm	
69788	red/amber/green	12 - 24 VAC/DC	Fresnel	3-way industrial LED traffic light	**13 800.00**
69789	red/amber/green	120 - 240 VAC	Fresnel	3-way industrial LED traffic light	**16 100.00**
Accessories for traffic lights *(above)*					
69784	wall bracket	swivel type		wall mount bracket for **TLINE** traffic lights	**600.00**
69785	NPT adaptor	adaptor		*(required for pole mounting of traffic light)*	**576.00**
27765	pole mount	base		with stainless steel pole (L) 424 mm	**1 040.00**
27766	pole mount	base		with stainless steel pole (L) 1240 mm	**1 240.00**

Up to 5 light modules or 4 light modules plus 1 x acoustic module can be combined with various colours permitting a number of signalling functions with multiple installation mounting options.

type	colour	dB @ 1m max	supply voltage	description	price
TWS SMD series - LED signal towers Ø70 mm				**IP66**	
• Low power consumption, high vibration resistance, 100.000 hour lifetime • Multi-functionality, excellent optical definition, improved light output *(12 LEDS)*					
TWS BASE - Wiring base + top cover for TWS towers				(H) 48 mm	
27700*	grey	–		wiring base + top cover for above TWS towers	**735.00**
* *Essential for assembly of TWS tower*					
TWS LED MULTI - integrated LED light module				(H) 59 mm	
- 4 light functions *(selectable by dip switch on each module)* steady - single flash - double flash - triple flash					
36501	blue	–	24 VAC/DC	multi-functional LED light module	**1 530.00**
36502	amber	–	24 VAC/DC	multi-functional LED light module	**1 530.00**
36503	red	–	24 VAC/DC	multi-functional LED light module	**1 530.00**
36504	green	–	24 VAC/DC	multi-functional LED light module	**1 530.00**
36505	yellow	–	24 VAC/DC	multi-functional LED light module	**1 530.00**
36506	white	–	24 VAC/DC	multi-functional LED light module	**1 530.00**
36521	blue	–	240 VAC	multi-functional LED light module	**1 700.00**
36522	amber	–	240 VAC	multi-functional LED light module	**1 700.00**
36523	red	–	240 VAC	multi-functional LED light module	**1 700.00**
36524	green	–	240 VAC	multi-functional LED light module	**1 700.00**
36525	yellow	–	240 VAC	multi-functional LED light module	**1 700.00**
36526	white	–	240 VAC	multi-functional LED light module	**1 700.00**
Acoustic module for above TWS towers				*IP54* (H) 104 mm	
TWS PZO - Piezoelectric sounder *(6 tones selectable via internal dip-switch)*					
27718	grey	85 dB	12 - 48 VAC/DC	acoustic module *(6 sounds)*	**1 390.00**
27719	grey	85 dB	110 - 240 VAC	acoustic module *(6 sounds)*	**1 600.00**
TWS MDA - magneto-dynamic sounder *(32 tones selectable via internal dip-switch)*					
27790	grey	105 dB	12 - 24 VAC/DC	acoustic module *(32 sounds)*	**2 510.00**
27793	grey	105 dB	240 VAC	acoustic module *(32 sounds)*	**3 590.00**

miniTWS series - LED signal towers Ø50 mm				**IP66** *(IP54 with sounder)*	
• Pre-assembled ready to install stack lights in 2 or 3 modules • Low power consumption, high vibration resistance, 100,000 hour lifetime • Multi-functionality two light effects: steady, flashing					
Two light stack light - *(green / red)*					
31594	grn/red	–	24 VAC/DC	LED signal tower complete	**3 390.00**
31596	grn/red	77 dB	24 VAC/DC	LED signal tower + acoustic sounder	**4 480.00**
Three light stack light - *(green / amber / red)*					
31595	grn/amb/red	–	24 VAC/DC	LED signal tower complete	**4 390.00**
31597	grn/amb/red	77 dB	24 VAC/DC	LED signal tower + acoustic sounder	**5 710.00**
babyTWS series- LED signal towers Ø36 mm				**IP65** *(IP54 with sounder)*	
• Pre-assembled ready-to-install stack lights in 2 or 3 modules • Low power consumption, high vibration resistance, 100.000 hour lifetime • Integrated steady light modules, excellent optical definition					
Two light stacklight - *(green / red)*					
36566	grn/red	–	24 VAC/DC	LED signal tower complete	**3 060.00**
36568	grn/red	72 dB	24 VAC/DC	LED signal tower + acoustic sounder	**3 840.00**
Three light stacklight - *(green / amber / red)*					
36567	grn/amb/red	–	24 VAC/DC	LED signal tower complete	**4 300.00**
36569	grn/amb/red	72 dB	24 VAC/DC	LED signal tower + acoustic sounder	**5 080.00**

Accessories for TWS, miniTWS and babyTWS towers				
27760	BS	mount	mounting foot for TWS *(Ø 88 mm)*	**260.00**
27761	PR	ext.	100 mm extension stem for TWS towers	**247.00**
27762	BP1	bracket	wall mounting bracket for TWS towers	**346.00**
27763	BP2	double	wall mount bracket *(double entry)* for TWS towers	**390.00**
27777	M16	–	mounting foot with junction box for TWS towers	**820.00**

Above ZAR prices do not include VAT. E&OE

ELYPS signal tower/stack light system features modules which plug-in to each other to form specific functions. Unique oval shape *(50 - 70 mm)* diameter variance depending on the viewing angle. Latest generation LED technology for highly effective indication with exceptional life *(+100.000 hours)*

- Supply voltage 12/24 VDC or 120 - 240 VAC/DC *(determined by the wiring module)*
- IP65 protection *(suitable for indoor or outdoor use)*
- Light modules configurable for "steady" or various modes of "flashing"

Modular stack lights - made up of four groups of modules

- Mounting base - Wiring module - Light modules - Acoustic modules

type	colour	supply voltage	mode	description	price
ELYPS WM Wiring modules *for all common wiring (determines supply voltage)*					
• Permits connection of up to 7 modules - steady, flashing or sound • Supply voltage of the system is determined by the wiring module **LT** 12 - 24 VDC modules *(direct connected)* **HT** 120 - 240 VAC/DC modules *(with built-in 12/24V transformer)*					
WM - wiring module - *basic type without built-in flashing facility*					
32457	grey	**LT**	12 - 24 VAC/DC	steady	standard wiring module/base **594.00**
32320	grey	**HT**	120 - 240 VAC	steady	standard wiring module/base **2 040.00**
WM - MULTI wiring module - *with built-in flashing facility*					
• Multi-functional flashing facility of each connected independent light module • Configurable for "steady" or Single flash - Double flash - Triple flash - Strobe mode					
32467	grey	**LT**	12 - 24 VAC/DC	flashing	multi LT wiring module/base **2 570.00**
32326	grey	**HT**	120 - 240 VAC	flashing	multi LT wiring module/base **2 700.00**
ELYPS Light modules *steady light or individual selectable flashing*					
LM light module - economic, entry-level LED light module with steady light					
32331	blue	WM LT wiring module (24 VAC/DC only)		steady	plug-in steady light module **701.00**
32332	amber			steady	plug-in steady light module **701.00**
32333	red			steady	plug-in steady light module **701.00**
32334	green			steady	plug-in steady light module **701.00**
32335	yellow			steady	plug-in steady light module **701.00**
32336	white			steady	plug-in steady light module **701.00**
LM S - MULTI light modules - multifunctional 4 selectable light effects *(via dip-switches)*					
• 2x FLASH - 3x FLASH - 5x FLASH - RANDOM *(uneven flashing pattern)*					
32391	blue	according to selected wiring module		flashing	plug-in multi-light module **1 790.00**
32392	amber			flashing	plug-in multi-light module **1 790.00**
32393	red			flashing	plug-in multi-light module **1 790.00**
32394	green			flashing	plug-in multi-light module **1 790.00**
32395	yellow			flashing	plug-in multi-light module **1 790.00**
32396	white			flashing	plug-in multi-light module **1 790.00**
LM X - MULTI light modules - superbright multi-functional LED light module					
• With superbright LED simulating traditional Xenon discharge lamps					
32351	blue	according to selected wiring module		flashing	plug-in super brite light module **1 620.00**
32352	amber			flashing	plug-in super brite light module **1 620.00**
32353	red			flashing	plug-in super brite light module **1 620.00**
32354	green			flashing	plug-in super brite light module **1 620.00**
32355	yellow			flashing	plug-in super brite light module **1 620.00**
32356	white			flashing	plug-in super brite light module **1 620.00**
ELYPS Acoustic modules to add acoustic signalisation to luminous sectors					
AM series Piezoelectric - 2 sound modes *(intermittent or continuous)*					
32337	grey	acc. to wiring module	87 dB	plug-in acoustic module	**2 030.00**
AM S series Magneto-dynamic - 16 different sound modes - *adjustable volume 60 - 90 dB*					
32347	grey	acc. to wiring module	90 dB	plug-in acoustic module	**2 700.00**
Mounting bases for signal towers					
32357	grey	foot mounting base		for ELYPS signal towers	**342.00**
32377	grey	foot mount base with 10 cm ext.		for ELYPS signal towers	**714.00**
32367	grey	wall mounting base		for ELYPS signal towers	**760.00**
32387	grey	pole mounting base		for ELYPS signal towers	**690.00**

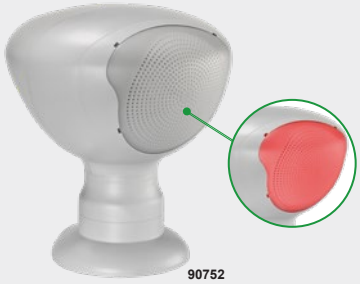
42200

42212

42021

50415

50424



90752

22700

Industrial motor-driven sirens

type	supply voltage	dB @ 1m	description	IP	run duration on	run duration off	dimensions (Ø)	dimensions (H)	price
MICRO W10 series			motor-driven sirens						
Ideal choice for industrial applications, from general-purpose signalization to warning • Can be installed vertically or horizontally									
42200	12 VDC	93	motor-driven siren	IP42	*(continuous)*		84	80	**1 090.00**
42202	24 VDC	93	motor-driven siren	IP42	*(continuous)*		84	80	**1 090.00**
42212	240VAC	93	motor-driven siren	IP42	*(continuous)*		90	129	**2 100.00**
CELERE series			motor-driven sirens						
• Self-extinguishing PC body with high-impact resistance • Motor protection thermal circuit breaker installed on **CELERE** and **super-CELERE** versions • Easy installation by means of the integrated fixing bracket - **M12** cable gland									
mini-CELERE			**miniature electro-mechanical siren**						
42006	12 VDC	101	motor-driven siren	IP43	*(continuous)*		91	115	**2 430.00**
42001	24 VAC/DC	101	motor-driven siren	IP43	1 min.	10 min.	91	115	**2 430.00**
42005	240 VAC/DC	101	motor-driven siren	IP43	1 min.	10 min.	91	115	**2 430.00**
CELERE			**mid-sized electro-mechanical siren**						
42026	12 VDC	110	motor-driven siren	IP43	*(continuous)*		118	167	**4 400.00**
42021	24 VAC/DC	110	motor-driven siren	IP43	1 min.	10 min.	118	167	**4 400.00**
42025	240 VAC/DC	110	motor-driven siren	IP43	1 min.	10 min.	118	167	**4 400.00**
super-CELERE			**large-size electro-mechanical siren**						
42046	12 VDC	114	motor-driven siren	IP43	*(continuous)*		140	186	**6 390.00**
42047	24 VAC/DC	114	motor-driven siren	IP43	*(continuous)*		140	186	**6 390.00**
42045	240 VAC/DC	114	motor-driven siren	IP43	1 min.	10 min.	140	186	**5 900.00**
Electronic sirens									
• Adjustable volume regulation and sound progression regulation									
SE4/29 series - *(modular base mount)*			5 *selectable sound tones*						
50415	12-24 VAC/DC	97	electronic siren	IP30	*(selectable)*		100	90	**3 750.00**
50418	240 VAC	97	electronic siren	IP30	*(selectable)*		100	90	**5 460.00**
SE12 series - *(hinged mounting bracket)*			32 *different tones (selectable via dip-switches)*						
50424	12-24 VAC/DC	114	electronic siren	IP43	*(selectable)*		102	108	**4 970.00**
50427	240 VAC	113	electronic siren	IP43	*(selectable)*		130	108	**5 790.00**
Super loud electronic sirens		**120dB**						**IP68, IP69K**	
• **64** different *(programmable)* sounds • **120 dB - super loud** - siren *(6 programmable volume levels)*									
SIR-TOUCH - Siren only			Unique touch programming					connection via **M12 4PIN** connector	
90750	24 VDC	120	electronic siren	IP68/69K	*(selectable)*		180	207	**9 750.00**
90751	85 - 265 VAC	120	electronic siren	IP68/69K	*(selectable)*		180	207	**10 400.00**
SIR-TOUCH LED - Siren and LED beacon *(programmable for steady light, flashing light or off)*									
90752	24 VDC	120	electronic siren	IP68/69K	*(selectable)*		180	207	**11 300.00**
90753	85 - 265 VAC	120	electronic siren	IP68/69K	*(selectable)*		180	207	**12 000.00**
Accessories - *for* **SIR-TOUCH** *siren*									
90754	mount		swivel wall mount bracket for above siren						**908.00**
90755	mount	SE 12	swivel base mount bracket for above siren						**908.00**
120104-06-053	4 Pin female		M12 PUR cable for **SIR-TOUCH** termination				2 meter		**220.00**
120104-06-061	4 Pin female		M12 PUR cable for **SIR-TOUCH** termination				5 meter		**443.00**
SE120 Alarm sounder		**120dB**							
Powerful and resistant - Customised alerts - Simple configuration (H) 190 x (W) 230 x (D) 190 mm **Discover a new level of sound power** • Unique configuration and diagnostics via **NFC** *(with App)* • **120 dB - super loud** - siren *(8 programmable volume levels)* • 64 different sounds *(programmable)*									
22700	24 VDC	120	electronic siren	IP66/69K	*(selectable)*		190	190	**7 840.00**
22701	85 - 265 VAC	120	electronic siren	IP66/69K	*(selectable)*		190	190	**9 310.00**

Above ZAR prices do not include VAT. E&OE

94734

EOS 14.0 series - LED signal stack lights *(with analog communication standard)*

The **EOS I4.0** system uses an analog communication standard; different functions *(luminous and acoustic)* are activated with different input voltage thresholds. Connected to the network or to a cloud, the **EOS I4.0** system allows remote control and monitoring of machinery and could therefore be part of the Industry 4.0 for Human - Machine Interface (HMI).

EOS I4.0, the first visual and acoustic LED signal column with analog output provide 32 different signal alerts in the range 0 - 10 VDC. Available in various configurations, with one or two multicoloured RGB light modules, acoustic module *(2 levels of sound output),*

Supply voltage of the column is 24 VDC, the system is designed to activate luminous signalling 5 colours *(in steady or flashing light mode)* and acoustic signalling with input voltage thresholds *(adjustable 0-10 VDC)* using just one analog PLC output.

Through hysteresis, all voltage thresholds are protected from unwanted activations or colour changes.

32 different signals *(configurable with 0 - 10 VDC analog signal)*

- Supply voltage: 12/24 VAC/DC
- Protection: IP66 -IP69K - *(suitable for indoor or outdoor use)*
- Light module: 5 colours on one module *("steady" or "flashing" mode)*
- Acoustic module: Selectable for sound A or B or OFF

94735

type	colour	supply voltage	dB @ 1m max	mode/ colour selection	description	price
EOS 14.0 series - Signal stack lite *(with analog communication standard)*						
• One or two multi-coloured *(5 colours)* light modules • One acoustic module providing 2 sounds A and B						
Single multi-coloured light module + acoustic module 77 dB						
94734	multi	12 - 24 VAC/DC	77 dB	0 - 10 VDC	analog controlled stack light	**5 080.00**
Single multi-coloured light module + acoustic module 95 dB						
94732	multi	12 - 24 VAC/DC	95 dB	0 - 10 VDC	analog controlled stack light	**5 600.00**
Double multi-coloured light module + acoustic module 77 dB						
94736	multi	12 - 24 VAC/DC	77 dB	0 - 10 VDC	analog controlled stack light	**6 660.00**
Double multi-coloured light module + acoustic module 77 dB						
94735	multi	12 - 24 VAC/DC	95 dB	0 - 10 VDC	analog controlled stack light	**6 980.00**

EOS 14.0 series - Function table reference guide

- With the EOS 14.0, a PLC with one 0 - 10 VDC analog output allows 32 different functions to be configured.
- Through hysteresis, all voltage thresholds are protected from unwanted activations or colour changes. (refer to table below)

EOS 14.0 + PLC
(with analog output)

FUNCTION	RANGE 0 - 10V	
NOTHING	0.35	±5%
LED OFF	1.00	±5%
STEADY RED	1.65	±5%
BLINKING RED	2.30	±5%
STEADY GREEN	3.00	±5%
BLINKING GREEN	3.65	±5%
STEADY BLUE	4.30	±5%
BLINKING BLUE	5.00	±5%
STEADY AMBER	5.65	±5%
BLINKING AMBER	6.30	±5%
STEADY WHITE	7.00	±5%
BLINKING WHITE	7.65	±5%
SOUND OFF	8.30	±5%
SOUND A	9.00	±5%
SOUND B	9.65	±5%
PULSE TIME	500 ms	2.5s

Signal beacons and towers

Signal beacons are fundamental elements for visual and audible signalling of system status in manufacturing processes.

type	colour	voltage	description	price
Signal beacons Ø62 mm		BA15d	**IP54**	
• Bases for various mounting solutions *(supplied separately)*				
Steady light modules - *BA15d lamp supplied separately (see bottom of page)*				
LB6EL1	orange	lamp dependant	direct supply - steady light module	**825.00**
LB6EL3	green		direct supply - steady light module	**825.00**
LB6EL4	red		direct supply - steady light module	**825.00**
LB6EL5	yellow		direct supply - steady light module	**825.00**
LB6EL6	blue		direct supply - steady light module	**825.00**
LB6EL8	white		direct supply - steady light module	**825.00**
Blinking/steady light modules - *BA15d lamp supplied separately (see bottom of page)*				
LB6GLB1	orange	12 - 48 VAC/DC	blinking light module *(no lamp)*	**1 150.00**
LB6GLB3	green	12 - 48 VAC/DC	blinking light module *(no lamp)*	**1 150.00**
LB6GLB4	red	12 - 48 VAC/DC	blinking light module *(no lamp)*	**1 150.00**
LB6GLB5	yellow	12 - 48 VAC/DC	blinking light module *(no lamp)*	**1 150.00**
LB6GLB6	blue	12 - 48 VAC/DC	blinking light module *(no lamp)*	**1 150.00**
LB6GLM1	orange	24 - 230 VAC	blinking light module *(no lamp)*	**1 150.00**
LB6GLM3	green	24 - 230 VAC	blinking light module *(no lamp)*	**1 150.00**
LB6GLM4	red	24 - 230 VAC	blinking light module *(no lamp)*	**1 150.00**
LB6GLM5	yellow	24 - 230 VAC	blinking light module *(no lamp)*	**1 150.00**
LB6GLM6	blue	24 - 230 VAC	blinking light module *(no lamp)*	**1 150.00**
Mounting accessories for signal beacons *(above)*				
LB6BP03	black		horizontal surface mounting base	**184.00**
LB6BP05	black		through hole mounting base Ø22 mm with locknut	**221.00**
LB6BP07	black		base for extended tube connection	**221.00**
LT7BP01	black		surface mount base with 100 mm extension for ***LB6BP07***	**390.00**
LT7BP02	black		wall mount base with 100 mm tube extension for ***LB6BP07***	**531.00**

Super bright LED signal lamps BA15d *(360° illumination)* *for above*

LT7ALLB*	red	24 VAC/DC	BA15d	LED lamp for towers	**551.00**
LT7ALLM*	red	230 VAC	BA15d	LED lamp for towers	**618.00**

* Replace with: **3**= green / **4**= red / **5**= yellow / **6**= blue / **8**= white

Signal towers Ø50 mm			**IP65**	

Signal towers can be assembled by stacking the following components:

1) Wiring module for terminating *(determines control voltage: 12 - 24 VDC or 110 - 230 VAC)*
2) Up to 5 light modules *(or)* 4 light modules + 1 sound module
3) Add required mounting accessories

Wiring modules *(required for termination of signal towers)*

LTN50MW024	grey	12…24 VDC	terminating modules for signal towers	**1 250.00**
LTN50MW230	grey	110…230 VAC	terminating modules for signal towers	**2 280.00**

Light modules - *(integrated LEDs)*

Configurable for steady light or blinking light - via internal DIP switch on each module

LTN50ML1	orange	determined by wiring module	LED light modules for signal towers	**833.00**
LTN50ML3	green		LED light modules for signal towers	**833.00**
LTN50ML4	red		LED light modules for signal towers	**833.00**
LTN50ML6	blue		LED light modules for signal towers	**833.00**
LTN50ML8	white		LED light modules for signal towers	**833.00**
LTN50C	grey	top cover	required if no sound module is used	**94.00**

Sound module *(continuous sound)* *(IP65)*

LTN50MSL	grey	85dB	sound module for signal towers	**876.00**

Mounting accessories for signal towers *(above)*

LTN50BP1	black	plastic	horizontal surface mounting base	**203.00**
LTN50BP3	black	plastic	surf mount base adjustable through 180°	**405.00**
LTN50BM1	metal	metal	horizontal surface mounting base	**283.00**
LTN50P100T	metal	metal	100 mm extension tube for base	**195.00**

Above ZAR prices do not include VAT. E&OE

Signal towers / Stack lights Ø70 mm

Signal towers are fundamental elements in manufacturing processes for visual and audible signalling of the system status. The signal towers can be assembled by stacking up to 5 light modules or 4 light modules and 1 sound module.

The modules feature exceptional brightness thanks to their plastic construction and the use of high-performance LEDs with a long service life.

The towers are quick and easy to install: simply align their reference marks and snap them together with a light twisting motion.

No. of stackable modules:	5 *(5 x light modules or 4 x light and 1x sound)*
Light modules:	Configurable as steady or flashing light
Sound modules:	Configurable as pulsed or continuous sound
Compliant with standards:	IEC/EN/BS 60947-5-1, IEC/EN/BS 60947-1, UL508, CSA C22.2 n° 14

type	colour	voltage	description	price
LED Signal towers Ø70 mm			**IP65**	
Signal towers are assembled by stacking the following components:				
1) Wiring module for terminating *(determines control voltage: 12 - 24 VDC or 110 - 230 VAC)*				
2) Up to 5 light modules *(or)* 4 light modules + 1 sound module				
3) Add required mounting accessories				
Wiring modules *(required for termination of signal towers)*				
LTN70MW024	grey	12…24 VDC	wiring modules for signal towers	**1 440.00**
LTN70MW230	grey	110…230 VAC	wiring modules for signal towers	**2 620.00**
Light modules - *(integrated LEDs)*				
Configurable for steady light or blinking light - via internal DIP switch on each module				
LTN70ML1	orange	determined by wiring module	LED light modules for signal towers	**958.00**
LTN70ML3	green		LED light modules for signal towers	**958.00**
LTN70ML4	red		LED light modules for signal towers	**958.00**
LTN70ML6	blue		LED light modules for signal towers	**958.00**
LTN70ML8	white		LED light modules for signal towers	**958.00**
LTN70C	grey	top cover	required if no sound module is used	**107.00**
Sound module - *(continuous sound)*			*(IP65)*	
LTN70MSL	grey	85dB	sound module for signal towers	**1 010.00**
Mounting accessories for signal towers *(above)*				
LTN70BP1	black	plastic	horizontal surface mounting base	**233.00**
LTN70BP3	black	plastic	surf mount base adjustable through 180°	**466.00**
LTN70BM1	metal	metal	horizontal surface mounting base	**325.00**
LTN70P100T	metal	metal	100 mm extension tube for base	**223.00**

Signal towers and beacons: Interpretation of light and sound signals

- Light and sound signals are a fundamental element for the safety of a system
- Each colour or sound alarm corresponds to a specific state of operation of the connected system and various levels of warning, as shown in the table below, according to EN 981-IEC/EN/BS 60073 standards
- The white module can be assigned a meaning as desired

Visual Code	Red	Yellow / Orange	Blue	Green	White
Meaning	Danger / Emergency	Warning and caution - Abnormal situation	Mandatory command	Normal situation - Regular operation	No specific meaning
Sound	Fast modulated repetition or high-pitch pulsing	Continuous short sound	Alternating sound at. constant tone	Constant and prolonged sound after an alarm	Other sounds
Correlated actions	Immediate intervention to deal with dangerous situation	Control intervention required	Intervention needed for mandatory action	No specific action	Depending on the situation

KN3C-R1021

KN3C-R1221

MTS-102

DS-12

KCD1-104

AC-05-2F

Toggle switches

type	current Ith	pos.	config.	mount hole Ø	switch	description	price
KN3C series - Standard toggle switches							
• Rating:	20A 125 VAC / 15A 250 VAC						
• Termination:	6.3 mm tab terminals *(accepts 6.3 mm push-on lugs)*						
• Mounting:	**M12** x P1.0 mm threaded collar *(mounts through Ø12.2 mm panel hole)*						
• Dielectric strength:	1500 VAC *(1 minute)*						
• Legend:	Supplied with ON/OFF legend plate						
Single pole toggle switches							
KN3C-R1021	15A	2-pos	ON-OFF	12.7 mm	SPST	std power toggle switch	**72.00**
KN3C-R1121	15A	2-pos	ON-ON	12.7 mm	SPDT	std power toggle switch	**73.00**
KN3C-R1122	15A	3-pos	ON-OFF-ON	12.7 mm	SPDT	std power toggle switch	**74.00**
Double pole toggle switches							
KN3C-R1221	15A	2-pos	ON-OFF	12.7 mm	DPST	std power toggle switch	**76.00**
KN3C-R1321	15A	2-pos	ON-ON	12.7 mm	DPDT	std power toggle switch	**77.00**
KN3C-R1322	15A	3-pos	ON-OFF-ON	12.7 mm	DPDT	std power toggle switch	**78.00**
Accessories - *for above toggle switches*							
WP-02	boot					rubber protection boot **M12** for **KN3C** toggle switches	**14.00**
MTS series - Miniature toggle switches							
• Rating:	6A 125 VAC / 3A 250 VAC						
• Termination:	Solder terminals (W) 2.05 mm						
• Mounting:	**M6** x 0.75 threaded collar *(mounts through Ø6 mm panel hole)*						
• Dielectric strength:	1000 VAC *(1 minute)*						
• Operating temp:	-25...+85°C						
Single pole miniature toggle switches							
MTS-102	3A	2-pos	ON-ON	6.5 mm	SPDT	miniature toggle switch	**19.60**
MTS-102T	3A	2-pos	ON-(ON)	6.5 mm	SPDT	spring return from R	**25.00**
MTS-103	3A	3-pos	ON-OFF-ON	6.5 mm	SPDT	centre off	**22.80**
MTS-103D	3A	3-pos	(ON)-OFF-(ON)	6.5 mm	SPDT	spring return from L+R	**28.20**
MTS-103T	3A	3-pos	ON-OFF-(ON)	6.5 mm	SPDT	spring return from R	**26.00**
Double pole miniature toggle switches							
MTS-202	3A	2-pos	ON-ON	6.5 mm	DPST	miniature toggle switch	**23.90**
MTS-203	3A	3-pos	ON-OFF-ON	6.5 mm	DPST	centre off	**27.10**
Miniature pushbutton switch - black button							
DS-12	3A	2-pos	ON-(ON)	6.5 mm	SPDT	spring return *(blk button)*	**28.00**
Accessories - *for above miniature switches*							
WP-01	boot					rubber protection boot for **MTS** miniature toggle switch	**12.90**

Rocker switches

Mechanical life: ≥10000 cycles

Made from durable PC materials, which are impact resistant to high temperature and discolouration. Switch simply pushes into the correctly cut hole.

- Current rating: 6A 250 VAC 10A 125VAC
- Contact resistance : ≤ 50mΩ
- Insulation resistance: ≥100mΩ
- Dielectric strength: ≥1500V AC/MIN
- Termination: Fast-on 4.8 or solder connection

type	current rating	colour	poles	configuration contact	configuration switch	dimensions (mm) frame	dimensions (mm) cut-out	price
KCD1-104	6A	black	2-pole	DPST	ON/OFF	21 x 15	19 x 13	**10.80**

Power socket *(panel-mounting)*

Mechanical life: ≥6000 cycles

The AC panel-mount male socket simply mounts through the correctly cut hole *(26.5 x 20.5 mm)* in a panel, made from Nylon 66 to 94V-2 flammability

- Current rating: 10A 250 VAC
- Insulation resistance: ≥100mΩ - 500 VDC
- Withstand voltage: 2500V AC/1 min *(between all terminals)*; 3750V AC/1 min *(terminals to base)*
- Termination: Fast-on 4.8 or solder connection

type	current rating	colour	poles	description	dimensions (mm) frame	dimensions (mm) cut-out	price
AC-05-2F	10A	black	2P+E	AC p/mount male socket	31 x 24	26.5 x 20.5	**17.20**

Above ZAR prices do not include VAT. E&OE

Notes

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200

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MAIN DB
POWER METER
Lovato
DMG 9000
21:37
HOME
P
PWR
I
V
HOME
LOGO
LOG
ETH
INFO
INST
L12
V
405.2
L23
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L31
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NFC
LED 1
LED 2
LED 3

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Metering

Interactive Catalogue

Metering

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E-8/19

Panel-mount analogue meters

E-17...18

Current transformers

E-20...25

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Scan the QR code for a short tutorial video.

Digital meters with LCD screen

DMED series of energy meters are digital instruments for the measurement of electrical energy consumption in single and three-phase systems with direct connection or via a current transformer (CT).

Expandable versions of the DMED models are available including a range of expansion modules for communication and I/O etc.

Typical applications include energy monitoring of individual units in shopping centres, apartments, marinas and factories.

Scan to watch video

DMED110T1

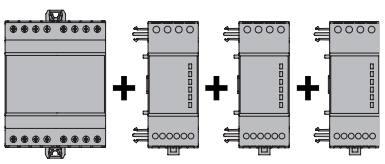
DMED120T1

DMED330

DMECD EXM1001

type	input current	description	static pulse output	width in 18 mm	price
Single-phase direct connection 40/63A *(modular design DIN-rail mountable)*					
• Rated supply voltage:		220...240 VAC -20…+15%			
• Input current:		40/63A *(direct connection)*			
• Active energy:		Class 1 (IEC/EN 62053-21)			
• Reactive energy:		Class 2 (IEC/EN 62053-23)			
Multi-measurements:		Total and partial active, reactive energy, active, reactive power, voltage, current and power factor, hour counter *(exclude DMED100T1)*			
DMED100T1	40A	direct conn. pulse digital energy meter	1	1	**1 370.00**
DMED110T1	40A	direct conn. static digital energy meter	1	1	**1 560.00**
DMED111	40A	as above with RS-485 interface	–	1	**1 800.00**
DMED120T1	63A	direct connection digital energy meter	1	2	**1 880.00**
DMED121	63A	as above with RS-485 interface	–	2	**2 940.00**
DMED130LM	63A	includes **EXM1001** module	–	4	**5 860.00**
Three-phase direct connection 80A *(modular design DIN-rail mountable)*					
Multi-measurements:		Total and partial active and reactive energy, voltage, current, active and reactive power, power factor, hour counter			
• Graphic backlit LCD screen with 6+1 digits					
• Tariff selection *(2 tariffs)*					
DMED300T2	80A	3-ph+N digital energy meter	2	4	**4 180.00**
DMED311	80A	as above with RS-485 interface	–	4	**4 540.00**
Three-phase CT connection …/5A *(modular design DIN-rail mountable)*					
Multi-measurements:		Total and partial active and reactive energy, voltage, current, active and reactive power, power factor, hour counter			
• Backlit LCD screen *(128 x 80 pixels)*					
DMED310T2*	5A	3-phase digital energy meter	2	4	**4 780.00**
DMED330	1/5A	as above with RS-485 interface	–	4	**4 940.00**
* *Accepts **EXM...** (up to 3) plug-in optic expansion modules*					
Data concentrator *(modular design DIN-rail mountable)*					
DMECD data concentrator designed in combination with energy meters, permitting connection to *(up to 8)* devices. The concentrator is able to count static pulse outputs from the connected energy meters, storing data for viewing on its display or directly on a PC through the built-in RS-485 port.					
• Graphic backlit LCD screen *(128 x 80 pixels)*					
• 8 inputs for pulse count, expandable up to 14 using **EXM…** type expansion modules					
• 8 total and 8 partial energy meters					
• Built-in RS-485 interface (Modbus-RTU or ASCII)					
• Expandable with **EXM...** *(up to 3)* plug-in optic expansion modules *(below)*					
DMECD		data concentrator for up to 8 connected energy meters	–	4	**7 940.00**
Expansion modules for DMED310T2, DMECD, DMG300 *(DIN-rail mountable)*					
EXM8004		sealable terminal cover for DMG100/110/200/210/300	–		**141.00**
EXM1001		2 opto-isolated digital inputs and 2 relay outputs *(5A 250 VAC)*	2		**4 080.00**
EXM1002		4 opto-isolated digital inputs and 2 relay outputs *(5A 250 VAC)*	2		**7 130.00**
EXM1010		opto-isolated USB interface	2		**4 080.00**
EXM1012		opto-isolated RS-485 interface	2		**3 930.00**
EXM1013		opto-isolated Ethernet interface	2		**6 590.00**
EXM1020		opto-isolated RS-485 interface and 2 relay outputs *(5A 250 VAC)*	2		**5 840.00**
EXM1030		data storage, clock-calendar (RTC) with backup for data logging	2		**9 520.00**

Maximum combination for **DMED310T2**



Above ZAR prices do not include VAT. E&OE

DMG series digital multifunction meters and power analysers are equipped with a digital LCD providing extremely clear, intuitive and flexible viewing of all electrical parameters in an installation.

- Modular DIN-rail mounting *(aligns with standard MCB 45 mm cut-out)*
- Accuracy:
  - Voltage/Current: ±0.5% *(True RMS measurements)*
  - Power: ±1% f.s.
  - Frequency: ±0.05%
  - Active energy: Class 1 (IEC/EN 62053-21)
  - Reactive energy: Class 2 (IEC/EN 62053-23)

Main measurements:
- Voltage: phase, line and system values
- Current: phase values *(neutral current calculated)*
- Power: apparent, active and reactive phase and total values
- Power Factor (PF) per phase and total
- HIGH-LOW-AVERAGE value functions of all measurements
- Maximum demand of power and current values
- Asymmetric voltage and current
- Energy meters for active, reactive and apparent values
- Bidirectional *(import and export of active reactive energy)*

DMG100

DMG200

DMG300

PMVF81

type	description	width in 18 mm	price
DMG100 series - LCD multifunction meters	*economical with icon LCD*		
	• Auxiliary power supply: 100...240 VAC / 120...250 VDC • Input current: CT - 1A or 5A • Voltage measurement: 50 - 720 VAC L-L • Harmonic analysis of V and I up to the 15th order		
DMG100	modular power analyser	4	**4 190.00**
DMG110	modular power analyser with RS-485 interface	4	**4 890.00**
DMG200 series - LCD multifunction meters	*with graphic backlight LCD*		
	*As above **DMG100** but with following additional features:* • Voltage measurement: 20...830 VAC L-L		
DMG200	modular power analyser	4	**6 990.00**
DMG210	modular power analyser with RS-485 interface	4	**9 080.00**
DMG300 series *(expandable)*	*with graphic backlight LCD*		
	*As above **DMG200** but with following additional features:* • Voltage measurement: 20...830 VAC L-L / 10...480 VAC L-N • Optional communication ports: USB, RS-485, Ethernet • Harmonic analysis of voltage and current up to the 31° order • Accuracy: Voltage/current: ±0.2%; Power/power factor: ±0.5%; Frequency: ±0.05%; Active energy: class 0.5S (IEC/EN 62053-22)		
DMG300*	modular power analyser	4	**10 500.00**

* *Accepts **EXM...**(up to 3) plug-in optic expansion modules, see page* **E-1**

New

PV

Photovoltaic (PV) interface protection unit *(modular DIN-rail mount)*

Designed to ensure that the PV system operates within the required safety parameters and the system from the grid if any anomalies are detected.

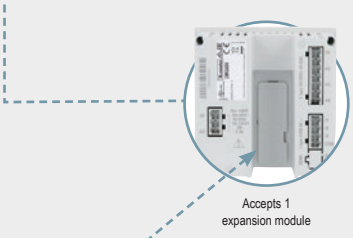
These devices continuously monitor the voltage and frequency of the electrical utility and when either the voltage or the frequency are out of the admissible limits, they step in by de-energising a relay output so that an interface switch (IS) *(e.g. contactor)* opens, isolating the PV system from the grid.

- Programmable voltage rating, voltage thresholds, frequency and delays
- Supports EXM series expansion modules (USB, RS-232, RS-485 and Ethernet)
- Compliant standards: VDE-AR-N , VDE-AR-N 4110, VDE-AR-N 4120x, IEC/EN 61010-1, IEC/EN 61000-6-2, IEC/EN 61000-6-4

type	aux. power supply	inputs	outputs	description	width in 18 mm	
PMVF81	24 - 240 VAC/DC	5	3	PV grid protection module	4	*see **Cat B** for pricing.*

DMG620

DMG611...



EXP1004

Flush mounting digital metering instruments *(96 x 96 mm)*

DMG range of digital multifunction meters are capable of viewing electrical measurements with high accuracy, permitting complete monitoring of networks.

The meters feature an extended power supply voltage range, high measurement accuracy, expandability and a graphic interactive interface that is easy to use.

Main measurement functions include:

- Voltage: phase, line and system values
- Current: phase values (neutral current calculated) via CT 1/5A
- Power: apparent, active and reactive phase and total values
- Power Factor (PF) per phase and total
- Frequency of measured voltage value
- HIGH-LOW-AVERAGE value functions for all measurements
- Maximum demand of power and current values
- Voltage and current asymmetry
- Total harmonic distortion (THD): voltage and current
- Harmonic analysis of voltage and current up to the 15° order
- Energy meters for active, reactive, apparent partial and total values
- Hour counter for programmable total and partial hours

type	comm. port	optical port	description	expansion slots	price
DMG500 series - "Basic" *multi-measurement instrument with backlit LCD*					
Auxiliary power supply:			100...240 VAC		
Voltage measurement range:			480 VAC (50/60 Hz)		
DMG500	no	no	digital panel-mount power analyser	–	**3 640.00**
DMG510	RS-485	no	digital panel-mount power analyser	–	**4 190.00**
DMG600 series - *Multi-measurement instrument with backlit LCD*					
*As above **DMG 500** but with following additional features:*					
Auxiliary power supply:			100...440 VAC / 110...250 VDC		
Voltage measurement:			50...720 VAC L-L		
Rated input current:			By external CT 5A or 1A		
Memory:			Non volatile memory for data storage		
Display:			Wide graphic LCD		
Expansion:			Accepts 1 plug-in expansion module		
Measurement accuracy:			**DMG600/610** - voltage/current +- 0.5s - Active energy Class 1 **DMG615/620** - voltage/current +- 0.2s - Active energy Class 0.5		
DMG600	no	yes	digital panel-mount power analyser	1	**4 540.00**
DMG610	RS-485	yes	digital panel-mount power analyser	1	**5 240.00**
DMG615	RS-485	yes	digital panel-mount power analyser	1	**6 640.00**
DMG620	Ethernet	yes	digital panel-mount power analyser	1	**8 910.00**
DMG611 series - *Supplied with calibrated Rogowski coils*					
• Current reading:			Through 3 Rogowski coils *(included)*		
• Measurement range:			5...100% Imax		
DMG611R0500	RS-485	yes	25...500A power analyser with Rogowski coils	1	**23 800.00**
DMG611R3000	RS-485	yes	100...3000A power analyser with Rogowski coils	1	**25 500.00**

Expansion modules and accessories *for above DMG series*

Inputs and outputs			
EXP1000	4 digital opto-isolated inputs		**2 310.00**
EXP1001	4 static opto-isolated outputs		**2 310.00**
EXP1002	2 digital inputs and 2 static outputs, opto-isolated		**2 760.00**
EXP1003	2 output relays *(5A 250 VAC)*		**2 760.00**
EXP1004	2 Analogue opto-isolated inputs	0/4 - 20mA or 0-5/10V *(for DMG75/8/9000)*	**8 280.00**
EXP1005	2 Analogue opto-isolated outputs	0/4 - 20mA or 0-5/10V *(for DMG75/8/9000)*	**8 280.00**
Communication ports			
EXP1010	opto-isolated USB interface		**4 140.00**
EXP1011	opto-isolated RS-232 interface		**4 140.00**
EXP1012	opto-isolated RS-485 interface		**2 090.00**
EXP1013	opto-isolated Ethernet interface		**5 130.00**
EXP1014	opto-isolated Profibus-DP interface	*(for DMG75/8/9000)*	**17 200.00**
Communication devices			
CX01	USB/optical communication device for programming, download and diagnostics		**4 160.00**

Above ZAR prices do not include VAT. E&OE

Lovato electric

DMG SERIES
POWER ANALYSER

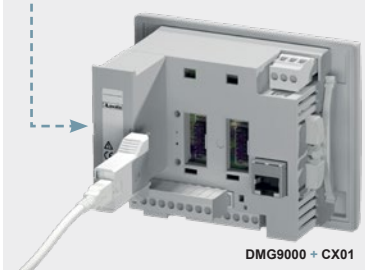
- **WIDESCREEN** COLOUR LCD
- HIGH ACCURACY LEVEL FOR **MEASUREMENTS**
- INTEGRATED COMMUNICATION
- NFC CONFIGURATION
- **STATISTICS ACCORDING TO EN 50160**
- INTEGRATED DATA **MEMORY**
- **WEB** SERVER
- **NFC** CONFIGURATION
- VOLTAGE AND CURRENT HARMONIC ANALYSIS UP TO THE **63rd ORDER**

Comparative table

	DMG7000	DMG7500	DMG8000	DMG9000
Built-in RS485 port	-	■	-	■
Built-in Ethernet port (with web-server)	-	-	■	■
Ethernet-RS485 gateway function	+ EXP1013 + EXP1012	+ EXP1013	+ EXP1012	■
Memory for data collection	-	-	■	■
Statistics of network quality according to EN50160	-	-	-	■
Neutral current measurement through dedicated CT	-	-	-	■
Neutral-Earth voltage measurement	-	-	-	■
Compatibility with EASY BRANCH power monitoring system	-	■	■	■

DMG...

Embedded Web-Server



DMG9000 + CX01

Power analysers with widescreen colour LCD *(flush mounting: cut-out 92 x 92 mm)*

DMG series of power analysers display electrical values on their large colour LCD with exceptional accuracy for the optimal view of measurements and parameters in a clear, simple and intuitive way.

- Wide colour screen LCD: 4.3" Widescreen (H) 96 x (W) 118 mm colour LCD permits optimal indication of measures and parameters
- Programmable LEDs: 3 programmable front LEDs provide device status at a glance
- NFC configuration: Programmable via NFC (Near Field Communication) or optical ports
- PLC logic: Perform simple automation with built-in PLC logic functionality via Xpress
- Communication: Availability of models with built-in RS485 and Ethernet communication ports
- Expendability: Expandable with up to 3 EXP... series expansion modules *(additional inputs, outputs and communication ports)*
- High accuracy level for measurements: Measurements are verified according to the recognised Intl. standards: IEC 62053-22 (class 0.5s), IEC 62053-24 (class 1) and IEC 61557-12

Measures and displays

- Frequency
- Voltage *(phase, phase-to-phase and system)*
- Measurements on 4 quadrants
- Power *(active, reactive and apparent phase and total power)*
- Power factor *(phase and total)*
- Maximum (HIGH), minimum (LOW) and average (AVERAGE) of all measured values
- Phase current (calculated neutral current and measured neutral current on the **DMG9000...**)
- Peak power/current *(max demand)*
- Voltage and current asymmetry and active power unbalance
- Total harmonic distortion *(voltage and current)*
- Voltage and current harmonic analysis up to the 63rd order
- Active, reactive and apparent energy metering *(partial and total)*
- Hour meter *(total and partial, programmable)*

Operational characteristics

- Auxiliary power: 100...240 VAC / 110...250 VDC
- Voltage measurement range: 40...830 VAC L-L / 5...480 VAC L-N
- Nominal input current: 5A or 1A with an external CT
- Frequency measurement range: 45...66Hz, 360...440Hz
- Protection rating: IP65 for front panel
- Communications protocols: Modbus-RTU, ASCII and TCP
- Integrated communications ports (RS485 or Ethernet)
- Integrated data memory (DMG8000, DMG9000)

Web server functional ***(DMG8000 and DMG9000)***

In addition to having built-in data memory the **DMG8000** and **DMG9000** host an embedded web-server functionality, making it possible to access the devices remotely through a browser.

- **Setting of all parameters:**
  - Programming of all parameters can be done through the browser or front panel
- **Web server and data memory:**
  - Select measures to be recorded *(up to 128)*
  - Set the sampling frequency of historical data
  - Download reports (.CSV file) with the acquired information
  - Sampling 20 measures within a minute, provides 10 days of historical data
- **Measurement view:**
  - Representation of the measured values by means of tables and charts

Scan to watch video

type	comm. port	description	expansion slots	price
DMG7500 - Power analyser *with built-in RS-485* (1)		**IP65**		
• *Compatible with EASY BRANCH power monitoring system*				
DMG7500	RS-485	digital panel-mount power analyser	3	**8 600.00**
DMG8000 - Power analyser *with built-in Ethernet and Web Server* (1)		**IP65**		
• Web Server and memory for data collection • *Compatible with EASY BRANCH power monitoring system*				
DMG8000	Ethernet / Web Server	digital panel-mount power analyser	3	**14 800.00**
DMG9000 - Power analyser *with built-in Ethernet and RS-485* (1)		**IP65**		
As above **DMG8000** but with following additional features: • Statistics of network quality according to EN50160 • Neutral current measurement through dedicated CT • Neutral-Earth voltage measurement				
DMG9000	Ethernet + RS-485	digital panel-mount power analyser	3	**20 300.00**
Communication devices				
CX01	USB/optical communication device for programming, download and diagnostics			**4 160.00**

Above ZAR prices do not include VAT. E&OE

EASY BRANCH POWER MONITORING SYSTEM / PLUG & PLAY

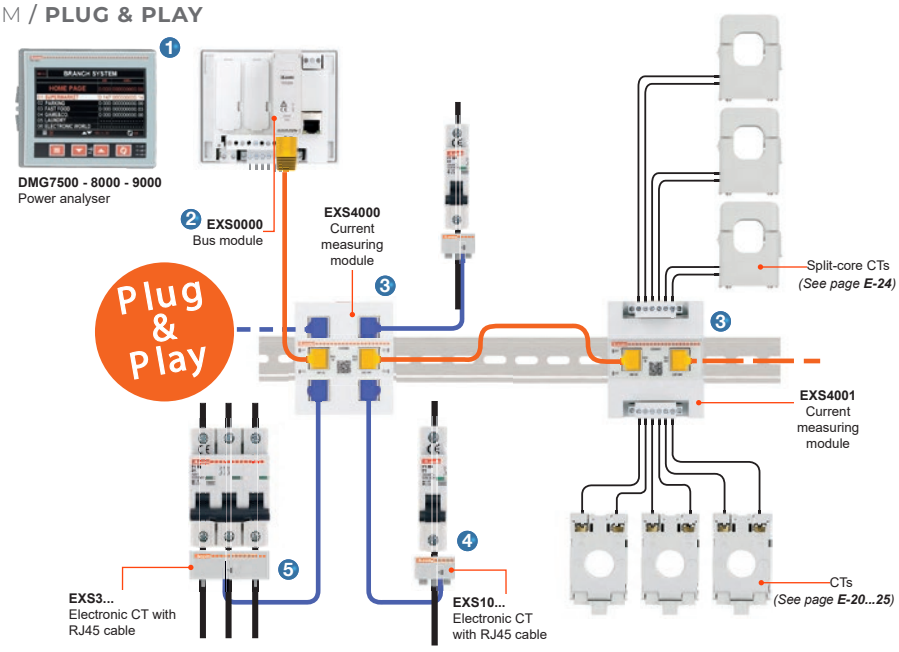
When the parameters of several loads have to be monitored, **EASY BRANCH** power monitoring system is a more efficient and simpler alternative to install than traditional systems which requires an independent instrument for each measuring point.

Distribution panels in shopping centres or in the departments of a production facility represent ideal applications for **EASY BRANCH** system.

Advantages:

- 4 components needed
- Reduction of wiring times
- Setting time reduction
- No special cables needed
- Measurement accuracy

Scan to watch video



EASY BRANCH - Power monitoring system

EASY BRANCH multi-circuit metering system is a modern solution to monitoring more than one load within a single electrical enclosure. Each DIN-rail mounting current metering unit can monitor 2 or 4 measurement points and display the values on the **DMG7500**, **DMG8000** or **DMG9000** power analysers to which it is connected, thus centralising the display of data.

- Up to 33 three-phase loads or 99 single-phase loads
- Current measuring modules are automatically recognized
- Uses standard ethernet cable *(Cat6) - cable not supplied (for RJ45 cables refer to* **E-15***)*

type	inputs	description	price
Bus module - *Expansion module for **DMG7500 / 8000 / 9000*** 2			
Installed in one of the expansion slots of the power analyser, accepts up to 8 current measuring modules ***(EXS4...)***. When connecting 5 or more ***EXS4...*** current models. *(bus module requires an additional 24 VDC - 200mA power supply)*			
EXS0000		bus module for EASY BRANCH power monitoring system	**4 410.00**
Current measuring modules - *Connects to bus module using Ethernet cable (Cat6)* 3			
The module collects the measurements of loads monitored by either electronic ***(EXS4000)*** or tradtional ***(EXS4001)*** current transformers.			
EXS4000	4	current measuring module for electronic RJ45 CTs	**10 900.00**
EXS4001	6	current measuring module for traditional CTs	**9 980.00**
For traditional CTs, *see Current Transformers*			

Electronic current transformers - *For use with EXS4000*

The Electronic current transformers are designed to be installed immediately downstream from the circuit breakers. The diameter and pitch of the pass through holes have been designed in line with MCBs.

- Integrated 2 meter RJ45 cable for fast and fail-safe installation

type	current	dia. Ø	pitch (mm)	description	cable length	price
Single-phase 4						
EXS1032	32A	7.8	7 mm	single-phase electronic CT	2m	**2 060.00**
EXS1063	63A	7.8	7 mm	single-phase electronic CT	2m	**2 060.00**
EXS1080	80A	12.2	12 mm	single-phase electronic CT	2m	**2 060.00**
EXS1125	125A	12.2	12 mm	single-phase electronic CT	2m	**2 060.00**
Three-phase 5						
EXS3032	32A	7.6	18 mm	three-phase electronic CT	2m	**3 610.00**
EXS3063	63A	7.6	18 mm	three-phase electronic CT	2m	**3 610.00**
EXS3080	80A	12.2	27 mm	three-phase electronic CT	2m	**3 610.00**
EXS3125	125A	12.2	27 mm	three-phase electronic CT	2m	**3 610.00**

DMK80R1

DMK81R1

DMK83R1

DMK75R1

DMK series - *Modular digital monitoring devices*

General features:

- Modular DIN-rail mounting *(3 modules – 54 mm wide)*
- Auxiliary supply: 220 - 240 VAC
- Memorises minimum and maximum measured values *(since last reset)*
- Instantaneous or preset trip delays *(0 - 900sec)*

Additional features:

- One changeover relay output *(8A 250 VAC)*
- Degree of protection: IP40 on front; IP20 on terminals
- Relay output with control and protection functions DMKxxR1
- Measurements are True RMS values *(reliable operation even in the presence of harmonics)*
- Compliant with standards: IEC/EN/BS61010-1, IEC/EN/BS61000-6-2, IEC/EN/BS61000-6-3

type	description		monitored range	price
Voltage monitors	*(measures and displays single and three-phase voltages)*			
Overvoltage range:	Off / 102...120%	*(delay 0 - 900sec)*		
Undervoltage range:	Off / 70...98%	*(delay 0 - 900sec)*		
Voltage/phase loss or failure:	Off / 5...85%	*(delay 0 - 900sec)*		
Programmable VT ratio :	1.00...500.0 (accuracy: ±0.25% f.s. ±1digit)			
DMK80R1	1-phase	over/under voltage meter/monitor	15 - 660 VAC	**2 880.00**
DMK70R1	3-phase	over/under voltage meter/monitor	15 - 660 VAC	**3 200.00**
DMK70	3-phase	voltage meter/monitor	15 - 660 VAC	**1 770.00**
Current monitors	*(measures and displays single and three-phase currents)*			
Measurement range:	0.05...5.75A	*(CT ratio: 5...10.000) ±0.5%*		
Overcurrent range:	Off / 102...200%	*(delay 0 - 900sec)*		
Undercurrent range:	Off / 5...98%	*(delay 0 - 900sec)*		
Instantaneous tripping:	Off / 110...600%			
DMK81R1	1-phase	over/under current meter/monitor	0.05 - 5.75A	**2 990.00**
DMK71R1	3-phase	over/under current meter/monitor	0.05 - 5.75A	**3 450.00**
Frequency monitors	*(measures and displays line frequency)*			
Measurement range:	15...660V / 50...60 Hz (±10%)			
DMK83R1	frequency meter/monitor		45 - 65Hz	**3 930.00**
Three-phase multi-measurement instrument				
Measurement range:				
– Voltage	Phase loss or failure:	Off / 5...85%	35...660 VAC	
	Maximum voltage:	Off / 102...120%		
	Minimum voltage	Off / 70...98%		
	Asymmetry:	Off / 2...20%		
	Phase sequence:	Off / L1-L2-L3 / L3-L2-L1		
– Current	Current loss:	Off / 2...100%	0.05...5.75A	
	Maximum current:	Off / 102...200%		
	Minimum current:	Off / 5...98%		
	Maximum current instantaneous trip:	Off / 110...600%		
– Power	Rated power:	1...10 000 kW		
	Maximum power:	Off / 101...200%		
	Max power instantaneous trip:	Off / 110...600%		
	Minimum power:	Off / 10...99%		
– Frequency	Maximum frequency:	Off / 101...110%	45...65Hz	
	Minimum frequency:	Off / 90...99%		
DMK75R1	3-phase	multi-measurement digital meter/monitor		**4 860.00**

Above ZAR prices do not include VAT. E&OE

DMK00R1

DMK10R1

DMK01R1

DMK11R1

DMK series - *Panel-mount digital monitoring devices*

General features:
- Panel-mount *(H) 48 x (W) 96 mm*
- Auxiliary supply: 220 - 240 VAC
- Memorises minimum and maximum measured values *(since last reset)*
- Instantaneous or preset trip delays (0 - 900sec)

Additional features:
- One changeover relay output (8A 250 VAC)
- Degree of protection: IP54 on front; IP20 on terminals
- Relay output with control and protection functions DMKxxR1
- Measurements are True RMS values *(provide for reliable operation even in the presence of harmonics)*
- Compliant with standards: IEC/EN/BS61010-1, IEC/EN/BS61000-6-2, IEC/EN/BS61000-6-3 and UL 508

type	description	output	monitored range	price
Voltage monitors	*(panel-mounting 48 x 96 mm)*			
Voltage measurement range:	15...660 VAC			
Operating frequency range:	45...65Hz			
Programmable VT ratio:	1.00...500.0			
Accuracy:	±0.25% f.s. ±1 digit			
Output:	1 c/o relay output *(8A - 250 VAC)* time delay			
Settings:	– Voltage loss or failure:	5...85%	(0 - 900sec)	
	– Maximum voltage:	102...120%	(0 - 900sec)	
	– Minimum voltage:	70...98%	(0 - 900sec)	
DMK00R1	1-phase digital voltage monitor	relay out	15-660 VAC	**3 240.00**
DMK10R1	3-phase digital voltage monitor	relay out	15-660 VAC	**3 500.00**
Current monitors	*accuracy: ± 0.5% full scale ± 1 digit*			
Current measurement range:	0.05...5.75A			
Operating frequency range:	45...65Hz			
Programmable CT ratio:	5...10.000			
Accuracy:	±0.5% f.s. ±1 digit			
Output:	1 changeover relay output	time delay		
Settings:	– Current loss:	Off / 2...100%	(0 - 900sec)	
	– Maximum current:	Off / 102...200%	(0 - 900sec)	
	– Instantaneous trip::	Off / 110...600%		
	– Minimum current:	Off / 5...98%	(0 - 900sec)	
DMK01R1	1-phase digital current monitor	relay out	0.05 - 5.75A	**3 240.00**
DMK11R1	3-phase digital current monitor	relay out	0.05 - 5.75A	**3 500.00**
Three-phase multi-measurement instrument	*combination voltage, current, power factor*			
Voltage measurement range:	35...660 VAC			
Current measurement range:	0.05...5.75A			
Operating frequency range:	45...65Hz			
Programmable VT ratio:	1.00...500.0			
Programmable CT ratio:	5...10000			
Settings:				
- Voltage				
Voltage loss or failure:	Off / 5...85%			
Maximum voltage:	Off / 102...120%			
Minimum voltage:	Off / 70...98%			
Asymmetry:	Off / 2...20%			
Phase sequence:	Off / L1-L2-L3 / L3-L2-L1			
- Current				
Current loss:	Off / 2...100%			
Maximum current:	Off / 102...200%			
Minimum current:	Off / 5...98%			
Max. current instantaneous trip:	Off / 110...600%			
- Power factor				
Maximum power factor:	0.10...1.00			
Minimum power factor:	0.10...1.00			
DMK16R1	3-phase multi-meter and monitor	relay out	multi-meter	**5 700.00**

4850 5004

4850 5014

4850 3054

4850 5044

4853 0000

COUNTIS series - Active energy meters (kWh meters)

COUNTIS range of active energy meters are digital instruments designed for the measurement of electrical energy consumption in single and three-phase systems with direct connection or via a current transformer (CT). Suitable for every type of integration, network and load *(direct readings up to 100A and up to 12000A via CT connections)*.

Operational features:

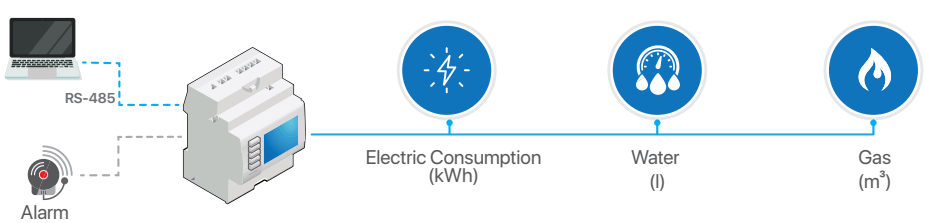
• Display:	Backlit LCD
• Rated supply voltage:	- 230 VAC *(single-phase)* - 230...400 VAC (three-phase)
• Pulse outputs:	Configurable 0.01 / 0.1 / 1 / 10 / 100 kWh/pulse
• Communication protocol:	RS-485 / Ethernet
• Multi-tariffs:	Manage up to 4 tariffs
• Bidirectional metering:	Energy consumption and production
• Measurement accuracy:	- voltage +-0.5% - Current +-1% - Frequency +-0.2% - Energy +- 1%

The COUNTIS range perfectly meets the needs and constraints of every electrical system:

- Industrial buildings
- Retail buildings
- Residential buildings
- Medical centres
- Data centres

type	model	connection	network	current	comms.	width in 18 mm	price
Single-phase direct connection kWh meters *(modular design DIN-rail mounting)*							
COUNTIS single-phase direct connect modular energy meters measure and display energy (kWh, kVArh and kVA) as well as other measurement values and are suitable for single-phase electrical systems up to 100A.							
4850 5004	P04	direct	1-phase	45A	RS-485	1	**1 840.00**
4850 3047*	E17	direct	1-phase	80A	Ethernet	2	**13 300.00**
4850 5014	P14	direct	1-phase	100A	RS-485	2	**3 060.00**
* *Ethernet web server embedded*							
Three-phase direct connection kWh meters *(modular design DIN-rail mounting)*							
COUNTIS three-phase direct connect modular energy meters measure and display energy (kWh, kVArh and kVA) as well as other measurement values and are suitable for three-phase electrical systems up to 100A.							
4850 3054*	E27	direct	3-phase	80A	Ethernet	4	**15 900.00**
4850 5034	P34	direct	3-phase	100A	RS-485	4	**4 900.00**
* *Ethernet web server embedded*							
CT operated single or three-phase kWh meters *(modular design DIN-rail mounting)*							
COUNTIS three-phase modular energy meters measure and display energy (kWh, kVArh and kVA) as well as other measurement values. They connect indirectly to the electrical system via 1/5A current transformers (CT).							
4850 5044	P44	CT (1/5A)	3-phase	12000A	RS-485	4	**5 200.00**
Pulse concentrator *(modular design DIN-rail mounting)*							
COUNTIS ECi2 multi-utility pulse concentrator allows for up to 7 pulse inputs from water, gas, compressed air and electricity meters to be registered and stored. All data can be centralised via RS-485 communication using Modbus protocol.							
• Load curves are available for each of the 7 logical inputs • Partial, total, daily, weekly or monthly kWh or other types of data *(litres, m³…)* • Customisation by selection of the measuring unit: kWh, m³, litres • Generate event alarms *(1 dedicated relay output)* • 230... 400 VAC supply							
4853 0000	ECi2	pulse concentrator for up to 7 inputs with RS-485				4	**8 490.00**

COUNTIS ECi2 - Pulse concentrator application



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A-10

A-14

A-20

A-30/41

Model	A-10	A-14	A-20	A-30/41
Mounting	modular DIN-rail *(4x 18mm)*	modular DIN-rail *(4x 18mm)*	panel-mount *(96 x 96mm)*	panel-mount *(96 x 96mm)*
Display	backlit LCD	backlit LCD	backlit LCD	backlit LCD
Front degree of protection	IP52	IP51	IP52	IP52
Aux. power supply	110-277 VAC	50-460 VAC	110-400 VAC	110-400 VAC / 12-48 VAC
Current Input	CT (5A)	CT (5A)	CT (5A)	CT (1A or 5A)
Plug-in expansion modules	–	–	2	4
Inputs	1	–	up to 6	up to 6
Outputs	1	–	up to 2	up to 6
Alarms	yes	–	yes*	yes*
Communication	RS-485	RS-485	RS-485*	RS-485 / ETHERNET / PROFIBUS*
Multi-Tariff	2	4	–	–
Detects wiring errors	yes	yes	yes	yes

* *with optional plug-in module*

4825 0401

4825 0020

DIRIS series - Multifunction meters

DIRIS series of modular and panel-mounted single circuit multifunction meters are Power Monitoring Devices (PMD) designed to measure, monitor and display electrical values with in single-circuit Low Voltage (LV) networks.

type	auxiliary power supply	width in 18.5 mm		description	price

DIRIS A-10 multifunction meter *(modular design DIN-rail mounting)*

The **DIRIS A-10** is a modular multifunction meter for measuring electrical values in low voltage networks. It allows all electrical parameters to be displayed and utilised for communication and/ or output functions.

Multi-measurement

- Current: I1 / I2 / I3 / In
- Voltage: V1 / V2 / V3 / Vn / U12 / U23 / U31
- Frequency: 45...65Hz
- Power: P1 / P2 / P3 / ∑P / Q1 / Q2 / Q3 / ∑Q / S1 / S2 / S3 / ∑S
- Power Factor: PF1 / PF2 / PF3 / ∑PF
- Energy: Active +/- kWh / Reactive +/- kVARh
- Harmonics: THD for I / V (up to 51st)
- Accuracy (Active Energy): Class 0.5 S
- Accuracy (Reactive Energy): Class 2
- Hour Meter: Yes

4825 0401	110 - 277 VAC	4	A10	modular multifunction meter + RS-485	**5 070.00**

DIRIS A-14 multifunction meter *(modular design DIN-rail mounting)*

The **DIRIS A-14** is a modular multifunction meter for measuring electrical values in low voltage networks. It allows all electrical parameters to be displayed and utilised for communication and/ or output functions.

Multi-measurement

- Current: I1 / I2 / I3 / In
- Voltage: V1 / V2 / V3 / Vn / U12 / U23 / U31
- Frequency: 50/60Hz
- Power: ∑P / ∑Q / ∑S
- Power Factor: ∑PF
- Energy: Active +/- kWh / Reactive +/- kVARh
- Harmonics: THD for I / V (up to 63rd)
- Accuracy (Active Energy): Class 0.5 S
- Accuracy (Reactive Energy): Class 2

4825 0020	50 to 460 VAC +/- 15%	4	A14	as above + MID	**7 110.00**

4825 0402

4825 0403

4825 0094

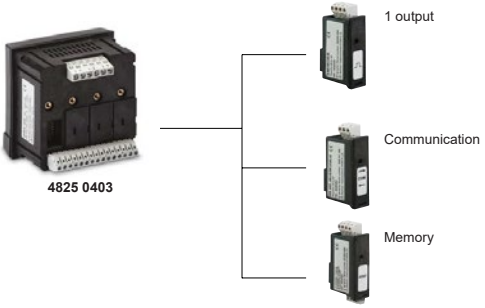
type	auxiliary power supply	number plug-in modules		description	price
DIRIS A-20 multifunction meter					
DIRIS A-20 is a panel-mount performance metering and monitoring device which ensures the user has access to all the measurements required for successfully carrying out energy efficiency projects and monitoring electrical distribution systems.					
Multi-measurement					
- Current:				I1 / I2 / I3 / In	
- Voltage:				V1 / V2 / V3 / Vn / U12 / U23 / U31	
- Frequency:				45...65Hz	
- Power:				P1 / P2 / P3 / ∑P / Q1 / Q2 / Q3 / ∑Q / S1 / S2 / S3 / ∑S	
- Power Factor:				PF1 / PF2 / PF3 / ∑PF	
- Energy:				Active +/- kWh / Reactive +/- kVARh	
- Harmonics:				THD for I / V *(up to 51st)*	
- Accuracy *(Active Energy)*:				Class 0.5 S	
- Accuracy *(Reactive Energy)*:				Class 2	
- Hour Meter:				Yes	
4825 0402	110 - 400 VAC	1	A20	96 x 96 mm panel-mount multifunction meter	**5 350.00**
DIRIS A-30/41 multifunction meter					
The **DIRIS A-30 / A-41** ranges of panel-mount performance metering and monitoring devices provide users with all the measurements required for successfully completing energy efficiency projects and monitoring electrical distribution systems.					
Multi-measurement					
- Current:				I1 / I2 / I3 / In	
- Voltage:				V1 / V2 / V3 / Vn / U12 / U23 / U31	
- Frequency:				45...65Hz	
- Power:				P1 / P2 / P3 / ∑P / Q1 / Q2 / Q3 / ∑Q / S1 / S2 / S3 / ∑S	
- Power Factor:				PF1 / PF2 / PF3 / ∑PF	
- Energy:				Active +/- kWh / Reactive +/- kVARh / Apparent kVAh	
- Harmonics:				THD for I / V *(up to 63rd)*	
- Accuracy *(Active Energy)*:				Class 0.5 S	
- Accuracy *(Reactive Energy)*:				Class 2	
- Hour Meter:				Yes	
4825 0403	110 - 400 VAC	4	A30	96 x 96 mm panel-mount multifunction meter	**9 450.00**
4825 0404	110 - 400 VAC	4	A41	as above with neutral monitoring	**13 700.00**
4825 0405	12 - 48 VDC	4	A30	96 x 96 mm panel-mount multifunction meter	**14 900.00**

Accessories for DIRIS meters

type	function	description	for model	price
Plug-modules		*(for customisation or upgrading of meters)*		
4825 0080	1 x output	plug-in optional modules	A20	**601.00**
4825 0082	RS-485 Modbus comms	plug-in optional modules	A20	**863.00**
4825 0090	2 configurable pulse outputs	plug-in optional modules	A30/41	**863.00**
4825 0092	RS-485 Modbus comms	plug-in optional modules	A30/41	**1 500.00**
4825 0093	2 Analogue outputs	plug-in optional modules	A30/41	**2 430.00**
4825 0094	2 inputs / 2 outputs	plug-in optional modules	A30/41	**1 360.00**
4825 0205	Sub D9 PROFIBUS DP comm	plug-in optional modules	A30/41	**9 770.00**
4825 0097	Memory	plug-in optional modules	A30/41	**1 230.00**
4825 0203	Ethernet comm. + Modbus TCP	plug-in optional modules	A30/41	**5 980.00**
4825 0204	Ethernet + RS-485 Modbus TCP	plug-in optional modules	A30/41	**5 590.00**
4825 0089	IP65 protection cover	for DIRIS meters	A30/41	**405.00**

DIRIS A... – Multifunction meters

Multifunction meter + optional plug-in modules for customisation or upgrading of meters.



4825 0403

Above ZAR prices do not include VAT. E&OE

A40 +TE+TR+TF

DIRIS A40 series of panel-mount Power Monitoring Devices (PMD) offers a range of metering options including Webview functionality. Designed to work with smart current sensors of different formats *(solid-core TE, split-core TR/iTR and rogowski coil TF).*

Measurements and functions:

- Voltage: V1 / V2 / V3 / Vn and U12 / U23 / U31
- Current: I1 / I2 / I3 / In
- Frequency: 45...65Hz
- Power: P1 / P2 / P3 / ∑P / Q1 / Q2 / Q3 / ∑Q / S1 / S2 / S3 / ∑S
- Power factor: PF1 / PF2 / PF3 / ∑PF
- Energy: Active +/- kWh / Reactive +/- kVARh / Apparent kVAh
- Harmonic analysis: THD for current and voltage *(up to 63rd)*
- Communication: RS-485 / Ethernet / Profibus
- Inputs: 3 digital inputs *(pulse metering, status checking)*
- Outputs: 2 outputs *(alarms or pulses)*
- Alarms for all electrical values, events and input status changes

Measurement accuracy:

- Overall accuracy: Class 0.2 DIRIS A-40
- Accuracy of active energy: Class 0.5 with TE, TF/iTR and Class 1 with TR
- Accuracy of reactive energy: Class 0.5 with TE, TF/iTR and Class 1 with TR

4825 ...

type	Aux. power supply	inputs	outputs	description	price
DIRIS A40 - Multifunction meter			*92 x 92 mm panel-mount 68 mm deep*		
4825 0500	110 - 400 VAC	3	2	panel-mount meter with RS-485 Modbus	**14 100.00**
4825 0501*	110 - 400 VAC	3	2	as above with Ethernet Modbus	**20 800.00**
4825 0502	110 - 400 VAC	3	2	as above with Profibus	**22 000.00**

* *Modbus TCP, Modbus RTU, BacNet, SMTP, SNTP*

4829 0000

DIRIS B30 - Multifunction meter *(modular design DIN-rail mounting)*

The **DIRIS B30** is a modular format PMD that communicates via RS-485. 4 x RJ12 independent current inputs allow it to manage several types and number of circuits.

4829 0000	110 - 230VAC	2	–	modular multifunction meter with RS-485	**10 600.00**

Accessories for DIRIS B30

4829 0200	D30 single point display for B30	*(panel-mount)*	96 x 96	**4 180.00**
4829 0280	RJ9 cable for above D30 display unit		1.5 m	**145.00**
4829 0281	RJ9 cable for above D-30 display unit		3.0 m	**239.00**

Current sensors *for above A40 / B30 multifunctional meter*

Various types of current sensors can be connected to the DIRIS A40 / B30: solid-core (TE), split-core (TR / iTR) or Rogowski (TF). A quick RJ12 connection makes wiring easy and reliable and prevents wiring errors.

TE...

TR...

TF...

type	model	actual range current (A)	description	pitch (mm)	hole size (mm)	price
TE - Solid current sensors			class 0.5			
4829 0500	TE-18	0.1…24	solid current sensor	18	Ø 8.6	**676.00**
4829 0501	TE-18	0.5…75	solid current sensor	18	Ø 8.6	**694.00**
4829 0502	TE-25	0.8…192	solid current sensor	25	13.5 ■	**780.00**
4829 0503	TE-35	1.26…300	solid current sensor	35	21 ■	**869.00**
4829 0504	TE-45	3.2…756	solid current sensor	45	31 ■	**1 220.00**
4829 0505	TE-55	8…1200	solid current sensor	55	41 ■	**1 570.00**
4829 0506	TE-90	12…2400	solid current sensor	90	64 ■	**2 850.00**
TR - Split-core current sensors			class 1			
4829 0555	TR-10	0.5…75	split-core current sensors	–	Ø 10	**2 110.00**
4829 0556	TR-14	0.8...192	split-core current sensors	–	Ø 14	**2 520.00**
4829 0557	TR-21	1.26...300	split-core current sensors	–	Ø 21	**3 210.00**
4829 0558	TR-32	3.2...720	split-core current sensors	–	Ø 32	**3 650.00**
iTR - Split-core current sensors			class 0.5 *(intelligent)*			
4829 0655	iTR-10	0.5...75	split-core current sensors	–	Ø 10	**3 170.00**
4829 0656	iTR-14	0.8…192	split-core current sensors	–	Ø 14	**3 780.00**
4829 0657	iTR-21	1.26…300	split-core current sensors	–	Ø 21	**4 820.00**
4829 0658	iTR-32	3.2…720	split-core current sensors	–	Ø 32	**5 470.00**
TF - Flexible current sensors *(Rogowski coil)*						
4829 0574	TF-80	3...720	flexible current sensor	–	Ø 80	**7 440.00**
4829 0575	TF-120	8...2400	flexible current sensor	–	Ø 120	**7 980.00**
4829 0577	TF-300	32...7200	flexible current sensor	–	Ø 300	**8 840.00**

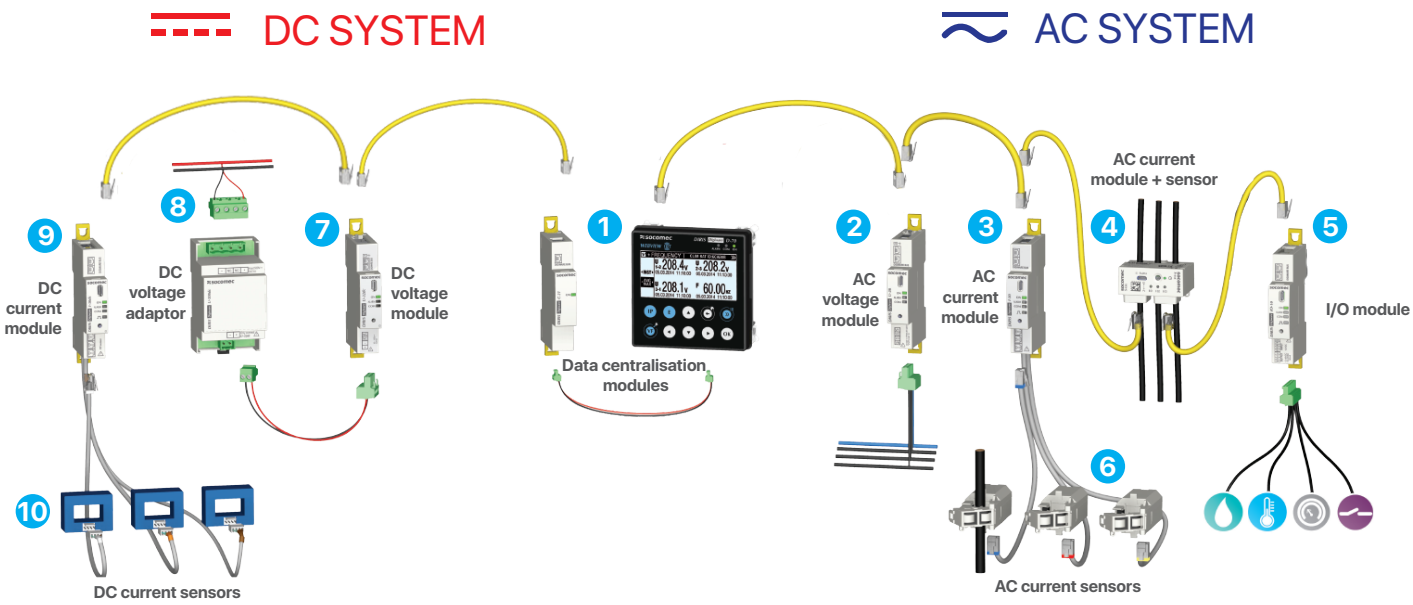
*For RJ12 cables to connect **A40/B30** PMD to **TE/TR/iTR/TF** current sensors refer to pg **E-15***

DIRIS Digiware system is a multi-circuit AC or DC power monitoring solution that is the most effective solution for monitoring multi-point electrical installation performance. With precise sensing, virtual monitoring and auto-correct technology.
This system offers accurate and reliable metering, monitoring and reporting of electrical systems.

Scan to watch video

- Accuracy as per standard IEC 61557-12 (Class 0.5)
- Implementation in a quarter of the time vs existing metering technologies
- Installation of measurement modules and current sensors at the closest point to the load
- Can monitor several circuits via a single current measurement module thanks to independent current inputs
- Compact and flexible design: suitable for new and existing installations, including panels with space restrictions
- The system is composed of several modules: control interface, voltage acquisition module, current acquisition modules but also closed, split-core or flexible current sensors

Build your system :



4829 0101

4829 0203

4854 0020

type	model	description	width in 18mm	price
Data centralisation, system interface and display modules				
• Power supply 24 VDC *(required, see power supply)*				
• Communication via RS-485 Modbus and Digiware BUS				
C-31 Data centralisation 1		*(without local display)*		
• Centralises all of the Digiware systems data, accessible via RS-485				
4829 0101	C-31	modular centralisation unit without display + RS-485	1	**3 260.00**
D50/70 Data centralisation and display 1		*(panel-mount 96 x 96mm)*		
• High-resolution LCD				
• Local view of data from the Digiware Bus				
• Keys on the front face for direct access to measurement data,device configuration etc.				
• Can display electrical measurements from both AC and DC systems simultaneously via Webview				
4829 0204	D-50	centralisation unit with multi-point display + Modbus TCP		**8 380.00**
4829 0203	D-70	centralisation unit with multi-point display + Ethernet + webserver		**40 700.00**
4829 0222	M-70	as above without display and modular DIN-rail mount	5	**29 900.00**
C-32 Range extending repeater				
• Required when Digiware bus length exceeds 100m				
• Maximum bus length 300m *(2 repeaters)*				
• Power supply 24 VDC *(required, see power supply)*				
4829 0103	range extending repeater		1	**3 900.00**
For RJ45 connecting cables for above see ***E-15***				
DATALOG H80 - Webview datalogger				
• Connect energy meters and multi-function measurement units to an Ethernet network				
• Real-time monitoring of all measurements and breakdown of energy consumption up to 100 devices				
4854 0020	datalogger with webview 4 Ethernet ports and up to 100 licences			**87 800.00**

Above ZAR prices do not include VAT. E&OE

AC voltage measurement modules ② – *Single voltage measurement point for the entire system*

- Three-phase voltage and frequency monitoring
- RJ45 bus allows you to measure voltage as well as supply power to all connected devices
- A complete, dedicated solution for metering, voltage monitoring and quality analysis of the AC voltage

4829 0106

type	description	width in 18 mm	price
U-10 metering module			
4829 0105	modular AC voltage measurement metering module	1	**3 650.00**
U-20 monitoring module *(as above but with additional 3ph THDu monitoring)*			
4829 0106	modular AC voltage measurement monitoring module	1	**4 510.00**
U-30 analysis module *(all electrical parameters including history of average values)*			
4829 0102	modular AC voltage measurement analysis module	1	**5 540.00**

AC current measurement modules ③

Allocates the load to be measured or to monitor independent current inputs i.e three-phase load and 3 single-phase loads.

- Metering: ± kWh, ± kvarh, kVAh
- Multi-measurement: I1, I2, I3, In, ΣP, ΣQ, ΣS, ΣPF
- Wiring errors are also prevented and implementation is simplified
- **RJ45** and **RJ12** rapid connection and configure connected current sensors

4829 0112

type	description	current Inputs	width in 18mm	price
I-30/60 metering modules				
4829 0110	I-30 modular current measurement metering module	3	1	**3 080.00**
4829 0112	I-60 modular current measurement metering module	6	2	**6 520.00**
I-31/61 metering and load curve modules				
4829 0111	I-31 modular current measurement metering module	3	1	**5 440.00**
4829 0113	I-61 modular current measurement metering module	6	2	**9 110.00**
I-35/45 analysis module *(all electrical parameters including history of average values)*				
4829 0130	I-35 modular current measurement analysis module	3	1	**5 930.00**
4829 0131	I-45 modular current measurement analysis module	4	1.5	**14 300.00**

AC current measurement modules with built-in current sensors ④

DIRIS Digiware S is a power metering and monitoring service with 3 integrated current sensors enabling the measurement of one three-phase or three single-phase circuits up to 63 A.

- Metering: ± kWh, ± kvarh, kVAh
- Can be mounted upstream or downstream of the protective device
- Advanced monitoring via **VirtualMonitor** *(position, trip etc. without using auxiliary)*
- Matching the pitch of protective devices up to 63A, solving issues of space constraints

4829 0160

4829 0160	S-130 modular current measurement metering module	3	–	**9 070.00**
4829 0161	S-135 modular current measurement analysis module	3	–	**11 600.00**
4829 0162	S-Datacenter modular 3 x single-phase monitoring	3	–	**8 390.00**
Accessories for DIRIS Digiware S modules				
4829 0195	Mounting clip for above Digiware S modules	pack	(x 10)	**797.00**
4829 0196	Holding clip for above Digiware S modules	pack	(x 10)	**921.00**
4829 0189	Flat RJ45 Digiware bus connection cable		0.06 m	**182.00**

*For longer length connecting cables refer to **E-15***

Digital and analogue input / output modules ⑤

The **DIRIS Digiware I/O** *(input/output)* modules can be easily added anywhere within the measurement system thanks to a quick **RJ45** connection.

The **I/O-10** modules have 4 digital inputs and 2 digital outputs, which can be used:
- To monitor changes of status of an input or to collect pulses from multi-fluid meters *(water, gas…)*
- To remotely command devices by sending a digital output signal
- Inputs/Connection: 12 VDC 3mA, Outputs: 12 - 48 VDC, 12 - 24 VAC 50mA / screw terminal blocks

The **I/O-20** modules have 2 analogue inputs allowing:
- To collect data from analogue sensors, e.g. pressure, humidity, temperature, levels *(fuel…)*
- To monitor levels by setting up alarms on chosen thresholds
- Inputs/Connection: 0/4-20 mA, 200 ohm / screw terminal blocks

4829 0161

	DI	DO	AI			
4829 0140	4	2	–	IO-10 digital input/output module	1	**5 120.00**
4829 0145	–	–	2	IO-20 analogue input modules	1	**6 720.00**

AC sensors (6)

Current sensors can be connected to the DIRIS Digiware system via a rapid RJ12 and various accessories are available, permitting installation in all panel configurations.

- Plug and play RJ12 connections *(for ease of wiring preventing wiring errors)*
- Automatic detection of sensor type and current rating
- Class 0.5 from 2% to 120% of nominal current *(as per standard IEC 61557-12)*

type	model	actual range current (A)	description	pitch (mm)	hole size (mm)	price
TE - Solid current sensors			class 0.5			
4829 0500	TE-18	0.1…24	solid current sensor	18	Ø 8.6	**676.00**
4829 0501	TE-18	0.5…75	solid current sensor	18	Ø 8.6	**694.00**
4829 0502	TE-25	0.8…192	solid current sensor	25	13.5 ■	**780.00**
4829 0503	TE-35	1.26…300	solid current sensor	35	21 ■	**869.00**
4829 0504	TE-45	3.2…756	solid current sensor	45	31 ■	**1 220.00**
4829 0505	TE-55	8…1200	solid current sensor	55	41 ■	**1 570.00**
4829 0506	TE-90	12…2400	solid current sensor	90	64 ■	**2 850.00**
TR - Split-core current sensors			class I			
4829 0555	TR-10	0.5…75	split-core current sensors	–	Ø 10	**2 110.00**
4829 0556	TR-14	0.8...192	split-core current sensors	–	Ø 14	**2 520.00**
4829 0557	TR-21	1.26...300	split-core current sensors	–	Ø 21	**3 210.00**
4829 0558	TR-32	3.2...720	split-core current sensors	–	Ø 32	**3 650.00**
iTR - Split-core current sensors			class 0.5 *(intelligent)*			
4829 0655	iTR-10	0.5...75	split-core current sensors	–	Ø 10	**3 170.00**
4829 0656	iTR-14	0.8…192	split-core current sensors	–	Ø 14	**3 780.00**
4829 0657	iTR-21	1.26…300	split-core current sensors	–	Ø 21	**4 820.00**
4829 0658	iTR-32	3.2…720	split-core current sensors	–	Ø 32	**5 470.00**
TF - Flexible current sensors *(Rogowski coil)*						
4829 0574	TF-80	3...720	flexible current sensor	–	Ø 80	**7 440.00**
4829 0575	TF-120	8...2400	flexible current sensor	–	Ø 120	**7 980.00**
4829 0577	TF-300	32...7200	flexible current sensor	–	Ø 300	**8 840.00**

Cables and accessories for current sensors

type	model	description	cable length (mm)	pack size (mm)	price
RJ12 current sensor connection cables *(interconnection)*					
• Automatic detection of current sensor ratings • Disconnection of the current sensor secondary under load					
4829 0581	RJ12	AC current sensor connection cable	0.2 m	3 x cables	**259.00**
4829 0595	RJ12	AC current sensor connection cable	0.5 m	3 x cables	**335.00**
4829 0583	RJ12	AC current sensor connection cable	1.0 m	3 x cables	**415.00**
4829 0584	RJ12	AC current sensor connection cable	2.0 m	3 x cables	**659.00**
4829 0597	RJ12	AC current sensor connection cable	0.5 m	6 x cables	**644.00**
4829 0593	RJ12	AC current sensor connection cable	1.0 m	6 x cables	**812.00**
4829 0594	RJ12	AC current sensor connection cable	2.0 m	6 x cables	**1 140.00**
4829 0602	RJ12	AC current sensor connection cable	5.0 m	1 x cables	**482.00**
4829 0782	RJ12	DC molex current sensor conn. cable	0.3 m	3 x cables	**488.00**
4829 0783	RJ12	DC molex current sensor conn. cable	0.5 m	3 x cables	**522.00**
4829 0784	RJ12	DC molex current sensor conn. cable	1.0 m	3 x cables	**634.00**
4829 0785	RJ12	DC molex current sensor conn. cable	2.0 m	3 x cables	**799.00**
4829 0786	RJ12	DC molex current sensor conn. cable	5.0 m	1 x cable	**497.00**
RJ45 current sensor connection cables *(bus connection)*					
• Interconnection of I and U modules via Digiware Bus					
4829 0181	RJ45	Digiware bus AC connection cable	0.1 m	–	**110.00**
4829 0182	RJ45	Digiware bus AC connection cable	0.5 m	–	**137.00**
4829 0183	RJ45	Digiware bus AC connection cable	1.0 m	–	**182.00**
4829 0184	RJ45	Digiware bus AC connection cable	2.0 m	–	**279.00**
4829 0185*	RJ45	AC current sensor cable + 50 connectors	50 m	*(cable roll)*	**10 100.00**
* *Maximum cable distance between current measurement modules and current sensors is 10 m*					
4829 0599	5A/CT adapter *(measurement >1000 A)* (6)				**1 220.00**
4829 0598	coupling link for interconnecting sensors staggered or linear mounted			*(30pcs)*	**899.00**
4829 0600	sealable cover *(guarantees the immunity of sensor connection)*			*(20pcs)*	**775.00**

Above ZAR prices do not include VAT. E&OE

4829 0150

DC voltage measurement modules 7

DIRIS Digiware U-31/32dc module measures DC voltage for the entire system. It measures up to 180 VDC with a direct connection and is therefore compatible with typical nominal voltages (24 VDC, 48 VDC)

- Voltage measurement accuracy: Class 0.5
- 1 single voltage measurement point for the entire system
- Voltage adaptors makes the system compatible with all voltage levels up to 1650 VDC
- RJ45 bus allows you measurement of voltage as well as supply power to all connected devices

type	range	voltage	description	width in 18 mm	price
U-31dc metering module					
4829 0150	19...60 VDC		modular voltage measurement metering module	1	**6 460.00**
U-32dc metering module					
4829 0151	38...180 VDC		modular voltage measurement metering module	1	**8 210.00**
DC voltage adaptor 8					
4829 0153	200...600 VDC		U500DC modular voltage adaptor metering module	3	**3 990.00**
4829 0154	400...1200 VDC		U1000DC modular voltage adaptor metering module	3	**5 980.00**
4829 0155	1200...1650 VDC		U1500DC modular voltage adaptor metering module	3	**7 970.00**

4829 0153

DC current measurement modules 9

Allocates the load to be measured or to monitor independent current inputs. Measurement of up to 3 DC circuits per Idc modules.

General features:

- Metering: ± kWh
- Accuracy of current measurement: Class 0.5
- Multi-measurement: Idc, Udc, Iripple, Irms
- Quick RJ45 connection between modules and RJ12-Molex to current sensors

4829 0156

type	description	current Inputs	width in 18 mm	price
I-30dc metering modules				
4829 0156	I-30dc modular current measurement metering module	3	3	**7 010.00**
I-35dc metering and analysis module				
4829 0157	I-35dc modular current measurement analysis module	3	3	**11 100.00**

DC sensors 10

The DC current sensors measure the DC load currents of an electrical installation and transmit information to the Idc measurement modules via an RJ12 to molex cable on the sensor side.

The range comprises solid-core and split-core sensors *(Open-loop Hall effect)* ranging from 50 to 5000A in various sizes allowing them it be used in new or existing electrical installations.

General features:

- Automatic detection of sensor type and current rating
- Up to 3 different DC sensors can be connected to the same Idc module
- Accuracy of current measurement <1%
- Plug and play RJ12 molex cables *(for ease of wiring - preventing wiring errors)* *see page **E-15***

4829 0700

type	frame size	nominal current (A)	description	pitch (mm)	hole size (mm)	price
DC solid-core current sensors *(frame size 1)*						
4829 0700	1	50A	DC solid-core current sensor	18	■ 10.4 x 20.4	**1 040.00**
4829 0701	1	100A	DC solid-core current sensor	25	■ 10.4 x 20.4	**1 040.00**
4829 0702	1	200A	DC solid-core current sensor	35	■ 10.4 x 20.4	**1 040.00**
4829 0703	1	300A	DC solid-core current sensor	45	■ 10.4 x 20.4	**1 040.00**
Up to 5000A available on special request.						
DC split-core current sensors *(frame size 1)*						
4829 0750	1	50A	DC split-core current sensor	0	Ø 21	**8 050.00**
4829 0751	1	100A	DC split-core current sensor	0	Ø 21	**8 050.00**
4829 0752	1	200A	DC split-core current sensor	0	Ø 21	**8 050.00**
Up to 2000A available on special request.						

4829 0750

SF4-2010A

SF9-3MD5A

SF9-3CM5A

SF7-8/5A

SF7-3CM5A

Analogue panel instruments

Designed to measure an extensive range of electrical and electronic parameters.

Benefits: Low cost, ease of installation, minimal training, low maintenance, reasonable accuracy.
Applications: Switchgear distribution systems, generator sets, control panels, energy and building management, utility power monitoring, process control and motor control.

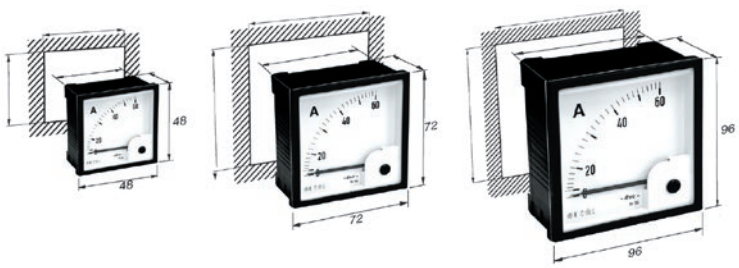
type	range	supply	description	frame size mm² 48 x 48	72 x 72	96 x 96	price
Ammeters (AC) moving iron							
SF4-2001A	0 - 1A	AC	AC ammeter *(direct reading)*	•			**283.00**
SF4-2005A	0 - 5A	AC	AC ammeter *(direct reading)*	•			**283.00**
SF4-2010A	0 - 10A	AC	AC ammeter *(direct reading)*	•			**283.00**
SF4-2015A	0 - 15A	AC	AC ammeter *(direct reading)*	•			**283.00**
SF4-2030A	0 - 30A	AC	AC ammeter *(direct reading)*	•			**301.00**
SF4-2/5A*	.../5A	AC	AC ammeter *(CT operated)*	•			**283.00**
SF7-8001A	0 - 1A	AC	AC ammeter *(direct reading)*		•		**303.00**
SF7-8005A	0 - 5A	AC	AC ammeter *(direct reading)*		•		**303.00**
SF7-8010A	0 - 10A	AC	AC ammeter *(direct reading)*		•		**303.00**
SF7-8015A	0 - 15A	AC	AC ammeter *(direct reading)*		•		**303.00**
SF7-8030A	0 - 30A	AC	AC ammeter *(direct reading)*		•		**321.00**
SF7-8/5A*	.../5A	AC	AC ammeter *(CT operated)*		•		**303.00**
SF9-8001A	0 - 1A	AC	AC ammeter *(direct reading)*			•	**320.00**
SF9-8005A	0 - 5A	AC	AC ammeter *(direct reading)*			•	**320.00**
SF9-8010A	0 - 10A	AC	AC ammeter *(direct reading)*			•	**320.00**
SF9-8015A	0 - 15A	AC	AC ammeter *(direct reading)*			•	**320.00**
SF9-8030A	0 - 30A	AC	AC ammeter *(direct reading)*			•	**339.00**
SF9-8/5A*	.../5A	AC	AC ammeter *(CT operated)*			•	**320.00**
Maximum demand ammeters			*(90° movement) delay time: 15 min (standard)*				
SF7-3MD5A*	.../5A	AC	max. demand ammeter - CT		•		**754.00**
SF9-3MD5A*	.../5A	AC	max. demand ammeter - CT			•	**754.00**
Maximum demand + Instantaneous ammeters							
SF7-3CM5A*	.../5A	AC	combined MD ammeter - CT		•		**1 230.00**
SF9-3CM5A*	.../5A	AC	combined MD ammeter - CT			•	**1 230.00**
Voltmeters (AC) moving iron			*(90° movement)*				
SF4-2015V	150V	AC	AC voltmeter *(direct reading)*	•			**303.00**
SF4-2030V	300V	AC	AC voltmeter *(direct reading)*	•			**303.00**
SF4-2050V	500V	AC	AC voltmeter *(direct reading)*	•			**303.00**
SF4-2060V	600V	AC	AC voltmeter *(direct reading)*	•			**303.00**
SF7-8015V	150V	AC	AC voltmeter *(direct reading)*		•		**321.00**
SF7-8030V	300V	AC	AC voltmeter *(direct reading)*		•		**321.00**
SF7-8050V	500V	AC	AC voltmeter *(direct reading)*		•		**321.00**
SF7-8060V	600V	AC	AC voltmeter *(direct reading)*		•		**321.00**
SF9-8015V	150V	AC	AC voltmeter *(direct reading)*			•	**339.00**
SF9-8030V	300V	AC	AC voltmeter *(direct reading)*			•	**339.00**
SF9-8050V	500V	AC	AC voltmeter *(direct reading)*			•	**339.00**
SF9-8060V	600V	AC	AC voltmeter *(direct reading)*			•	**339.00**

* *Replace with code in chart (below) for desired amperage*

Standard amperages - *add code to end of part number e.g* **SF4-2/5A005** *(50A)*

Code	003	004	005	006	007	010	015	020	025	030	040	050	060	075	100	125	160	200
A	30	40	50	60	75	100	150	200	250	300	400	500	600	750	1000	1250	1600	2000

Frame sizes



Above ZAR prices do not include VAT. E&OE

Analogue panel instruments

SF4-2022Z

SF4-2HA25

SF7-8025DA

SF4-203DV

type	range	supply	description	frame size mm² 48 x 48	72 x 72	96 x 96	price
Frequency meters			*(90° movement)*				
SF4-2022Z	45 - 55Hz	220V	frequency meter *(pointer type)*	•			**510.00**
SF4-2038Z	45 - 55Hz	380V	frequency meter *(pointer type)*	•			**510.00**
SF7-8022Z	45 - 55Hz	220V	frequency meter *(pointer type)*		•		**547.00**
SF7-8038Z	45 - 55Hz	380V	frequency meter *(pointer type)*		•		**547.00**
SF9-8022Z	45 - 55Hz	220V	frequency meter *(pointer type)*			•	**565.00**
SF9-8038Z	45 - 55Hz	380V	frequency meter *(pointer type)*			•	**565.00**
Running hour meters							
SF4-2HA25	110V	AC	running hour meter	•			**378.00**
SF4-2HA45	380V	AC	running hour meter	•			**378.00**
SF7-3HA25	110V	AC	running hour meter		•		**900.00**
SF7-3HA45	380V	AC	running hour meter		•		**900.00**
SF9-3HA25	110V	AC	running hour meter			•	**900.00**
SF9-3HA45	380V	AC	running hour meter			•	**900.00**
Ammeters (DC) moving coil			*(90° movement)*				
SF4-2000DA	0 - 1mA	DC	ammeter *(direct reading)*	•			**321.00**
SF4-2420DA	4 - 20mA	DC	ammeter *(direct reading)*	•			**359.00**
SF4-2001DA	0 - 1A	DC	ammeter *(direct reading)*	•			**321.00**
SF4-2005DA	0 - 5A	DC	ammeter *(direct reading)*	•			**321.00**
SF4-2010DA	0 - 10A	DC	ammeter *(direct reading)*	•			**321.00**
SF4-2015DA	0 - 15A	DC	ammeter *(direct reading)*	•			**321.00**
SF4-2030DA	0 - 30A	DC	ammeter *(direct reading)*	•			**321.00**
SF4-2/7DA*	.../75mV	DC	ammeter *(shunt operated)*		•		**321.00**
SF7-8000DA	0 - 1mA	DC	ammeter *(direct reading)*		•		**339.00**
SF7-8420DA	4 - 20mA	DC	ammeter *(direct reading)*		•		**378.00**
SF7-8001DA	0 - 1A	DC	ammeter *(direct reading)*		•		**339.00**
SF7-8005DA	0 - 5A	DC	ammeter *(direct reading)*		•		**339.00**
SF7-8010DA	0 - 10A	DC	ammeter *(direct reading)*		•		**339.00**
SF7-8015DA	0 - 15A	DC	ammeter *(direct reading)*		•		**339.00**
SF7-8030DA	0 - 30A	DC	ammeter *(direct reading)*		•		**339.00**
SF7-8/7DA*	.../75mV	DC	ammeter *(shunt operated)*		•		**339.00**
SF9-8000DA	0 - 1mA	DC	ammeter *(direct reading)*			•	**358.00**
SF9-8420DA	4 - 20mA	DC	ammeter *(direct reading)*			•	**358.00**
SF9-8001DA	0 - 1A	DC	ammeter *(direct reading)*			•	**358.00**
SF9-8005DA	0 - 5A	DC	ammeter *(direct reading)*			•	**358.00**
SF9-8010DA	0 - 10A	DC	ammeter *(direct reading)*			•	**358.00**
SF9-8015DA	0 - 15A	DC	ammeter *(direct reading)*			•	**358.00**
SF9-8030DA	0 - 30A	DC	ammeter *(direct reading)*			•	**358.00**
SF9-8/7DA*	.../75mV	DC	ammeter *(shunt operated)*			•	**358.00**
Voltmeter (DC)			*(90° movement)*				
SF4-2007DV	75mV	DC	voltmeter *(direct reading)*	•			**321.00**
SF4-203DV	30V	DC	voltmeter *(direct reading)*	•			**321.00**
SF4-215DV	150V	DC	voltmeter *(direct reading)*	•			**321.00**
SF4-250DV	500V	DC	voltmeter *(direct reading)*	•			**321.00**
SF7-8007DV	75mV	DC	voltmeter *(direct reading)*		•		**339.00**
SF7-803DV	30V	DC	voltmeter *(direct reading)*		•		**339.00**
SF7-815DV	150V	DC	voltmeter *(direct reading)*		•		**339.00**
SF7-850DV	500V	DC	voltmeter *(direct reading)*		•		**339.00**
SF9-8007DV	75mV	DC	voltmeter *(direct reading)*			•	**358.00**
SF9-803DV	30V	DC	voltmeter *(direct reading)*			•	**358.00**
SF9-815DV	150V	DC	voltmeter *(direct reading)*			•	**358.00**
SF9-850DV	500V	DC	voltmeter *(direct reading)*			•	**358.00**

* *- Replace with code in chart (below) for desired amperage*

Standard amperages *- add code to end of part number for desired amperage*

Code	003	004	005	006	007	010	015	020	025	030	040	050	060	075	100	125	160	200
A	30	40	50	60	75	100	150	200	250	300	400	500	600	750	1000	1250	1600	2000

SFN-4K1-I

Digital panel meters

Measuring accuracy:	± 0.5 % FS ±1 digit
Measuring display mode:	RMS measurement, four-digit LED
Auxiliary power supply:	AC220V, 50/60Hz *(others on request)*
Operating temperature:	-10…50ºC
Overload voltage and current:	Continuous: 1.2 times. Instantaneous: 2 times *(30s-Voltage) (1s-Current)*
Available frame sizes:	**4** = 48 x 48 mm / **5** = 48 x 96 mm / **7** = 72 x 72 mm / **9** = 96 x 96 mm

SFN-7K3-3I

SFN-5K1-U

SFN-9K3-3U

SFN-7K1-F

SFN-9K3-UIF

type	range	range using CT /5A	description	phase	frame size mm² 48 x 48	48 x 96	72 x 72	96 x 96	price
Ammeters (AC)									
Direct measure:		*AC 0…5A (with CT …/5A: AC 0…9999A)*							
Single-phase									
SFN-4K1-I	0…5A	0…9999A	digital AC ammeter	1ph	•				**792.00**
SFN-5K1-I	0…5A	0…9999A	digital AC ammeter	1ph		•			**792.00**
SFN-7K1-I	0…5A	0…9999A	digital AC ammeter	1ph			•		**792.00**
SFN-9K1-I	0…5A	0…9999A	digital AC ammeter	1ph				•	**792.00**
Three-phase - *(3 displays - one for each phase)*									
SFN-4K3-3I	0…5A	0…9999A	digital AC ammeter	3ph	•				**1 230.00**
SFN-7K3-3I	0…5A	0…9999A	digital AC ammeter	3ph			•		**1 230.00**
SFN-9K3-3I	0…5A	0…9999A	digital AC ammeter	3ph				•	**1 230.00**
Voltmeters (AC)									
Direct measure:		*AC 0…600V (with PT …/100V: AC 0…9999V)*							
Single-phase									
SFN-4K1-U	0…600V	0…9999V	digital AC voltmeter	1ph	•				**792.00**
SFN-5K1-U	0…600V	0…9999V	digital AC voltmeter	1ph		•			**792.00**
SFN-7K1-U	0…600V	0…9999V	digital AC voltmeter	1ph			•		**792.00**
SFN-9K1-U	0…600V	0…9999V	digital AC voltmeter	1ph				•	**792.00**
Three-phase - *(3 displays - one for each phase)*									
SFN-4K3-3U	0…600V	0…9999V	digital AC voltmeter	3ph	•				**1 230.00**
SFN-7K3-3U	0…600V	0…9999V	digital AC voltmeter	3ph			•		**1 230.00**
SFN-9K3-3U	0…600V	0…9999V	digital AC voltmeter	3ph				•	**1 230.00**
Frequency meters									
SFN-4K1-F	30…99Hz	30...500V	digital frequency meter	1ph	•				**847.00**
SFN-5K1-F	30…99Hz	30...500V	digital frequency meter	1ph		•			**847.00**
SFN-7K1-F	30…99Hz	30...500V	digital frequency meter	1ph			•		**847.00**
SFN-9K1-F	30…99Hz	30...500V	digital frequency meter	1ph				•	**847.00**
Combination - Amp, Volt and Frequency meter *(on one panel meter)*									
SFN-4K3-UIF	0…500V	0…5kV	digital A, V, Hz meter	3ph	•				**1 230.00**
SFN-7K3-UIF	0…5A	0…5000A	digital A, V, Hz meter	3ph			•		**1 230.00**
SFN-9K3-UIF	45…65Hz	45…65Hz	digital A, V, Hz meter	3ph				•	**1 230.00**
DC panel meters									
Ammeters (DC)									
Direct measure:		*DC 0…5A (with shunt … / 75mV: DC 0…9999A)*							
SFN-4K1DC-I	0…5A	0…9999A	digital DC ammeter	1ph	•				**792.00**
SFN-5K1DC-I	0…5A	0…9999A	digital DC ammeter	1ph		•			**792.00**
SFN-7K1DC-I	0…5A	0…9999A	digital DC ammeter	1ph			•		**792.00**
SFN-9K1DC-I	0…5A	0…9999A	digital DC ammeter	1ph				•	**792.00**
Voltmeters (DC)									
SFN-4K1-DCU	0…600V	–	digital DC voltmeter	1ph	•				**792.00**
SFN-5K1-DCU	0…600V	–	digital DC voltmeter	1ph		•			**792.00**
SFN-7K1-DCU	0…600V	–	digital DC voltmeter	1ph			•		**792.00**
SFN-9K1-DCU	0…600V	–	digital DC voltmeter	1ph				•	**792.00**

Above ZAR prices do not include VAT. E&OE

ASR 20.3

Current transformers **Class 1**

General specifications:

- Nominal frequency: 50Hz *(others on request)*
- Isolation class: E
- Nominal thermal short-time current: Ith = 60 x In
- Maximum operating voltage: Um ≤ 0.72 kV
- Over-current limiting factor: FS 5 up to 1500 A nominal current

MBS AG current transformers conform fully to: DIN VDE 0414/1 - DIN 42600 - IEC 61869/1+2 - VBG 4

type	ratio	class	Burden (VA)	description	max. hole diameter (mm) round	B/bar 1	B/bar 2	price
Tube/ring type current transformers				**5A secondary - class 1**				
ASR 20.3	tube current transformers			*(H) 65 x (W) 45 x (D) 30 mm*				
26027	50/5A	1	1	tube current transformer	Ø21	–	–	**476.00**
26029	60/5A	1	1.25	tube current transformer				**476.00**
26031	75/5A	1	1.5	tube current transformer				**476.00**
26035	100/5A	1	2.5	tube current transformer				**476.00**
26041	150/5A	1	3.75	tube current transformer				**476.00**
26051	200/5A	1	3.75	tube current transformer				**476.00**
26046	250/5A	1	5	tube current transformer				**476.00**

ASK 41.4

type	ratio	class	Burden (VA)	description	max. hole diameter (mm) round	B/bar 1	B/bar 2	price
Busbar mounted current transformers				**5A secondary - class 1**				
ASK 31.3	current transformers			*(H) 76 x (W) 61 x (D) 48 mm*				
7038	50/5A	1	1	std current transformer	Ø26	30x10	20x20	**476.00**
7039	60/5A	1	1	std current transformer				**476.00**
7041	75/5A	1	1.5	std current transformer				**476.00**
7045	100/5A	1	2.5	std current transformer				**476.00**
7047	150/5A	1	2.5	std current transformer				**476.00**
7050	200/5A	1	5	std current transformer				**476.00**
7053	250/5A	1	5	std current transformer				**476.00**
ASK 41.4	current transformers			*(H) 85.5 x (W) 71 x (D) 58 mm*				
13044	100/5A	1	2.5	std current transformer	Ø32	40x10	30x15	**406.00**
13048	150/5A	1	5	std current transformer				**406.00**
13050	200/5A	1	5	std current transformer				**406.00**
13054	250/5A	1	10	std current transformer				**406.00**
13057	300/5A	1	10	std current transformer				**406.00**
13062	400/5A	1	15	std current transformer				**406.00**
13066	500/5A	1	15	std current transformer				**406.00**
13070	600/5A	1	15	std current transformer				**406.00**
13073	750/5A	1	15	std current transformer				**406.00**
13077	800/5A	1	15	std current transformer				**406.00**

ASK 51.4

type	ratio	class	Burden (VA)	description	max. hole diameter (mm) round	B/bar 1	B/bar 2	price
ASK 51.4	current transformers			*(H) 98.5 x (W) 86 x (D) 58 mm*				
16055	400/5A	1	10	std current transformer	Ø44	50x10	40x20	**515.00**
16060	500/5A	1	15	std current transformer				**515.00**
16064	600/5A	1	15	std current transformer				**515.00**
16068	750/5A	1	15	std current transformer				**515.00**
16071	800/5A	1	15	std current transformer				**515.00**
16075	1000/5A	1	15	std current transformer				**515.00**
ASK 61.4	current transformers			*(H) 105.5 x (W) 96 x (D) 58 mm*				
19065	600/5A	1	15	std current transformer	Ø44	60x10	50x30	**523.00**
19069	750/5A	1	15	std current transformer				**523.00**
19073	800/5A	1	15	std current transformer				**523.00**
19076	1000/5A	1	15	std current transformer				**523.00**
19085	1250/5A	1	30	std current transformer				**523.00**

ASK 61.4

type	ratio	class	Burden (VA)	description	max. hole diameter (mm) round	B/bar 1	B/bar 2	price
ASK 81.4	current transformers			*(H) 123.5 x (W) 120 x (D) 58 mm*				
21045	600/5A	1	10	std current transformer	Ø55	80x10	60x30	**849.00**
21049	750/5A	1	15	std current transformer				**849.00**
21053	800/5A	1	15	std current transformer				**849.00**
21056	1000/5A	1	15	std current transformer				**849.00**
21064	1250/5A	1	15	std current transformer				**849.00**
21072	1600/5A	1	30	std current transformer				**849.00**

ASK 103.3

ASK 103.41

121-1000...

121-10106

Current transformers **Class 1**

General specifications:

- Nominal frequency: 50Hz *(others on request)*
- Isolation class: E
- Nominal thermal short-time current: Ith = 60 x In
- Maximum operating voltage: Um ≤ 0.72 kV
- Over-current limiting factor: FS 5 up to 1500 A nominal current

MBS AG current transformers conform fully to: DIN VDE 0414/1 - DIN 42600 - IEC 61869/1+2 - VBG 4

type	ratio	class	Burden (VA)	description	max. hole diameter (mm) round	B/bar 1	B/bar 2	price
Busbar mounted current transformers		**5A secondary - class 1**						
ASK 101.4	current transformers			*(H) 144 x (W) 130 x (D) 58 mm*				
22055	1250/5A	1	30	std current transformer	Ø70	100x10	80x30	**959.00**
22062	1600/5A	1	30	std current transformer				**959.00**
22070	2000/5A	1	30	std current transformer				**959.00**
ASK 103.3	current transformers			*(H) 187.5 x (W) 172 x (D) 52 mm*				
23058	1600/5A	1	30	std current transformer	Ø85	100x30	80x50	**1 100.00**
23062	2000/5A	1	30	std current transformer				**1 100.00**
23066	2500/5A	1	30	std current transformer				**1 100.00**
23070	3000/5A	1	30	std current transformer				**1 100.00**
Rectangular hole for vertically mounted busbars								
ASK 103.41	current transformers			*(H) 150 x (W) 98.5 x (D) 58 mm*				
97054	500/5A	1	5	std current transformer	Ø40	100x40	–	**2 020.00**
97056	600/5A	1	5	std current transformer				**2 020.00**
97058	750/5A	1	5	std current transformer				**2 020.00**
97060	800/5A	1	10	std current transformer				**2 020.00**
97062	1000/5A	1	15	std current transformer				**2 020.00**
97066	1250/5A	1	15	std current transformer				**2 020.00**
ASK 128.4	current transformers			*(H) 150 x (W) 98.5 x (D) 58 mm*				
94056	1250/5A	1	15	std current transformer	Ø38	128x38	–	**2 840.00**
94058	1500/5A	1	30	std current transformer				**3 170.00**
94060	2000/5A	1	30	std current transformer				**3 310.00**
94062	2500/5A	1	30	std current transformer				**3 310.00**

Accessories for current transformers

55013	DIN clip	DIN-rail mounting clip for current transformers	ASR 20.3	**141.00**
55011	DIN clip	DIN-rail mounting clip for current transformers	ASK 30.3	**141.00**
55012	DIN clip	DIN-rail mounting clip for current transformers	ASK 41.4	**141.00**

Rogowski coils and integrator

FASK series - Rogowski coils

As well as conventional CTs, Rogowski coils can be used for measuring current and are easy to attach and removed without disconnecting the power circuit.

- Certification: Complies with EMC EN 61326-1:2006
- Insulation voltage: Coil - 3000V / Supply cable: 1000V
- Transmission ratio: 100 mV/kA @ 50 Hz
- Operating temperature: -30 to +80ºC

type	coil length (mm)	coil window size (mm)	description	cable length	price
121-10004	665	200	1 x Rogowski coil	3 m	**4 340.00**
121-10005	965	300	1 x Rogowski coil	3 m	**4 340.00**

Other sizes on request

ROI-3 integrator *for above Rogowski coil*

- Accuracy: 0.5% at 1% to 110% of the primary rated current
- Supply voltage: 24 VDC
- Dimensions: 114 x 100 x 22.5 mm

type	ratio	no of phases	description	module width	price
121-10106	2000/1A	3	integrator for Rogowski coil	22.5 mm	**8 430.00**
121-10107	4000/1A	3	integrator for Rogowski coil	22.5 mm	**8 430.00**
121-10108	6000/1A	3	integrator for Rogowski coil	22.5 mm	**8 430.00**

Above ZAR prices do not include VAT. E&OE

ASK 41.4

ASK 61.4

ASK 103.3

ASK 51.4

Current transformers …/5A Class 0.2 and 0.5

Modern meters and network analysers provide higher accuracy levels, requiring more accurate current transformers. We introduce a range of high accuracy and reliability class 0.2s and 0.5 current transformers.

MBS AG current transformers conform fully to: IEC 60044 / DIN VDE 0414/1 - DIN 42600-2

type	ratio	class	Burden (VA)	description	max. hole diameter (mm) round	B/bar 1	B/bar 2	price
Busbar mounted current transformers				**5A secondary - Class 0.5**				
ASK 41.4	current transformers			*(H) 85.5 x (W) 71 x (D) 58 mm*				
13085	200/5A	0.5	5	std current transformer	Ø32	40x10	30x15	**888.00**
13086	250/5A	0.5	5	std current transformer				**888.00**
13087	300/5A	0.5	10	std current transformer				**888.00**
13088	400/5A	0.5	10	std current transformer				**888.00**
13089	500/5A	0.5	15	std current transformer				**888.00**
13090	600/5A	0.5	15	std current transformer				**888.00**
13031	800/5A	0.5	10	std current transformer				**888.00**
ASK 51.4	current transformers			*(H) 101.5 x (W) 86 x (D) 58 mm*				
16154	600/5A	0.5	15	std current transformer	Ø44	50x12	40x20	**1 100.00**
16203	750/5A	0.5	15	std current transformer				**1 100.00**
16033	800/5A	0.5	15	std current transformer				**1 100.00**
16036	1000/5A	0.5	15	std current transformer				**1 100.00**
ASK 61.4	current transformers			*(H) 108.5 x (W) 96 x (D) 58 mm*				
19031	800/5A	0.5	15	std current transformer	Ø44	63x10	50x20	**1 210.00**
19034	1000/5A	0.5	15	std current transformer				**1 210.00**
19101	1250/5A	0.5	30	std current transformer				**1 210.00**
ASK 81.4	current transformers			*(H) 126.5 x (W) 120 x (D) 58 mm*				
21023	1000/5A	0.5	15	std current transformer	Ø55	80x10	50x30	**1 630.00**
21029	1250/5A	0.5	15	std current transformer				**1 630.00**
21035	1600/5A	0.5	15	std current transformer				**1 630.00**
ASK 103.3	current transformers			*(H) 187.5 x (W) 172 x (D) 52 mm*				
23026	1600/5A	0.5	15	std current transformer	Ø85	100x30	80x50	**2 580.00**
23029	2000/5A	0.5	30	std current transformer				**2 580.00**
23032	2500/5A	0.5	30	std current transformer				**2 580.00**
23035	3000/5A	0.5	30	std current transformer				**2 580.00**
Busbar mounted current transformers				**5A secondary - Class 0.2s**				
ASK 41.4	current transformers			*(H) 85.5 x (W) 71 x (D) 58 mm*				
V24-1704D	200/5A	0.2s	2.5	std current transformer	Ø32	40x10	30x15	**3 690.00**
V24-1804F	250/5A	0.2s	5	std current transformer				**3 690.00**
V24-1904F	300/5A	0.2s	5	std current transformer				**3 690.00**
V24-2004H	400/5A	0.2s	10	std current transformer				**3 690.00**
V24-2104H	500/5A	0.2s	10	std current transformer				**3 410.00**
V24-2204F	600/5A	0.2s	5	std current transformer				**3 690.00**
ASK 51.4	current transformers			*(H) 98.5 x (W) 86 x (D) 58 mm*				
V34-2404H	800/5A	0.2s	10	std current transformer	Ø44	50x12	40x20	**3 000.00**
V34-2504J	1000/5A	0.2s	15	std current transformer				**3 000.00**
ASK 61.4	current transformers			*(H) 105.5 x (W) 96 x (D) 58 mm*				
V41-2704J	1250/5A	0.2s	15	std current transformer	Ø44	60x10	50x20	**3 710.00**
V41-2804J	1600/5A	0.2s	15	std current transformer				**3 710.00**
ASK 123.3	current transformers			*(H) 184.8 x (W) 172 x (D) 52 mm*				
V56-2704F	1250/5A	0.2s	5	std current transformer	Ø100	120x30	100x50	**5 870.00**
V56-2904J	1600/5A	0.2s	15	std current transformer				**4 510.00**
V56-3004J	2000/5A	0.2s	15	std current transformer				**4 510.00**
V56-3204J	2500/5A	0.2s	15	std current transformer				**4 510.00**
V56-3304J	3000/5A	0.2s	15	std current transformer				**4 510.00**

WSK 40

SUSK 4

ASK 41.4

ASK 61.4

ASK 103.3

type	ratio	class	Burden (VA)	description	dimensions (mm) (H)	(W)	(D)	price
Primary wound current transformers				**5A secondary - class 1**				
WSK 30	*primary wound current transformers*							
30022	5/5A	1	5	wound current transformer	79	61	35	**1 330.00**
30024	10/5A	1	5	wound current transformer	79	61	35	**1 330.00**
30026	15/5A	1	5	wound current transformer	79	61	35	**1 330.00**
30028	20/5A	1	5	wound current transformer	79	61	35	**1 330.00**
WSK 40	*primary wound current transformers*							
31070	25/5A	1	10	wound current transformer	89	71	45	**1 550.00**
31074	30/5A	1	10	wound current transformer	89	71	45	**1 550.00**
Summation current transformers				**5A secondary - class 1**				
KSU 2/3	*summation current transformers*							
41015	5+5/5A	1	10	summation transformer	94	127	57	**2 190.00**
41031	5+5+5/5A	1	10	summation transformer	94	127	57	**3 040.00**
SUSK 4	*summation current transformers*							
40027	5+5+5+5/5A	1	10	summation transformer	137	156	65	**4 110.00**

type	ratio	class	Burden (VA)	description	max. hole diameter (mm) round	B/bar 1	B/bar 2	price
Busbar mounted current transformers				**1A secondary - class 1**				
ASK 41.4	current transformers			*(H) 85.5 x (W) 71 x (D) 58 mm*				
13239	75/1A	1	1.5	std current transformer	Ø32	40x10	30x15	**624.00**
13244	100/1A	1	2.5	std current transformer				**624.00**
13248	150/1A	1	5	std current transformer				**624.00**
13250	200/1A	1	5	std current transformer				**624.00**
13254	250/1A	1	10	std current transformer				**624.00**
13257	300/1A	1	10	std current transformer				**624.00**
13262	400/1A	1	15	std current transformer				**624.00**
13266	500/1A	1	15	std current transformer				**624.00**
13270	600/1A	1	15	std current transformer				**624.00**
13273	750/1A	1	15	std current transformer				**624.00**
13277	800/1A	1	15	std current transformer				**624.00**
ASK 51.4	current transformers			*(H) 85.5 x (W) 71 x (D) 58 mm*				
16260	500/1A	1	15	std current transformer	Ø44	50x10	40x30	**834.00**
16264	600/1A	1	15	std current transformer				**834.00**
16268	750/1A	1	15	std current transformer				**834.00**
16271	800/1A	1	15	std current transformer				**834.00**
16275	1000/1A	1	15	std current transformer				**834.00**
ASK 61.4	current transformers			*(H) 105.5 x (W) 96 x (D) 58 mm*				
19265	600/1A	1	15	std current transformer	Ø44	60x10	50x30	**819.00**
19269	750/1A	1	15	std current transformer				**819.00**
19273	800/1A	1	15	std current transformer				**819.00**
19285	1250/1A	1	30	std current transformer				**819.00**
ASK 81.4	current transformers			*(H) 123.5 x (W) 120 x (D) 58 mm*				
21253	800/1A	1	15	std current transformer	Ø55	80x10	60x30	**1 440.00**
21256	1000/1A	1	15	std current transformer				**1 440.00**
21264	1250/1A	1	15	std current transformer				**1 440.00**
21272	1600/1A	1	30	std current transformer				**1 440.00**
ASK 103.3	current transformers			*(H) 185 x (W) 172 x (D) 52 mm*				
23251	1250/1A	1	30	std current transformer	Ø85	100x30	80x50	**1 220.00**
23258	1600/1A	1	30	std current transformer				**1 220.00**
23262	2000/1A	1	30	std current transformer				**1 220.00**
23266	2500/1A	1	30	std current transformer				**1 220.00**
23270	3000/1A	1	30	std current transformer				**1 220.00**

Above ZAR prices do not include VAT. E&OE

KBR 28

KBU 23

KBU 816

Split-core current transformers

The split measuring system facilitates simple installation into existing panel boards without additional mounting requirements. Simply open the locking mechanism of the current transformer place, around the primary conductor and lock ensuring that the circuit is closed. Once secondary conductors are connected and the unit is ready for operation.

MBS AG current transformers conform fully to: DIN VDE 0414/1 - DIN 42600 - IEC 61869/1+2 - VBG 4

type	ratio	class	Burden (VA)	description	hole diameter (mm) round	B/bar	price
KBR series - Split-core CTs				**5A secondary - class 1**			
• Delivered with 0.5m connection cable 2 x 1.5 mm²							
KBR 18L	split-core current transformers			*(H) 80.1 x (W) 49 x (D) 59 mm*			
18L-5001	150/5A	1	1	split-core current transformer	Ø18.4	–	**1 920.00**
18L-5002	200/5A	1	1.5	split-core current transformer			**1 920.00**
18L-5004	250/5A	1	2	split-core current transformer			**1 920.00**
KBR 28	split-core current transformers			*(H) 79.5 x (W) 49 x (D) 59 mm*			
28-5002	300/5A	1	1.5	split-core current transformer	Ø26	–	**2 100.00**
28-5003	400/5A	1	2.5	split-core current transformer			**2 100.00**
28-5005	500/5A	1	3.0	split-core current transformer			**2 100.00**
KBR 42	split-core current transformers			*(H) 96 x (W) 67 x (D) 69 mm*			
42-5003	500/5A	1	5	split-core current transformer	Ø42.4	–	**2 270.00**
42-5005	600/5A	1	5	split-core current transformer			**2 270.00**
42-5009	800/5A	1	5	split-core current transformer			**2 270.00**
42-5011	1000/5A	1	5	split-core current transformer			**2 270.00**
KBU series - Split-core CTs				**5A secondary - class 3 / 1 / 0.5**			
KBU 23	split-core current transformers			*(H) 106 x (W) 93 x (D) 58 mm*			
80048	100/5A	3	1.25	split-core current transformer	Ø20	20x30	**2 340.00**
80030	150/5A	3	1.50	split-core current transformer			**2 340.00**
80031	200/5A	3	2.50	split-core current transformer			**2 340.00**
80044	250/5A	1	3.75	split-core current transformer			**2 340.00**
KBU 58	split-core current transformers			*(H) 158 x (W) 125 x (D) 58 mm*			
80061	250/5A	1	1.5	split-core current transformer	Ø 50	50x80	**2 720.00**
80062	300/5A	1	2.5	split-core current transformer			**2 720.00**
80063	400/5A	1	2.5	split-core current transformer			**2 720.00**
80038	400/5A	0.5	2.5	split-core current transformer			**3 410.00**
80064	500/5A	1	5.0	split-core current transformer			**2 720.00**
80054	500/5A	0.5	2.5	split-core current transformer			**3 410.00**
80065	600/5A	1	5.0	split-core current transformer			**2 720.00**
80055	600/5A	0.5	2.5	split-core current transformer			**3 410.00**
80067	800/5A	1	7.5	split-core current transformer			**2 720.00**
80057	800/5A	0.5	2.5	split-core current transformer			**3 410.00**
80068	1000/5A	1	10	split-core current transformer			**2 720.00**
80058	1000/5A	0.5	5	split-core current transformer			**3 410.00**
KBU 812	split-core current transformers			*(H) 198 x (W) 155 x (D) 58 mm*			
80098	1000/5A	1	10	split-core current transformer	Ø80	120x80	**3 230.00**
80100	1250/5A	1	15	split-core current transformer			**3 230.00**
80080	1250/5A	0.5	7.5	split-core current transformer			**3 810.00**
KBU 816	split-core current transformers			*(H) 243 x (W) 195 x (D) 79 mm*			
80147	1600/5A	1	15	split-core current transformer	Ø 80	160 x 80	**3 800.00**
80115	1600/5A	0.5	15	split-core current transformer			**4 390.00**
80149	2000/5A	1	15	split-core current transformer			**3 800.00**
80117	2000/5A	0.5	15	split-core current transformer			**4 390.00**
80151	2500/5A	1	15	split-core current transformer			**3 800.00**
80120	2500/5A	0.5	15	split-core current transformer			**4 390.00**
80153	3000/5A	1	30	split-core current transformer			**3 800.00**
80122	3000/5A	0.5	15	split-core current transformer			**4 390.00**
80155	4000/5A	1	30	split-core current transformer			**3 800.00**
80157	5000/5A	1	30	split-core current transformer			**3 800.00**

Available with 1A secondary on request

IMN1...

IBR1...

IBR3...

FL-2/001-7

FL-2/060-7

type	ratio	description	class	VA	dimensions (mm) (H)	(W)	(D)	price
IMN1 ring type transformers			*Ø round conductor: 32 mm*					
IMN1/05	50/5A	ring current transformer	3	1.25	87	64	42	**235.00**
IMN1/06	60/5A	ring current transformer	3	1.25	87	64	42	**236.00**
IMN1/07	75/5A	ring current transformer	3	1.25	87	64	42	**238.00**
IMN1/10	100/5A	ring current transformer	1	2.5	87	64	42	**238.00**
IMN1/12	125/5A	ring current transformer	1	2.5	87	64	42	**239.00**
IMN1/15	150/5A	ring current transformer	1	3.75	87	64	42	**240.00**
IMN1/16	160/5A	ring current transformer	1	3.75	87	64	42	**242.00**
IMN1/20	200/5A	ring current transformer	1	5	87	64	42	**252.00**
IMN1/25	250/5A	ring current transformer	1	7.5	87	64	42	**257.00**
4 - 20 mA version on request								
IMN2 current transformers								
Primary bar conductor: *40 x 12.5 mm*			*Ø round conductor: 38 mm*					
IMN2/16	160/5A	ring current transformer	1	5	99	75	42	**321.00**
IMN2/20	200/5A	ring current transformer	1	10	99	75	42	**330.00**
IMN2/25	250/5A	ring current transformer	1	10	99	75	42	**352.00**
IMN2/30	300/5A	ring current transformer	1	15	99	75	42	**364.00**
IMN2/40	400/5A	ring current transformer	1	25	99	75	42	**386.00**
IMN2/50	500/5A	ring current transformer	1	30	99	75	42	**449.00**
IMN2/60	600/5A	ring current transformer	1	30	99	75	42	**450.00**
IBR1 current transformers								
Primary bar conductor: *60 x 20 mm*			*Ø round conductor: 60 mm*					
IBR1/06	600/5A	ring current transformer	0.5	7.5	115	104	45	**523.00**
IBR1/08	800/5A	ring current transformer	0.5	15	115	104	45	**519.00**
IBR1/10	1000/5A	ring current transformer	0.5	30	115	104	45	**554.00**
IBR1/12	1250/5A	ring current transformer	0.5	30	115	104	45	**593.00**
IBR3 current transformers								
Primary bar conductor: *100 x 30 mm*			*Ø round conductor: 110 mm*					
IBR3/12	1250/5A	ring current transformer	0.5	15	170	152	45	**787.00**
IBR3/16	1600/5A	ring current transformer	0.5	30	170	152	45	**878.00**
IBR3/20	2000/5A	ring current transformer	0.5	30	170	152	45	**884.00**
IBR3/25	2500/5A	ring current transformer	0.5	30	170	152	45	**894.00**
IBR3/30	3000/5A	ring current transformer	0.5	30	170	152	45	**958.00**
IBNP primary wound current transformers								
IBNP/05	5/5A	primary wound CT	0.5	5	111	68	43	**345.00**
IBNP/10	10/5A	primary wound CT	0.5	5	111	68	43	**345.00**
IBNP/15	15/5A	primary wound CT	0.5	5	111	68	43	**345.00**
IBNP/20	20/5A	primary wound CT	0.5	5	111	68	43	**345.00**
IBNP/25	25/5A	primary wound CT	0.5	5	111	68	43	**345.00**
IBNP/30	30/5A	primary wound CT	0.5	5	111	68	43	**345.00**
IBNP/40	40/5A	primary wound CT	0.5	5	111	68	43	**345.00**

DC shunts — **75mV output**

- Accuracy: 0.50%
- Overload: 120% continuously, 1000% for 5 seconds

type	current	output	description	dimensions (mm) (H)	(W)	(D)	mount holes centre	mount holes Ø	price
FL-2/001-7	10A	75mV	DC shunts	120	25	14	100	6.5	**208.00**
FL-2/002-7	20A	75mV	DC shunts	120	25	14	100	8.5	**208.00**
FL-2/003-7	30A	75mV	DC shunts	120	25	14	100	8.5	**208.00**
FL-2/004-7	40A	75mV	DC shunts	120	25	14	100	8.5	**208.00**
FL-2/005-7	50A	75mV	DC shunts	120	25	14	100	8.5	**208.00**
FL-2/006-7	60A	75mV	DC shunts	109	23	11	85	8.5	**378.00**
FL-2/007-7	75A	75mV	DC shunts	109	23	11	85	8.5	**378.00**
FL-2/010-7	100A	75mV	DC shunts	109	23	11	85	8.5	**434.00**
FL-2/015-7	150A	75mV	DC shunts	118	22	22	85	8.5	**471.00**
FL-2/020-7	200A	75mV	DC shunts	118	22	22	85	8.5	**490.00**
FL-2/025-7	250A	75mV	DC shunts	127	46	22	100	10.5	**510.00**
FL-2/030-7	300A	75mV	DC shunts	127	46	22	100	10.5	**585.00**
FL-2/040-7	400A	75mV	DC shunts	127	46	22	100	10.5	**792.00**
FL-2/050-7	500A	75mV	DC shunts	127	46	22	100	10.5	**981.00**
FL-2/060-7	600A	75mV	DC shunts	127	76	22	100x50	4x10.5	**1 230.00**
FL-2/075-7	750A	75mV	DC shunts	127	76	22	100x50	4x10.5	**1 470.00**
FL-2/100-7	1000A	75mV	DC shunts	127	96	22	100x50	4x10.5	**1 890.00**

60mV available on request

Intermediate and larger sizes up to 10 000A also available on request

Above ZAR prices do not include VAT. E&OE

Notes

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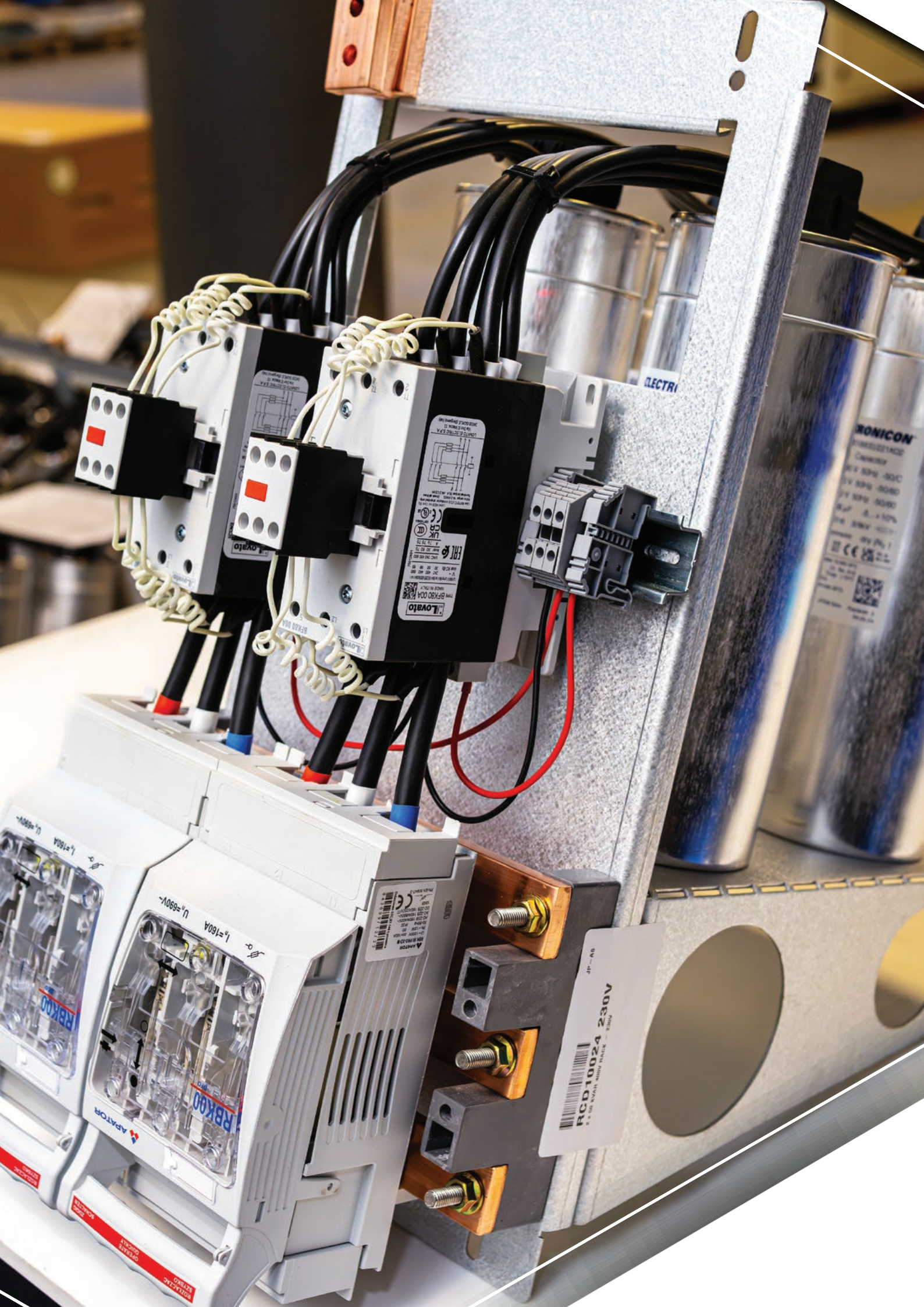
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RCD10024 230V

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Power Quality

Interactive Catalogue

Power Quality

Engine & Generator controllers

F-1...2

Automatic transfer switch controllers

F-3

Automatic battery chargers

F-4

Power factor controllers

F-5...6

Power factor correction (rack systems)

F-7...8

Power factor correction (floor standing systems)

F-9...10

Power factor correction (wall mount systems)

F-11

Active power filters

F-13

Static var generators

F-14

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Scan the QR code for a short tutorial video.

Automatic mains failure (AMF) gen-set controllers

- Engine protection
- Programmable inputs and outputs / alarm properties
- Automatic starting of generator and load switching to stand-by emergency source in case of mains failure
- Supervision in “open transition” for contactors, motorised circuit breakers and changeover switches

RGK600

type	digital inputs	digital outputs	description	price
RGK600 series			144 x 144 mm panel mounting	
- Universal supply: 7…33 VDC - Display: Graphic LCD 128 x 80 pixels with backlight - Measurement voltage: 50…576 VAC / Rated voltage: 480 VAC L-L - Current input: 3PH, /5A or /1A - Single, two and three phase voltage control - L1-L2-L3-N - IR programming port on front panel for communication with PC - 3 analog resistance input for oil pressure, engine temperature or fuel level control - Customisable alarm text *(8 alarms)* - Non-volatile memory for event storage - Modbus-RTU and Modbus-ASCII protocols with expansion modules (***RGK610***)				
RGK600	4	6	basic AMF gen-set controller *with “W” or magnetic “pickup” for engine speed reading (no CANbus)*	**9 870.00**
RGK601	4	6	basic AMF gen-set controller *with CANbus-J1939 (no “W” or magnetic “pickup”)*	**10 500.00**
RGK610*	4	6	basic AMF gen-set controller *with “W” or magnetic “pickup” for engine speed reading (no CANbus)*	**10 900.00**
* *1 slot to accept plug-in expansion modules **EXP1010/1011/1012,** see controller accessories*				

RGK750

RGK700 series			180 x 240 mm panel mounting	
*As above **RGK600** but with the following additional features:* - Measurement voltage: 30…600 VAC / Rated voltage: 480 VAC L-L - Rated voltage: RGK700 - 600 VAC L-L / RGK750 - 480 VAC L-L - 1 USB/optical and Wi-Fi on front panel for programming and PC communication - PLC logic for inputs, outputs and internal status - Expansion bus with 2 slots for **EXP...** series expansion modules *(**RGK750** only)* - Calendar-clock (RTC) with backup reserve energy				
RGK700	6	7	grey AMF gen-set controller	**11 000.00**
RGK750	8	10	black AMF gen-set controller	**12 200.00**
RGK800 series			180 x 240 mm panel mounting	
*As above **RGK750** but with the following additional features:* - RS-485 communication (+ CANBUS) - Neutral current measurement range: 0.050…6A or 1.2A - 400Hz frequency support - 1 programmable analog input - Current leakage control - Expandable with rear plug-in expansion *(up to 3)* modules *(see controller accessories)*				
RGK800	8	10	fully featured AMF gen-set controller	**13 900.00**

RGK750 (2 modules)
RGK800 (3 modules)
RGK900 (4 modules)

RGK900

Paralleling controllers for *(mains - mains)* and *(generator - generator)*				
• Engine protection • Mains-generator “closed transition” synchronising • Mains-generator load sharing with source peak demand control • Generator paralleling supervision *(island mode with load sharing)*				
RGK900 series			180 x 240 mm panel mounting	
*As above **RGK800** but with the following additional features:* - Voltage measurement range: 50-720 VAC / Rated voltage: 600 VAC L-L - Frequency measurement range: 45…65Hz or 360…440Hz - Display: Graphic LCD 128 x 112 pixels with backlight - Customisable alarm text *(16 alarms)* - Modbus-RTU, Modbus-ASCII and Modbus-TCP communication protocols - 2 analog outputs for engine speed control *(governor)* / voltage regulator (AVR) - Built-in buzzer, multi-level passwords, sleep function				
RGK900SA	12	10	full featured stand alone gen-set controller	**44 100.00**
RGK900	12	10	mains-generator paralleling control	**44 800.00**
Control of mains, automatic transfer switching and paralleling on multiple generators controlled *by RGK900SA*				
RGK900MC	13	10	Mains-ATS *(Automatic Transfer Switching)* controller	**34 200.00**

Above ZAR prices do not include VAT. E&OE

Sam1 NFC Xpress

Stand alone gen-set controllers

- Engine protection
- Programmable alarm properties
- Programmable inputs and outputs
- Generator voltage and current control

NFC

RGK400SA

NFC

RGK420SA

RGK600SA

type	digital inputs	digital outputs	description	price
RGK400SA series			96 x 96 mm panel mounting	

RGK400SA and **RGK420SA** with NFC technology are suitable for simple applications where only control, motor starting and monitoring of the electrical power alternator *(stand-alone applications, i.e. without the presence of the network)* are required.

- Universal supply: 12 / 24 VDC
- Display: LCD icon display
- Measurement voltage: 5...576 VAC
- Rated voltage: 480 VAC L-L
- Current Input: 1PH, /5A or /1A
- Engine protection: *With "W" or magnetic "pickup" for engine speed reading*
- 1 analog resistance input for oil pressure / engine temperature or fuel level control
- Single, two and three phase voltage control - L1-L2-L3-N
- Customisable alarm text *(2 alarms)*
- IR programming port on front panel for communication with PC ***(CX01,** see controller accessories)*
- NFC technology for parameter setup via smartphone or tablet

RGK400SA	5+1 (E/stop)	5	stand alone gen-set controller	**4 650.00**
RGK420SA*	5+1 (E/stop)	5	stand alone gen-set controller	**5 290.00**

* *Incorporates 3 position key switch (OFF, local start, remote start)*

RGK400SA accessories

Expansion modules *(rear plug-in)*

EXP1040	additional - 2 digital / resistance inputs, 2 static outputs	**3 240.00**
EXP1041	additional - 2 thermocouple inputs, 2 static outputs	**3 390.00**
EXP8005	housing gasket to increase protection to IP65	**186.00**

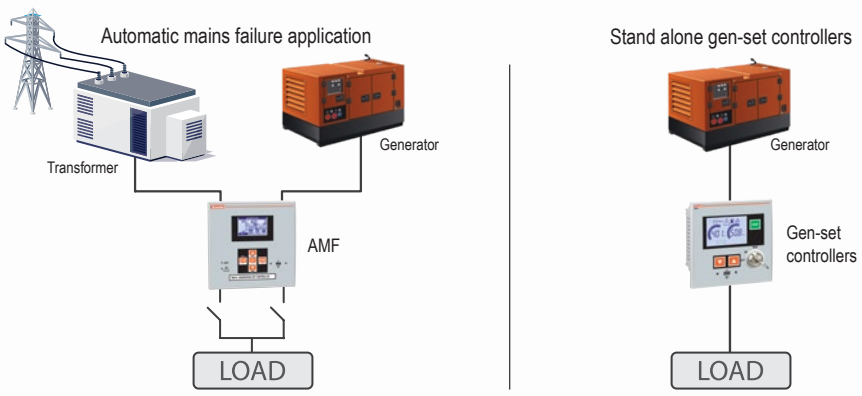
RGK600SA series			144 x 144 mm panel mounting	

*As above **RGK400SA** but with following additional features:*

- Universal supply: 12 / 24 VDC
- Display: Graphic LCD 128 x 80 pixels with backlight
- Measurement voltage: 50...576 VAC
- Rated voltage: 480 VAC L-L
- Current Input: 3PH, /5A or /1A
- Operating temperature: -30...+70°C
- 3 analog resistance input for oil pressure, engine temperature or fuel level control
- Customisable alarm text *(8 alarms)*
- No NFC technology
- Non-volatile memory for event storage
- Modbus-RTU and Modbus-ASCII protocols

RGK600SA	4	6	stand alone gen-set controller *with "W" or magnetic "pickup" for engine speed reading (no CANbus)*	**9 250.00**
RGK601SA	4	6	stand alone gen-set controller *with CANbus-J1939 (no "W" or magnetic "pickup")*	**9 800.00**

Engine / Generator controllers



Automatic Transfer Switch (ATS) controllers

- Tie-breaker management
- Remote control and supervision / Event logging
- Supervision of two or three three-phase power sources
- Automatic non-priority load management (ATL800, ATL900)
- Emergency demand supervision for stand-by generating sets
- Modbus-RTU, Modbus-ASCII and Modbus-TCP communication protocols
- IR programming port on front panel for communication with PC *(NFC on some models)*

Scan to watch video

ATL100

type	digital inputs	relay outputs	description	price
ATL100 series (econo)			*(no display)* *54 mm DIN mounting*	
ATL100 with its modular housing is suitable for monitoring two independent power sources and to manage switching between the two sources with single phase control. • Supply voltage: 110...230 VAC • Rated voltage: 110..230 VAC L-L • 2 single phase inputs and outputs L+N • Response thresholds of min and max voltage: 80% and 120% of nominal setting • LED indication: 2 x *(green)* presence of both input voltages, 1 x presence of output voltage 1 x *(red)* indicates presence voltage out of limits on inputs				
ATL100	2	3	single phase automatic transfer switch controller	**7 000.00**
ATL500 series (econo)			*(no display)* *144 x 144 mm panel mounting*	
The ATL500 is an automatic transfer switch that enables load commutation between two different source lines: a main line (LINE 1) and a standby or emergency secondary line (LINE 2). • Supply voltage: Self seeking power supply - 110...240 VAC LN • Measurement inputs: 3-ph+N *(suitable for 1 and 2 phase lines)* • Supported switching devices: Contactors and motorised changeovers • Output relay: 2 NO for contactors / 1 NC to start genset • Parameter setup: Via built-in NFC technology *(smartphone or tablet)* • Monitoring functions: Overvoltage, Undervoltage Phase failure Wrong phase sequence, Asymmetry, Over frequency Under frequency				
ATL500	2	3	3-ph+N automatic transfer switch controller	**7 000.00**
ATL600 series			*(with LCD)* *144 x 144 mm panel mounting*	
• AC power supply 110...240 VAC • Rated voltage: 100...480 VAC L-L • Management of two power sources • Measurement inputs for 3-ph+N voltage values *(suitable for 1 and 2-phase lines)* • 128 x 80 pixel backlit graphic LCD to view measurements, events and alarms				
ATL600	6	7	automatic transfer switch controller for 2 sources	**13 600.00**
ATL601*	6	7	automatic transfer switch controller for 2 sources	**13 600.00**
* *With 12/24 VDC supply*				

NFC

ATL 500

ATL601

ATL610 series

*As above **ATL600** but with following additional features:*

- Real time clock RTC
- Dual power supply *(110...240 VAC line and 12...24 VDC battery supply)*
- Expandable with I/O and communication modules

ATL610*	6	7	automatic transfer switch controller for 2 sources	**17 400.00**

* *2 slot to accept plug-in expansion modules **EXP1010/1011/1012/1013/1014,** see page **F-6***

ATL800 series			*(with backlit LCD)* *180 x 240 mm panel mounting*	

*As above **ATL610** but with following additional features:*

- Rated voltage: 100...600 VAC L-L
- With backlit graphic LCD display
- Management of 2 energy sources and 1 tie breaker
- Built-in NFC technology for parameter setup via smartphone or tablet
- Built-in RS-485 communication / Built-in programmable PLC logic
- Expandable with up to 3 rear plug-in expansion modules **EXP...** *(see controller accessories)*

ATL800	8	7	automatic transfer switch controller for 2 sources	**37 400.00**
ATL900 series			*(with backlit LCD)* *180 x 240 mm panel mounting*	

*As above **ATL800** but with following additional features:*

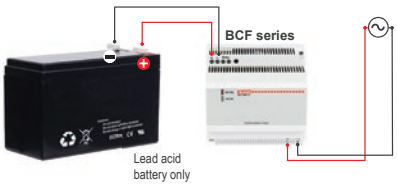
- Management of 3 energy power sources and 2 tie breakers
- 4 current inputs for the three phases and neutral
- 14 preconfigured system layouts
- 128 x 112 backlit graphic LCD to view measurements, events and alarms

ATL900	12	11	automatic transfer switch controller for 3 sources	**119 000.00**

NFC

ATL900

Above ZAR prices do not include VAT. E&OE



Battery chargers

- For lead acid battery
- Switching technology
- Automatic reset at end of alarm conditions
- Charging cycle in accordance with DIN 41773 standards

type	output voltage	output current	max. power consumption VA	max. power consumption W	description	dimensions (mm) (H)	(W)	(D)	price
BCF series			**Modular automatic switching battery chargers**						
• Alarm output relay *(3A 250 VAC)* AC1 duty • Modular DIN-rail mounting *(aligns with standard MCB's)* or chassis mount • Wide auxiliary supply range 100...240 VAC (±10%) 50/60Hz • Protection: - Mains input fuse *(non replaceable)* - Battery output fuse - Electronic lock in case of short circuit on battery terminals, reverse battery polarity and output overload • LED indication of: - Correct output voltage - Reverse battery polarity									
BCF025012	12V	2.5A	80	40	auto battery charger	96	90	56	**2 010.00**
BCF045012	12V	4.5A	150	70	auto battery charger	96	90	56	**2 490.00**
BCF012524	24V	1.25A	80	39	auto battery charger	96	90	56	**2 010.00**
BCF025024	24V	2.5A	150	77	auto battery charger	96	90	56	**2 490.00**
BCG series			**DIN-rail mount switching battery chargers**						
• High efficiency • Alarm output relay *(5A 30 VDC duty)* • Wide auxiliary supply range 110...240 VAC (±10%) 50/60Hz • DIN-rail or chassis mounting *(can be mounted vertically with adaptor)* • Boost signal controlled by external contact • Hiccup function for battery recharging when its voltage is lower than 50% rated value • Maximum charging current limiting trimmer 20...100% *(adjustable from front)* • Protection: - Mains input fuse - Electronic lock in case of short circuit on battery terminals, reverse battery polarity and output overload • LED indication of: - Power ON - Charging operation I>30% Ic - Overload or short circuit condition - Reverse battery polarity									
BCG0612	12V	6A	230	97	auto battery charger	150	162	63	**3 840.00**
BCG1212	12V	12A	284	190	auto battery charger	150	213	63	**7 430.00**
BCG0524	24V	5A	364	158	auto battery charger	150	162	63	**3 840.00**
BCG1024	24V	10A	630	311	auto battery charger	150	213	63	**7 430.00**
Accessories for above BCG battery chargers									
BCGX00	vertical side mount adaptor *(for space saving)* for ***BCG0612*** and ***BCG0524***								**139.00**
BCE series			**Linear battery chargers**						
• Linear technology • Auxiliary supply voltage: 220...240 VAC (±10%) 50/60Hz • Charging current: 30 - 100% Ie *(adjustable)* • Protection: - Mains input fuse *(except **BCE2V524** and **BCE0312**)* - Battery output fuse - Electronic lock in case of short circuit on battery terminals, reverse Battery polarity output overload (<0.5 Ue) and disconnected battery • LED indication of: - Power ON - Charge (I>0.2 Ic) - Alarm for protection tripping • Alarm output: Static NPN transistor **BCE2V5** and **BCE03** - others relay *(5A 250 VAC)*									
BCE0312	12V	3	117	–	auto battery charger	93	134	100	**5 760.00**
BCE0612	12V	6	222	–	auto battery charger	130	192	140	**9 280.00**
BCE1212	12V	12	400	–	auto battery charger	230	192	140	**13 700.00**
BCE2V524	24V	2.5	166	–	auto battery charger	93	134	100	**6 110.00**
BCE0524	24V	5	317	–	auto battery charger	130	192	140	**9 990.00**
BCE1024	24V	10	610	–	auto battery charger	230	192	140	**15 200.00**

BCF...

BCG ...

BCE...

DCRL...

DCRL / DCRG Power Factor Controllers

DCRL/DCRG controllers incorporate latest technological advanced monitoring to provide accurate measurement and control of network parameters in power factor correction applications, providing total protection of capacitors and systems.

General features:

- Suitable for medium voltage systems (with VT's)
- High accuracy (TRMS) measurements with configurable alarms
- Wide voltage measurement range: 50...720 VAC L-L, 50....415 VAC L-N
- Expandable through clip-in expansion modules *(I/Os, Comm ports etc.)*
- Front mounted optic interface port for programming, data download, diagnostics

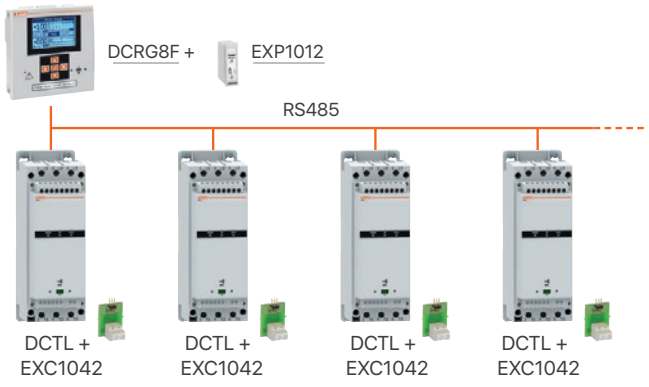
type	number of steps	expand to:	description	dimensions (mm) (H)	(W)	(D)	price
DCRL controllers 3, 5 and 8 step			*(one CT connection)*				
DCRL series power factor controllers with advanced functionality in a dedicated ultra compact housing, combine modern front design with ease of mounting and expendability.							
- Reactive power measurement per step installed							
- 3, 5 or 8 steps *(expandable with expansion module)*							
- Voltage and current THD with single harmonic analysis up to 15° order							
- Backlit icon LCD display *(alarm codes with scrolling text)* 128 x 80 pixels							
3 and 5 step controllers			*1 expansion slot*				
DCRL 3	3 step	6 step	panel mount power factor controller	96	96	65	**5 120.00**
DCRL 5	5 step	8 step	panel mount power factor controller	96	96	65	**5 920.00**
8 step controllers			*2 expansion slots*				
DCRL 8	8 step	14 step	panel mount power factor controller	144	144	44	**8 550.00**

DCRG 8

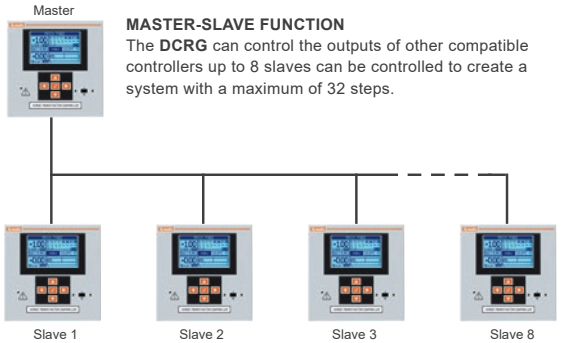
DCRG controllers 8 step			*single and three-phase CT connection*				
DCRG series power factor controllers are designed to satisfy technical characteristics of modern electrical installation requirements in all industries and working conditions, to detect critical operating conditions and offer total protection of power factor systems.							
- Recording of number of connections per step							
- Capacitor over-current protection on all three phases							
- Voltage and current THD with single harmonic analysis up to 31° order							
- 8 steps *(expandable by up to another 10 steps with plug-in expansion modules)*							
- Backlit graphic LCD display *(permits reading in bar-graph and wave form format)*							
- Configurable for fast dynamic *(thyristor)* switching or a combination of static and relay							
- Quick CT programming function / Automatic identification of direction of CT current flow							
- Calendar-clock (RTC) with backup reserve for event logging: Alarms, setup changes, etc.							
- Connection to 1/3 ph lines, 3 ph + N and co-generation systems with 4 quadrant operation							
- Three current inputs permit per phase analysis of all electrical parameters in the installation							
8 relay step controller			*4 expansion slots*				
DCRG 8	8 step	18 step	panel mount power factor controller	144	144	44	**11 800.00**
8 thyristor static step controller *(expandable up to 24 steps with expansion modules)*							
DCRG 8F	8 step	24 step	static step power factor controller	144	144	44	**13 700.00**
For expansion modules options, see ***F-6***							

DCRG 8F

DCRG - Power factor controllers



The thyristor modules type **DCTL** can be connected to the automatic power factor controller type **DCRG8F** with the RS485 optional port (code **EXC1042**), obtaining a simple and linear wiring.



MASTER-SLAVE FUNCTION
The **DCRG** can control the outputs of other compatible controllers up to 8 slaves can be controlled to create a system with a maximum of 32 steps.

Above ZAR prices do not include VAT. E&OE

Sam1 NFC Xpress

EXP...

CX02

CX01

Expansion modules for PFC controllers

EXP... series expansion modules add extra functionality to following panel mount products:

DMG 600/7000/8000/9000 - Digital multimeters and power analysers
DCRL and **DCRG** - Automatic power factor controllers
ATL 610/800/900 - Automatic transfer controllers
RGK 400/600/750/800/900 - Generator controllers

type	inputs	outputs	description	price
EXP expansion modules			*(plug into rear of controller to add more functionality)*	
Inputs/Outputs				
EXP1006	–	2 relay	to increase number of capacitor steps	**1 140.00**
EXP1007	–	3 relay	to increase number of capacitor steps	**2 610.00**
EXP1000	4 digital	–	opto-isolated digital inputs	**2 310.00**
EXP1001	–	4 static	opto isolated to increase static steps	**2 310.00**
EXP1002	2 digital	2 static	opto-isolated digital inputs and static outputs	**2 760.00**
EXP1003	–	2 relay	outputs rated 5A 250 VAC	**2 760.00**
EXP1004	2 analog	–	opto-isolated PT100, 0/4-20mA, 0-10V, 0…±5V	**8 280.00**
EXP1005	–	2 analog	opto-isolated 0/4-20mA or 0-10V or 0…±5V	**8 280.00**
EXP1016	3ph (A)	–	+ 2 x NTC for capacitor bank protection	**7 450.00**
Communication				
EXP1010	USB	–	opto-isolated USB interface	**4 140.00**
EXP1011	RS-232	–	opto-isolated RS-232 interface	**4 140.00**
EXP1012	RS-485	–	opto-isolated RS-485 interface	**2 090.00**
EXP1013	Ethernet	–	opto-isolated Ethernet with web server function	**5 130.00**
EXP1014	Profibus	–	opto-isolated Profibus-DP interface	**17 200.00**
Accessories				
51C2			PC - DCRL/DCRG connecting cable + **EXP1011** module	**1 260.00**
C9 cable			PC - Analog modem connecting cable	**3 020.00**
CX01			PC - controller USB dongle with connecting cable	**4 160.00**
CX02			PC - Controller Wi-Fi dongle for programming, data download, diagnostics	**10 400.00**

Monitor the key aspects of your Power Factor Correction system

POLAR CLOUD

Enhance efficiency and control with advanced Polar Cloud remote monitoring solution for floor-standing power factor correction systems. Instantly access critical data, make quick adjustments, and optimise energy usage without the need for constant on-site supervision. Prevent costly downtimes and address potential issues proactively.

Polar Cloud allows you to monitor:

- **Power Factor:** View power factor and adjust power factor setpoints
- **Total Harmonic Distortion:** Monitor THDi and THDu levels
- **Voltage and Current:** Gain instant access to voltage and current data
- **Temperature:** Keep your equipment safe by monitoring temperature levels remotely
- **Capacitor Status:** Stay informed about the health of your capacitors

Monitor what matters most with Polar Cloud - available now on request

275.525-701400

MKPg-275 series - Three-phase cylindrical capacitors

MKPg-275 three-phase power capacitors, dry self-healing dielectric, gas filled (N2) protecting windings from environmental influences extending life expectancy, permitting mounting in any position.

- Capacitance tolerance: -5...+10%
- Max. permissible current: 1.5...2 In
- Max. inrush current: 300 x In
- Dielectric losses: <0.25 W/kvar
- Impregnant *(filling):* Inert insulation gas (N2) completely harmless to the environment
- Mounting: M12 base mounted fixing stud *(any position)*
- Protection: Overpressure disconnection facility
- Standards: IEC/EN 60831, VDE 0560-46/47, CSA C22.2 - 190-M1985, UL - 810, GOST 1282-88

275.186-405600

400...440V three-phase capacitors *Supplied with discharge resistors*

- Rated voltage: 400...440V, 50 Hz
- Temp category: **-50/D** -50°C to +55°C Max. *(24 hr average 45°C - annual average 35°C)*
- Duty: Continuous *(life expectancy > 100.000 h)*

type	kvar at: 400V	440V	480V	CN µF 3 x	description	dimensions (mm) (H)	Ø	price
275.548-408200	**12.5**	15	–	82	3-ph cylindrical capacitor	245	75	**2 040.00**
275.269-416600	**25**	30	–	166	3-ph cylindrical capacitor	280	95	**3 060.00**
275.39B-527400*	**41**	50	–	274	3-ph cylindrical capacitor	295	136	**5 610.00**
275.105-10068*	discharge resistor module for **275.39B-527400** capacitor					3 x 68 kΩ		**99.00**

400...480V three-phase industrial capacitors

- For PFC equipment in mains with severe operating conditions or substantial voltage fluctuations.
- Temp category: **60** -50°C...+60°C Max. *(24 hr average 50°C - annual average 40°C)*
- Duty: Continuous *(life expectancy > 150,000 h)*
- Supplied with discharge resistors *(except * require separate discharge module)*

275.523-502800	**4.2**	5	6.1	33	3-ph cylindrical capacitor	196	60	**1 640.00**
275.545-504000	**6.2**	7.5	8.7	40	3-ph cylindrical capacitor	164	75	**1 900.00**
275.546-505800	**8.3**	10	12.5	58	3-ph cylindrical capacitor	230	75	**1 900.00**
275.546-506800	**10.0**	12.5	15.0	68	3-ph cylindrical capacitor	230	75	**2 070.00**
275.256-508300	**12.5**	15.0	18.0	83	3-ph cylindrical capacitor	230	85	**2 270.00**
275.266-511100	**16.8**	20.0	24.1	111	3-ph cylindrical capacitor	230	95	**2 830.00**
275.278-513700	**20.0**	25.0	30.0	137	3-ph cylindrical capacitor	245	100	**2 850.00**
275.279-516600	**25.0**	30.0	36.0	166	3-ph cylindrical capacitor	280	100	**2 980.00**
275.389-519900*	**30.0**	36.0	43.0	199	3-ph cylindrical capacitor	280	116	**3 620.00**
275.389-522100*	**33.3**	40.0	48.0	221	3-ph cylindrical capacitor	280	116	**4 030.00**
275.100-10120*	discharge resistor module for **275.389-519900** capacitor					3 x 120 kΩ		**90.00**
275.105-10100*	discharge resistor module for **275.389-522100** capacitor					3 x 100 kΩ		**105.00**

275.396-715401

525V three-phase capacitors

- Temperature category: **D** -40°C...+55°C (Max: 24 hr average 45°C - annual ave 35°C)
- Duty: Continuous *(life expectancy 480V >150000 h 525V >100000 h)*
- Supplied with discharge resistors *(except * require separate discharge module)*

type	kvar at: 400V	480V	**525V**	CN µF 3 x	description	dimensions (mm) (H)	Ø	price
275.525-701400	2.2	3.0	**3.6**	14	3-ph cylindrical capacitor	164	60	**1 480.00**
275.535-601900	3	4.1	**5**	19	3-ph cylindrical capacitor	164	65	**1 550.00**
275.546-703800	6.2	8.3	**10**	38	3-ph cylindrical capacitor	230	75	**1 930.00**
275.548-605800	9.4	12.5	**15**	58	3-ph cylindrical capacitor	245	75	**1 980.00**
275.266-607700	12.5	16.7	**20**	77	3-ph cylindrical capacitor	230	95	**2 690.00**
275.269-611500	18.6	25.0	**30**	115	3-ph cylindrical capacitor	280	95	**3 070.00**
275.396-715401*	25	33.4	**40**	154	3-ph cylindrical capacitor	230	136	**4 490.00**
275.105-10100*	discharge resistor module for 40 kvar 525V capacitor					3 x 100 kΩ		**105.00**

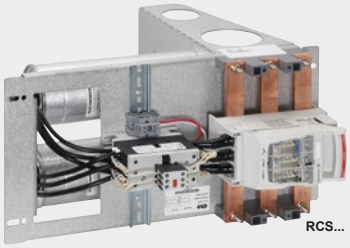
275.100-10120

690V three-phase capacitors

- Temperature category: **60** -40°C...+60°C *(Max: 24 hr average 50°C - annual ave 40°C)*
- Duty: Continuous *(life expectancy > 150000 h)*

type	kvar at: 690V	760V	400	CN µF 3 x	description	dimensions (mm) (H)	Ø	price
275.185-402800*	**12.5**	15	–	27.6	3-ph cylindrical capacitor	164	116	**3 100.00**
275.186-405600*	**25**	30	–	56	3-ph cylindrical capacitor	230	116	**3 650.00**
275.39B-411100*	**50**	60	–	111	3-ph cylindrical capacitor	295	136	**6 020.00**
275.100-10300*	discharge resistor module for 12.5/25 kvar 690V capacitor					3 x 300 kΩ		**87.00**
275.105-10180*	discharge resistor module for 50 kvar 690V capacitor					3 x 180 kΩ		**99.00**

Above ZAR prices do not include VAT. E&OE


RCS...

RC series - Power Factor Correction (PFC) rack system

RC series power factor racks *(single and double step versions)* are designed for direct panel mounting onto vertical supports within floor standing electrical panels. The 7% and 14% detuned harmonic reactors are available for networks with high level of harmonics.

RC series - Rack design incorporates the following:

- Sheet metal mounting frame for easy panel mounting
- Electronicon heavy duty "gas filled" cylindrical capacitors *(with integrated discharge resistors)*
- Special capacitor switching contactors 400VAC coil *(230V on request)*
- Three-phase busbar mounted fuse disconnector with hinged fuse protection cover
- Suitably rated HRC fuses per phase of each capacitor bank
- Incorporated busbar, supports and inter-connecting busbar links

type	kvar at: 400V	440V	480V	description	dimensions (mm) (H)	(W)	(D)	price
RC series - Racks (480V capacitors) *without harmonic reactors*								
Single-step racks - 480V capacitors - fuse protection								
RCS01204	**12.5**	14	17	single step capacitor rack	270	545	320	**9 140.00**
RCS02504	**25**	28	34	single step capacitor rack	270	545	320	**11 800.00**
RCS05004	**50**	56	67	single step capacitor rack	270	545	320	**16 500.00**
Double-step racks 480V capacitors - separate fuse protection for each bank								
RCD02524	**2 x 12.5**	2 x 14	2 x 17	double step capacitor rack	270	545	320	**14 200.00**
RCD05024	**2 x 25**	2 x 28	2 x 34	double step capacitor rack	270	545	320	**19 600.00**
RCD10024	**2 x 50**	2 x 56	2 x 68	double step capacitor rack	270	545	320	**29 100.00**
RCD03734	**12.5+25**	14 + 28	17 + 34	double step capacitor rack	270	545	320	**16 900.00**
RCD07534	**25 + 50**	28 + 56	34 + 68	double step capacitor rack	270	545	320	**24 400.00**

RCD...

type	kvar at: 400V	525V	**550V**	description	dimensions (mm) (H)	(W)	(D)	price
Double-step racks - 690V capacitors *for use in 400/525/550V networks (230V coil)*								
RCD64026	2 x 17	2 x 30	**2 x 32**	double step capacitor rack	270	545	320	**32 600.00**

type	kvar at: **400V**	440V	480V	description	dimensions (mm) (H)	(W)	(D)	price
HR7 series - Racks (480V capacitors) with 7% detuned reactors								
7% - 189 Hz Detuned reactors *for networks with a high level of 5th and 7th Harmonics*								
Single-step racks 480V capacitors - *fuse protection*								
HRS013074	**12.5**	14	17	capacitor + 7% reactor rack	310	740	538	**16 200.00**
HRS025074	**25**	28	34	capacitor + 7% reactor rack	310	740	538	**24 900.00**
HRS050074	**50**	56	67	capacitor + 7% reactor rack	310	740	538	**35 300.00**
Double-step racks 480V capacitors - *separate fuse protection for each bank*								
HRD025274	**2 x 12.5**	2 x 14	2 x 17	capacitor + 7% reactor rack	310	740	538	**26 100.00**
HRD050274	**2 x 25**	2 x 28	2 x 34	capacitor + 7% reactor rack	310	740	538	**43 300.00**
HRD100274	**2 x 50**	2 x 56	2 x 68	capacitor + 7% reactor rack	310	740	538	**64 400.00**
HRD038374	**12.5+25**	14 + 28	17 + 34	capacitor + 7% reactor rack	310	740	538	**34 700.00**
HRD075374	**25 + 50**	28 + 56	34 + 68	capacitor + 7% reactor rack	310	740	538	**54 000.00**

HRD...

type	kvar at: **400V**	440V	480V	description	dimensions (mm) (H)	(W)	(D)	price
HR14 series - Racks (525V capacitors) with 14% detuned reactors								
14% - 134 Hz Detuned reactors *for networks with a high level of 3rd Harmonics*								
Single-step racks 525V capacitors - *fuse protection*								
HRS054144	**50**	56	68	capacitor + 14% reactor rack	310	740	538	**44 200.00**
Double-step racks 525V capacitors - *separate fuse protection for each bank*								
HRD025144	**2 x 12.5**	2 x 14	2 x 17	capacitor + 14% reactor rack	310	740	538	**32 500.00**
HRD050144	**2 x 25**	2 x 28	2 x 34	capacitor + 14% reactor rack	310	740	538	**56 100.00**
HRD038144	**12.5+25**	14 + 28	17 + 34	capacitor + 14% reactor rack	310	740	538	**44 200.00**

Scan here

Scan above to try the PFC Calculator.

FMS series - Power factor Correction (PFC) *(automatic)*

For applications with varying capacitor requirements. An automatic reactive controller monitors the network and only switches capacitor banks when required, avoiding potential over or under compensation in a network.

FMS series - Floor standing systems

Complete ready-to-install system comprising following:

- Suitably ventilated floor standing enclosure *(thermostatically controlled roof mounted exhaust fan)*
- Mains isolator, door interlocking *(with early make/late break auxiliary contact)*
- **DCRG 8** high end reactive control relay *(incorporating digital display of all important network parameters)*
- Bottom cable entry *(top entry available on request)*
- RC series racks with heavy duty capacitors, fusegear, capacitor switching contactors and busbar system

Able to monitor all three phase voltage and current to providing accurate indication of:

- Active, Apparent Power as well as Active, Reactive, Apparent Energy monitoring
- Current and Voltage Harmonics analysis *(up to 31st harmonic)*
- Event logging: alarms, setup changes, events etc. *(internal memory stores last 250 events)*
- Internal panel temperature monitoring
- Expandable with up to 4 expansion modules for:
  Analog Inputs/Outputs, RS-323, RS-485, Ethernet, optional remote monitoring

FMS...

type	kvar at:		steps (kvar) at 400V				Expands	dimensions (mm)			price
	400V	440V	12.5	25	50	100	to (kvar)	(H)	(W)	(D)	
FMS series - 400V Floor standing complete PFC systems *(480V capacitors)*											
• *Using 480V heavy duty capacitors with RC racks for use in 400V networks*											
400V floor standing complete power factor systems											
FMS13804	**138**	165	1	1	2	–	475	2180	600	630	**96 900.00**
FMS17504	**175**	210	–	1	3	–	475	2180	600	630	**105 000.00**
FMS21304	**213**	255	1	2	3	–	475	2180	600	630	**122 000.00**
FMS23804	**238**	285	1	1	2	1	475	2180	600	630	**126 000.00**
FMS27504	**275**	330	–	1	3	1	475	2180	600	630	**134 000.00**
FMS31304	**313**	375	1	2	1	2	475	2180	600	630	**151 000.00**
FMS33804	**338**	390	1	1	2	2	475	2180	600	630	**156 000.00**
FMS37504	**375**	450	–	1	3	2	475	2180	600	630	**163 000.00**
FMS43804	**438**	525	1	1	2	3	475	2180	600	630	**185 000.00**
FMS47504	**475**	570	–	1	1	4	–	2180	600	630	**193 000.00**
Double floor standing panels*											
FMS57524*	**575**	690	–	1	1	5	950	2180	1200	630	**248 000.00**
FMS67524*	**675**	810	–	1	1	6	950	2180	1200	630	**290 000.00**
FMS77524*	**775**	930	–	1	1	7	950	2180	1200	630	**320 000.00**
FMS87524*	**875**	1050	–	1	1	8	950	2180	1200	630	**351 000.00**

FMS series - 550V Floor standing complete PFC systems *(690V capacitors)*

- *Using 690V heavy duty capacitors with RC racks for use in 400/525/550V networks*

type	kvar at:			step kvar at 550V		Expands	dimensions (mm)			price
	400V	525V	**550V**	32	64	to (kvar)	(H)	(W)	(D)	
FMS12806	68	120	**128**	2	1	320	2180	600	630	**117 000.00**
FMS19206	102	180	**192**	2	2	320	2180	600	630	**149 000.00**
FMS25606	136	240	**256**	2	3	320	2180	600	630	**182 000.00**
FMS32006	170	300	**320**	2	4	–	2180	600	630	**214 000.00**
FMS38426*	204	360	**384**	2	5	640	2180	1200	630	**287 000.00**
FMS44826*	238	420	**448**	2	6	640	2180	1200	630	**321 000.00**
FMS51226*	272	480	**512**	2	7	640	2180	1200	630	**353 000.00**
FMS57626*	306	540	**576**	2	8	640	2180	1200	630	**386 000.00**
FMS64026*	340	600	**640**	2	9	–	2180	1200	630	**420 000.00**
FMS70426**	374	660	**704**	2	10	960	2180	1800	630	**491 000.00**
FMS76826**	408	720	**768**	2	11	960	2180	1800	630	**523 000.00**
FMS83226**	442	780	**832**	2	12	960	2180	1800	630	**556 000.00**
FMS89626**	476	840	**896**	2	13	960	2180	1800	630	**588 000.00**
FMS96026**	510	900	**960**	2	14	–	2180	1800	630	**621 000.00**

Larger systems are made up with two (*) or three (**) panels each incorporating an individual isolator requiring supply cable to be split between the isolators.

Above ZAR prices do not include VAT. E&OE

DCRG 8 (Door mount)

FHS...

FHS series - Floor standing power factor systems *(with anti-harmonic detuned reactors)*

- For networks with THDU ≤6% and/or THDI ≤40%

Growing use of power electronic devices such as: variable speed drives, inverters, UPS systems, battery chargers, LED lighting etc. is causing increasing levels of harmonic distortion in electrical networks, often leading to problems with capacitor installations.

Installation of detuned *(reactor-connected)* capacitors designed to force the resonant frequency of the network below the frequency of the lowest harmonic present *(usually the 5th)* thereby ensuring no resonant circuit or amplification of harmonic currents. Such an installation also has a partial filtering effect, reducing the level of voltage distortion on the supply.

Detuned capacitors are safer than non-detuned capacitors and future-proof for conditions of more and more deteriorating power quality in modern mains.

Complete ready-to-connect floor standing power factor system comprising:

- Suitably ventilated floor standing enclosure with roof mounted exhaust fan
- Mains isolator, door interlocking *(with early make/late break auxiliary contact)*
- HR heavy duty racks comprising: capacitors, reactors, switchgear, fusegear and busbars
- High end reactive control relay DCRG 8 *(incorporating digital display of all important network parameters)*

  Configurable to monitor three voltage and current phases and provide accurate indication of:
  - Active, Apparent power as well as Active, Reactive, Apparent Energy monitoring
  - Current and Voltage Harmonics analysis *(up to 31st harmonic)*
  - Calendar-clock with backup reserve power
  - Event logging: alarms, setup, changes, etc. *(internal memory stores last 250 events)*
  - Internal panel temperature monitoring
- Expandable with up to 4 expansion modules for:
  - Additional steps, Analog I/O's, RS-323, RS-485, Ethernet, optional - remote monitoring

type	kvar at:		steps (kvar) at 400V				Expands	dimensions (mm)			price
	400V	440V	12.5	25	50	100	to kvar	(H)	(W)	(D)	
Anti-harmonic systems incorporating 7% detuned reactors *(480V capacitors)*											
• **7% - 189 Hz detuned reactors** *for 400V networks with a high level of 5th and 7th Harmonic*											
FHS138074	**138**	165	1	1	2	–	375	2280	900	600	**164 000.00**
FHS175074	**175**	210	–	1	3	–	375	2280	900	600	**184 000.00**
FHS213074	**213**	255	1	2	3	–	375	2280	900	600	**218 000.00**
FHS238074	**238**	285	1	1	2	1	375	2280	900	600	**229 000.00**
FHS275074	**275**	330	–	1	1	2	375	2280	900	600	**248 000.00**
FHS313074	**313**	375	1	2	1	2	375	2280	900	600	**283 000.00**
FHS338074	**338**	405	1	1	2	2	375	2280	900	600	**293 000.00**
FHS375074	**375**	450	–	1	1	3	–	2280	900	600	**313 000.00**
FHS438074*	**438**	525	1	1	2	3	775	2280	1800	600	**411 000.00**
FHS475074*	**475**	570	–	1	1	4	775	2280	1800	600	**431 000.00**
FHS538074*	**538**	645	1	1	2	4	775	2280	1800	600	**476 000.00**
FHS575074*	**575**	690	–	1	1	5	775	2280	1800	600	**495 000.00**
FHS638074*	**638**	765	1	1	2	5	775	2280	1800	600	**540 000.00**
FHS675074*	**675**	810	–	1	1	6	775	2280	1800	600	**560 000.00**
FHS738074*	**738**	885	1	1	2	6	775	2280	1800	600	**605 000.00**
FHS775074*	**775**	930	–	1	1	7	–	2280	1800	600	**625 000.00**
FHS838074**	**838**	1005	1	1	2	7	975	2280	2700	600	**723 000.00**
FHS875074**	**875**	1050	–	1	1	8	975	2280	2700	600	**742 000.00**
FHS975074**	**975**	1170	–	1	1	9	–	2280	2700	600	**807 000.00**
Anti-harmonic systems incorporating 14% detuned reactors *(525V capacitors)*											
• **14% - 134 Hz detuned reactors** *for 400V networks with a high level of 3rd Harmonic*											
FHS138144	**138**	165	1	1	2	–	203	2280	900	600	**198 000.00**
FHS150144	**150**	180	–	2	2	–	203	2280	900	600	**210 000.00**
FHS200144	**200**	240	–	2	3	–	–	2280	900	600	**254 000.00**
FHS238144*	**238**	285	1	1	4	–	432	2280	1800	600	**339 000.00**
FHS288144*	**288**	345	1	1	5	–	432	2280	1800	600	**383 000.00**
FHS300144*	**300**	360	–	2	5	–	432	2280	1800	600	**395 000.00**
FHS350144*	**350**	420	–	2	6	–	432	2280	1800	600	**440 000.00**
FHS400144*	**400**	480	–	2	7	–	–	2280	1800	600	**485 000.00**
FHS450144**	**450**	540	–	2	8	–	648	2280	2700	600	**529 000.00**
FHS500144**	**500**	600	–	2	9	–	648	2280	2700	600	**626 000.00**
FHS550144**	**550**	660	–	2	10	–	648	2280	2700	600	**670 000.00**
FHS600144**	**600**	720	–	2	11	–	648	2280	2700	600	**714 000.00**

Larger systems are made up with two (*) or three (**) panels each incorporating an individual isolator requiring supply cable to be split between the isolators.

WMS...

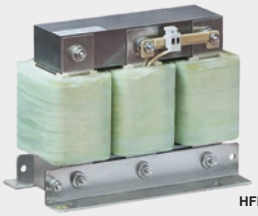
WMS series - Wall-mount power factor systems *(automatic)* 400/440V

For applications with varying capacitor requirements. An automatic reactive controller monitors the network and only switches capacitor banks when required, avoiding potential over or under compensation in a network.

Complete ready-to-install system comprising following:

- Reverse-flow fan ventilated wall-mount enclosure, bottom cable entry *(top entry on request)*
- Mains isolator, door interlocking *(with early make / late break auxiliary)*
- Heavy duty three phase capacitors *(with internal discharge resistors)*
- Reactive control relay DCRL 5 *(digital display of all important electrical network parameters)*
- "Special" capacitor switching contactors incorporating limiting resistors
- HRC fuse protection *(per capacitor bank)*

type	kvar at:		steps (kvar) at 415V			Expands	dimensions (mm)			price
	400V	440V	12.5	25	50	to (kvar)	(H)	(W)	(D)	
WM series - Wall-mount complete PFC systems *(440V capacitors)*										
WMS03804	**37.5**	45	1	1	–	87.5	950	700	270	**34 300.00**
WMS05004	**50**	60	2	1	–	87.5	950	700	270	**38 900.00**
WMS07504	**75**	90	2	2	–	87.5	950	700	270	**47 500.00**
WMS10004	**100**	120	2	1	1	150	950	700	270	**54 100.00**
WMS12504	**125**	150	2	2	1	150	950	700	270	**58 900.00**
WMS15004	**150**	180	–	2	2	–	950	700	270	**65 900.00**



HFRA...

HFRA series - Detuned anti-harmonic reactors 400V, 50Hz

Detuned reactors protect capacitors against harmonics, avoiding parallel resonance and amplification of harmonics flowing within the network.

- Insulation: F class insulation, 155°C
- Internal protection: Thermal cutout (125°C) incorporated *(on centre phase)*
- Reference standards: IEC/EN 60076-6, 61558-2-20

type	kvar at:		%	description	dimensions (mm)			price
	400V	440V			(H)	(W)	(D)	
7% - 189 Hz Detuned reactors			*for networks with a high level of 5th and 7th Harmonics*					
HFRA1207	**12.5**	15	7%	anti-harmonic reactors	215	210	120	**5 250.00**
HFRA2507	**25**	30	7%	anti-harmonic reactors	190	240	170	**11 100.00**
HFRA5007	**50**	60	7%	anti-harmonic reactors	240	300	180	**15 800.00**
14% - 134 Hz Detuned reactors			*for networks with a high level of 3rd Harmonic*					
HFRA1314	**12.5**	15	14%	anti-harmonic reactors	280	240	150	**7 900.00**
HFRA2714	**25**	30	14%	anti-harmonic reactors	250	330	220	**15 400.00**
HFRA5414	**50**	60	14%	anti-harmonic reactors	270	340	220	**20 000.00**

EXP1011

Communication modules for PFC systems

For remote monitoring and control of all electrical network parameters including harmonics, panel internal temperature, alarms, events and all setup parameters.

Communication modules simply plug-in to the controller and are automatically configured to offer various communication protocols.

EXP1011	opto-isolated	RS-232 plug-in communication	expansion module	**4 140.00**
EXP1012	opto-isolated	RS-485 plug-in communication	expansion module	**2 090.00**
EXP1013	opto-isolated	Ethernet with web server function	expansion module	**5 130.00**
EXP1014	opto-isolated	Profibus-DP plug-in communication	expansion module	**17 200.00**

PM-GW-LTE

Remote monitoring solutions for PFC systems

Polar Monitoring offers remote monitoring systems that enable (RS-485) devices to be securely viewed from anywhere via its comprehensive cloud platform. This provide an ideal solution to monitor generator controllers and Power Factor Correction systems.

General features:

- Remote programming, monitoring, trending
- Alerts and notifications *(SMS and email)*
- Error codes and reporting
- Multiple user access rights
- Device agnostic *(Supports multiple types of devices and applications in one platform)*

type	supply voltage	network connection	connector type	description	
PM-GW-LTE	9...36 VDC	2G/LTE	terminal	LTE - Gateway *(within South Africa)*	*see **Cat G** for pricing.*

For more information, see **category G**

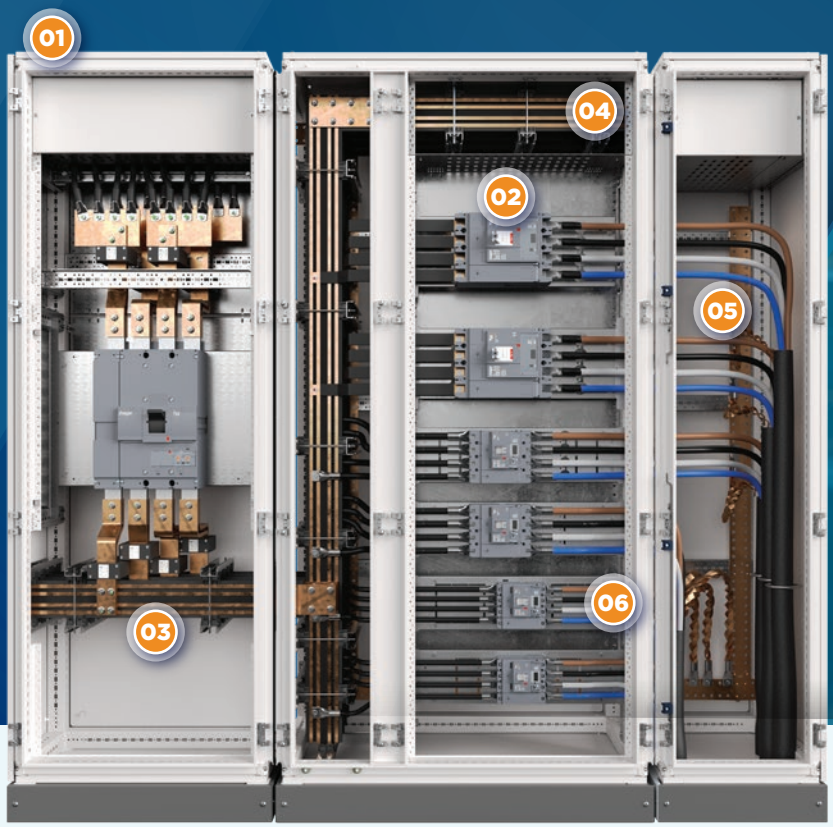
Above ZAR prices do not include VAT. E&OE

Introducing more possibilities

quadro evo.

The New Hager Main Distribution Board

A tested Hager solution, fully compliant with IEC 61439-1&2, up to 4000A, quadro evo now offers 4 safety classes. With segregations 1, 2b, 3b or 4b, there is a solution for projects of any dimension. The new quadro evo is a solution that will meet almost any challenge. Its many improvements make it the base of a main distribution that will endure. Choosing, configuring and building the quadro evo is now easier and more efficient.



01 Outside, the familiar Hager look, inside there's plenty more to see

02 New capabilities and more intelligence

03 New form segregations for up to 4b and new safety features

04 Ready for an all-new power busbar, allowing systems for up to 4000A

05 The new design allows for more space, making wiring and maintenance easier

06 Improved mounting kits, fewer screws and a clear positioning

hagercad software

A fully integrated, electrical planning software from Hager, offering maximum simplicity, speed, reliability and flexibility.

- Automatic power loss and heat calculation feature
- Simply generate your terminal plan
- User-friendly function for device labels
- Quickly generate circuit diagrams
- Easily create and share your project
- Windows 10 & 11 compatible with quick, automatic updates

hager

Scan to learn more about **quadro evo**

Modular Solution | User Friendly HMI | Complete Protection Features | Efficient Heat Dissipation

Active Power Filter (APF) systems

The increase of non-linear and other challenging loads in electrical grids today present unique power quality challenges. APF (Active Power Filter) provides a cost efficient solution to power quality problems, eliminating resonance problems, preventing amplified harmonic current and voltage, simultaneously compensating reactive power in real-time to maintain power factor at >0.99, enhancing equipment operating life whilst improving overall power system capacity.

APF systems provide multiple compensation functionality including:

- **Harmonic compensation** *(filtering any order from 2nd to 50th harmonic)*
- **Power Factor compensation** *(compensating in real-time to maintain power factor at >0.99)*
- **Phase Imbalance compensation** *(reducing the peak current demand tariff on electricity bills)*

Typical applications

Malls, shopping centres, office blocks, hospitals, printing works, processing plants, Data centres, pumping stations and all applications where Harmonic generating equipment such as variable speed drives *(VSDs)* rectifiers, battery charges, UPS's, Power supplies, LED lighting is utilised.

Benefits include: Reduced maintenance, a considerably longer lifespan

- Complete power quality improvement solution including real-time elimination of harmonics and flicker mitigation
- Provides dynamic step-less compensation instantaneously in real-time to each phase individually
- Only injects the kVAr required in that moment with no possibility of over or under-compensation
- Voltage fluctuations *(flicker)* mitigation and reduction of voltage *(sag and swell)* variations
- Correcting phase imbalance *(reducing the peak current reducing peak demand tariff on electricity bills)*
- Maintenance free *(with no electromechanical components)*
- Expandable by paralleling up to 8 modules *(unnecessary to over-dimension capacity to cater for future needs)*
- Output current is unaffected by mains voltage fluctuations providing stable support for mains voltage

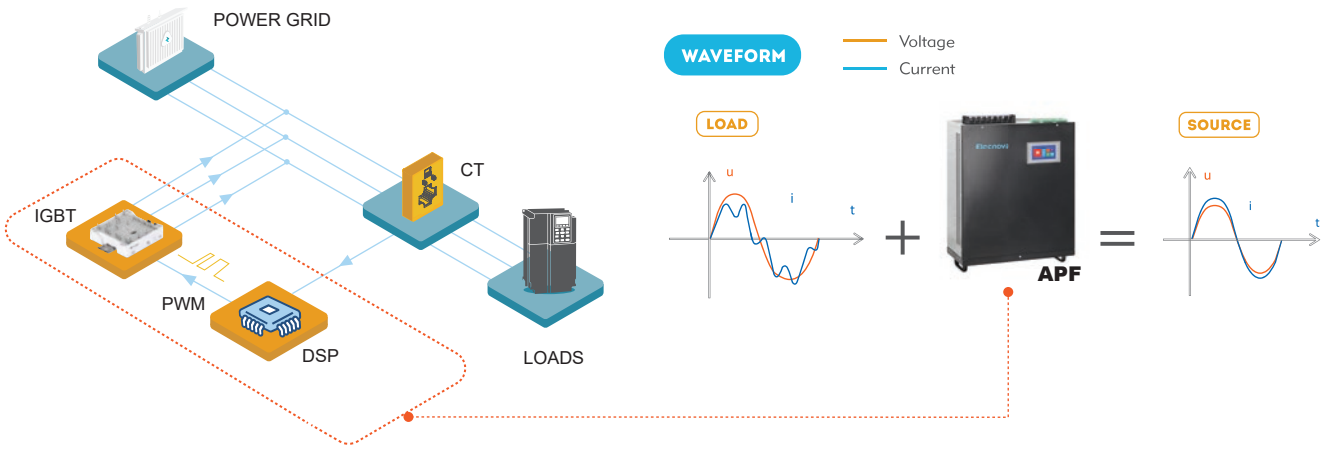
SFR-APF4...

- Harmonic compensation: 2nd to 51st order
- Response time: <5ms
- Efficiency: ≥97%
- Communication port: RS-485 - Modbus-RTU protocol
- Display interface: 4.3" LCD
- Operating temp: -20°C...45°C
- Cooling: Forced air cooling *(fan cooling)*
- Protection class: IP20

type	rated current	description	rated input (V)	dimensions (mm) (H)	(W)	(D)	price
Active Power Filters (APF) - Wall-mount system *(3-phase 4 wire) 400V*							
SFR-APF4-30/0.4B	30A	Active Power Filter (APF)	400V ±15%	641	440	149	**88 500.00**
SFR-APF4-50/0.4B	50A	Active Power Filter (APF)	400V ±15%	641	440	149	**112 000.00**
SFR-APF4-75/0.4B	75A	Active Power Filter (APF)	400V ±15%	641	440	149	**135 000.00**
SFR-APF4-100/0.4B	100A	Active Power Filter (APF)	400V ±15%	753	520	230	**158 000.00**
SFR-APF4-150/0.4B	150A	Active Power Filter (APF)	400V ±15%	753	520	230	**216 000.00**

Larger sizes can be made up by paralleling up to 8 wall-mount systems.
External protection (a circuit breaker is required)

Active Power Filter



Above ZAR prices do not include VAT. E&OE

Modular Solution | User Friendly HMI | Complete Protection Features | Efficient Heat Dissipation

Static Var Generator (SVG) systems

The increase of non-linear and other challenging loads in electrical grids today present unique power quality challenges. **SVG** (Static Var Generator) provides a cost effective, extremely fast solution to power quality problems, enhancing equipment operating life whilst improving overall power system capacity.

The **SVG** operates by detecting the load current, analysing the reactive content and then injecting the exact reverse reactive compensating current on an instantaneous real-time basis enabling perfect compensation on each phase for both inductive and capacitive loads.

Typical applications:

- Highly dynamic loads requiring rapid reactive power compensation, e.g: electric arc furnaces, or in big steps like cranes, sawmill machinery, etc.
- Electrical welding systems
- Renewable power generation *(e.g. photovoltaics and wind turbines)*
- Plastic industry machinery *(e.g. extruders, injection moulders)*
- Loads with low power factor: Motors, cables, lightly loaded transformers, lighting, etc.

SVG an IGBT based compensation device with the following advantages:

- Is a controllable current source, avoiding harmonic amplification which may be present
- Can dynamically and continuously compensate power factor according to the change of load. The module exports reactive power and can absorb reactive power, completely eliminating reactive power reverse transmission.
- With response time of ≤ 5ms, and the conversion from conductive reactive power to inductive reactive power can be accomplished almost instantaneously and can be fully utilised for fast switching loads

Benefits include: Reduced maintenance, a considerably longer lifespan, compact size

- Complete power quality improvement solution including real-time elimination of harmonics and flicker mitigation
- Provides dynamic step-less compensation instantaneously in real-time to each phase individually
- Only injects the kVAr required in that moment with no possibility of over or under-compensation
- Can maintain a PF of 0.99 lagging or unity *(if required)* for both inductive and capacitive loads
- Voltage fluctuations *(flicker)* mitigation and reduction of voltage *(sag and swell)* variations
- Correcting phase imbalance *(reducing the peak current which reduces the peak demand tariff on electricity bills)*
- Immune to harmonics, resonance and voltage level and is maintenance free *(with no electromechanical components)*
- Expandable by paralleling up to 8 modules *(unnecessary to over-dimension capacity to cater for future needs)*
- Output current is unaffected by mains voltage fluctuations providing stable support for mains voltage

- Overall efficiency: ≥97%
- Overload capability: 120%
- Response time: ≥5ms
- Communication port: RS-485 - Modbus-RTU protocol
- Display interface: 4.3" LCD
- Operating temp: -20°C...45°C
- Cooling: Forced air cooling *(fan cooling)*

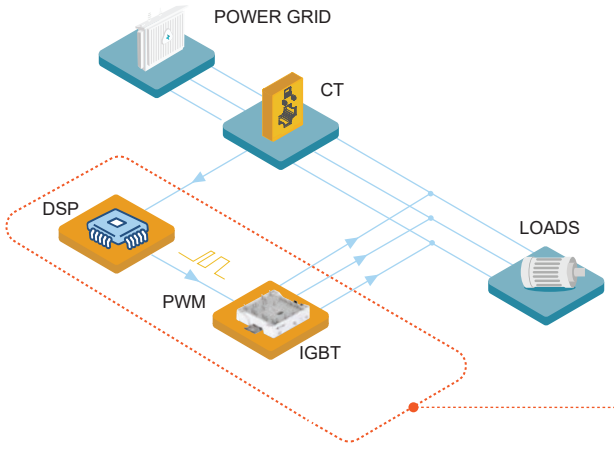
SFR-SVG4...

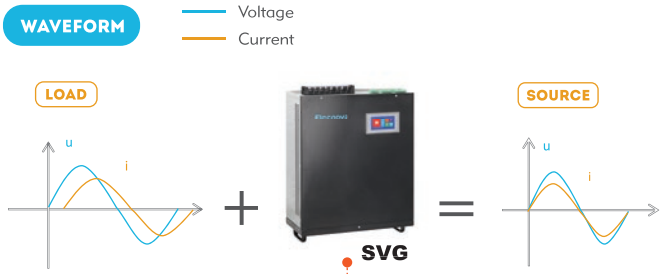
type	kvar	description	rated input (V)	dimensions (mm) (H)	(W)	(D)	price
Static Var Generator (SVG) - Wall-mount system			*(3-phase 4 wire) 400V*				
SFR-SVG4-30/0.4B	30 kvar	Static Var Generator (SVG)	400V ± 15%	641	440	149	**101 000.00**
SFR-SVG4-50/0.4B	50 kvar	Static Var Generator (SVG)	400V ± 15%	641	440	149	**129 000.00**
SFR-SVG4-75/0.4B	75 kvar	Static Var Generator (SVG)	400V ± 15%	753	520	230	**158 000.00**
SFR-SVG4-100/0.4B	100 kvar	Static Var Generator (SVG)	400V ± 15%	753	520	230	**191 000.00**

Larger sizes can be made up by paralleling up to 8 wall-mount systems.

External protection (a circuit breaker is required)

Static Var Generator





ALARM
RESET
PWR1
PWR2
DI1
DI2
GE8
GE9
LINK ACT
16AM
+24DC
0VDC
W123
W124
W128
MODEL:
POWER INPUT :
S/N:
MAC Address:
LISTED
70HF
IND. CONT. EQ.
Made in China

G

Monitoring & Control

Interactive Catalogue

Monitoring & Control

Layer 1 industrial ethernet switches

G-1

Layer 2 industrial managed switches

G-1

Layer 3 rack-mount managed switches

G-2

Industrial routers

G-2

LTE & Ethernet gateways

G-3

Edge Gateway with on-board processing

G-3

POLAR CLOUD

Cloud-based monitoring and control platform

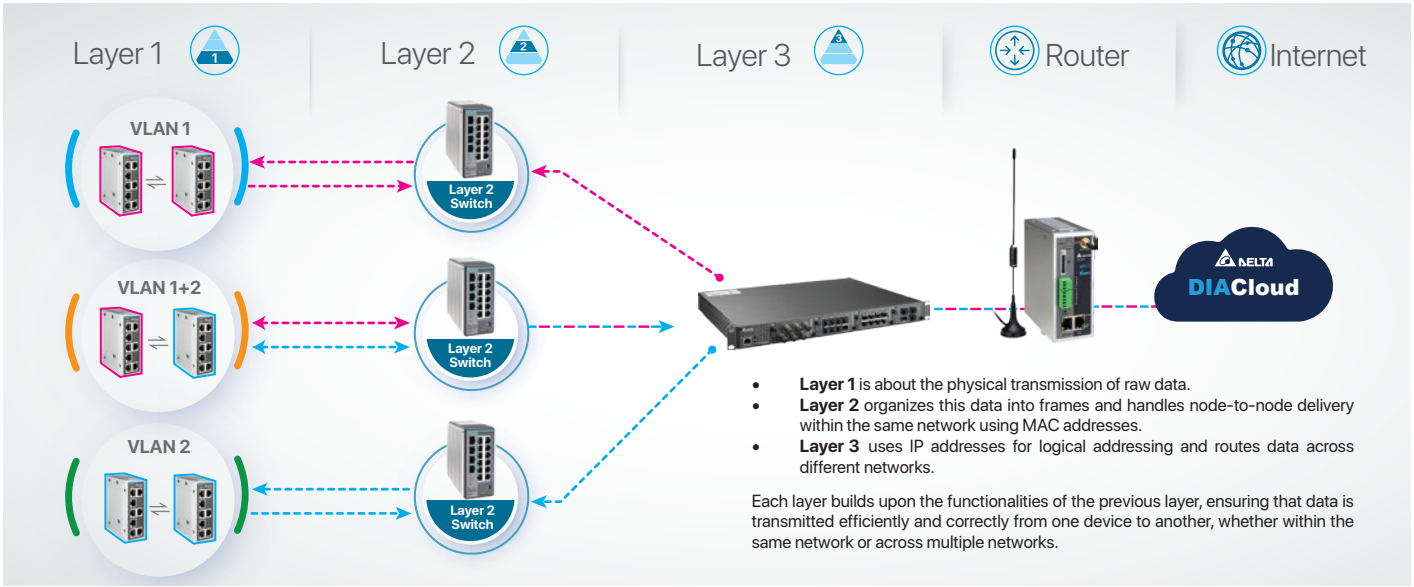
G-4

VTScada by Trihedral

Supervisory control and data acquisition system

G-6

Need help navigating the interactive catalogue? Scan the QR code for a short tutorial video.



- **Layer 1** is about the physical transmission of raw data.
- **Layer 2** organizes this data into frames and handles node-to-node delivery within the same network using MAC addresses.
- **Layer 3** uses IP addresses for logical addressing and routes data across different networks.

Each layer builds upon the functionalities of the previous layer, ensuring that data is transmitted efficiently and correctly from one device to another, whether within the same network or across multiple networks.

Rugged Ethernet · EMC · FANLESS

Industrial Ethernet switches

DVS-005R00

DVS-008R00

DVS-G116W02-4GF

type	no. ports	operating temperature	alarm contact	no. fibre ports	description	price
Layer 1: Compact Ethernet switches *(Unmanaged)*						
• Input voltage: 12 to 48 VDC • 10 /100 base-T(X), auto MDI / MDI-X, auto negotiation						
DVS-005R00	5	-20...+70°C	–	–	entry level Ethernet switch	**1 340.00**
DVS-008R00	8	-20...+70°C	–	–	entry level Ethernet switch	**1 910.00**
Layer 1:Standard Ethernet switches *(Unmanaged)*						
• IEEE 802.1p Class of service / quality of service, priority protocols ***(8W01 and 16W01)*** • Input voltage: 2 sets, 12 to 48 VDC redundant terminal block input						
DVS-005W01	5	-40...+75°C	yes	–	standard Ethernet switch	**2 900.00**
DVS-008W01	8	-40...+75°C	yes	–	standard Ethernet switch	**4 110.00**
DVS-016W01	16	-40...+75°C	yes	–	standard Ethernet switch	**6 990.00**
Layer 1: Gigabit Ethernet switches *(Unmanaged)*						
• 10 / 100 / 1000 base-T, auto MDI/MDI-X, auto negotiation • 10Gbps, wired speed • Input voltage: 12 to 48 VDC (2 set)						
DVS-G005I00C	5	-40...+70°C	–	–	Gigabit Ethernet switch	**2 140.00**
Layer 1: PoE Gigabit Ethernet switches *(Unmanaged)*						
• 10 / 100 / 1000 base-T PoE(PSE) ports. 2 x 100 / 1000 base-SFP • Based on IEEE 802.3at standard up to 30W per port. Backward compatible with IEEE 802.3af • 48 to 57 VDC redundant terminal block power input						
DVS-G406W01-2GF	6	-40...+70°C	yes	2 x SFP	PoE Gigabit Ethernet switch	**8 220.00**
Layer 2: Managed Ethernet switches						
High-end Layer 2 management, redundant self-healing ring and a wide-operating temperature. • Supports EtherNet/IP and Modbus TCP protocols for remote management by SCADA etc. • IEEE 802.1X, TACACS+, SSH, HTTPS and SNMP v3 for enhanced network security • Compatible with most industrial protocols, including: EtherNet/IP, Profinet, CC-LINK IE, DNP 3.0 • RJ45 ports: 10 / 100 / 1000 base-T, auto MDI/MDI-X, auto negotiation • SFP ports: 100 / 1000 base-SFP						
DVS-G112W02-4GF	8	-40...+75°C	yes	4 x SFP	Managed Ethernet switch	**12 400.00**
DVS-G116W02-4GF	12	-40...+75°C	yes	4 x SFP	Managed Ethernet switch	**16 200.00**

SFP fibre transciever *(SFP fibre transceiver - 1 port)*

type	operating temperature	interface: connectors	interface: fibre type	interface: max. link distance	price
LCP-1250A4FDRJ	-5°C...70°C	duplex LC	multi mode	550 m	**1 480.00**

Above ZAR prices do not include VAT. E&OE

Rugged ETHERNET · EMC · FANLESS

Excluding modules

Communication devices

Layer 3: Managed industrial rack mount Ethernet switch *(100 to 240VAC / 125 to 370VDC)*

Layer 3 switches route network packets between different subnets, using hardware to determine the correct paths and ensure efficient data exchange. Delta Layer 3 switches incorporate advanced hardware and software to function effectively in harsh industrial settings.

- Enhanced network security with **IEEE 802.1X, TACACS+, SSH, HTTPS and SNMP v3**
- STP/RSTP/MSTP for network redundancy further ensures reliability

type	no. ports	DI	DO (relay)	power input	operating temperature	description	price
DVS-G928W01	4	–	2	2	-40...+85ºC	L3 managed ETH switch	**55 400.00**

	module slot M1	M2	M3	M4	operating temperature	no ports	description	price
DVS-G900-8GE	•	•	•	–	-40...+85ºC	8	RJ45 ETH module	**10 300.00**
DVS-G900-6GM12	•	•	•	–	-40...+85ºC	6	M12 ETH module	**14 100.00**
DVS-G900-8GF	•	•	•	–	-40...+85ºC	8	SPF ETH module	**9 790.00**
DVS-G900-4GF	–	–	–	•	-40...+85ºC	4	SFP ETH module	**8 520.00**

DX-series - Industrial cloud solutions *input: 24 VDC*

- Data acquisition equipment connected to DIA cloud servers
- Supports a two-way data collection channel between the device and the cloud
- Various peripheral interfaces include RS-485, RS-232 and LAN ports
- Built-in RTC and supports NTP time synchronization over a network
- Supports TCP/IP, UDP, ICMP, DHCP, HTTP, DNS, SSH, TCP and Modbus RTU protocols

Industrial Ethernet cloud router *(4-Port LAN FE + 1-Port WAN FE + 1 RS-232 + 1 RS-485)*

The DX-2310LN is an IoT wired communication product of industrial grade.

The product includes Ethernet, RS232 and RS485 interfaces.

- Flexible connection method over WAN ports, e.g. static IP, DHCP client and more
- Customisable SMS alarm functions
- SD card for data backup and quick installation

DX-2310LN	5	–	–	1	-20...+70ºC	cloud based VPN router	**5 260.00**

Industrial 4G cloud router *(1-Port Lan + 1-Port WAN/LAN + 1-Port RS-485 + 1-Port RS-232)*

The DX-2400L9 industrial router supports multiple mobile networks and provides internet access via WAN and cellular connections. It includes Ethernet, RS232, and RS485 interfaces

- Connect to AWS IoT MQTT Broker through MQTT protocol
- Universal LTE-FDD and LTE-TDD frequency bands
- Connect to internet through 4G cellular network or WAN broadband interfaces

DX-2400L9	2	–	–	1	-20...+70ºC	4G/WAN cloud router	**7 510.00**

Industrial 3/4G/WAN *(1-Port WAN + 4-Port LAN + 1-Port RS-232 + 1-Port RS-485)*

- USB port can accept 3rd-party Wi-Fi USB adapter(only Realtek RTL8192EU driver supported)
- Universal 4G LTE-FDD and LTE-TDD frequency bands

DX-3021L9	5	2	2	1	-20...+70ºC	cloud based 4G/WAN router	**14 500.00**

Industrial fieldBus Delta solution

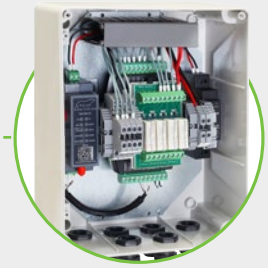
Industrial automation products for converting communication signals of automation, servo and control devices. IFD communication modules are robust, high quality devices offering stable communication with in-built protection.

type	from	to	description	price
Ethernet to serial Modbus RS-232/485 Converters *(full isolation)*				
IFD9506	RS-232/485	MODBUS TCP	converter *(inc. power supply)*	**3 520.00**
To configure IFD devices you need to install DCISoft				
Serial to serial communication converters				
IFD6500	USB	RS-485	converter *(no ext. power supply required)*	**1 080.00**
IFD6530	USB	RS-485	with 9V power supply *(115.2k bps Max.)*	**1 820.00**
IFD8500-A	RS-232	RS-422/485	RS-232 isolated converter	**1 170.00**
IFD8510	RS-485	isolated repeater/amplifier	*(extends transmission to 1.2 km)*	**1 350.00**
***IFD65xx** requires special driver to work with Windows OS, available on Delta website.*				
CAN / DeviceNet to serial converters				
IFD6503	USB	CAN	CAN to serial converter	**4 710.00**

PM-GW-LTE

PM-GW-GE

PM-MB4442



PM-S-CUBE

Polar Monitoring - All-in-One Cloud-Based Monitoring

Polar Monitoring offers a comprehensive, cloud-based monitoring solution tailored for the agriculture, commercial, and industrial sectors. This innovative system allows users to integrate and manage data from multiple devices and brands into a single, centralised platform, streamlining the process of data viewing and management.

type	supply voltage	network connection	connector type	description	price
LTE gateway			DIN mounting rail	**IP40**	

LTE Gateways use the GSM/LTE mobile network to connect to the Polar Cloud Service.
Gateways have a pre-installed SIM Card, managed by Polar Monitoring for user convenience.

- SIM: Pre-installed, no airtime/data required *(managed by Polar Monitoring)*
- Antenna Includes standard antenna (PM-A-2)

PM-GW-LTE	9 - 36 VDC	2G/LTE	terminal	LTE - Gateway *(within South Africa)*	**2 920.00**
PM-GW-LTE-G*	9 - 36 VDC	2G/LTE	terminal	LTE - Gateway *(outside South Africa)*	**2 920.00**

* *For Zambia and Namibia add ZAM / NAM to the above part number*

Ethernet gateway			DIN mounting rail	**IP40**	

The Ethernet Gateway requires an existing on site internet connection. It connects directly into an existing IP network via DHCP.

- DHCP client connects through firewall. No VPN or port forwarding required

PM-GW-ETH	9 - 36 VDC	Ethernet	terminal	Ethernet - Gateway	**1 420.00**

Edge gateway			DIN mounting rail	**IP40**	

Introducing the Glacier Edge, the next-generation IoT edge gateway designed by Polar Monitoring for the industrial and commercial sectors.

With the capability to store data locally and maintain on-site control even during an internet outage, the Glacier Edge experiences no downtime due to network issues and automatically syncs any missing data with the cloud once the connection is restored.

- Key features: Dual Ethernet ports, GPS, Intel CPU 4-core 2.5Ghz, 4GB RAM, 126GB SSD, fan-less design, 4x isolated RS-485, Modbus TCP support,Virtual Com ports

PM-GW-GE	12 - 24 VDC	2G/LTE	terminal	Edge - Gateway	**30 500.00**

type	supply voltage	inputs (DI)	outputs (DO)	inputs (AI)	pulse counter	price
Industrial fieldbus solution			DIN mounting rail		**IP40**	

The PM-MB4442 is a Remote I/O solution designed for use with the Polar Gateway via RS-485.
This unit supports 4-20mA analog inputs, pulse counters, and Digital I/O, allowing you to conveniently monitor real-world variables in the Polar Cloud.

PM-MB4442	12 - 24 VDC	4	4	4 (4-20mA)	2	**2 930.00**

Advanced remote monitoring and control solution	(H) 240 (W) 190 (D) 125	

The Polar Cube combines the Polar Monitoring LTE Gateway and the MB4442 module into an advanced remote monitoring and control system designed for easy installation and versatile application.
Ideal for borehole and water pumping operations. Coupled to the Polar Cloud the system tracks and trends data in real-time, providing intuitive visualisation enabling alerts and detailed reports.

- SIM: Pre-installed, no airtime/data required *(managed by Polar Monitoring)*
- Antenna Includes standard antenna (PM-A-2)

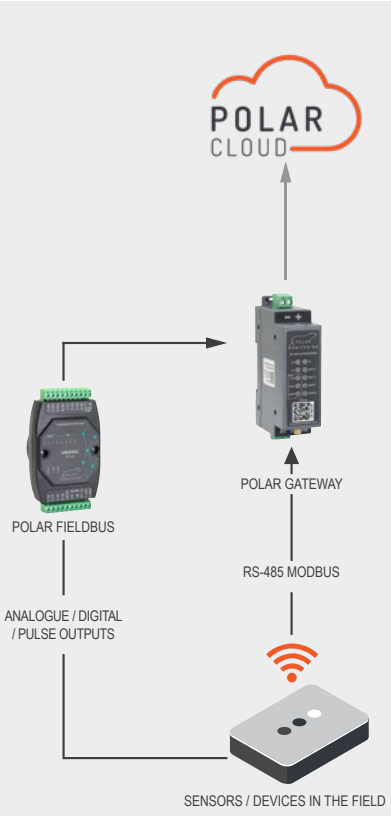
PM-S-CUBE	12-24 VDC or 230 VAC	2G/LTE	–	remote monitoring and control solution	**6 650.00**

Polar Cube requires polar license subscription

Accessories for above

type	gain	mounting	cable length	description	price
PM-A-2	2.5db	magnetic	2m	magnetic base antenna cable	**436.00**
PM-A-24	4db	bracket	5m	omni directional outdoor ant. cable	**1 020.00**
PM-A-28	8db	bracket	5m	omni directional outdoor ant. cable	**1 880.00**
PM-A-32	3db	p/mount	1m	vandal resistant ant. cable	**481.00**
PM-CAB-RS-2	RS485		2m	shielded communication cable	**93.00**
PM-CAB-RS-5	RS485		5m	shielded communication cable	**141.00**
PM-CAB-RS-10	RS485		10m	shielded communication cable	**221.00**
PM-CAB-D-2	RJ-45-RS485		2m	comm. cable for Delta VFDs	**84.00**
PM-CAB-D-5	RJ-45-RS485		5m	comm. cable for Delta VFDs	**148.00**
PM-CAB-D-10	RJ-45-RS485		10m	comm. cable for Delta VFDs	**347.00**

Above ZAR prices do not include VAT. E&OE



Polar Cloud - Software for Monitoring & Control

Polar Cloud serves as the backbone of the entire Polar Monitoring ecosystem. This user-friendly platform, in conjunction with the Polar Gateway, consolidates and displays crucial data from your field devices in a single location. It also provides the convenience of remote programming and system parameter adjustments.

The Polar Cloud is device and brand agnostic meaning one can monitor a multitude of different devices and brand types from one platform.

General features:

- Remote programming, monitoring, trending
- Alerts and notifications *(SMS and email)*
- Error codes and reporting
- Multiple user access rights
- Device agnostic *(Supports multiple types of devices and applications in one platform)*

Scan here to learn more

Pricing small to medium systems

Polar Site Based Licencing					Subscription options		
Code	I/O tags	Alerts	Schedulers	Up to Gateways	1-Year	2-Year	3-Year
PL-Y-T15	15	2	4	1	2 025.00	3 650.00	4 862.50
PL-Y-T32	32	10	20	2	4 325.00	7 775.00	10 362.50
PL-Y-T50	50	16	32	5	6 587.50	11 850.00	15 800.00
PL-Y-T100	100	32	64	10	12 825.00	23 087.50	30 775.00
PL-Y-T150	150	46	92	20	19 237.50	34 625.00	46 175.00
PL-Y-T250	250	70	140	50	31 225.00	56 200.00	74 925.00
PL-Y-T500	500	130	260	100	60 750.00	109 350.00	145 800.00
PL-Y-T1000	1 000	200	400	250	121 500.00	218 700.00	291 600.00

*For **2** or **3** year licence option, replace **Y** with **2Y** or **3Y** to part number eg. **PL-2Y-T15** for a 2 year licence*

Extras

Additional tags, alerts and schedulers can be added to any licence above to extend the offering

Code	description	price per year
PL-Y-AT-1	Additional Tag	172.80
PL-Y-AA-1	Additional Alerts	115.20
PL-Y-AS-1	Additional Schedulers	72.00

Note: *Up front, net price, no discount applicable*

* *Glacier Edge Gateways require data bundles if connecting to the internet through the embedded SIM*

** *3rd party API available*

Polar Cloud - Software for Monitoring & Control

POLAR CLOUD Remote Monitoring Solution

Live Viewing | Remote Commissioning | Alarm Notification | Data Storage

Polar Monitoring's new tag/site based licensing offers a flexible tag based pricing model. Below is an example of how the tag based model works and how you can implement it in your future projects and applications.

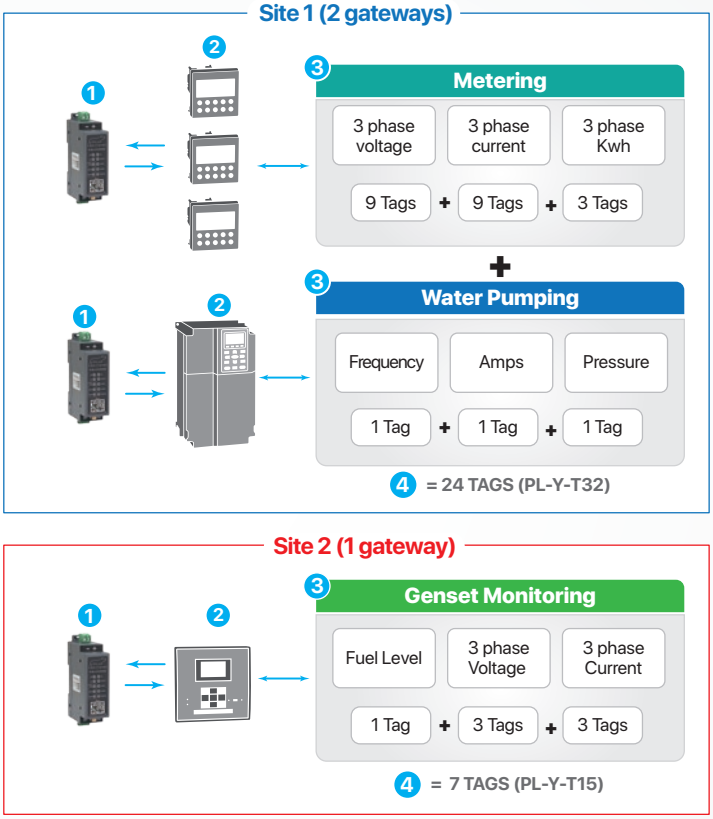
Step 1 Choose Your Gateway (LTE Local, LTE International, or Ethernet)

Step 2 Select Your Compatible RS485/Modbus RTU Device

Step 3 Identify Your Monitoring Needs and Calculate Required Tags

Step 4 Choose a License That Fits Your Requirements

Test the Polar Platform today! Access the Polar Demo Portal via the QR code for a hands-on experience of everything Polar has to offer.



VTScada® by Trihedral

Powerful Simplicity

Monitor and Control your system from anywhere in the world

VTScada award-winning software trusted for real-time monitoring and control of industrial operations. Its user-friendly interface and advanced visualisation make it ideal for all users, ensuring operational excellence across industries.

Key Benefits:

- **User-Friendly Interface:** Designed for both technical and non-technical users.
- **Advanced Visualisation:** Clear and concise data presentation.
- **Scalability:** Ideal for both small and large operations.
- **Operational Excellence:** Reduce costs, enhance safety, increase uptime, and improve compliance.

Featured VTScada Industries

- Manufacturing
- Water & Waste Water
- Oil & Gas
- Power Generation
- Mining
- ICT

VTScada Successes

The City of Houston modernised its 400 MGD water purification plant expansion by implementing VTScada, providing real-time monitoring and control over its water and wastewater systems. This upgrade improved efficiency, reduced downtime, and enhanced reliability, ensuring continuous clean water delivery. The user-friendly interface also enabled the team to quickly adapt and optimise processes.

Scan to learn more

Scan to learn more

Bright Alloys, a ferrochrome smelter in South Africa, transformed into a more agile, sustainable, and efficient operation with the implementation of VTScada. This led to a one-third reduction in natural gas consumption, a 10% increase in furnace availability, and a 1% improvement in feed accuracy tolerance, driving better performance and reducing environmental impact.

A leading oil and gas producer modernised its operations with VTScada, enabling real-time monitoring and control across its complex infrastructure. This upgrade improved operational efficiency, reduced downtime, and enhanced safety, ensuring continuous production. The intuitive interface also allowed the team to quickly adapt and optimise processes.

Scan to learn more

Supervisory control and data acquisition systems

VTScada by Trihedral - SCADA system

SCADA (Supervisory Control and Data Acquisition) software is essential for real-time monitoring and control of industrial processes. Providing operators with tools to manage equipment efficiently, analyse data and respond to system alerts. This ensures optimal performance, safety and reliability across various industries.

Advanced SCADA Monitoring and Control with user- friendly design

VTScada an intuitive SCADA software solution designed to simplify complex industrial processes. Combining real-time data acquisition, scalable architecture and integrated alarm management enhancing operational efficiency while reducing learning curves for engineers.

With a customisable interface and extensive support resources, offering a user-centric approach to industrial automation, ensuring that new and experienced users can leverage their full potential.

- Integrated Alarm Management: Real-time event detection to prevent disruptions
- Scalable Architecture: Seamless integration across all system sizes
- Customisable Interface: Tailor your HMI to specific requirements
- Built-in Protocols: Hundreds of device drivers for broad connectivity
- Data Sharing: Integrates external data from 3rd party systems for seamless control

type	development runtime	alarm notification	data sharing	thin clients			price
				1	5	∞	
VTScada development runtime (200 Tag combos)							
VTS-200DRTCANS	•	•	–	•	–	–	**80 000.00**
VTS-200DRULTCANS	•	•	–	–	–	•	**250 000.00**
Add additional thin clients (price per each thin client)							
VTS-200VIC01	–	–	–	•	–	–	**30 000.00**
Add 3rd party data sharing							
VTS-2003RD	–	–	•	–	–	–	**35 000.00**

Small to Medium Systems (up to 25,000 I/O Tags)

Designed to handle the complexities of large-scale industrial systems, VTScada offers robust scalability to manage thousands of I/O points seamlessly. Its architecture supports extensive data logging, high availability, and distributed systems across multiple locations.

Prices as per below table for custom builds

		A	B	C	D	S	T	U	V
type	tags	run time	development runtime	alarm notification	data sharing	thin clients			dual server premium*
						1	5	∞	
VTS-001Kx	1 000	**60 000.00**	**110 000.00**	**30 000.00**	**35 000.00**	**50 000.00**	**145 000.00**	**175 000.00**	**350 000.00**
VTS-005Kx	5 000	**75 000.00**	**145 000.00**	**50 000.00**	**45 000.00**	**60 000.00**	**190 000.00**	**290 000.00**	**520 000.00**
VTS-010Kx	10 000	**90 000.00**	**180 000.00**	**55 000.00**	**55 000.00**	**70 000.00**	**220 000.00**	**420 000.00**	**650 000.00**
VTS-025Kx	25 000	**105 000.00**	**215 000.00**	**70 000.00**	**60 000.00**	**90 000.00**	**290 000.00**	**660 000.00**	**900 000.00**

Replace **X** *above with* **A, B, C, D, S, T, U** *or* **V** *for the relevant software component - pricing for more than 25 000 tags available on request*

* **Dual Server Premium** for Enterprise-Level SCADA solutions for large-scale critical operations *(includes all of the features as below)*

Access and User Interaction:		Unlimited Thin Clients	Unlimited PC and mobile access for seamless large-scale operations
		Widgets and Graphics Library	Access thousands of pre-built industry-specific widgets
		Multi-User Scripting	Advanced scripting capabilities with hundreds of functions
		Idea Studio	Powerful development environment with on/offline and multi-user support
Data Management and Analysis:		High-Performance Historian	Capture and store extensive real-time data with ease
		Comprehensive Trending	Automatic trend analysis with no additional setup required
		Customisable Reporting	Generate tailored reports to meet all compliance needs
		DataLogger Support	Integrated logging for DF1, SCADAPack, and more
System Security and Redundancy:		Advanced Security	Robust, integrated security features for enterprise-level protection
		Backup Alarms and Event	Full redundancy for alarms and event logging
		Backup ODBC/OPC	Redundant ODBC and OPC servers for uninterrupted operations
		Backup Deployment	Redundant deployment tools for uninterrupted operations
Connectivity and Integration:		Common I/O Drivers	Supports Modbus, Siemens S7, Omron Host Link, Delta and more
		Advanced I/O Drivers	Includes DNP3, SNMP, Motorola ACE, and other advanced protocols
		Proprietary I/O Drivers	Supports DataFlow Systems and other proprietary protocols
		Data Sharing	ODBC Server, OPC Server, and Web Services for third-party integration
		Multi-Plant Support	Centralised management of multiple plants or locations
System Management and Support:		Resource Monitoring	Full system view with SNMP Agent for efficient resource management
		SupportPlus Year 1	Unlimited support, upgrades, and version compatibility
		Version Control	Automatic version control (for seamless updates and disaster recovery)
		Change Deployment	Remotely update all system components with a single click
		Alarms and Events Logging	Comprehensive logging of all system and user actions

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Enclosures & Climate Control

Interactive Catalogue

Enclosures & Climate Control

Insulated enclosures

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Cabinet air conditioners

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Need help navigating the interactive catalogue?
Scan the QR code for a short tutorial video.

686.204

686.206

686.409

686.230

COMBI 308

Junction boxes for electrical installations *(halogen free)*

SCABOX series plastic boxes/enclosures are ideal for housing electrical accessories and terminals for household and fixed electrical installations and offer IP56 degree of protection.

- Max. operating temperature: 60°C
- Colour RAL 7035 grey *(stabilised)*
- Material: Self extinguishing thermoplastic
- Reference standards: EN 60439-1, EN 60670-1, EN60670-22

type	IP rating	description	carton qty.	ext. dimension (mm) (H)	(W)	(D)	price (ea)
Plastic housings		**IP56**					
Shallow lid							
686.204	IP56	PVC housing - opaque lid	40	100	100	50	**58.00**
686.205	IP56	PVC housing - opaque lid	42	120	80	50	**60.00**
686.206	IP56	PVC housing - opaque lid	48	150	110	70	**90.00**
686.207	IP56	PVC housing - opaque lid	30	190	140	70	**173.00**
686.208*	IP56	PVC housing - opaque lid	16	240	190	90	**283.00**
686.209*	IP56	PVC housing - opaque lid	8	300	220	120	**515.00**
686.210*	IP56	PVC housing - opaque lid	4	380	300	120	**667.00**
686.211*	IP56	PVC housing - opaque lid	1	450	370	130	**1 170.00**
Deep lid							
686.404	IP56	PVC housing - opaque *(high)* lid	24	100	100	80	**90.00**
686.408*	IP56	PVC housing - opaque *(high)* lid	6	240	190	125	**374.00**
686.409*	IP56	PVC housing - opaque *(high)* lid	6	300	220	170	**638.00**
686.410*	IP56	PVC housing - opaque *(high)* lid	3	380	300	170	**975.00**
686.411*	IP56	PVC housing - opaque *(high)* lid	1	450	370	180	**1 340.00**
Transparent cover/ lid							
Shallow lid							
686.226	IP56	PVC housing - transparent lid	48	150	110	70	**202.00**
686.227	IP56	PVC housing - transparent lid	30	190	140	70	**350.00**
686.228*	IP56	PVC housing - transparent lid	16	240	190	90	**545.00**
686.229*	IP56	PVC housing - transparent lid	8	300	220	120	**795.00**
686.230*	IP56	PVC housing - transparent lid	4	380	300	120	**1 280.00**
686.231*	IP56	PVC housing - transparent lid	1	450	370	130	**1 840.00**
Deep lid							
686.428*	IP56	PVC housing - transparent *(high)* lid	6	240	190	125	**655.00**
686.429*	IP56	PVC housing - transparent *(high)* lid	6	300	220	170	**923.00**
686.430*	IP56	PVC housing - transparent *(high)* lid	3	380	300	170	**1 580.00**
686.431*	IP56	PVC housing - transparent *(high)* lid	1	450	370	180	**2 170.00**
Accessories for above enclosures							
Chassis plates *(steel)*			for enclosures				
654.0787	–	chassis plate for enc.	**686.207/227**	190	140	–	**108.00**
654.0788	–	chassis plate for enc.	**686.208/408/228/428**	240	190	–	**164.00**
654.0789	–	chassis plate for enc.	**686.209/409/229/429**	300	220	–	**237.00**
654.0790	–	chassis plate for enc.	**686.210/410/230/430**	380	300	–	**648.00**
654.0791	–	chassis plate for enc.	**686.211/411/231/431**	460	380	–	**777.00**
654.0080	–	sealing caps for internal mounting holes				*(12 pcs)*	**46.00**
654.0085	–	kit to hinge the lid on enclosures				*(1 pair)*	**117.00**
654.0021	–	plastic wall mounting brackets				*(set of 4)*	**63.00**

* *Enclosures which accept **654.0085** hinge kit*

COMBI Junction boxes IP66/67

Wiska COMBI junction boxes provide ultimate protection from environmental conditions in a compact, very attractive format, suitable for extreme outdoor installations.

- Weather proof, ultraviolet resistant, shatterproof, impact resistant, flame retardant and halogen free

type	cable entry sides	cable entry rear	thread Ø	description	colour	dimensions (mm) (H)	(W)	(D)	price
COMBI 308	IP66/67		*(captive - quick release lid screws)*						*see **Cat L** for pricing.*
10060400	8	–	M20	weatherproof junction box	grey	85	85	51	
10060581	8	–	M20	weatherproof junction box	black	85	85	51	

Above ZAR prices do not include VAT. E&OE

Plastic enclosures

Lovato M series enclosures are high quality, extremely robust housings ideally suited to indoor or outdoor installations, offering IP65 protection for internally mounted components.

- Protection degree: IP65
- Operating temperature: -25...+60°C
- Material: Made of UV protected polycarbonate
- Colour: Black base and RAL7035 *(light grey)* cover

M1N

type	IP rating	cable entry	description	dimensions (mm) (H)	(W)	(D)	price
M1 and M2 series - Plastic housings	**IP65**		*(light grey)*				
Slim, deep housings designed for compact but tall components such as contactors, timers, voltage, liquid level and phase failure relays etc. required to be housed in a protective enclosure without occupying much space.							
• External mounting holes • Incorporated earth terminal • DIN-rail incorporated into internal base of enclosure for mounting electrical components • Two M20 knock-outs on top and bottom of enclosure *(to accommodate gland for cable entry)*							
M1N	IP65	M20	slim polycarbonate housing	202	88	135	
M2N	IP65	M20	slim polycarbonate housing	234	110	149	

M24N

M24 and M25 series - Plastic housings	**IP65**		*(light grey)*				
Robust, heavy duty enclosures for mounting a variety of electrical components.							
• Incorporated earth terminal • Mounting holes within the enclosure *(outside the sealing gasket)* • Supplied complete with internal metal chassis plate *(156 x 148 mm)* • Moulded *(alpha and numeric)* grid on internal door for ease of mounting control devices • Two M25/M32 knock-outs on top and bottom of enclosure *(to accommodate gland for cable entry)*							
M24N	IP65	M25/32	shallow polycarbonate housing	210	175	99	
M25N	IP65	M25/32	deep polycarbonate housing	210	175	165	*see* ***Cat A*** *for pricing.*
Accessories *(spare chassis)*							
MX31	chassis		metal chassis/mounting plate	*for M25N enclosures*			

M3N

M3 series - Plastic housings	**IP65**		*(light grey)*				
Robust, heavy duty enclosure with high impact resistance and incorporated hinge facility for mounting a variety of electrical components.							
• Material: ABS plastic material • Mounting holes within the enclosure *(outside the sealing gasket)* • Internal ribbing in base for mounting components - DIN-rail etc. • Plain base *(no knockouts)* for easy configuration of cable entry/exits • Incorporated hinge facility *(180° full opening)* lid can be removed if required • Moulded *(alpha - numeric)* grid on internal door for easy alignment of control devices							
M3N	IP65	–	ABS housing without chassis plate	280	220	170	
MX30	chassis		metal chassis/mounting plate	*for M3N enclosures*			

Metallic enclosures *(empty housings)* — IP66, IP67 — *(without any holes)*

- The thickness of the enclosure is suitable for drilling
- Suitable for pushbuttons, selector switches and pilot lights
- Material: Aluminium alloy
- Colour: Light grey *(base and cover)*
- Protection: IEC/EN: IP66 and IP67
UL: Nema 4X
- Earth connection: On base and cover
- Ambient conditions: -25...+70°C
- Compliant: IEC/EN/BS 60947-5-1, cULus

LPZ M6E8

type	cover	description	(H)	(W)	(D)	price
LPZ M1E8	grey	empty aluminium alloy housing only	80	80	73	**676.00**
LPZ M2E8	grey	empty aluminium alloy housing only	130	80	73	**842.00**
LPZ M3E8	grey	empty aluminium alloy housing only	170	80	73	**1 010.00**
LPZ M5E8	grey	empty aluminium alloy housing only	160	160	90	**1 830.00**
LPZ M6E8	grey	empty aluminium alloy housing only	170	190	90	**2 000.00**
LPZ M7E8	grey	empty aluminium alloy housing only	190	250	90	**2 380.00**

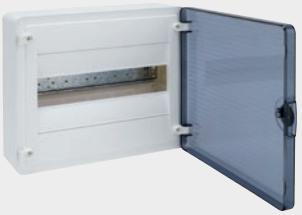
(Enclosure only)

GD106B

GP110T

GZ04E

GZ04N



VS118TJ

VF318TJ

VU24NE

Enclosures / Distribution boards

type	no. of ways	IP rating	description	dimensions (mm) (H)	(W)	(D)	price
Mini gamma series - Surface shrouds 40A				**IP30**			
• Incorporated DIN profile and labelling facility • Hinged transparent doors available *(IP40 with door)* • Lead sealable housing							
GD102B	2-way	IP30	surface mounting MCB shroud	160	55	82	**86.00**
GD104B	4 way	IP30	surface mounting MCB shroud	180	110	82	**117.00**
GD106B	6 way	IP30	surface mounting MCB shroud	180	146	82	**136.00**
GD110B	10 way	IP30	surface mounting MCB shroud	180	218	82	**284.00**
Accessories for above GD series boards							
GP102T	door	–	transparent *(horizontally)* hinged door	for	GD102B		**153.00**
GP104T	door	–	transparent *(horizontally)* hinged door	for	GD104B		**174.00**
GP106T	door	–	transparent *(horizontally)* hinged door	for	GD106B		**183.00**
GP110T	door	–	transparent *(horizontally)* hinged door	for	GD110B		**204.00**
GZ104S	support	–	clip-in support for terminals GZ04E/N	for	GD104B		**30.60**
GZ106S	support	–	clip-in support for terminals GZ04E/N	for	GD106B		**30.60**
GZ110S	support	–	clip-in support for terminals GZ04E/N	for	GD110B		**41.00**
GZ04E	4 way	terminal	insulated "earth" terminal	*(clips onto above supports)*			**56.00**
GZ04N	4 way	terminal	insulated "neutral" terminal	*(clips onto above supports)*			**56.00**
JP002	24 way	blanking	blanking strip	*(breakable sections)*			**78.00**
Golf series - Surface and flush-mount distribution boards 63A							
• Transparent door 180° opening *(hinged left or right)* / key-lock facility • Internal cable tie fixing points / cable can be run behind breakers / optional cable retainer clips • Supplied with earth / neutral terminals • Colour: RAL9010 *(white)* / glow wire test to 650°C to UNE 60595-2-1							
Golf VS series - Surface mounting enclosures - IP40 *(with door)*							
• Pre-cut profiles for cable, conduit, trunking entry • Enclosures can be joined together *(horizontally or vertically)*							
VS104TJ	4 (1 x 4)	IP40	surface mounting distribution board	184	138	99	**392.00**
VS108TJ	8 (1 x 8)	IP40	surface mounting distribution board	184	210	99	**440.00**
VS112TJ	12 (1 x 12)	IP40	surface mounting distribution board	252	282	99	**600.00**
VS212TJ	24 (2 x 12)	IP40	surface mounting distribution board	377	282	99	**820.00**
VS118TJ	18 (1 x 18)	IP40	surface mounting distribution board	252	390	99	**690.00**
VS218TJ	36 (2 x 18)	IP40	surface mounting distribution board	377	390	99	**1 090.00**
VS318TJ	54 (3 x 18)	IP40	surface mounting distribution board	500	390	99	**1 230.00**
Golf VF series - Flush mounting enclosures - IP40 *(with door)*							
• 72 mm installation depth, can be mounted into "hollow wall" with optional brackets							
VF108TJ	8 (1 x 8)	IP40	flush mounting distribution board	225	275	98	**501.00**
VF112TJ	12 (1 x 12)	IP40	flush mounting distribution board	293	352	98	**593.00**
VF212TJ	24 (2 x 12)	IP40	flush mounting distribution board	418	352	98	**795.00**
VF118TJ	18 (1 x 18)	IP40	flush mounting distribution board	293	460	98	**687.00**
VF218TJ	36 (2 x 18)	IP40	flush mounting distribution board	418	460	98	**1 040.00**
VF318TJ	54 (3 x 18)	IP40	flush mounting distribution board	543	460	98	**1 220.00**
Accessories for Golf series (VS/VF) enclosures							
VZ696N	bracket	hollow wall mounting brackets for flush enclosures				*(4pcs)*	**283.00**
VZ699N	retainer	cable retaining guides for all enclosures				*(4pcs)*	**270.00**
VZ786N	bracket	brick wall fixing brackets for flush enclosures				*(4pcs)*	**104.00**
VZ787N	label	spare transparent label holder for all enclosures				*(5pcs)*	**283.00**
VZ794N	key	key lock facility for all enclosures				*(2pcs)*	**489.00**
Volta series - "Exclusive" flush mounting boards IP41 *(class II)*							
• Metallic front door and frame *(reversible - opening from left or right)* • Integrated mini spirit level *(installation aid for alignment)* • 30% more wiring space available • Supplied with earth / neutral terminals • Colour : RAL 9010 *(white)* • IEC 60439-3							
VU12NE	12 (1 x 12)		flush mount "exclusive" distribution board	356	348	96	**1 220.00**
VU24NE	24 (2 x 12)		flush mount "exclusive" distribution board	505	348	96	**1 420.00**
VU36NE	36 (3 x 12)		flush mount "exclusive" distribution board	630	348	96	**1 730.00**
VU48NE	48 (4 x 12)		flush mount "exclusive" distribution board	755	348	96	**1 930.00**

Above ZAR prices do not include VAT. E&OE

VE106L

(Enclosure only)

Vector series - Surface mount enclosures class II

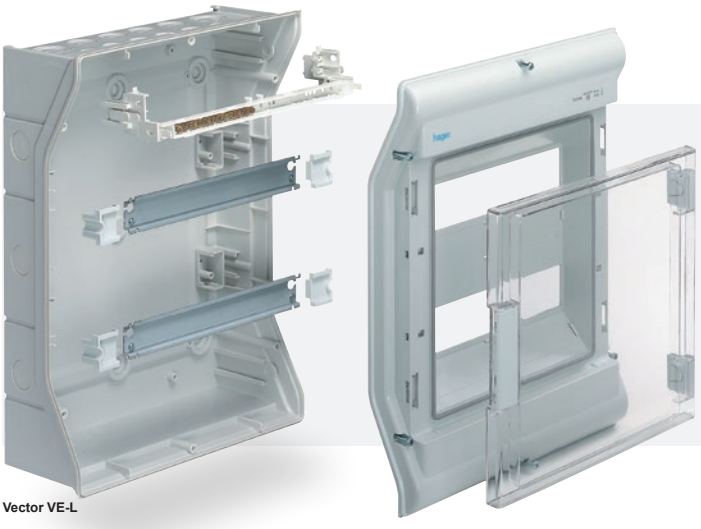
- Compliant: IEC 61439-3
- Colour: RAL 7035 *(light grey)*
- Adjustable DIN-rail depth *(to fit products of different depth)*
- Transparent hinged cover *(2 - 10 way)* or door *(12 - 54 way)*
- Rear adjustment screws for mounting on uneven / irregular wall surfaces *(up to 3 mm)*
- Premarked knock-outs for cable glands **M20, M25, M32, M40, M50** *(size dependant)*

type	number of ways		dimensions (mm) (H)	(W)	(D)	price
Vector VE-L - Surface-mount distribution boards 63A			**IP65**			
• IP rating: IP65 • Supplied with Earth/Neutral terminals • 2 lateral knockouts for cable entry or coupling pieces • Glow wire test to IEC 60695-2-10 and IEC 60 695-2-11: 750ºC						
VE103L	3 (1 x 3)	surface mounting distribution board	175	111	93	**516.00**
VE106L	6 (1 x 6)	surface mounting distribution board	190	165	113	**595.00**
VE110L	10 (1 x 10)	surface mounting distribution board	210	237	114	**671.00**
VE112L	12 (1 x12)	surface mounting distribution board	302	310	151	**945.00**
VE212L	24 (2 x 12)	surface mounting distribution board	427	310	151	**1 550.00**
VE118L	18 (1 x 18)	surface mounting distribution board	302	418	151	**1 380.00**
VE218L	36 (2 x 18)	surface mounting distribution board	452	418	151	**2 130.00**
VE318L	54 (3 x 18)	surface mounting distribution board	602	418	151	**2 700.00**

VE212SN

Vector VE-SN - Surface-mount distribution boards 63A *(for outdoor use)*			**IP65**			
UV stabilised and IP65 surface mounting enclosure range designed specifically for outdoor use and **photovoltaic** applications. • Protection: IP65 • Material: Polycarbonate • Dimensional stability up to 100°C, resistant to frost down to -25°C • Plain base *(no knockouts)* for easy configuration of cable entry/exits • Earth and neutral terminals to be ordered separately *(see below)* • Glow wire test to IEC 60695-2-10 and IEC 60 695-2-11: 750ºC • Resistant to ultraviolet radiation, immersion in water in accordance with UL746C						
VE112SN	12 (1 x 12)	surface mounting distribution board	302	310	151	**930.00**
VE212SN	24 (2 x 12)	surface mounting distribution board	427	310	151	**1 540.00**
VE312SN	36 (3 x 12)	surface mounting distribution board	552	318	151	**2 390.00**
Earth/Neutral terminal set for above VE...SN boards						
VZ522	E/Neutral	terminals each with: *(1 x 25 mm² + 5 x 16 mm² + 7 x 10 mm²)*				**259.00**

Vector waterproof boards



Vector VE-L

Technical characteristics

- **Excellent waterproofing: IP55 / 65** - IK 07 and IK 08
- Plastic boxes, class II
- Capacity: 1 to 3 rows, 3 to 54 modules
- Depth **adjustable DIN-rail**
- 2 side knockouts (VE-L)

Vega D series - Surface and flush mounting distribution boards IP41 *(with optional door fitted)*

Vega D enclosures are suitable for installations in residential and commercial buildings for supplies up to 160A. Delivered in a ready-to-mount configuration. All enclosures have 24 module rows.

General features:

- Material: Metallic enclosure
- Colour: RAL 9010 *(white)*
- Integrated quick connect earth terminals
- Removable front frame for optimal access to internal installed devices
- Doors sheet metal plain or with transparent window *(to be ordered separately)*
- Protection class: IP30/IK07 *(without door)* - IP41/IK08 *(with door)* - class II totally insulated

Scan to watch video

FU42AN

FU42DN

FD42PN

FD42TN

FD01A1

type	number of modular ways		description	dimensions (mm) (H)	(W)	(D)	price
Surface-mounting boards	48 to 168 way						
• Removable top and bottom plates for easier cable entry							
FD22DN	48	(2 x 24)	surface mounting distribution board	450	550	193	**6 010.00**
FD32DN	72	(3 x 24)	surface mounting distribution board	600	550	193	**6 700.00**
FD42DN	96	(4 x 24)	surface mounting distribution board	750	550	193	**7 760.00**
FD52DN	120	(5 x 24)	surface mounting distribution board	900	550	193	**8 250.00**
FD62DN	144	(6 x 24)	surface mounting distribution board	1050	550	193	**9 780.00**
FD72DN	168	(7 x 24)	surface mounting distribution board	1200	550	193	**10 500.00**
Partially equipped surface enclosures							
FD42AN*	48	(2 x 24)	surface mounting distribution board	750	550	193	**6 700.00**
FD52AN*	72	(3 x 24)	surface mounting distribution board	900	550	193	**7 610.00**
FD62AN*	96	(4 x 24)	surface mounting distribution board	1050	550	193	**8 060.00**
FD72AN*	120	(5 x 24)	surface mounting distribution board	1200	550	193	**8 520.00**
Flush-mounting boards	48 to 168 way						
General features:							
• Metallic flush mounting tray *(depth 110 mm with insulated cable entries top and bottom)*							
• Removable chassis with uprights accommodating modular devices							
• Metallic *(easily removable)* finishing frame DN=40 / AN=72 mm depth							
FU22DN	48	(2 x 24)	flush mounting distribution board	537	550	150	**6 910.00**
FU32DN	72	(3 x 24)	flush mounting distribution board	687	550	150	**8 440.00**
FU42DN	96	(4 x 24)	flush mounting distribution board	837	550	150	**9 110.00**
FU52DN	120	(5 x 24)	flush mounting distribution board	987	550	150	**9 860.00**
FU62DN	144	(6 x 24)	flush mounting distribution board	1137	550	150	**10 400.00**
FU72DN	168	(7 x 24)	flush mounting distribution board	1287	550	150	**12 000.00**
Partially equipped flush enclosures							
FU42AN*	48	(2 x 24)	flush mounting distribution board	837	550	182	**8 440.00**
FU52AN*	72	(3 x 24)	flush mounting distribution board	987	550	182	**9 550.00**
FU62AN*	96	(4 x 24)	flush mounting distribution board	1137	550	182	**10 100.00**
FU72AN*	120	(5 x 24)	flush mounting distribution board	1287	550	182	**10 600.00**
* *Supplied without top two rows, to be completed with internal modules of choice (below) to accept main switch MCCB (up to 160A) or two rows modular devices or chassis plate*							

Doors for Vega D enclosures *(sheet metal)*							
Plain doors		*(left or right hinged 135° opening)*					
FD22PN	plain	sheet metal door for enclosures	FD/FU22	350	500	–	**1 200.00**
FD32PN	plain	sheet metal door for enclosures	FD/FU32	500	500	–	**1 400.00**
FD42PN	plain	sheet metal door for enclosures	FD/FU42	650	500	–	**1 600.00**
FD52PN	plain	sheet metal door for enclosures	FD/FU52	800	500	–	**1 700.00**
FD62PN	plain	sheet metal door for enclosures	FD/FU62	950	500	–	**1 800.00**
FD72PN	plain	sheet metal door for enclosures	FD/FU72	1100	500	–	**2 000.00**
Transparent doors		*(left or right hinged 135° opening)*					
FD22TN	transparent	sheet metal door for enclosures	FD/FU22	350	500	–	**1 800.00**
FD32TN	transparent	sheet metal door for enclosures	FD/FU32	500	500	–	**1 900.00**
FD42TN	transparent	sheet metal door for enclosures	FD/FU42	650	500	–	**2 200.00**
FD52TN	transparent	sheet metal door for enclosures	FD/FU52	800	500	–	**2 400.00**
FD62TN	transparent	sheet metal door for enclosures	FD/FU62	950	500	–	**2 600.00**
FD72TN	transparent	sheet metal door for enclosures	FD/FU72	1100	500	–	**2 900.00**
Internal modules *(to fill upper 2 spaces on FD/FU42,52,62,72AN enclosures)*							
FD01A1	1 row 24 way	standard chassis with modular DIN cover		150	–	–	**725.00**
FD01A2	1 row adj.	DIN-rail kit for terminals with plain front cover		150	–	–	**975.00**
FD01K1	1 row	for 1x horizontally mounted 160A MCCB		150	–	–	**1 710.00**

*See page **H-6** for Vega D internal modules and accessories*

Above ZAR prices do not include VAT. E&OE

Quadro 5 series - Floor standing distribution board system *(IP55)*

- Nominal insulation voltage: Ui = 690 V
- Type tested nominal current: 630A, 35 kA
- Colour: RAL9010, *(plinth RAL7042)*
- Class of protection: IP55, IK10 *(with door)* to EN 60530

type	description	for enclosure	dimensions (mm) (H)	(W)	(D)	price
Enclosures - Height: 1260 mm - Surface wall mount or *(floor mount with optional plinth)*						
• Main frame with back plate, removable top and bottom plates and 4 lugs for wall mounting • 1200 mm Internal height - accepts: - 8 rows *(150 mm high)* or 6 rows *(200 mm high)* 24 way						
FM205	upright basic frame ***without plinth***	*(standard)*	1260	700	260	**10 200.00**
FM405	pair of side plates *(L and R)* for enclosure	FM205	1260	–	260	**2 010.00**
FM450	plinth *(optional)* for floor mounting enclosure	FM205	150	700	260	**3 380.00**
FM535	plain sheet metal hinged door for	FM205	1260	685	–	**3 910.00**
FM545	transparent sheet metal hinged door for	FM205	1260	685	–	**5 180.00**
Enclosures - Height: 2010 mm *(floor standing with back plate, removable top plate and plinth)*						
• Main frame with back plate, removable top plate and plinth with 2 wall securing lugs • 1800 mm Internal height - accepts: - 12 rows *(150 mm high)* or 9 rows *(200 mm high)* 24 way						
FM109	upright basic frame ***with back plate and plinth***	*(narrow)*	2010	450	260	**15 500.00**
FM209	upright basic frame ***with back plate and plinth***	*(standard)*	2010	700	260	**16 100.00**
FM409	pair of side plates *(L and R)* for enclosure	FM1/209	2010	–	260	**2 800.00**
FM519	plain sheet metal hinged door *(narrow)*	FM109	2010	435	–	**4 970.00**
FM539	plain sheet metal hinged door *(standard)*	FM209	2010	685	–	**6 340.00**
FM549	transparent sheet metal hinged door (standard)	FM209	2010	685	–	**8 080.00**
Equipment mounting kits - For Quadro 5 system						
• Comprises: mounting rail + accessories and front covers for modular MCB and MCCB						
For 700 mm wide *(standard)* **panels**						
UC201	mounting kit for MCB *(150 mm)*	24 modules	FM205/9	150	600	– **1 040.00**
UC205	mounting kit for MCB *(200 mm)*	24 modules	FM205/9	200	600	– **1 140.00**
UC011H	mounting kit for MCCB	x160	FM205/9	300	600	– **1 560.00**
UC021H	mounting kit for MCCB	x250	FM205/9	300	600	– **2 640.00**
UC464P	kit for mounting 2 x MCCB	P630	FM205/9	300	600	– **2 170.00**
UC464X	kit for mounting 2 x MCCB	x630	FM205/9	300	600	– **2 570.00**
UC233EM	kit with knock-outs for 3 x 96 mm instruments		FM205/9	200	600	– **991.00**
For 450 mm wide *(narrow)* **panels**						
UC200	mounting kit for MCB	10 modules	FM109	150	350	– **701.00**
UC010H	mounting kit for MCCB	x160	FM109	300	350	– **1 300.00**
UC020H	mounting kit for MCCB	x250	FM109	300	350	– **2 200.00**
UC434P	kit for mounting 1 x MCCB	P630	FM109	300	350	– **1 770.00**
UC434X	kit for mounting 1 x MCCB	x630	FM109	300	350	– **1 960.00**
Accessories for Quadro 5 enclosures - *(other common accessories see page **H-11**)*						
FM484	chassis plates for standard enclosures		FM205/9	300	500	– **688.00**
FM486	chassis plates for standard enclosures		FM205/9	600	500	– **1 150.00**
FM635	horizontal joining kit *(side by side mounting of frames)*					**952.00**
FM653	screw-in lifting ring set for Quadro 5 enclosures					*(2pcs)* **265.00**
UC915	clip-in cable trunking support *(60 mm vertical / 40 mm horizontal)*					**76.00**
JP024	blanking strip *(24 modules wide)* with breakable sections					**82.00**
FZ517	replacement square 6 x 6 mm key lock insert					**86.00**

FM109 / 209

FM549

☛ *(continued...)* **Vega D Internal modules**

type	number of modular ways	description	dimensions (mm) (H)	(W)	(D)	price
FD02A1	2 rows *(24 way)*	standard chassis with modular DIN cover	300	–	–	**1 320.00**
FD02K1	2 row	for 1 x vertically mounted 160A MCCB	300	–	–	**1 410.00**
FD02C2	2 row	perforated chassis plate + plain front cover	300	–	–	**2 030.00**
FD00C2	2 row	plain flat surface front cover for enclosures	300	–	–	**639.00**
FD00M2	2 row	chassis plate direct fixing on vert. supports	300	–	–	**307.00**
Accessories for Vega D enclosures						
JP002	blanking strip	24 way blanking strip *(breakable sections)*			*(ea)*	**78.00**
FD00A1	label holder	24 way holder and paper strip for marking			*(10 per pack)*	**512.00**
FD00F1	bracket	for horizontal side by side mounting			*(ea)*	**603.00**
FD00F2	brackets	external wall mount for surface enclosures			*(ea)*	**506.00**
FZ794	pocket plan	self adhesive flexible A4 format pocket plan			*(10 per pack)*	**477.00**
FD00S1	key lock	key lock to replace original door latch			*(ea)*	**413.00**

- Quick and easy to assemble
- IP55 *(with door)*
- Access from all sides
- Sheet metal class I

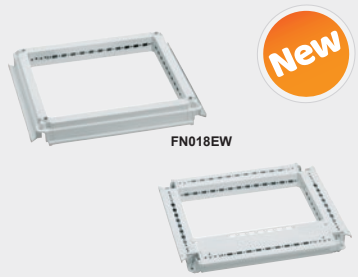
Dimension (mm)			Top and bottom	4 uprights	plinth (H=100 mm)	back panel		side panel
height	width	depth	frame (set)			plane	ventilated	
1900	450	400	FN018EW	FN046EW	FN438E	FN216E	–	FN356E
1900	450	600	FN020EW	FN046EW	FN440E	FN216E	–	FN366E
1900	450	800	FN022EW	FN046EW	FN442E	FN216E	–	FN376E
1900	700	400	FN021EW	FN046EW	FN441E	FN276E	FN276EDW	FN356E
1900	700	600	FN029EW	FN046EW	FN451E	FN276E	FN276EDW	FN366E
1900	700	800	FN013EW	FN046EW	FN433E	FN276E	FN276EDW	FN376E
1900	900	400	FN023EW	FN046EW	FN443E	FN296E	FN296EDW	FN356E
1900	900	600	FN031EW	FN046EW	FN453E	FN296E	FN296EDW	FN366E
1900	900	800	FN017EW	FN046EW	FN437E	FN296E	FN296EDW	FN376E
1900	1000	400	FN024EW	FN046EW	FN444E	FN246E	FN246EDW	FN356E
1900	1000	600	FN032EW	FN046EW	FN454E	FN246E	FN246EDW	FN366E
1900	1000	800	FN037EW	FN046EW	FN459E	FN246E	FN246EDW	FN376E

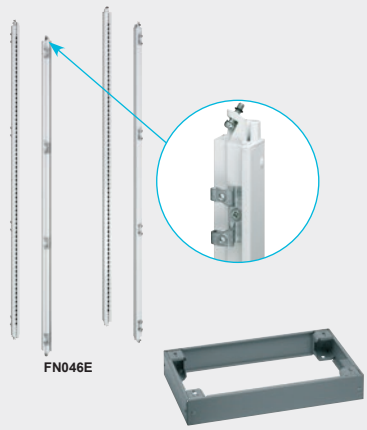
Introducing more possibilities

quadro evo

The New Hager Main Distribution Board

Basic component requirement to assemble a single floor standing cabinet:
• Top and bottom frames • Four uprights • Plinth • Side panels • Back panel • Top and bottom plates • Door





type	description		dimensions (mm) (H)	(W)	(D)	price
Top and bottom frame set - *Connects to structural uprights* **FN046EW** 1						
FN018EW	top and bottom frame set	*(connects to uprights)*	–	450	400	**5 230.00**
FN020EW	top and bottom frame set	*(connects to uprights)*	–	450	600	**5 670.00**
FN022EW	top and bottom frame set	*(connects to uprights)*	–	450	800	**6 060.00**
FN021EW	top and bottom frame set	*(connects to uprights)*	–	700	400	**6 190.00**
FN029EW	top and bottom frame set	*(connects to uprights)*	–	700	600	**6 410.00**
FN013EW	top and bottom frame set	*(connects to uprights)*	–	700	800	**6 870.00**
FN023EW	top and bottom frame set	*(connects to uprights)*	–	900	400	**6 750.00**
FN031EW	top and bottom frame set	*(connects to uprights)*	–	900	600	**7 620.00**
FN017EW	top and bottom frame set	*(connects to uprights)*	–	900	800	**8 520.00**
FN024EW	top and bottom frame set	*(connects to uprights)*	–	1000	400	**7 560.00**
FN032EW	top and bottom frame set	*(connects to uprights)*	–	1000	600	**8 390.00**
FN037EW	top and bottom frame set	*(connects to uprights)*	–	1000	800	**9 230.00**
Four structural uprights - *Connects to top and bottom frames with single captive screw* 2						
FN046EW	set of 4 uprights	*(connects to top and bottom frame)*	1900	–	–	**6 950.00**
Plinth - *Removable front and rear inspection plates* 3						
FN438E	plinth with inspection plates	*(H) 100 mm*	100	450	400	**2 420.00**
FN440E	plinth with inspection plates	*(H) 100 mm*	100	450	600	**2 660.00**
FN442E	plinth with inspection plates	*(H) 100 mm*	100	450	800	**2 820.00**
FN441E	plinth with inspection plates	*(H) 100 mm*	100	700	400	**2 700.00**
FN451E	plinth with inspection plates	*(H) 100 mm*	100	700	600	**2 790.00**
FN433E	plinth with inspection plates	*(H) 100 mm*	100	700	800	**3 010.00**
FN443E	plinth with inspection plates	*(H) 100 mm*	100	900	400	**2 840.00**
FN453E	plinth with inspection plates	*(H) 100 mm*	100	900	600	**2 940.00**
FN437E	plinth with inspection plates	*(H) 100 mm*	100	900	800	**3 150.00**
FN444E	plinth with inspection plates	*(H) 100 mm*	100	1000	400	**2 820.00**
FN454E	plinth with inspection plates	*(H) 100 mm*	100	1000	600	**2 920.00**
FN459E	plinth with inspection plates	*(H) 100 mm*	100	1000	800	**3 130.00**
FN430E	Plinth connection kit to increase overall height by adding two or more plinths					**111.00**
Back panels - *Removable* 4						
FN216E	rear panel for Quadro enclosures	*(removable)*	1900	450	–	**2 200.00**
FN276E	rear panel for Quadro enclosures	*(removable)*	1900	700	–	**3 240.00**
FN296E	rear panel for Quadro enclosures	*(removable)*	1900	900	–	**4 210.00**
FN246E	rear panel for Quadro enclosures	*(removable)*	1900	1000	–	**4 730.00**
FN276EDW	ventilated rear panel for enclosures	*(louvered)*	1900	700	–	**5 510.00**
FN296EDW	ventilated rear panel for enclosures	*(louvered)*	1900	900	–	**7 220.00**
FN246EDW	ventilated rear panel for enclosures	*(louvered)*	1900	1000	–	**8 320.00**
Side panels *(supplied individually)* 5						
FN356E	side panel for Quadro enclosures	(removable)	1900	–	400	**2 090.00**
FN366E	side panel for Quadro enclosures	(removable)	1900	–	600	**2 590.00**
FN376E	side panel for Quadro enclosures	(removable)	1900	–	800	**3 990.00**

Above ZAR prices do not include VAT. E&OE

6	7	8		9	10
top and bottom cable entry plates		doors		chassis plate	functional uprights
plain plate	cable entry	plain	transparent	full height	
FN078E	FN4540DREM	FN546E	FN510E	FN726E	UC1800FB
FN080E	FN4560DREM	FN546E	FN510E	FN726E	UC1800FB
FN082E	FN4580DREM	FN546E	FN510E	FN726E	UC1800FB
FN081E	FN7040DREM	FN506E	FN516E	FN736E	UC1800FB
FN089E	FN7060DREM	FN506E	FN516E	FN736E	UC1800FB
FN073E	FN7080DREM	FN506E	FN516E	FN736E	UC1800FB
FN083E	FN9040DREM	FN526E	FN536E	FN746E	UC1800FB
FN091E	FN9060DREM	FN526E	FN536E	FN746E	UC1800FB
FN077E	FN9080DREM	FN526E	FN536E	FN746E	UC1800FB
FN084E	FN10040DREM	–	–	–	UC1800FB
FN092E	FN10060DREM	–	–	–	UC1800FB
FN121E	FN10080DREM	–	–	–	UC1800FB

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FN089E

FN4540DREM

FN506E

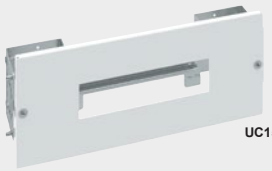
FN516E

type	description			dimensions (mm) (H)	(W)	(D)	price
Top and bottom cover plates *(plain)* 6							
FN078E	plain cover plate	top *(or)* bottom	*(plain)*	–	450	400	**1 020.00**
FN080E	plain cover plate	top *(or)* bottom	*(plain)*	–	450	600	**1 230.00**
FN082E	plain cover plate	top *(or)* bottom	*(plain)*	–	450	800	**1 430.00**
FN081E	plain cover plate	top *(or)* bottom	*(plain)*	–	700	400	**1 280.00**
FN089E	plain cover plate	top *(or)* bottom	*(plain)*	–	700	600	**1 540.00**
FN073E	plain cover plate	top *(or)* bottom	*(plain)*	–	700	800	**2 160.00**
FN083E	plain cover plate	top *(or)* bottom	*(plain)*	–	900	400	**1 350.00**
FN091E	plain cover plate	top *(or)* bottom	*(plain)*	–	900	600	**1 760.00**
FN077E	plain cover plate	top *(or)* bottom	*(plain)*	–	900	800	**2 200.00**
FN084E	plain cover plate	top *(or)* bottom	*(plain)*	–	1000	400	**1 500.00**
FN092E	plain cover plate	top *(or)* bottom	*(plain)*	–	1000	600	**1 790.00**
FN121E	plain cover plate	top *(or)* bottom	*(plain)*	–	1000	800	**2 830.00**
Top and bottom cable entry plates *(frame + precut plate)* 7							
FN4540DREM	cable entry plate	top *(or)* bottom	*(precut)*	–	450	400	**1 469.00**
FN4560DREM	cable entry plate	top *(or)* bottom	*(precut)*	–	450	600	**1 964.00**
FN4580DREM	cable entry plate	top *(or)* bottom	*(precut)*	–	450	800	**2 207.00**
FN7040DREM	cable entry plate	top *(or)* bottom	*(precut)*	–	700	400	**2 025.00**
FN7060DREM	cable entry plate	top *(or)* bottom	*(precut)*	–	700	600	**2 569.00**
FN7080DREM	cable entry plate	top *(or)* bottom	*(precut)*	–	700	800	**3 130.00**
FN9040DREM	cable entry plate	top *(or)* bottom	*(precut)*	–	900	400	**2 460.00**
FN9060DREM	cable entry plate	top *(or)* bottom	*(precut)*	–	900	600	**3 130.00**
FN9080DREM	cable entry plate	top *(or)* bottom	*(precut)*	–	900	800	**3 740.00**
FN10040DREM	cable entry plate	top *(or)* bottom	*(precut)*	–	1000	400	**3 010.00**
FN10060DREM	cable entry plate	top *(or)* bottom	*(precut)*	–	1000	600	**3 550.00**
FN10080DREM	cable entry plate	top *(or)* bottom	*(precut)*	–	1000	800	**4 350.00**
Cable entry plates - *for (above) open cover plates*							
FZ404	cable entry plain plastic plate without precuts					plain	**263.00**
FZ422	cable entry plain steel plate without precuts					plain	**448.00**
FZ402AL	aluminium cable entry plate					plain	**435.00**
FZ402	cable entry plate with flexible rubber pins			various entry diameters			**283.00**
FZ406M	cable entry plate with precuts for cable glands			13x M20 + 2x M25/20			**262.00**
FZ407M	cable entry plate with precuts for cable glands			6x M25 + 2x M32/25			**263.00**
FZ408M	cable entry plate with precuts for cable glands			2x M25/32 + 1x M50/63			**263.00**
FZ403WP	top ventilating cap for enclosures			*(mounts onto open cover plates)*			**743.00**
Doors - *Supplied with hinges and rotary locks* 8							
FN510E	door for Quadro system	*(reversible)*	*(t/parent)*	1900	450	–	**4 900.00**
FN516E	door for Quadro system	*(reversible)*	*(t/parent)*	1900	700	–	**7 090.00**
FN536E	door for Quadro system	*(reversible)*	*(t/parent)*	1900	900	–	**8 190.00**
FN546E	door for Quadro system	*(reversible)*	*(plain)*	1900	450	–	**4 110.00**
FN506E	door for Quadro system	*(reversible)*	*(plain)*	1900	700	–	**5 150.00**
FN526E	door for Quadro system	*(reversible)*	*(plain)*	1900	900	–	**6 100.00**
FN952	door stopper unit *(to latch door in open position)*			–	–	–	**840.00**

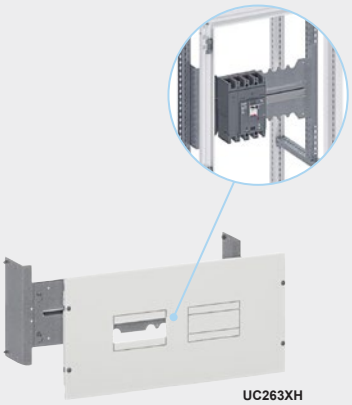
Equipment mounting kits *(for Quadro Evo systems)*

- Comprises: mounting accessories and front covers for MCB, MCCB and ACB

type	description		for components	dimensions (mm) (H)	(W)	price
Functional uprights - *Mandatory for mounting equipment kits in enclosures* (10)						
UC1800FB	functional uprights	*(to support mounting accessories)*		1900	–	**6 200.00**
UC1600FB	functional uprights	*(space for busbar in top section)*		1600	–	**6 260.00**
Mounting kits for circuit breakers - *Vertical mounting (terminals top/bottom)*						
For 450 *(350)* **mm wide panels**						
UC1530MDN	kit for mounting MCB		10 modules	150	350	**1 440.00**
UC2035AMD*	terminal kit with mounting kit, DIN-rail and front cover			200	350	**1 090.00**
UC133X	kit for mounting 2 x MCCB	vertical	x160	300	350	**1 920.00**
UC233XH	kit for mounting 1 x MCCB	vertical	x250	300	350	**2 000.00**
UC434PN	kit for mounting 1 x MCCB	vertical	P630	400	350	**2 180.00**
UC434XN	kit for mounting 1 x MCCB	vertical	x630	400	350	**2 170.00**
For 700 *(600)* **mm wide panels**						
UC1560MDN	kit for mounting MCB		24 modules	150	600	**1 470.00**
UC2060MDN	kit for mounting MCB		24 modules	200	600	**1 500.00**
UC2060AMD*	terminal kit with mounting kit, DIN-rail and front covercover plate			200	600	**1 160.00**
UC163X	kit for mounting 4 x MCCB	vertical	x160	300	600	**2 100.00**
UC263XH	kit for mounting 2 x MCCB	vertical	x250	300	600	**1 740.00**
UC464PN	kit for mounting 2 x MCCB	vertical	P630	400	600	**2 950.00**
UC464XN	kit for mounting 2 x MCCB	vertical	x630	400	600	**3 110.00**
UC566H	kit for mounting 1 x MCCB	vertical	h1000	600	600	**3 950.00**
UC666H	kit for mounting 1 x MCCB	vertical	h1600	600	600	**4 650.00**
Horizontal mounting *(terminals left and right)*						
UC262XHR	kit for mounting 1 x MCCB	horizontal	x250	200	600	**2 080.00**
UC463XRN	kit for mounting 1 x MCCB	horizontal	x630	300	600	**2 560.00**
UC463PRN	kit for mounting 1 x MCCB	horizontal	P630	400	600	**2 500.00**
UC564H	kit for mounting 1 x MCCB	horizontal	h1000	400	600	**3 750.00**
Mounting kits for ACB - *Vertically mounted (terminals top/bottom)*						
UC6040HW1	kit for mounting HW1 ACB	fixed-D/out	1600A	400	600	**2 760.00**
UC6060HW2	kit for mounting HW2 ACB	fixed-D/out	2500A	600	600	**4 440.00**
Other mounting kits - *For 700mm wide cabinets*						
UC301	kit with knock-outs for up to	4 x 72 mm²	instruments	200	600	**667.00**
UC233EM	kit with knock-outs for up to	3 x 96 mm²	instruments	200	600	**991.00**
For 900 *(800)* **mm wide panels**						
UC1580MDN	kit for mounting MCB		35 modules	150	800	**1 840.00**
UC2080MDN	kit for mounting MCB		35 modules	200	800	**1 900.00**
UC2080AMD*	terminal kit with mounting kit, DIN-rail and front cover			200	800	**1 190.00**
UC183X	kit for mounting 6 x MCCB	vertical	x160	300	800	**1 700.00**
UC283XH	kit for mounting 3 x MCCB	vertical	x250	300	800	**1 980.00**
UC484XDN	kit for mounting 3 x MCCB	vertical	x630	400	800	**3 570.00**
UC484PDN	kit for mounting 3 x MCCB	vertical	P630	400	800	**3 540.00**
UC586H	kit for mounting 1 x MCCB	vertical	h1000	600	800	**4 120.00**
UC686HD	kit for mounting 2 x MCCB	vertical	h1600	600	800	**3 190.00**
Horizontal mounting MCCB *(terminals left and right)*						
UC282XHR	kit for mounting 1 x MCCB	horizontal	x250	200	800	**2 390.00**
UC483XRN	kit for mounting 1 x MCCB	horizontal	x630	300	800	**2 880.00**
UC483PRN	kit for mounting 1 x MCCB	horizontal	P630	400	800	**2 940.00**
UC584H	kit for mounting 1 x MCCB	horizontal	h1000	400	800	**4 360.00**
Mounting kits for ACB						
UC8040HW1	kit for mounting HW1 ACB	fixed-D/out	1600A	400	800	**3 160.00**
UC8060HW2	kit for mounting HW2 ACB	fixed-D/out	2500A	600	800	**4 870.00**
UC8060FHW4	kit for mounting HW4 ACB	fixed	4000A	600	800	**6 440.00**
UC8060DHW4	kit for mounting HW4 ACB	D/out	4000A	600	800	**6 440.00**
Other mounting kits - *For 900 mm wide cabinets*						
UC243EM	kit with knock-outs for up to	3 x 96 mm²	instruments	200	800	**1 280.00**



UC1530MD



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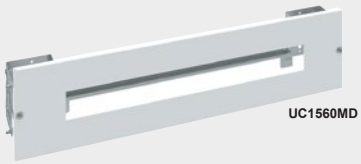


UC1560MD

UC243EM

* *Front cover to be purchased separately.*

Above ZAR prices do not include VAT. E&OE

FN6030PDW

FN6060PDW

UC232

FN266E

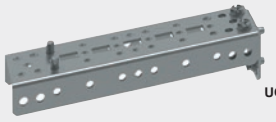
FN206E

type	description			dimensions (mm) (H)	(W)	(D)	price
Partial door system - *Replaces classical door system with partial doors*							
Vertical upright - *requires front top and bottom finishing panels (below)*							
FN1900PD	vertical upright to attach partial doors onto		*(ea)*	1900	–	–	**1 340.00**
FN60TBPW	top and bottom finishing panels for partial doors		*(set 2 pcs)*	–	600	–	**1 490.00**
FN80TBPW	top and bottom finishing panels for partial doors		*(set 2 pcs)*	–	800	–	**1 880.00**
Partial doors for cabinets							
FN6020MDW	partial door with cut-out for modular devices (MCB's)		*(1 lock)*	200	600	–	**2 640.00**
FN6020PDW	partial plain blank doors only	*(hinged)*	*(1 lock)*	200	600	–	**2 610.00**
FN6030PDW	partial plain blank doors only	*(hinged)*	*(1 lock)*	300	600	–	**3 040.00**
FN6040PDW	partial plain blank doors only	*(hinged)*	*(2 locks)*	400	600	–	**2 500.00**
FN6060PDW	partial plain blank doors only	*(hinged)*	*(2 locks)*	600	600	–	**2 640.00**
FN8020MDW	partial door with cut-out for modular devices (MCB's)		*(1 lock)*	200	800	–	**2 840.00**
FN8020PDW	partial plain blank doors only	*(hinged)*	*(1 lock)*	200	800	–	**2 060.00**
FN8030PDW	partial plain blank doors only	*(hinged)*	*(1 lock)*	300	800	–	**2 400.00**
FN8040PDW	partial plain blank doors only	*(hinged)*	*(2 locks)*	400	800	–	**2 610.00**
FN8060PDW	partial plain blank doors only	*(hinged)*	*(2 locks)*	600	800	–	**2 870.00**
Blanking plates - *For Quadro systems - screws onto functional uprights*							
UC221	front blanking cover plate	*(screw on)*	*(plain)*	50	350	–	**474.00**
UC222	front blanking cover plate	*(screw on)*	*(plain)*	150	350	–	**411.00**
UC223	front blanking cover plate	*(screw on)*	*(plain)*	200	350	–	**520.00**
UC224	front blanking cover plate	*(screw on)*	*(plain)*	300	350	–	**591.00**
UC225	front blanking cover plate	*(screw on)*	*(plain)*	400	350	–	**828.00**
UC226	front blanking cover plate	(screw on)	(plain)	600	350	–	**794.00**
UC231	front blanking cover plate	*(screw on)*	*(plain)*	50	600	–	**540.00**
UC239	front blanking cover plate	*(screw on)*	*(plain)*	100	600	–	**583.00**
UC232	front blanking cover plate	*(screw on)*	*(plain)*	150	600	–	**643.00**
UC233	front blanking cover plate	*(screw on)*	*(plain)*	200	600	–	**885.00**
UC234	front blanking cover plate	*(screw on)*	*(plain)*	300	600	–	**655.00**
UC235	front blanking cover plate	*(screw on)*	*(plain)*	400	600	–	**920.00**
UC236	front blanking cover plate	*(screw on)*	*(plain)*	600	600	–	**1 170.00**
UC6020PL	ventilating front blanking cover	*(screw on)*	*(louvered)*	200	600	–	**1 020.00**
UC241	front blanking cover plate	*(screw on)*	*(plain)*	50	800	–	**587.00**
UC249	front blanking cover plate	*(screw on)*	*(plain)*	100	800	–	**631.00**
UC242	front blanking cover plate	*(screw on)*	*(plain)*	150	800	–	**670.00**
UC243	front blanking cover plate	*(screw on)*	*(plain)*	200	800	–	**774.00**
UC244	front blanking cover plate	*(screw on)*	*(plain)*	300	800	–	**901.00**
UC245	front blanking cover plate	*(screw on)*	*(plain)*	400	800	–	**1 180.00**
UC246	front blanking cover plate	*(screw on)*	*(plain)*	600	800	–	**1 450.00**
UC8020PL	ventilating front blanking cover	*(screw on)*	*(louvered)*	200	800	–	**1 090.00**
Vertical dividing uprights - *(supplied individually)*							
- To create a cable compartment (W) 200/300 mm within (W) 900/1000 mm cabinets							
FN286EW	vertical dividing upright for cable compartment		*(each)*	1900	–	–	**4 740.00**
Cable compartment plate - *(supplied individually) fixing with screws*							
FN266E	cable compartment blanking plate	*(front or back mount)*		–	200	–	**2 050.00**
FN206E	cable compartment blanking plate	*(front or back mount)*		–	300	–	**1 840.00**
Horizontal dividing support - *to support functional uprights when creating a cable compartment*							
FX289	horizontal dividing side support for functional uprights			–	–	400	**629.00**
FX291	horizontal dividing side support for functional uprights			–	–	600	**797.00**
FX292	horizontal dividing side support for functional uprights			–	–	800	**982.00**
Partial front functional uprights - *can be used when no functional uprights for equipment are used*							
UC200F	partial front functional uprights for cabinet			200	–	–	**755.00**
UC300F	partial front functional uprights for cabinet			300	–	–	**874.00**
UC400F	partial front functional uprights for cabinet			400	–	–	**1 020.00**
UC600F	partial front functional uprights for cabinet			600	–	–	**1 200.00**
UC1800F	full length functional front uprights for cabinet			1800	–	–	**2 360.00**
Partial rear functional uprights - *to accommodate rear mounted chassis and support brackets*							
UC400BU	partial rear functional uprights			400	–	–	**2 440.00**
UC600BU	partial rear functional uprights			600	–	–	**2 370.00**
UC800BU	partial rear functional uprights			800	–	–	**2 510.00**
UC1000BU	partial rear functional uprights			1000	–	–	**3 400.00**

FN950

Finishing frame

FN406E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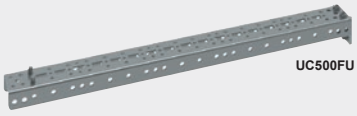

UC500FU

UC000FU

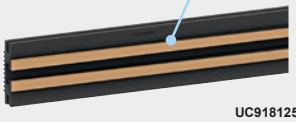
UC990

FZ767

UC268

type	description			dimensions (mm) (H)	(W)	(D)	price
Coupling kits - *To combine cabinets (of the same height) depth or laterally*							
FN950	lateral coupling to combine two cabinets horizontally *(for greater width)*						**425.00**
FN942E	cover plate for gap between adjoining enclosures	widthwise		–	–	400	**292.00**
FN943E	cover plate for gap between adjoining enclosures	widthwise		–	–	600	**315.00**
FN944E	cover plate for gap between adjoining enclosures	widthwise		–	–	800	**359.00**
FN954E	depth coupling to combine two cabinets back to back *(for greater depth)*						**1 320.00**
FN946E	cover plate for gap between adjoining enclosures	depthwise		–	450	–	**375.00**
FN947E	cover plate for gap between adjoining enclosures	depthwise		–	700	–	**396.00**
FN948E	cover plate for gap between adjoining enclosures	depthwise		–	900	–	**445.00**
FN949E	cover plate for gap between adjoining enclosures	depthwise		–	901	–	**710.00**
FN951	adhesive gasket/seal tape for enclosures	*(10 x 6 mm)*	*(length 10 met)*				**298.00**
Finishing frame - *Required when no door is fitted to enclosure*							
FN1970AF	finishing frame when no door is used on enclosures			1900	700	–	**2 270.00**
FN1990AF	finishing frame when no door is used on enclosures			1900	900	–	**2 570.00**
Chassis plates - *UC partial plates can be increased in height by adding* 1 *or more kits* 9							
UC2060MP	partial chassis mounting plate	*(without cover plate)*		200	600	–	**900.00**
UC2080MP	partial chassis mounting plate	*(without cover plate)*		200	800	–	**976.00**
FN726E	chassis plate for Quadro cabinets	*(full height)*		1900	450	–	**2 320.00**
FN736E	chassis plate for Quadro cabinets	*(full height)*		1900	700	–	**3 210.00**
FN746E	chassis plate for Quadro cabinets	*(full height)*		1900	900	–	**4 710.00**
Perforated mounting accessories							
All accessories are designed for adapting enclosures to accommodate a range of components. Perforations in profiles, brackets, rails are in steps 25 mm apart and accommodate cage nuts M6 **(UC990).**							
Side brackets - *mounts horizontally between side structural uprights*							
UC300FU	side mount horizontal support bracket	*(perforated)*		50	–	400	**603.00**
UC500FU	side mount horizontal support bracket	*(perforated)*		50	–	600	**543.00**
UC700FU	side mount horizontal support bracket	*(perforated)*		50	–	800	**637.00**
Back brackets - *mounts horizontally between back structural uprights or mounted side brackets*							
UC350FU	back bracket mounts bet. rear funct. uprights or side brackets			–	450	–	**488.00**
UC600FU	back bracket mounts bet. rear funct. uprights or side brackets			–	700	–	**747.00**
UC800FU	back bracket mounts bet. rear funct. uprights or side brackets			–	900	–	**959.00**
UC200FU	back bracket for accessories	for cable compartment section		–	200	–	**529.00**
UC300FU	back bracket for accessories	for cable compartment section		–	300	–	**603.00**
UC000FU	support mounting bracket for perforated profiles *(one per profile)*						**206.00**
FZ767	lifting rings for enclosures	Quadro evo	*(2 pcs)*	–	–	–	**248.00**
FZ760E	lifting rings for double enclosures	Quadro evo	*(2 pcs)*	–	–	–	**403.00**
UC990	clip-in M6 cage nut for perforations in profiles	*(pack of 25)*		–	–	–	**318.00**
UC991	M6 x 12 mm screw for above cage nuts	*(pack of 25)*		–	–	–	**597.00**
Accessories for Quadro systems							
UC268	hinge kit for modular covers *(hinge from left or right)*	*(2 pcs)*		–	–	–	**159.00**
UC000HTS	clip-in cable trunking support	*(6pcs)*		–	–	–	**857.00**
UZ25V1*	rail mount cable clamp/guide	*(20pcs)*		–	–	–	**163.00**
UZ01V1	cable guide to fix cable clamp to DIN-rail	*(20pcs)*					**851.00**
JP024	blanking strip *(24 - way)* with breakable sections			–	–	–	**82.00**
JE003	spare transparent self-adhesive marking strips *(24 - way)*			–	–	–	**55.00**
* *Requires* ***UZ01V1*** *- cable guide to fix cable clamp* ***UZ25V1*** *to DIN-rail*							
FZ795D	metal	self-adhesive document holder *(A4)* for inside doors		–	–	–	**576.00**
FZ794	plastic	self-adhesive transparent pocket *(A4)* for inside doors		–	–	–	**477.00**
Key locks							
• To replace existing lock cylinders with other key types							
FZ537	spare swing lever handle for enclosures without lock						**832.00**
FZ506	key lock replacement cylinder	with key	1242E	–	–	–	**518.00**
FZ519	key lock replacement cylinder	with key	405	–	–	–	**519.00**
FZ520	key lock replacement cylinder	with key	455	–	–	–	**503.00**
FZ850	panel key triangle/square/double bit			–	–	–	**62.00**
FL74Z	lock replacement insert	triangle	8 mm	–	–	–	**270.00**
FL76Z	lock replacement insert	square	8x8 mm	–	–	–	**303.00**
FZ516	lock replacement insert	square	6x6 mm	–	–	–	**91.00**

Above ZAR prices do not include VAT. E&OE



UC918125AL

UC918160AL

UC9840S

UC815

UC820

UC826

Busbar supports for Quadro system

type	current (A)	bar size (mm) width	bar size (mm) thick	no. pole	description	dimensions (mm) (H)	dimensions (mm) (W)	dimensions (mm) (D)	price
Universal edgewise mounting busbar support - *Variable phase-spacing 75/100/150mm*									
• Supplied with 8 x insulated supports *(for top and bottom of busbars)* with fixing screws • For vertical or horizontal busbar mounting within Quadro enclosures • Suitable for aluminium profile bars or flat copper bars • Requires support brackets *(below)* to complete system									
UC825BB	1600A	50...120	1 x 10	4	edgewise busbar support		variable		**1 850.00**
UC8110BB	2000A	50...120	1 x 10	4	edgewise busbar support		variable		**1 780.00**
UC8210BB	2500A	50...120	2 x 10	4	edgewise busbar support		variable		**1 970.00**
UC8310BB	4000A	50...120	3 x 10	4	edgewise busbar support		variable		**2 180.00**
Busbar support profiles and mounting brackets - *required to mount the above edgewise supports*									
• Delivered with 2 x perforated profiles, 2 x mounting brackets and 8 x screws									
UC300BB	support on Quadro structure kit				for enclosure depth			400	**900.00**
UC500BB	support on Quadro structure kit				for enclosure depth			600	**981.00**
UC700BB	support on Quadro structure kit				for enclosure depth			800	**1 220.00**
UC400BB	flying support profile kit				for enclosure depth			400	**929.00**
UC600BB	flying support profile kit				for enclosure depth			600	**1 170.00**
UC800BB	flying support profile kit				for enclosure depth			800	**1 340.00**
Lower vertical busbar holders - *set of 4 holders to be mounted at the bottom of vertical bars*									
UC000BB	lower busbar support kit for vertically mounted bars *(to prevent sliding)*						variable		**1 120.00**
Aluminium profile busbars - *Mounts into holders* **UC825BB**									
UC91880AL	800A	50	18.5		aluminium profile busbars	1800	50	18.5	**2 260.00**
UC918125AL	1250A	60	18.5		aluminium profile busbars	1800	60	18.5	**3 570.00**
UC918160AL	1600A	100	18.5		aluminium profile busbars	1800	100	18.5	**4 890.00**
Copper connection plates for aluminium bars - *to extend or join profile bars*									
UC9800C	800A	connection plates for **UC91880AL** aluminium bars				110	50	–	**2 940.00**
UC9125C	1250A	connection plates for **UC918125AL** aluminium bars				130	60	–	**3 240.00**
UC9160C	1600A	connection plates for **UC918160AL** aluminium bars				210	100	–	**5 880.00**
UC9800T	800A	deviation plates for **UC91880AL** aluminium bars				110	50	–	**3 630.00**
UC9125T	1250A	deviation plates for **UC918125AL** aluminium bars				130	60	–	**4 360.00**
UC9160C	1600A	deviation plates for **UC918160AL** aluminium bars				210	100	–	**5 880.00**
Screws for aluminium bars - *steel class 8.8, supplied (screw + nut + washer)*									
UC9825S	screws	hammerhead zinc plated screws			M8x25 *(50 pcs)*	25	M8	–	**1 940.00**
UC9840S	screws	hammerhead zinc plated screws			M8x25 *(50 pcs)*	40	M8	–	**3 030.00**
Flat copper bar supports *(multi-pole)*									
Multi stage bar support - *supplied individually with 6x M6 and 2 cagenuts*									
UC815	250A	20	5	4	multi stage busbar support	180	25	126	**1 430.00**
UC816	protective screen kit				for *(above)* **UC815** support	620	–	–	**2 850.00**
Inclined busbar support - *set of 2 with with all mounting accessories and terminals*									
UC826	630A	20...32	5/10	4	inclined busbar support	245	54	114	**2 380.00**
UC828	protective screen kit				for *(above)* **UC826** support	990	212	–	**1 140.00**
Flat busbars - *supplied individually with mounting accessories*									
UC820	630A	12...30	5/10	4	inclined busbar support	242	22	42	**794.00**
UC827	protective screen kit				for *(above)* **UC820** support	990	294	–	**1 520.00**

hagercad: Layout software for distribution boards with 3D visualisation

01 **Easily** create & share your projects

02 **Quickly** generate circuit diagrams

03 **Automatic** power loss & heat calculation feature

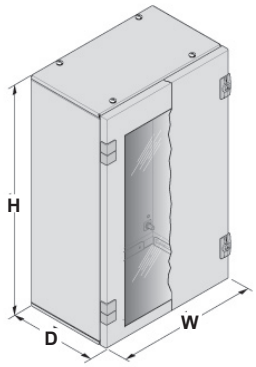
04 **Simply** generate your terminal plan

05 **Up to Date** documentation & operating instructions

06 **Greater accuracy** for cabinet calculations

07 **User friendly** function for device labels

To learn more about Hagercad visit www.em.co.za/hagercad



Orion + Enclosures *(IP65) (sheet metal and polyester)*

Sheet steel or glass reinforced polyester - **Orion Plus** enclosures suited for the harshest conditions can be applied for wet and mechanical use. Even under chemical use, Orion Plus offers the ideal solution with glass reinforced polyester.

Flexibility is provided via mounting plate or DIN-rail *(in 2 different versions)* and thus offers the suitable interior equipment system - both for the application in automation and for classical current distribution.

- Colour: RAL 7035 *(light grey)*
- Mounting: Surface mounting
- Certification: CEI EN 60439-1
- Material: Sheet steel - class I or polyester - class II
- IP Rating: *(IP65/IK10)* protection, insulation class I *(powder-coated epoxy polyester)*

General features:

- Size and depth adapted according to your need
- Front door with foamed gasket opening 140°, hinged left or right
- Interior kits for conversion to distribution facility *(for mounting MCB and modular products)*
- Polyester enclosures for indoor and outdoor applications
- Sheet metal enclosures for indoor application

Typical applications:

- Installation of automation products for the control of machines or small processes
- Installation of non modular products such as contactors, transformers, etc
- Cable termination and distribution

FL117A

FL110A+FL547A

FL404A

type	protection	description	dimensions (mm) (H)	(W)	(D)	price
Sheet metal enclosures 630A *(surface mounting)*						
• Colour: RAL 7035 *(light grey)*						
• IP65 protection, insulation class I *(powder-coated epoxy polyester)*						
• Full-sized top and bottom gland plates *(enclosures can be mounted on top of each other)*						
FL102A	IP65	surface mount sheet metal enclosure	300	250	160	**2 500.00**
FL104A	IP65	surface mount sheet metal enclosure	350	300	160	**2 710.00**
FL110A	IP65	surface mount sheet metal enclosure	500	300	200	**3 370.00**
FL112A	IP65	surface mount sheet metal enclosure	500	400	200	**3 800.00**
FL117A	IP65	surface mount sheet metal enclosure	650	400	200	**4 230.00**
FL120A	IP65	surface mount sheet metal enclosure	650	500	250	**4 990.00**
FL124A	IP65	surface mount sheet metal enclosure	800	600	300	**5 860.00**
FL128AEM	IP65	surface mount sheet metal enclosure	950	800	300	**7 620.00**
FL130AEM	IP65	surface mount sheet metal enclosure	1250	800	300	**9 790.00**
*Above enclosures with transparent door (add suffix T to part no. - e.g **FL102AT**)*						**+ 15%**
Polyester enclosures 630A *(surface mounting)*						
• Colour: RAL 7035 *(light grey)*						
• IP66 protection, insulation class II						
• Waterproof hood, top and bottom *(incorporated)*						
FL204B	IP66	surface mount polyester enclosure	350	300	160	**3 690.00**
FL209B	IP66	surface mount polyester enclosure	500	300	200	**4 230.00**
FL213B	IP66	surface mount polyester enclosure	500	400	200	**4 670.00**
FL216B	IP66	surface mount polyester enclosure	650	400	200	**5 860.00**
FL221B	IP66	surface mount polyester enclosure	650	500	250	**7 160.00**
FL221BT	IP66	as above + transparent door	650	500	250	**5 620.00**
FL229B	IP66	surface mount polyester enclosure	800	600	300	**9 330.00**
Above enclosures, add suffix T to part no. - e.g **FL204BT** *(excl.* **FL221BT** *with transparent door)*						**+15%**

Chassis plates *(supplied separately)*

- Plain mounting plate mounted either directly
- Sheet metal thickness 2 mm
- Mounting either directly on the back of enclosure or on the integrated slides with brackets **FL450A** to adjust depth, see page ***H-14***

type	description		for enclosures	price
FL402A	internal sheet metal chassis plate	for enclosure	FL102	**380.00**
FL404A	internal sheet metal chassis plate	for enclosure	FL104/204	**392.00**
FL407A	internal sheet metal chassis plate	for enclosure	FL110/209	**596.00**
FL408A	internal sheet metal chassis plate	for enclosure	FL112/213	**651.00**
FL412A	internal sheet metal chassis plate	for enclosure	FL117/216	**824.00**
FL413A	internal sheet metal chassis plate	for enclosure	FL120/221/221B	**977.00**
FL415A	internal sheet metal chassis plate	for enclosure	FL124/229	**1 410.00**
FL417AEM	internal sheet metal chassis plate	for enclosure	FL128	**2 190.00**
FL419AEM	internal sheet metal chassis plate	for enclosure	FL130	**2 760.00**

Above ZAR prices do not include VAT. E&OE

FL544A

Orion + Enclosures *(IP65) (sheet metal and polyester)*

Internal door assembly

- Internal doors, sheet metal reversible
- Delivered with fixing accessories mounting on slides with delivered fixing frame

type	description	for enclosures	price
FL544A	internal door mounting kit	for enclosure FL104/204	**2 390.00**
FL547A	internal door mounting kit	for enclosure FL110/209	**2 610.00**
FL548A	internal door mounting kit	for enclosure FL112/213	**2 610.00**
FL551A	internal door mounting kit	for enclosure FL117/216	**2 930.00**
FL552A	internal door mounting kit	for enclosure FL120/221	**3 040.00**
FL555A	internal door mounting kit	for enclosure FL124/229	**3 800.00**
FL557A	internal door mounting kit	for enclosure FL128	**4 450.00**
FL559A	internal door mounting kit	for enclosure FL130	**4 990.00**

Functional chassis *(complete)* for mounting modular products and MCB

- To convert a surface mount enclosure int a distribution board
- Pre-assembled made up of: 2 Uprights, DIN guides and modular panels

FL981A

type	number of modular ways		description	for enclosures	price
FL979A	24	*(2x12)*	complete modular chassis system	FL104A	**1 360.00**
FL980A	24	*(2x12)*	complete modular chassis system	FL204B	**1 310.00**
FL981A	36	*(3x12)*	complete modular chassis system	FL110/209	**1 460.00**
FL982A	54	*(3x18)*	complete modular chassis system	FL112/213	**1 960.00**
FL983A	72	*(4x18)*	complete modular chassis system	FL117/216	**2 840.00**
FL994A	88	*(4x22)*	complete modular chassis system	FL120A/221B	**3 280.00**
FL996A	140	*(5x28)*	complete modular chassis system	FL124A/229B	**4 360.00**
FL998A	216	*(6x36)*	complete modular chassis system	FL128A	**5 670.00**
FL000A	288	*(8x36)*	complete modular chassis system	FL130A	**6 810.00**

Kits for main incomer for enclosures

FL372A	(H) 300 mm	kit to mount 125/160A MCCB	into	FL120/221	**1 320.00**
FL373A	(H) 300 mm	kit to mount 125/160A MCCB	into	FL124/229	**1 530.00**
FL374A	(H) 300 mm	kit to mount 125/160A MCCB	into	FL128/130	**1 780.00**

*Above requires **HYA033H** DIN-rail adaptor to mount onto rail in kit, see MCCB accessories*

Blank front covers

FL713E

- Fixed by screws of 1/4 turn to replace modular covers

FL711E	150 mm	blank front cover for enclosures	FL104/10FL204/9	**312.00**
FL712E	150 mm	blank front cover for enclosures	FL112/17/FL213/16	**372.00**
FL713E	150 mm	blank front cover for enclosures	FL120A/221B	**396.00**
FL714E	150 mm	blank front cover for enclosures	FL124A/229B	**488.00**
FL715E	150 mm	blank front cover for enclosures	FL128/130A	**619.00**
FL733E	300 mm	blank front cover for enclosures	FL120A/221B	**1 410.00**
FL734E	300 mm	blank front cover for enclosures	FL124A/229B	**1 520.00**
FL735E	300 mm	blank front cover for enclosures	FL128/130A	**1 630.00**

Plinths for enclosures

FL958A	base mount plinth system	for enclosures	FL120/221	**3 260.00**
FL960A	base mount plinth system	for enclosures	FL124/229	**3 690.00**
FL962A	base mount plinth system	for enclosures	FL128/130	**4 230.00**

Accessories for enclosures

FL96Z

FL958A

FL85Z

FL670A

FL670A	seal kit for mounting enclosures one above another	**380.00**
FL85Z	metallic mounting brackets for sheet metal enclosures	**166.00**
FL863Z	plastic mounting brackets for polyester enclosures	**318.00**
FL871Z	blanking strip *(grey)* 6 x 4 way blanks in a pack	**73.00**
FL96ZX01	lever handle door lock *(without key)* for all enclosures	**225.00**
FL96Z	lever handle door lock *(with key)* for all enclosures	**219.00**
FL93Z	set of 2 locks triangular centre 8 mm	**154.00**
FL450A	4 brackets delivered with fixing screws	**244.00**

HE204

HE204T-G

HE series - Sheet metal electrical enclosures

- Manufactured from high-grade mild steel, powder-coated
- Supplied with internal Aluzinc chassis plate *(2 mm thick)*
- Supplied with 6 mm square drive locks, panel key and mounting brackets
- Degree of protection: IP65 *(continuous foam gasket)*

type	IP rating	colour	description	dimensions (mm) (H)	(W)	(D)	price
Sheet metal enclosures				**IP65**			
Orange enclosures - *(RAL2000)* electric orange							
HE200	IP65	orange	wall mount sheet metal enclosure	250	200	170	**1 400.00**
HE201	IP65	orange	wall mount sheet metal enclosure	350	250	170	**1 700.00**
HE202	IP65	orange	wall mount sheet metal enclosure	450	300	220	**2 100.00**
HE203	IP65	orange	wall mount sheet metal enclosure	550	400	220	**2 560.00**
HE203GP1*	IP65	orange	*as above* with bottom gland plate	550	400	220	**3 160.00**
HE204	IP65	orange	wall mount sheet metal enclosure	650	450	270	**3 180.00**
HE205	IP65	orange	wall mount sheet metal enclosure	750	550	270	**3 940.00**
HE206	IP65	orange	wall mount sheet metal enclosure	850	600	270	**4 890.00**
HE206E	IP65	orange	wall mount sheet metal enclosure	850	600	330	**5 290.00**
HE206EGP1*	IP65	orange	*as above* with bottom gland plate	850	600	330	**6 560.00**
HE207	IP65	orange	wall mount sheet metal enclosure	950	700	270	**5 860.00**
HE207E	IP65	orange	wall mount sheet metal enclosure	950	700	330	**6 350.00**
HE207EGP1*	IP65	orange	*as above* with bottom gland plate	950	700	330	**8 400.00**
HE208	IP65	orange	wall mount sheet metal enclosure	1150	850	270	**7 880.00**
HE208E	IP65	orange	wall mount sheet metal enclosure	1150	850	330	**8 650.00**
* **GP1**-*(bottom gland plate)*							
Enclosures with transparent glass door							
HE201T	IP65	orange	enclosure with transparent door	350	250	170	**2 340.00**
HE202T	IP65	orange	enclosure with transparent door	450	300	220	**2 820.00**
HE203T	IP65	orange	enclosure with transparent door	550	400	220	**3 290.00**
HE204T	IP65	orange	enclosure with transparent door	650	450	270	**4 420.00**
HE205T	IP65	orange	enclosure with transparent door	750	550	270	**5 770.00**
HE206T	IP65	orange	enclosure with transparent door	850	600	270	**6 500.00**
HE206ET	IP65	orange	enclosure with transparent door	850	600	330	**6 890.00**
HE207T	IP65	orange	enclosure with transparent door	950	700	270	**7 850.00**
HE207ET	IP65	orange	enclosure with transparent door	950	700	330	**8 330.00**
HE208T	IP65	orange	enclosure with transparent door	1150	850	270	**10 600.00**
HE208ET	IP65	orange	enclosure with transparent door	1150	850	330	**11 300.00**
Grey enclosures - (RAL7032) light grey				**IP65**			
HE200-G	IP65	grey	wall mount sheet metal enclosure	250	200	170	**1 400.00**
HE201-G	IP65	grey	wall mount sheet metal enclosure	350	250	170	**1 700.00**
HE202-G	IP65	grey	wall mount sheet metal enclosure	450	300	220	**2 100.00**
HE203-G	IP65	grey	wall mount sheet metal enclosure	550	400	220	**2 560.00**
HE204-G	IP65	grey	wall mount sheet metal enclosure	650	450	270	**3 310.00**
HE205-G	IP65	grey	wall mount sheet metal enclosure	750	550	270	**4 200.00**
HE206-G	IP65	grey	wall mount sheet metal enclosure	850	600	270	**4 890.00**
HE206E-G	IP65	grey	wall mount sheet metal enclosure	850	600	330	**5 290.00**
HE207-G	IP65	grey	wall mount sheet metal enclosure	950	700	270	**5 860.00**
HE207E-G	IP65	grey	wall mount sheet metal enclosure	950	700	330	**6 350.00**
HE208-G	IP65	grey	wall mount sheet metal enclosure	1150	850	270	**7 880.00**
HE208E-G	IP65	grey	wall mount sheet metal enclosure	1150	850	330	**8 650.00**
Enclosures with transparent glass door							
HE201T-G	IP65	grey	enclosure with transparent door	350	250	170	**2 340.00**
HE202T-G	IP65	grey	enclosure with transparent door	450	300	220	**2 820.00**
HE203T-G	IP65	grey	enclosure with transparent door	550	400	220	**3 290.00**
HE204T-G	IP65	grey	enclosure with transparent door	650	450	270	**4 420.00**
HE205T-G	IP65	grey	enclosure with transparent door	750	550	270	**5 770.00**
HE206T-G	IP65	grey	enclosure with transparent door	850	600	270	**6 500.00**
HE206ET-G	IP65	grey	enclosure with transparent door	850	600	330	**6 890.00**
HE207T-G	IP65	grey	enclosure with transparent door	950	700	270	**7 850.00**
HE207ET-G	IP65	grey	enclosure with transparent door	950	700	330	**8 330.00**
HE208T-G	IP65	grey	enclosure with transparent door	1150	850	270	**10 600.00**
HE208ET-G	IP65	grey	enclosure with transparent door	1150	850	330	**11 300.00**

Above ZAR prices do not include VAT. E&OE

HE204T + ID04 + HC04

HC0...

16.4.431.01

HE12960GP2

GAZS1E

type	IP rating	colour	description		dimensions (mm) (H)	(W)	(D)	price
Internal door kit for HE enclosures								
• Reversible and lockable								
ID02	–	white	internal door kit for enclosures	HE202	–	–	–	**832.00**
ID03	–	white	internal door kit for enclosures	HE203	–	–	–	**1 100.00**
ID04	–	white	internal door kit for enclosures	HE204	–	–	–	**1 440.00**
ID05	–	white	internal door kit for enclosures	HE205	–	–	–	**1 770.00**
ID06	–	white	internal door kit for enclosures	HE206	–	–	–	**2 160.00**
ID06E	–	white	internal door kit for enclosures	HE206E	–	–	–	**2 240.00**
ID07	–	white	internal door kit for enclosures	HE207	–	–	–	**2 680.00**
ID07E	–	white	internal door kit for enclosures	HE207E	–	–	–	**2 830.00**
ID08	–	white	internal door kit for enclosures	HE208	–	–	–	**3 280.00**
ID08E	–	white	internal door kit for enclosures	HE208E	–	–	–	**3 480.00**
Canopy for HE enclosures								
Orange - RAL2000 *(electric orange)*								
HC02	IP65	orange	steel canopy for enclosures	HE202	–	300	220	**414.00**
HC03	IP65	orange	steel canopy for enclosures	HE203	–	400	220	**462.00**
HC04	IP65	orange	steel canopy for enclosures	HE204	–	450	270	**581.00**
HC05	IP65	orange	steel canopy for enclosures	HE205	–	550	270	**746.00**
HC06	IP65	orange	steel canopy for enclosures	HE206	–	600	270	**765.00**
HC06E	IP65	orange	steel canopy for enclosures	HE206E	–	600	330	**860.00**
HC07	IP65	orange	steel canopy for enclosures	HE207	–	700	270	**903.00**
HC07E	IP65	orange	steel canopy for enclosures	HE207E	–	700	330	**1 030.00**
HC08	IP65	orange	steel canopy for enclosures	HE208	–	850	270	**1 070.00**
HC08E	IP65	orange	steel canopy for enclosures	HE208E	–	850	330	**1 270.00**
Grey - RAL7032 *(light grey)*								
HC02-G	IP65	grey	steel canopy for enclosures	HE202	–	300	220	**414.00**
HC03-G	IP65	grey	steel canopy for enclosures	HE203	–	400	220	**462.00**
HC04-G	IP65	grey	steel canopy for enclosures	HE204	–	450	270	**581.00**
HC05-G	IP65	grey	steel canopy for enclosures	HE205	–	550	270	**746.00**
HC06-G	IP65	grey	steel canopy for enclosures	HE206	–	600	270	**765.00**
HC06E-G	IP65	grey	steel canopy for enclosures	HE206E	–	600	330	**860.00**
HC07-G	IP65	grey	steel canopy for enclosures	HE207	–	700	270	**903.00**
HC07E-G	IP65	grey	steel canopy for enclosures	HE207E	–	700	330	**1 030.00**
HC08-G	IP65	grey	steel canopy for enclosures	HE208	–	850	270	**1 070.00**
HC08E-G	IP65	grey	steel canopy for enclosures	HE208E	–	850	330	**1 270.00**
Accessories								
16.4.431.01	16 mm	black	padlockable lever handle		for above enclosures			**190.00**
Special "extra deep" enclosures					**IP65**			
• Ideal for changeover switch applications								
• Supplied with internal Aluzinc chassis plate *(2 mm thick)*								
• Degree of protection: IP65 *(continuous foam gasket)*								
• Colour : RAL2000 *(electric orange)* - other colours on request								
HE09645	IP65	orange	extra deep sheet metal enclosures		900	600	450	**11 600.00**
HE12960GP1*	IP65	orange	*as above* with top/bottom gland plate		1200	900	600	**21 900.00**
* **GP1**-*(bottom gland plate)*								
Special "termination" boxes					**IP65**			
• Front cover secured by 4 x screws								
Sheet metal enclosures								
GAZM1E	IP65	grey	sheet metal enclosures		200	150	120	**1 400.00**
Stainless steel (AISI 304) **enclosures**								
GAZS1E	IP65	S/Steel	stainless steel enclosures		200	150	120	**2 780.00**
For stainless steel enclosures see overleaf								

SE....

3CR12 series - Stainless steel enclosures

- Manufactured from 3CR12 stainless steel and powder-coated
- Supplied with internal Aluzinc chassis plate *(2 mm thick)*
- Supplied with 6 mm square drive locks, panel key and mounting brackets
- Degree of protection: IP65 *(continuous foam gasket)*
- Colour: RAL2000 *(electric orange)* - other colours on request

type	IP rating	colour	description	dimensions (mm) (H)	(W)	(D)	price
3CR12 stainless steel enclosures				**IP65**			
SE1035	IP65	orange	3CR12 stainless steel enclosure	350	250	170	**2 480.00**
SE1040	IP65	orange	3CR12 stainless steel enclosure	400	300	220	**2 960.00**
SE1050	IP65	orange	3CR12 stainless steel enclosure	500	400	220	**3 600.00**
SE1065	IP65	orange	3CR12 stainless steel enclosure	600	500	220	**4 670.00**
SE1070	IP65	orange	3CR12 stainless steel enclosure	700	600	270	**6 280.00**
SE1080	IP65	orange	3CR12 stainless steel enclosure	800	600	270	**7 710.00**
SE1090	IP65	orange	3CR12 stainless steel enclosure	900	700	330	**9 250.00**
SE1100	IP65	orange	3CR12 stainless steel enclosure	1000	800	330	**11 400.00**
SE1201	IP65	orange	3CR12 stainless steel enclosure	1200	800	330	**13 000.00**
Stainless steel enclosures with transparent glass door							
SE1040T	IP65	orange	3CR12 enc. with transparent door	400	300	220	**3 820.00**
SE1050T	IP65	orange	3CR12 enc. with transparent door	500	400	220	**4 690.00**
SE1065T	IP65	orange	3CR12 enc. with transparent door	600	500	220	**6 140.00**
SE1070T	IP65	orange	3CR12 enc. with transparent door	700	600	270	**8 070.00**
SE1080T	IP65	orange	3CR12 enc. with transparent door	800	600	270	**9 760.00**
SE1090T	IP65	orange	3CR12 enc. with transparent door	900	700	330	**11 900.00**
SE1100T	IP65	orange	3CR12 enc. with transparent door	1000	800	330	**14 600.00**
SE1201T	IP65	orange	3CR12 enc. with transparent door	1200	800	330	**16 900.00**

RGS....

Canopy for above enclosures

HC3CR-4	IP65	orange	canopy for stainless steel enclosures	SE1040		**954.00**
HC3CR-5	IP65	orange	canopy for stainless steel enclosures	SE1050		**981.00**
HC3CR-6	IP65	orange	canopy for stainless steel enclosures	SE1065		**1 090.00**
HC3CR-7	IP65	orange	canopy for stainless steel enclosures	SE1070/1080		**1 330.00**
HC3CR-9	IP65	orange	canopy for stainless steel enclosures	SE1090		**1 540.00**
HC3CR-10	IP65	orange	canopy for stainless steel enclosures	SE1100/1200		**1 760.00**

*Add **"-G"** to the end of the above **SE..** / **HC3CR..** part numbers for grey (RAL7032) enclosures*

304 stainless steel enclosures				**IP65**			
RGS304-30	IP65	S/Steel	SS 304 stainless steel enclosure	350	250	170	**3 860.00**
RGS304-40	IP65	S/Steel	SS 304 stainless steel enclosure	400	300	220	**4 830.00**
RGS304-50	IP65	S/Steel	SS 304 stainless steel enclosure	500	400	220	**6 560.00**
RGS304-65	IP65	S/Steel	SS 304 stainless steel enclosure	600	500	220	**9 390.00**
RGS304-70	IP65	S/Steel	SS 304 stainless steel enclosure	700	600	270	**13 000.00**
RGS304-80	IP65	S/Steel	SS 304 stainless steel enclosure	800	600	270	**14 500.00**
RGS304-93	IP65	S/Steel	SS 304 stainless steel enclosure	900	700	330	**19 000.00**
RGS304-103	IP65	S/Steel	SS 304 stainless steel enclosure	1000	800	330	**22 700.00**
RGS304-123	IP65	S/Steel	SS 304 stainless steel enclosure	1200	800	330	**27 300.00**

- Manufactured from high grade SS 304 stainless steel
- Supplied with internal Aluzinc chassis plate *(2 mm thick)*
- Supplied with bottom SS 304 gland plate and enclosure mounting brackets
- Degree of protection: IP65 *(continuous foam gasket)*
- Colour: Stainless steel - "brushed" finish

RGS....

Internal door kit for all above enclosures *(mild steel)*

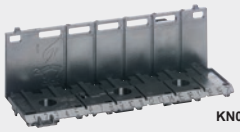
ID3CR-4	–	white	internal door kit for above enclosures	400	300	170	**900.00**
ID3CR-5	–	white	internal door kit for above enclosures	500	400	220	**1 180.00**
ID3CR-6	–	white	internal door kit for above enclosures	600	500	220	**1 590.00**
ID3CR-7	–	white	internal door kit for above enclosures	700	600	270	**2 010.00**
ID3CR-8	–	white	internal door kit for above enclosures	800	600	270	**2 310.00**
ID3CR-9	–	white	internal door kit for above enclosures	900	700	330	**2 910.00**
ID3CR-10	–	white	internal door kit for above enclosures	1000	800	330	**3 400.00**
ID3CR-12	–	white	internal door kit for above enclosures	1200	800	330	**3 620.00**

Above ZAR prices do not include VAT. E&OE

KM13E

KM13N

type	description		price
Rail mountable earth/neutral terminals *(clips vertically onto rail)*			
KM13N	rail mountable neutral terminal *(blue)*	6 x 16 + 7 x 10 mm²	**77.00**
KM13E	rail mountable earth terminal *(green)*	6 x 16 + 7 x 10 mm²	**81.00**
Terminal support *(clips into various distribution boards)*			
KN00A	universal terminal support	DIN-rail mount *(horizontal or vertical)* 105 mm	**52.00**


KN00A

Distribution terminals *(fully insulated clips onto above support)*

Incoming: 1.5..25 mm² screw clamp terminal
Outgoing: 1.5..4 mm² connect cage clamp terminals (push-in)

type		supply 1.5..25 mm²	output 1.5..4 mm²	description	colour	price
KN10E	63A	2 x 25 mm²	8 x 4 mm²	insulated earth terminal	*(green)*	**117.00**
KN18E	63A	4 x 25 mm²	14 x 4 mm²	insulated earth terminal	*(green)*	**144.00**
KN26E	63A	6 x 25 mm²	20 x 4 mm²	insulated earth terminal	*(green)*	**173.00**
KN99E	earth insulated bridge piece for above terminals *(push-in)*					**252.00**
KN10N	63A	2 x 25 mm²	8 x 4 mm²	insulated neutral terminal	*(blue)*	**117.00**
KN18N	63A	4 x 25 mm²	14 x 4 mm²	insulated neutral terminal	*(blue)*	**144.00**
KN26N	63A	6 x 25 mm²	20 x 4 mm²	insulated neutral terminal	*(blue)*	**173.00**
KN99N	neutral insulated bridge piece for above terminals *(10pcs)*					**252.00**
KN10P	63A	2 x 25 mm²	8 x 4 mm²	insulated phase terminal	*(brown)*	**117.00**
KN18P	63A	4 x 25 mm²	14 x 4 mm²	insulated phase terminal	*(brown)*	**144.00**
KN26P	63A	6 x 25 mm²	20 x 4 mm²	insulated phase terminal	*(brown)*	**173.00**
KN99P	phase insulated bridge piece for above terminals *(10 pcs)*					**252.00**
KN04N	90A	4 x 25 mm²	screw clamp	insulated neutral terminal	*(blue)*	**72.00**
KN07N	90A	7 x 25 mm²	screw clamp	insulated neutral terminal	*(blue)*	**76.00**
KN04P	90A	4 x 25 mm²	screw clamp	insulated phase terminal	*(brown)*	**72.00**
KN07P	90A	7 x 25 mm²	screw clamp	insulated phase terminal	*(brown)*	**76.00**

KN26E

KN99...

KN04P

KN07N

Single-pole distribution blocks *(fully protected) Icc: 36kA*

- Space saving
- IP20 protection
- DIN-rail or bolt down mounting
- One main cable input - various cable outputs

type	amps	incoming terminals	outgoing terminals (per phase) mm² 1.5...6	2.5...10	2.5...16	2.5...25	6...35	Icc kA	poles	price
KJ02D	125A	1x35/1x16 mm²			6			36	1 pole	**585.00**
KJ02C	160A	70 mm²			6			36	1 pole	**938.00**
KJ02A	250A	95 mm²		4	5	2		36	1 pole	**1 210.00**
KJ02B	400A	150 mm²		4	5	2		36	1 pole	**1 310.00**

KJ02C

KJ02A

Multi-pole distribution blocks

- Modular DIN-rail mounting *(mounts through modular front cut-out)*
- 3Ph+N distribution bars in modular format
- High fault level
- IEC 60947-1

type	amps	incoming terminals	outgoing terminals (per phase) mm² 1.5...6	2.5...10	2.5...16	2.5...25	6...35	Icc kA	poles	price
KJ01A	100A	35 mm²			10	1		29	2 pole	**846.00**
KJ01B	80A	16 mm²		8				21	4 pole	**846.00**
KJ01C	125A	35 mm²			10	1		29	4 pole	**958.00**
KJ01D	160A	50 mm²			8		3	20	4 pole	**2 920.00**
KJ02E	125A	25 mm²	5/4*	2/6*				20	4 pole	**907.00**

*= Neutral terminals

KJ01B

KJ02E

Filter / fan units - Panel mounting

Complete filter fan assembly with fan, mounting frame, removable filter, internal finger guard. Mounts through panel wall or door for simple installation as a ventilator device for electrical cabinets/panels.

- Push-in frame, self locking *(fastening without screws)*
- Permanent sealing gasket in polyurethane foam
- Patented hinged system for easy filter replacement without tools
- Shielded self lubricating ball bearings
- Protection type: IP55

113H1238HA2BMT

SVF114H

FU-9804C2 P2A23

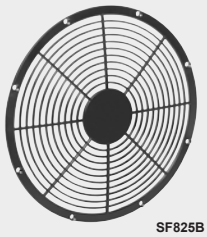
type	voltage (V)	power (W)	noise (dB/A)	air flow (CFM)	dimensions (mm²) size	frame	cutout	price
Panel mount fan / filter units				**IP55**				
• Fan, mounting frame, removable filter, internal finger guard								
AC filter/fans								
112H9225HA2BPT	230 VAC	14	32	18	2	109	92	**619.00**
113H1238HA2BMT	230 VAC	18	42	59	3	145	124	**745.00**
114H17255HA2BMT	230 VAC	28	51	177	4	202	177	**2 320.00**
115H1806HA2BMT	230 VAC	47	57	340	5	252	224	**2 720.00**
116H2208HA2BMT	230 VAC	58	65	476	6	320	292	**3 270.00**
116H2509HA2BMW	230 VAC	57	64	570	6	320	292	**3 620.00**
113H1238HA1BMT	110 VAC	18	42	59	3	145	124	**745.00**
114H17255HA1BMT	110 VAC	28	51	177	4	202	177	**2 320.00**
115H1806HA1BMT	110 VAC	47	57	340	5	252	224	**2 720.00**
113H1238HA3BMT	380 VAC	18	42	59	3	145	124	**808.00**
114H17255HA3BMT	380 VAC	28	51	177	4	202	177	**2 640.00**
115H1806HA3BMT	380 VAC	47	57	340	5	252	292	**2 940.00**
DC filter/fans								
112H8025MD4BBLS	24 VDC	14	36	25	2	109	92	**388.00**
113H1225XD4BCLS	24 VDC	14	45	41	3	145	124	**577.00**
115H1724XD4BALS	24 VDC	36	54	136	5	252	224	**1 910.00**
Exhaust filter - *without fan used as a matching air outlet/inlet*								
• Match size of the filter/fan to achieve optimal ventilation within the cabinet								
SVF112H	9225	–	exhaust filter only		2	109	92	**168.00**
SVF113H	1238	–	exhaust filter only		3	145	124	**200.00**
SVF114H	1755	–	exhaust filter only		4	202	177	**241.00**
SVF115H	1806	–	exhaust filter only		5	252	224	**441.00**
SVF116H	2208	–	exhaust filter only		6	320	292	**630.00**
Filter / fan units with rain hood				**IP55**				
• Fan, mounting frame, removable filter, internal finger guard, external rain hood								
AC filter/fans - *(with rain hood)*								
FU-9801C2 P2A23	230 VAC	20	30	21	1	109	83	**920.00**
FU-9802C2 P2A23	230 VAC	20	35	35	2	121	95	**1 050.00**
FU-9803C2 P2A23	230 VAC	21	49	99	3	149	122	**1 150.00**
FU-9804C2 P2A23	230 VAC	30	56	213	4	204	175	**1 750.00**
FU-9805C2 P2A23	230 VAC	49	67	592	5	255	223	**4 090.00**
FU-9806C2 P2A23	230 VAC	50	66	788	6	332	292	**5 870.00**
FU-9803C2 P2A40	400 VAC	21	49	99	3	149	122	**1 080.00**
FU-9804C2 P2A40	400 VAC	30	56	2.3	4	204	175	**1 640.00**
DC filter/fans - *(with rain hood)*								
FU-9801C2 P2D	24 VDC	1.44	42	34	1	109	83	**761.00**
FU-9802C2 P2D	24 VDC	1.92	44	51	2	121	95	**785.00**
FU-9803C2 P2D	24 VDC	2.64	48	89	3	149	122	**1 100.00**
Exhaust filter with rain hood - *without fan used as an air outlet/inlet*								
• Match size of the filter/fan to achieve optimal ventilation within the cabinet								
FU9801B P2	–	–	exhaust filter only		1	109	83	**533.00**
FU9802B P2	–	–	exhaust filter only		2	121	95	**574.00**
FU9803B P2	–	–	exhaust filter only		3	149	122	**664.00**
FU9804B P2	–	–	exhaust filter only		4	204	175	**765.00**
FU9805B P2	–	–	exhaust filter only		5	255	223	**1 190.00**
FU9806B P2	–	–	exhaust filter only		6	332	292	**2 380.00**

Above ZAR prices do not include VAT. E&OE

1238XA2BPT

1725XA3BPT

FU9805B P2/P5-220


SF825B

MG-80

SF8...

Frame fans and accessories

- Temperature: -40°C...+60°C
- Shielded self lubricating ball bearing fans

type	voltage (V)	power (W)	noise (dB/A)	air flow (CFM)	dimensions (mm²) size	□	(D)	price
AC frame fans only								
8025HA2BPT	230 VAC	14	30	19	1	80	25	**420.00**
9238HA2BPT	230 VAC	17	38	43	2	92	38	**420.00**
1238XA2BPT	230 VAC	20	40	93	3	120	38	**451.00**
1725XA2BPT	230 VAC	40	46	200	4	172 x 150	51	**766.00**
2206HA2BMT	230 VAC	47	60	450	5	Ø 222	60	**1 910.00**
2509HA2BMW	230 VAC	57	64	670	6	Ø 255	89	**2 630.00**
1238XA3BPT	380 VAC	18	40	96	3	120	38	**504.00**
1725XA3BPT	380 VAC	34	46	200	4	172 x 150	51	**891.00**
2206HA3BMW	380 VAC	42	60	450	5	Ø 222	60	**2 160.00**
2509HA3BMW	380 VAC	52	64	670	6	Ø 255	89	**2 900.00**
DC frame fans - 24V DC *(12…27.6 VDC)*								
8025HD4BBLS	24 VDC	0.80A	41	56	1	80	25	**137.00**
9225HD4BBLS	24 VDC	0.35A	44	73	2	92	25	**152.00**
1225HD4BCLS	24 VDC	0.80A	44	100	3	120	25	**195.00**
1725HD4BALS	24 VDC	2.50A	58	256	4	172 x 150	51	**1 160.00**

Exhaust filter - without fan — IP55

- Match size of the filter/fan to achieve optimal ventilation within the cabinet

type	accepts fan type	with air duct	external material		dimensions (mm²) size	frame	cutout	price
SVF112H	8025	no	UL94-V0	–	1/2	109	92	**168.00**
SVF113H	1238	no	UL94-V0	–	3	145	124	**200.00**
SVF114H	1725	yes	UL94-V0	–	4	202	177	**241.00**
SVF115H	2206	yes	UL94-V0	–	5	252	224	**441.00**
SVF116H	2509	yes	UL94-V0	–	6	320	292	**630.00**
All metallic version *(ADC12 aluminium alloy material)*								
FU9803AM	K1238	–	metal	–	3	149	122	**1 700.00**

Panel mount filter units - with rain hood cover — IP55

type	accepts fan type	with air duct	external material		dimensions (mm²) size	frame	cutout	price
FU9802B P2	9225	–	PC+UV	–	2	121	95	**574.00**
FU9803B P2	1238	–	PC+UV	–	3	149	122	**664.00**
FU9804B P2/P4-172	1725	P4-172	PC+UV	–	4	204	175	**837.00**
FU9805B P2/P5-220	2206	P5-220	PC+UV	–	5	255	223	**1 360.00**
FU9806B P2/P6-250	2509	P6-250	PC+UV	–	6	332	292	**2 600.00**
All metallic version *(ADC12 aluminium alloy material)*								
FU9803BM	1238	–	metal	–	3	149	122	**3 390.00**

Finger guards *(internal) for fans*

type	for fan	colour	material	description	size	H	W	price
SF808B	8025	black	ABS	finger guard	1	80	80	**8.20**
SF809B	9225	black	ABS	finger guard	2	92	92	**8.20**
SF812B	1238	black	ABS	finger guard	3	119	119	**12.60**
SF817B	1725	black	ABS	finger guard	4	172	151	**20.80**
SF822B	2206	black	ABS	finger guard	5	222	Ø	**31.20**
SF825B	2509	black	ABS	finger guard	6	259	Ø	**43.00**
MG-80	8025	chrome	metal	finger guard	1	75	75	**10.40**
MG-92	9225	chrome	metal	finger guard	2	89	89	**10.40**
MG-120	1238	chrome	metal	finger guard	3	115	115	**15.60**
MG-172	1725	chrome	metal	finger guard	4	162	139	**20.80**
MG-220	2206	chrome	metal	finger guard	5	212	Ø	**53.00**
MG-250	2509	chrome	metal	finger guard	6	246	Ø	**74.00**

3-in-1 econo filter - *Comprising of frame, low density fabric filter and cover guard*

SF808A	8025	black	ABS	3-in-1 air outlet	1	85	85	**20.80**
SF809A	9225	black	ABS	3-in-1 air outlet	2	96	96	**20.80**
SF812A	1238	black	ABS	3-in-1 air outlet	3	125	125	**31.20**
SF817A	1725	black	ABS	3-in-1 air outlet	4	177	156	**63.00**

TRT-10A230V-NO

TRT-10A230V-NC

IGR35F

FF12A230UF

FF12A230UF

FF20A230UE

HWM030

HTM060

TRT series - Mechanical bimetal thermostats *(used to control temperatures within enclosures)*

Bimetal thermostats used to control temperatures inside enclosures. Suitable for different applications, available with closed-on-rise (NO) or open-on rise (NC) contact for regulation of heating and ventilation equipment or for switching signalling devices.

- Compact dimensions - *(H) 68 x (W) 29 x (D) 45 mm*
- Enclosure PA66 self-extinguishing to UL 94V-0
- DIN-rail mountable
- IP20 protected screw terminals
- Applied standards EN 60730-1, UL approved UL873 and C22.2

Thermostats 1

type	temperature range	contact	description	price
TRT-10A230V-NO	-10 - +80°C	1 x NO	DIN-rail mount panel thermostat *(blue knob)*	**294.00**
TRT-10A230V-NC	-10 - +80°C	1 x NC	DIN-rail mount panel thermostat *(red knob)*	**292.00**

IGR series - Mechanical hygrostat

Mechanical hygrostats automatically regulate humidity inside enclosures, triggering a heater or fan when a preset relative humidity is exceeded. To prevent condensation on electric and electronic components the relative humidity is raised above the dew point.

IGR35F	10 - 90% RH	ch/over	DIN-rail mounting panel hygrostat	**1 330.00**

Panel ventilation 2

FF series - Complete fan-filter units *(IP54)*

Compact design, snap-on mounting, integrated sealing gasket preventing dust and water penetration. Ideal for all panel ventilation applications.

- Complete fan with mounting frame, removable filter and metal finger guard
- Screwless mounting *(simply clips into panel cut-out)*
- Plastic parts self extinguishing to UL 94V-0
- Permanent sealing gasket in polyurethane foam
- Shielded self lubricating ball bearing fans
- Filter replaceable from the front removable grill

type	voltage (V)	power (W)	air flow (m^3/h)	noise (dB/A)	description	dimensions (mm^2) frame	cutout	price
FF08A230UN	230 VAC	10	10	33	complete fan filter	107	92	**806.00**
FF12A230UF	230 VAC	18	45	49	complete fan filter	150	124	**830.00**
FF15A230UF	230 VAC	32	230	50	complete fan filter	250	223	**2 000.00**
FF20A230UE	230 VAC	79	460	66	complete fan filter	325	291	**3 540.00**

Outlet filter grill/frame *(without fan)*

					price
FF08U	outlet/filter	separate panel mount ventilation unit	107	92	**217.00**
FF12U	outlet/filter	separate panel mount ventilation unit	150	124	**220.00**
FF15U	outlet/filter	separate panel mount ventilation unit	250	223	**420.00**
FF20U	outlet/filter	separate panel mount ventilation unit	325	291	**688.00**

Panel heaters *(anti-condensation)* 3 *15W - 400W*

For the thermo regulation of electrical cabinets. The heaters consist of a self-extinguishing PTC element in a black anodized aluminium DIN-rail mountable housing.

- Compact dimensions - DIN-rail mounting
- Self-regulating PTC resistance
- Screw terminal connection *(15/30W heaters supplied with 500 mm cable)*
- Voltage range: 110...250 VAC
- Complies with standards: IEC/EN 60335-1 and IEC 60004-1

type	heating power	current mA	description	dimensions (mm) (H)	(W)	(D)	price
HWM015	15 W	65	DIN-rail mount panel heater	78	28	49	**829.00**
HWM030	30 W	130	DIN-rail mount panel heater	108	28	49	**829.00**
HTM060	60 W	260	DIN-rail mount panel heater	138	62	85	**1 160.00**
HTM100	100 W	475	DIN-rail mount panel heater	188	62	85	**1 490.00**
HTM150	150 W	770	DIN-rail mount panel heater	238	62	85	**1 690.00**

Above ZAR prices do not include VAT. E&OE

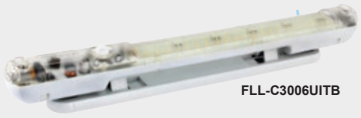
TP19U230B54

TP series - Roof mount exhaust fan units 4

Roof exhaust fan units used to directly extract heat from the upper region of the cabinet facilitating effective internal air flow. Equipped with a high-head radial fan.

- Mounting via 8 x Ø4 mm screws *(mounts through 175 mm² cutout)*
- Plastic parts in PC/ABS alloy and aluminium self extinguishing to UL 94V-0
- Permanent sealing gasket in polyurethane foam
- Compact dimensions, height: total 94 mm / hood 62 mm
- Colour: RAL 7035 *(others colours available on request)*

type	voltage (V)	power (W)	air flow (m^3/h)	noise (dB/A)	description	dimensions (mm) (H)	(W)	(D)	price
Exhaust Fan *(roof mount)*		**IP24**							
TP19U230B	230 VAC	70	500	68	roof exhaust fan	324	324	94	**3 340.00**
Exhaust Fan *(roof mount)*		**IP54**							
TP19U230B54	230 VAC	70	420	68	roof exhaust fan	324	324	94	**3 810.00**



FLL-C3006UITB

LED Lamp for switchboards 5

During maintenance and inspection on switchboards it is essential for to have a good level of lighting LEDs provides effective illumination within electrical cabinets at significantly low consumption. Switching via a mounted switch or version with a PIR sensor which detects motion within 120° radius with delayed auto off with no detected presence.

type	power	supply voltage	description	dimensions (mm) (H)	(W)	(D)	price
Fandis FLL series - Panel lamps							
Termination is via "push-in" cage clamp terminals on both sides with an incorporated release button. Magnetic fastening for simple positioning on metallic surfaces *(with optional magnet set)*. Lamp rotates to six different positions on base *(max. to 40°)*							
• LED light output:		600 lm *(luminous flux)*, 120°, daylight, colour temperature 7100K					
• Operating temp:		-30 to +60°C					
• Lifetime:		160000 h at 25°C					
FLL-C3006USTB	5 Watt	20...230V AC/DC	LED panel lamp with switch	32	356	48	**1 900.00**
FLL-C3006UITB	5 Watt	20...230V AC/DC	LED lamp with PIR sensor	32	356	48	**1 830.00**
FLL-2MA	magnet		magnet mounting kit for lamps *(2 magnets)*				**158.00**

400100

Seifert SL 4000 series - Panel lamps

Termination via 2 pin latching plug *(supplied separately)* on both ends of the lamp. Mounting is via supplied mounting clips or incorporated magnets for simple positioning on metallic surfaces.

400100	4 Watt	24...265V AC/DC	LED panel lamp with switch	32	350	28	**1 510.00**
400000	4 Watt	24...265V AC/DC	LED panel lamp with sensor	32	350	33	**1 800.00**
91.921.3053.0	white		female connector plug for panel lamps	18	53	14	**83.00**
91.922.3053.0	white		male connector plug for panel lamps	18	53	14	**77.00**

Systems & components for enclosures

850600001

SlimLine Pro - 8500 series - Cabinet cooling units

SlimLine Pro series cabinet cooling air conditioners feature an innovative one man mounting system permitting screwless installation with maintenance free operation due to the eco-friendly filter-less construction. The compact, slim construction combined with modern design features provide excellent size to performance ratio to meet modern day requirements. Providing improved cooling performance ensuring total reliability in all industrial applications.

- Innovative mounting system *(screwless, one man mounting)*
- Simplified panel cutout *(ease mounting even further)*
- Integrated condensate evaporation
- Temperature range 10°C to 60°C
- Standard material powder coated mild steel housing RAL 7035 *(light grey)*
- Compliance to NEMA / UL type 3, 3R, 12, 4 und 4X.
- Can be mounted external or recessed *(with only 35-50 mm protruding)* into the panel

type	cooling capacity L35L35	supply voltage	description	dimensions (mm) (H)	(W)	(D)	Ext.	price
SlimLine Pro - 8500 series		**IP56**						
850600001	670 W	230 VAC	panel air conditioner	600	250	135	(25)	**38 300.00**
850800001	825 W	230 VAC	panel air conditioner	950	305	210	(35)	**45 000.00**
851200001	1.2 kW	230 VAC	panel air conditioner	950	305	210	(35)	**46 800.00**
851500001	1.5 kW	230 VAC	panel air conditioner	1350	395	210	(35)	**62 600.00**
852000001	2.0 kW	230 VAC	panel air conditioner	1350	395	210	(35)	**68 400.00**
852500001	2.5 kW	230 VAC	panel air conditioner	1350	395	210	(35)	**74 200.00**
854000001	4.0 kW	230 VAC	panel air conditioner	1550	455	270	(50)	**102 000.00**

42740001

SlimLine series - Filterless technology air conditioners

SlimLine series air conditioners provide maximum power-to-size ratio compatible with market standards ensuring simple integration with cabinet systems. Designed to operate with minimum maintenance, due to eco-friendly filter-less construction. Wide-ribbed aluminium condenser provides improved cooling performance ensuring total reliability in all industrial applications.

- Compressor type: Rotary piston compressor
- Mounting: Internal / External

42660001	320 W	230 VAC	panel air conditioner	520	270	110	(25)	**32 200.00**
42700001	600 W	230 VAC	panel air conditioner	810	395	145	(25)	**47 000.00**
42710001	820 W	230 VAC	panel air conditioner	980	395	145	(25)	**50 700.00**
42720001	1100 W	230 VAC	panel air conditioner	1250	395	145	(25)	**58 200.00**
42740001	1500 W	230 VAC	panel air conditioner	1550	395	145	(25)	**66 800.00**

SlimLine TOP series - Top mounted filterless air conditioners

- Compressor type: Rotary piston compressor

45550001	1100 W	230 VAC	roof mount air conditioner	400	600	400	–	**60 800.00**

43050001

ComPact series - Economical all-round systems

ComPact series air conditioners optimise high efficiencies with outstanding COP values throughout the range, the built-in controller displays temperature, operating status and can be simply adjusted. Surface treated condenser with high fin separation provide virtually maintenance free service.

- Operating temp. range: 20°C...55°C
- Compressor type: Reciprocating compressor
- Mounting: External mounting
- Colour: RAL 7035 *(other colours available on request)*

43040001	320 W	230 VAC	panel air conditioner	500	280	200	–	**26 400.00**
43050001	550 W	230 VAC	panel air conditioner	650	315	260	–	**28 400.00**
43100001	1000 W	230 VAC	panel air conditioner	650	315	260	–	**35 000.00**
43150001	1500 W	230 VAC	panel air conditioner	980	395	260	–	**44 900.00**
43200001	2000 W	230 VAC	panel air conditioner	980	395	260	–	**51 000.00**

TG 3102-24V

TG series - Thermoelectric cooling units - *for cooling enclosures or electronic components*

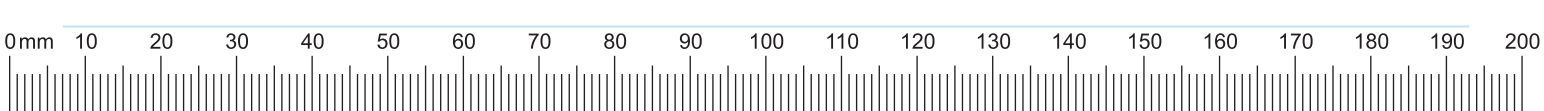
Thermoelectric cooling units are an effective solution for the cooling of enclosures. Energy transferred heat without the use of hazardous gases or liquids. Thermoelectric modules *(Peltier modules)*, permitting heat absorption from one side *(cold side)* and heat expulsion to the ambient from the other side.

- External or recessed mounting in almost any position *(except roof mounting)*
- Suitable for indor and outdoor application, ingress protection rating of IP66
- Stainless steel AISI 304 (V2A)
- Maintenance free
- Easy installation

type	voltage (V)	cooling power	rated current	cutout (mm)	dimensions (mm) (H)	(W)	(D)	price
SoliTherm Peltier - Panel cooling units				Temperature range: -20°C…+65°C				
TG 3102-24V	24 VDC	100W	4.8A	260 x 160	304	200	138	**22 800.00**
TG 3200-24V	24 VDC	200W	9.0A	370 x 155	400	180	171	**34 700.00**

Above ZAR prices do not include VAT. E&OE

Notes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24020 PARRE BG ITALY
3P+T-IP44-16A-6h/380-415V~ 50/60Hz MADE IN ITALY

H

Plugs & Sockets

Interactive Catalogue

Plugs & Sockets

Industrial plugs & Sockets

I-1...5

Industrial socket outlets

I-6...7

Surface-mount distribution boards

I-8

Mobile distribution assemblies

I-9

Residential switches & Sockets

I-10

Weatherproof plugs & Sockets

I-11...12

Heavy-duty multi-pole connectors

I-13...15

Photovoltaic (PV) connectors

I-16

Battery storage connectors & Terminals

I-17...20

Need help navigating the interactive catalogue?
Scan the QR code for a short tutorial video.

2P+E 3P+E 3P+N+E

Optima series: 16A - 32A - 63A - 125A

- Insulation voltage: 690 VAC
- Standards: IEC 60309-2
- Material: Thermoplastic ***(halogen free)***
- Impact resistance: IK08 *(1.7kg with a striking energy of 2J)*
- Operating temperature: -25...+40°C *(max operating temperature +60°C)*
- Cable inlet: External cable stay with tulip clamping IP67 gland

Voltage Coding
- 100 to 130V*
- 200 to 250V
- 380 to 480V
- 480 to 525V

* *On request*

213.163...

218.163...

218.1636...

313.324...

318.324...

type	rated current	(h) pos.	pin configuration	IP protection 44/54	IP protection 66/7/9	description	cable outlet	price
Male plugs *(straight cable exit)*			**16 - 125A**					
213.1633	16A	6h	2P+E *(3pin)*	•		male ind. plug	straight	**76.00**
213.1636	16A	6h	3P+E *(4pin)*	•		male ind. plug	straight	**101.00**
213.1637	16A	6h	3P+N+E *(5pin)*	•		male ind. plug	straight	**126.00**
213.3233	32A	6h	2P+E *(3pin)*	•		male ind. plug	straight	**144.00**
213.3236	32A	6h	3P+E *(4pin)*	•		male ind. plug	straight	**171.00**
213.3237	32A	6h	3P+N+E *(5pin)*	•		male ind. plug	straight	**180.00**
213.6333	63A	6h	2P+E *(3pin)*	•		male ind. plug	straight	**768.00**
213.6336	63A	6h	3P+E *(4pin)*	•		male ind. plug	straight	**650.00**
213.6337	63A	6h	3P+N+E *(5pin)*	•		male ind. plug	straight	**684.00**
218.1633	16A	6h	2P+E *(3pin)*		•	male ind. plug	straight	**168.00**
218.1636	16A	6h	3P+E *(4pin)*		•	male ind. plug	straight	**197.00**
218.16366	16A	7h	3P+E *(4pin)*		•	male ind. plug	straight	**267.00**
218.1637	16A	6h	3P+N+E *(5pin)*		•	male ind. plug	straight	**223.00**
218.16376	16A	7h	3P+N+E *(5pin)*		•	male ind. plug	straight	**318.00**
218.3233	32A	6h	2P+E *(3pin)*		•	male ind. plug	straight	**272.00**
218.3236	32A	6h	3P+E *(4pin)*		•	male ind. plug	straight	**278.00**
218.32364*	32A	3h	3P+E *(4pin)*		•	male ind. plug	straight	**278.00**
218.32366	32A	7h	3P+E *(4pin)*		•	male ind. plug	straight	**347.00**
218.3237	32A	6h	3P+N+E *(5pin)*		•	male ind. plug	straight	**309.00**
218.32376	32A	7h	3P+N+E *(5pin)*		•	male ind. plug	straight	**386.00**
218.6333	63A	6h	2P+E *(3pin)*		•	male ind. plug	straight	**854.00**
218.6336	63A	6h	3P+E *(4pin)*		•	male ind. plug	straight	**713.00**
218.63366	63A	7h	3P+E *(4pin)*		•	male ind. plug	straight	**1 110.00**
218.6337	63A	6h	3P+N+E *(5pin)*		•	male ind. plug	straight	**746.00**
218.63376	63A	7h	3P+N+E *(5pin)*		•	male ind. plug	straight	**1 180.00**
218.12533	125A	6h	2P+E *(3pin)*		•	male ind. plug	straight	**2 040.00**
218.12536	125A	6h	3P+E *(4pin)*		•	male ind. plug	straight	**1 770.00**
218.125366	125A	7h	3P+E *(4pin)*		•	male ind. plug	straight	**2 650.00**
218.12537	125A	6h	3P+N+E *(5pin)*		•	male ind. plug	straight	**1 890.00**
218.125376	125A	7h	3P+N+E *(5pin)*		•	male ind. plug	straight	**2 820.00**
Connectors/couplers *(female in-line socket)*								
313.1643	16A	6h	2P+E *(3pin)*	•		female connector	straight	**134.00**
313.1646	16A	6h	3P+E *(4pin)*	•		female connector	straight	**141.00**
313.1647	16A	6h	3P+N+E *(5pin)*	•		female connector	straight	**173.00**
313.3243	32A	6h	2P+E *(3pin)*	•		female connector	straight	**164.00**
313.3246	32A	6h	3P+E *(4pin)*	•		female connector	straight	**200.00**
313.3247	32A	6h	3P+N+E *(5pin)*	•		female connector	straight	**221.00**
313.6343	63A	6h	2P+E *(3pin)*	•		female connector	straight	**882.00**
313.6346	63A	6h	3P+E *(4pin)*	•		female connector	straight	**786.00**
313.6347	63A	6h	3P+N+E *(5pin)*	•		female connector	straight	**806.00**
318.1643	16A	6h	2P+E *(3pin)*		•	female connector	straight	**236.00**
318.1646	16A	6h	3P+E *(4pin)*		•	female connector	straight	**261.00**
318.16466	16A	7h	3P+E *(4pin)*		•	female connector	straight	**340.00**
318.1647	16A	6h	3P+N+E *(5pin)*		•	female connector	straight	**286.00**
318.16476	16A	7h	3P+N+E *(5pin)*		•	female connector	straight	**392.00**
318.3243	32A	6h	2P+E *(3pin)*		•	female connector	straight	**328.00**
318.3246	32A	6h	3P+E *(4pin)*		•	female connector	straight	**323.00**
318.32464*	32A	3h	3P+E *(4pin)*		•	female connector	straight	**340.00**
318.32466	32A	7h	3P+E *(4pin)*		•	female connector	straight	**425.00**
318.3247	32A	6h	3P+N+E *(5pin)*		•	female connector	straight	**353.00**
318.32476	32A	7h	3P+N+E *(5pin)*		•	female connector	straight	**486.00**
318.6343	63A	6h	2P+E *(3pin)*		•	female connector	straight	**979.00**
318.6346	63A	6h	3P+E *(4pin)*		•	female connector	straight	**863.00**
318.63466	63A	7h	3P+E *(4pin)*		•	female connector	straight	**1 240.00**
318.6347	63A	6h	3P+N+E *(5pin)*		•	female connector	straight	**881.00**
318.63476	63A	7h	3P+N+E *(5pin)*		•	female connector	straight	**1 330.00**

Continued overleaf....

* *Refrigerated container (Reefer plugs)*

Above ZAR prices do not include VAT. E&OE

2P+E 3P+E 3P+N+E

243.639...

248.329...

240.639...T

570.90164

type	rated current	(h) pos.	pin configuration		IP protection 44/54	IP protection 66/7/9	description	flange size	price
***continued...* Connectors/couplers** *(female in-line socket)*									
318.12543	125A	6h	2P+E	*(3pin)*		•	female connector	straight	**2 440.00**
318.12546	125A	6h	3P+E	*(4pin)*		•	female connector	straight	**2 450.00**
318.125466	125A	7h	3P+E	*(4pin)*		•	female connector	straight	**3 490.00**
318.12547	125A	6h	3P+N+E	*(5pin)*		•	female connector	straight	**2 620.00**
318.125476	125A	7h	3P+N+E	(5pin)		•	female connector	straight	**3 800.00**
Optima series - Appliance inlets *(male pins - accept female connector)*									
Flush mount appliance inlet				*(straight inlet)*					
243.1693	16A	6h	2P+E	*(3pin)*	•		flush mnt appliance inlet	75 x 75	**177.00**
243.1696	16A	6h	3P+E	*(4pin)*	•		flush mnt appliance inlet	75 x 75	**199.00**
243.1697	16A	6h	3P+N+E	*(5pin)*	•		flush mnt appliance inlet	75 x 75	**258.00**
243.3293	32A	6h	2P+E	*(3pin)*	•		flush mnt appliance inlet	75 x 75	**288.00**
243.3296	32A	6h	3P+E	*(4pin)*	•		flush mnt appliance inlet	75 x 75	**307.00**
243.3297	32A	6h	3P+N+E	*(5pin)*	•		flush mnt appliance inlet	75 x 75	**315.00**
243.6393	63A	6h	2P+E	*(3pin)*	•		flush mnt appliance inlet	100 x 110	**860.00**
243.6396	63A	6h	3P+E	*(4pin)*	•		flush mnt appliance inlet	100 x 110	**919.00**
243.6397	63A	6h	3P+N+E	*(5pin)*	•		flush mnt appliance inlet	100 x 110	**975.00**
248.1693	16A	6h	2P+E	*(3pin)*		•	flush mnt appliance inlet	75 x 75	**251.00**
248.1696	16A	6h	3P+E	*(4pin)*		•	flush mnt appliance inlet	75 x 75	**265.00**
248.16966	16A	7h	3P+E	*(4pin)*		•	flush mnt appliance inlet	75 x 75	**335.00**
248.1697	16A	6h	3P+N+E	*(5pin)*		•	flush mnt appliance inlet	75 x 75	**335.00**
248.16976	16A	7h	3P+N+E	*(5pin)*		•	flush mnt appliance inlet	75 x 75	**417.00**
248.3293	32A	6h	2P+E	*(3pin)*		•	flush mnt appliance inlet	75 x 75	**353.00**
248.3296	32A	6h	3P+E	*(4pin)*		•	flush mnt appliance inlet	75 x 75	**375.00**
248.32966	32A	7h	3P+E	*(4pin)*		•	flush mnt appliance inlet	75 x 75	**469.00**
248.3297	32A	6h	3P+N+E	*(5pin)*		•	flush mnt appliance inlet	75 x 75	**411.00**
248.32976	32A	7h	3P+N+E	*(5pin)*		•	flush mnt appliance inlet	75 x 75	**516.00**
248.6393	63A	6h	2P+E	*(3pin)*		•	flush mnt appliance inlet	100 x 110	**564.00**
248.6396	63A	6h	3P+E	*(4pin)*		•	flush mnt appliance inlet	100 x 110	**603.00**
248.63966	63A	7h	3P+E	*(4pin)*		•	flush mnt appliance inlet	100 x 110	**1 240.00**
248.6397	63A	6h	3P+N+E	*(5pin)*		•	flush mnt appliance inlet	100 x 110	**632.00**
248.63976	63A	7h	3P+N+E	*(5pin)*		•	flush mnt appliance inlet	100 x 110	**1 320.00**
248.12593	125A	6h	2P+E	*(3pin)*		•	flush mnt appliance inlet	114 x 114	**1 100.00**
248.12596	125A	6h	3P+E	*(4pin)*		•	flush mnt appliance inlet	114 x 114	**1 190.00**
248.125966	125A	7h	3P+E	*(4pin)*		•	flush mnt appliance inlet	114 x 114	**2 120.00**
248.12597	125A	6h	3P+N+E	*(5pin)*		•	flush mnt appliance inlet	114 x 114	**1 310.00**
248.125976	125A	7h	3P+N+E	*(5pin)*		•	flush mnt appliance inlet	114 x 114	**2 440.00**
Surface mount appliance inlet				*(angled inlet)*				*cable entry*	
240.1693	16A	6h	2P+E	*(3pin)*	•		surf mnt appliance inlet	M25	**263.00**
240.1696	16A	6h	3P+E	*(4pin)*	•		surf mnt appliance inlet	M25	**289.00**
240.1697	16A	6h	3P+N+E	*(5pin)*	•		surf mnt appliance inlet	M25	**356.00**
240.3293	32A	6h	2P+E	*(3pin)*	•		surf mnt appliance inlet	M32	**390.00**
240.3296	32A	6h	3P+E	*(4pin)*	•		surf mnt appliance inlet	M32	**412.00**
240.3297	32A	6h	3P+N+E	*(5pin)*	•		surf mnt appliance inlet	M32	**420.00**
240.6393T	63A	6h	2P+E	*(3pin)*	•		surf mnt appliance inlet	M40	**1 150.00**
240.6396T	63A	6h	3P+E	*(4pin)*	•		surf mnt appliance inlet	M40	**1 260.00**
240.6397T	63A	6h	3P+N+E	*(5pin)*	•		surf mnt appliance inlet	M40	**1 350.00**
245.1693	16A	6h	2P+E	*(3pin)*		•	surf mnt appliance inlet	M25	**323.00**
245.1696	16A	6h	3P+E	*(4pin)*		•	surf mnt appliance inlet	M25	**338.00**
245.1697	16A	6h	3P+N+E	*(5pin)*		•	surf mnt appliance inlet	M25	**411.00**
245.3293	32A	6h	2P+E	*(3pin)*		•	surf mnt appliance inlet	M32	**429.00**
245.3296	32A	6h	3P+E	*(4pin)*		•	surf mnt appliance inlet	M32	**453.00**
245.3297	32A	6h	3P+N+E	*(5pin)*		•	surf mnt appliance inlet	M32	**491.00**
245.6393T	63A	6h	2P+E	*(3pin)*		•	surf mnt appliance inlet	M40	**1 110.00**
245.6396T	63A	6h	3P+E	*(4pin)*		•	surf mnt appliance inlet	M40	**1 220.00**
245.6397T	63A	6h	3P+N+E	*(5pin)*		•	surf mnt appliance inlet	M40	**1 310.00**
245.12597T	125A	6h	3P+N+E	*(5pin)*		•	surf mnt appliance inlet	M63	**3 100.00**
Protection caps for plugs and appliance inlets IP66 / IP67 / IP69									
570.90163	16A	–	2P+E			•	covers for plugs and inlets		**52.00**
570.90164	16A	–	3P+E			•	covers for plugs and inlets		**57.00**
570.90165	16A	–	3P+N+E			•	covers for plugs and inlets		**63.00**
570.90324	32A	–	2/3P+E			•	covers for plugs and inlets		**70.00**
570.90325	32A	–	3P+N+E			•	covers for plugs and inlets		**75.00**
570.9063	63A	–	all configurations			•	covers for plugs and inlets		**46.00**
570.9125	125A	–	all configurations			•	covers for plugs and inlets		**113.00**

2P+E

3P+E

3P+N+E

Optima series: Panel mount sockets 16A - 32A - 63A - 125A

- Insulation voltage: 690 VAC
- Operating temperature: -25...+40°C *(max operating temperature +60°C)*
- Material: Thermoplastic ***(halogen free)*** / Impact resistance IK08

413.166...

418.636...

570.M0125

423.166...

428.166...

type	rated current	(h) pos.	pin configuration		IP protection 44/54	IP protection 67/8/9	description	flange size	price
Flush mount angled socket outlet *(18°)*					16A - 125A		Standards: *IEC 60309-2*		
413.1663	16A	6h	2P+E	*(3pin)*	•		angled socket	70 x 87	**126.00**
413.1666	16A	6h	3P+E	*(4pin)*	•		angled socket	70 x 87	**134.00**
413.1667	16A	6h	3P+N+E	*(5pin)*	•		angled socket	70 x 87	**147.00**
413.3263	32A	6h	2P+E	*(3pin)*	•		angled socket	84 x 106	**168.00**
413.3266	32A	6h	3P+E	*(4pin)*	•		angled socket	84 x 106	**176.00**
413.3267	32A	6h	3P+N+E	*(5pin)*	•		angled socket	84 x 106	**185.00**
413.6363	63A	6h	2P+E	*(3pin)*	•		angled socket	100 x 110	**811.00**
413.6366	63A	6h	3P+E	*(4pin)*	•		angled socket	100 x 110	**836.00**
413.6367	63A	6h	3P+N+E	*(5pin)*	•		angled socket	100 x 110	**906.00**
418.1663	16A	6h	2P+E	*(3pin)*		•	angled socket	70 x 87	**193.00**
418.1666	16A	6h	3P+E	*(4pin)*		•	angled socket	70 x 87	**210.00**
418.16666	16A	7h	3P+E	*(4pin)*		•	angled socket	70 x 87	**356.00**
418.1667	16A	6h	3P+N+E	*(5pin)*		•	angled socket	70 x 87	**239.00**
418.16676	16A	7h	3P+N+E	*(5pin)*		•	angled socket	70 x 87	**435.00**
418.3263	32A	6h	2P+E	*(3pin)*		•	angled socket	84 x 106	**302.00**
418.3266	32A	6h	3P+E	*(4pin)*		•	angled socket	84 x 106	**307.00**
418.32664*	32A	3h	3P+E	*(4pin)*		•	angled socket	84 x 106	**402.00**
418.32666	32A	7h	3P+E	*(4pin)*		•	angled socket	84 x 106	**501.00**
418.3267	32A	6h	3P+N+E	*(5pin)*		•	angled socket	84 x 106	**353.00**
418.32676	32A	7h	3P+N+E	*(5pin)*		•	angled socket	84 x 106	**548.00**
418.6363	63A	6h	2P+E	*(3pin)*		•	angled socket	100 x 110	**875.00**
418.6366	63A	6h	3P+E	*(4pin)*		•	angled socket	100 x 110	**902.00**
418.63666	63A	7h	3P+E	*(4pin)*		•	angled socket	100 x 110	**1 130.00**
418.6367	63A	6h	3P+N+E	*(5pin)*		•	angled socket	100 x 110	**963.00**
418.63676	63A	7h	3P+N+E	*(5pin)*		•	angled socket	100 x 110	**1 230.00**
418.12563	125A	6h	2P+E	*(3pin)*		•	angled socket	114 x 114	**2 470.00**
418.12566	125A	6h	3P+E	*(4pin)*		•	angled socket	114 x 114	**2 090.00**
418.125666	125A	7h	3P+E	*(4pin)*		•	angled socket	114 x 114	**3 090.00**
418.12567	125A	6h	3P+N+E	*(5pin)*		•	angled socket	114 x 114	**2 140.00**
418.125676	125A	7h	3P+N+E	*(5pin)*		•	angled socket	114 x 114	**3 440.00**
Micro-switch - *for plug inserted indication of above angled outlet sockets only*									
654.0391	16/32A		1x NO				micro-switch for above angled sockets	–	**153.00**
654.0392	16/32A		1x NC				micro-switch for above angled sockets	–	**153.00**
654.0393	63/125A		1x NO				micro-switch for above angled sockets	–	**222.00**
654.0394	63/125A		1x NC				micro-switch for above angled sockets	–	**222.00**
Housings to surface mount *(above)* **angled sockets**									
570.0116	16A		angled housing			•	for p/mnt sockets	70 x 87	**107.00**
570.0016	16A		straight housing			•	for p/mnt sockets	70 x 87	**107.00**
570.0132	32A		angled housing			•	for p/mnt sockets	84 x 106	**147.00**
570.0032	32A		straight housing			•	for p/mnt sockets	84 x 106	**144.00**
570.M0163	63A		angled housing			•	for p/mnt sockets	100 x 110	**693.00**
570.M0125	125A		angled housing			•	for p/mnt sockets	114 x 114	**1 070.00**
Flush mount straight socket outlet					16A - 125A		Standards: *IEC 60309-2*		
423.1663	16A	6h	2P+E	*(3pin)*	•		straight socket	75 x 75	**122.00**
423.1663/R	16A	6h	2P+E	*(3pin)*	•		straight socket	62 x 62	**163.00**
423.1666	16A	6h	3P+E	*(4pin)*	•		straight socket	75 x 75	**138.00**
423.1666/R	16A	6h	3P+E	*(4pin)*	•		straight socket	62 x 62	**177.00**
423.1667	16A	6h	3P+N+E	*(5pin)*	•		straight socket	75 x 75	**141.00**
423.3263	32A	6h	2P+E	*(3pin)*	•		straight socket	75 x 75	**288.00**
423.3266	32A	6h	3P+E	*(4pin)*	•		straight socket	75 x 75	**294.00**
423.3267	32A	6h	3P+N+E	*(5pin)*	•		straight socket	75 x 75	**342.00**
423.6363	63A	6h	2P+E	*(3pin)*	•		straight socket	100 x 110	**811.00**
423.6366	63A	6h	3P+E	*(4pin)*	•		straight socket	100 x 110	**836.00**
423.6367	63A	6h	3P+N+E	*(5pin)*	•		straight socket	100 x 110	**906.00**
428.1663	16A	6h	2P+E	*(3pin)*		•	straight socket	75 x 75	**257.00**
428.1666	16A	6h	3P+E	*(4pin)*		•	straight socket	75 x 75	**285.00**
428.1667	16A	6h	3P+N+E	*(5pin)*		•	straight socket	75 x 75	**348.00**
428.3263	32A	6h	2P+E	*(3pin)*		•	straight socket	75 x 75	**400.00**
428.3266	32A	6h	3P+E	*(4pin)*		•	straight socket	75 x 75	**402.00**
428.32664*	32A	3h	3P+E	*(4pin)*		•	straight socket	75 x 75	**402.00**
428.3267	32A	6h	3P+N+E	*(5pin)*		•	straight socket	75 x 75	**438.00**

Continued overleaf....

* *Refrigerated container (Reefer plugs)*

Above ZAR prices do not include VAT. E&OE

2P+E 3P+E 3P+N+E

428.636...

513.325...

518.635...T

518.325...TS

type	rated current	(h) pos.	pin configuration		IP protection 44/54	IP protection 67/8/9	description	flange size	price
***continued...* Flush mount socket outlet - straight**									
428.6363	63A	6h	2P+E	*(3pin)*		•	straight socket	100 x 110	**875.00**
428.6366	63A	6h	3P+E	*(4pin)*		•	straight socket	100 x 110	**902.00**
428.6367	63A	6h	3P+N+E	*(5pin)*		•	straight socket	100 x 110	**920.00**
428.12563	125A	6h	2P+E	*(3pin)*		•	straight socket	114 x 114	**2 470.00**
428.12566	125A	6h	3P+E	*(4pin)*		•	straight socket	114 x 114	**2 470.00**
428.12567	125A	6h	3P+N+E	*(5pin)*		•	straight socket	114 x 114	**2 750.00**

OPTIMA series - Surface-mount socket outlets

- Insulation voltage: 690 VAC
- Operating temperature: -25...+40°C *(max operating temperature +60°C)*
- Material: Thermoplastic ***(halogen free)***
- Impact resistance: IK08 *(1.7kg with a striking energy of 2J)*

type	rated current	(h) pos.	pin configuration		IP protection 44/54	IP protection 67/8/9	description	cable entry	price
BASE version - IP44 compact, economical, slimline socket outlets								*(angled)*	
513.1653	16A	6h	2P+E	*(3pin)*	•		surface mnt socket	M20/25	**186.00**
513.1656	16A	6h	3P+E	*(4pin)*	•		surface mnt socket	M20/25	**219.00**
513.1657	16A	6h	3P+N+E	*(5pin)*	•		surface mnt socket	M20/25	**224.00**
513.3253	32A	6h	2P+E	*(3pin)*	•		surface mnt socket	M32	**284.00**
513.3256	32A	6h	3P+E	*(4pin)*	•		surface mnt socket	M32	**288.00**
513.3257	32A	6h	3P+N+E	*(5pin)*	•		surface mnt socket	M32	**352.00**
TOP version - IP44 and IP67								*(angled)*	
513.1653T	16A	6h	2P+E	*(3pin)*	•		surface mnt socket	M20/25	**240.00**
513.1656T	16A	6h	3P+E	*(4pin)*	•		surface mnt socket	M20/25	**284.00**
513.1657T	16A	6h	3P+N+E	*(5pin)*	•		surface mnt socket	M20/25	**290.00**
513.3253T	32A	6h	2P+E	*(3pin)*	•		surface mnt socket	M32	**367.00**
513.3256T	32A	6h	3P+E	*(4pin)*	•		surface mnt socket	M32	**374.00**
513.3257T	32A	6h	3P+N+E	*(5pin)*	•		surface mnt socket	M32	**456.00**
513.6353T	63A	6h	2P+E	*(3pin)*	•		surface mnt socket	M40	**1 320.00**
513.6356T	63A	6h	3P+E	*(4pin)*	•		surface mnt socket	M40	**1 340.00**
513.6357T	63A	6h	3P+E	*(4pin)*	•		surface mnt socket	M40	**1 390.00**
518.1653T	16A	6h	2P+E	*(3pin)*		•	surface mnt socket	M20/25	**425.00**
518.1656T	16A	6h	3P+E	*(4pin)*		•	surface mnt socket	M20/25	**456.00**
518.1657T	16A	6h	3P+N+E	*(5pin)*		•	surface mnt socket	M20/25	**531.00**
518.3253T	32A	6h	2P+E	*(3pin)*		•	surface mnt socket	M32	**644.00**
518.3256T	32A	6h	3P+E	*(4pin)*		•	surface mnt socket	M32	**633.00**
518.32564T*	32A	3h	3P+E	*(4pin)*		•	surface mnt socket	M32	**633.00**
518.3257T	32A	6h	3P+N+E	*(5pin)*		•	surface mnt socket	M32	**683.00**
518.6353T	63A	6h	2P+E	*(3pin)*		•	surface mnt socket	M40	**1 420.00**
518.6356T	63A	6h	3P+E	*(4pin)*		•	surface mnt socket	M40	**1 440.00**
518.6357T	63A	6h	3P+N+E	*(5pin)*		•	surface mnt socket	M40	**1 500.00**
518.12553T	125A	6h	2P+E	*(3pin)*		•	surface mnt socket	M63	**2 920.00**
518.12556T	125A	6h	3P+E	*(4pin)*		•	surface mnt socket	M63	**3 160.00**
518.12557T	125A	6h	3P+N+E	*(5pin)*		•	surface mnt socket	M63	**3 310.00**
Surface mount switch sockets *(not mechanical interlocked)*									
513.1653TS	16A	6h	2P+E	*(3pin)*	•		surface mnt socket	M25	**532.00**
513.1656TS	16A	6h	3P+E	*(4pin)*	•		surface mnt socket	M25	**561.00**
513.1657TS	16A	6h	3P+N+E	*(5pin)*	•		surface mnt socket	M25	**578.00**
513.3253TS	32A	6h	2P+E	*(3pin)*	•		surface mnt socket	M32	**713.00**
513.3256TS	32A	6h	3P+E	*(4pin)*	•		surface mnt socket	M32	**744.00**
513.3257TS	32A	6h	3P+N+E	*(5pin)*	•		surface mnt socket	M32	**777.00**
518.1653TS	16A	6h	2P+E	*(3pin)*		•	surface mnt socket	M25	**713.00**
518.1656TS	16A	6h	3P+E	*(4pin)*		•	surface mnt socket	M25	**744.00**
518.1657TS	16A	6h	3P+N+E	*(5pin)*		•	surface mnt socket	M25	**777.00**
518.3253TS	32A	6h	2P+E	*(3pin)*		•	surface mnt socket	M32	**798.00**
518.3256TS	32A	6h	3P+E	*(4pin)*		•	surface mnt socket	M32	**830.00**
518.3257TS	32A	6h	3P+N+E	*(5pin)*		•	surface mnt socket	M32	**863.00**

* *Refrigerated container (Reefer plugs)*

2P+E 3P+E 3P+N+E

Eureka series 16A/32A - 90° inlets

- Insulation voltage: 690 VAC
- Protection degree: IP44 and IP67
- Operating temperature: -25...+40°C *(max operating temperature +60°C)*
- Material: Thermoplastic
- Impact resistance: IK07 *(0.5kg with a striking energy of 2J)*
- Standards: IEC 6039-1 / EN 60309-3

221.163...

type	rated current	(h) pos.	pin configuration	IP protection 44/54	IP protection 66/7/9	description	flange size	price
Male plugs *(90° cable inlet)*			*16A - 32A*					
221.1633	16A	6h	2P+E *(3pin)*	•		90° ind male plug	sleeve	**180.00**
221.1636	16A	6h	3P+E *(4pin)*	•		90° ind male plug	sleeve	**200.00**
221.1637	16A	6h	3P+N+E *(5pin)*	•		90° ind male plug	sleeve	**233.00**
221.3233	32A	6h	2P+E *(3pin)*	•		90° ind male plug	sleeve	**282.00**
221.3236	32A	6h	3P+E *(4pin)*	•		90° ind male plug	sleeve	**300.00**
221.3237	32A	6h	3P+N+E *(5pin)*	•		90° ind male plug	sleeve	**366.00**
226.1633	16A	6h	2P+E *(3pin)*		•	90° ind male plug	gland	**230.00**
226.1636	16A	6h	3P+E *(4pin)*		•	90° ind male plug	gland	**247.00**
226.1637	16A	6h	3P+N+E *(5pin)*		•	90° ind male plug	gland	**284.00**
226.3233	32A	6h	2P+E *(3pin)*		•	90° ind male plug	gland	**318.00**
226.3236	32A	6h	P+E *(4pin)*		•	90° ind male plug	gland	**333.00**
226.3237	32A	6h	3P+N+E *(5pin)*		•	90° ind male plug	gland	**408.00**

247.169...

Appliance inlets *(90° inlet)*			*16A - 32A*					
242.1693	16A	6h	2P+E *(3pin)*	•		90° appliance inlet	70 x 87	**186.00**
242.1696	16A	6h	3P+E *(4pin)*	•		90° appliance inlet	70 x 87	**209.00**
242.1697	16A	6h	3P+N+E *(5pin)*	•		90° appliance inlet	70 x 87	**280.00**
242.3293	32A	6h	2P+E *(3pin)*	•		90° appliance inlet	70 x 87	**317.00**
242.3296	32A	6h	3P+E *(4pin)*	•		90° appliance inlet	70 x 87	**338.00**
242.3297	32A	6h	3P+N+E *(5pin)*	•		90° appliance inlet	70 x 87	**348.00**
247.1693	16A	6h	2P+E *(3pin)*		•	90° appliance inlet	70 x 87	**287.00**
247.1696	16A	6h	3P+E *(4pin)*		•	90° appliance inlet	70 x 87	**301.00**
247.1697	16A	6h	3P+N+E *(5pin)*		•	90° appliance inlet	70 x 87	**377.00**
247.3293	32A	6h	2P+E *(3pin)*		•	90° appliance inlet	70 x 87	**399.00**
247.3296	32A	6h	3P+E *(4pin)*		•	90° appliance inlet	70 x 87	**426.00**
247.3297	32A	6h	3P+N+E *(5pin)*		•	90° appliance inlet	70 x 87	**471.00**

452.166...

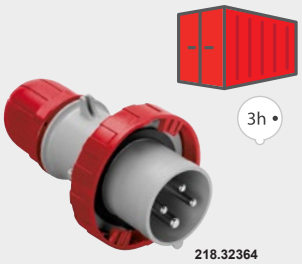
Sockets *(90° outlet)*			*16A - 32A*					
452.1663	16A	6h	2P+E *(3pin)*	•		90° female socket	70 x 87	**231.00**
452.1666	16A	6h	3P+E *(4pin)*	•		90° female socket	70 x 87	**251.00**
452.1667	16A	6h	3P+N+E *(5pin)*	•		90° female socket	70 x 87	**348.00**
452.3263	32A	6h	2P+E *(3pin)*	•		90° female socket	70 x 87	**413.00**
452.3266	32A	6h	3P+E *(4pin)*	•		90° female socket	70 x 87	**423.00**
452.3267	32A	6h	3P+N+E *(5pin)*	•		90° female socket	70 x 87	**583.00**
457.1663	16A	6h	2P+E *(3pin)*		•	90° female socket	70 x 87	**383.00**
457.1666	16A	6h	3P+E *(4pin)*		•	90° female socket	70 x 87	**422.00**
457.1667	16A	6h	3P+N+E *(5pin)*		•	90° female socket	70 x 87	**522.00**
457.3263	32A	6h	2P+E *(3pin)*		•	90° female socket	70 x 87	**593.00**
457.3266	32A	6h	3P+E *(4pin)*		•	90° female socket	70 x 87	**596.00**
457.3267	32A	6h	3P+N+E *(5pin)*		•	90° female socket	70 x 87	**734.00**

Container plugs and sockets *32A*

Resistance is a fundamental requirement in a harsh and exhausting environment like a terminal container where sun, humidity, saltiness and temperature changes put a strain on any product.

Scame offers a full range of plugs and socket outlets in 3h configuration for the supply of refrigerated containers: OPTIMA series plugs and sockets, flush or surface mounting interlocked socket in OMNIA series, ADVANCE2 series of interlocked socket outlets in thermoplastic material to offer maximum resistance to shocks and atmospheric and chemical agents.

- Refrigeration container *(Reefer plugs and sockets)*
- Earth pin *(3h)* position
- IP rating: IP67



218.32364

218.32364	32A	3h	3P+E *(4pin)*		•	container straight male plug		**278.00**
318.32464	32A	3h	3P+E *(4pin)*		•	container straight connector		**340.00**
428.32664	32A	3h	3P+E *(4pin)*		•	p/mnt straight socket	75 x 75	**402.00**
418.32664	32A	3h	3P+E *(4pin)*		•	p/mnt angled socket	84 x 106	**402.00**
518.32564T	32A	3h	3P+E *(4pin)*		•	TOP surface mnt socket outlet		**633.00**
505.32864	32A	3h	3P+E *(4pin)*		•	Omnia surf switch/socket outlet		**1 550.00**
561.32864	32A	3h	3P+E *(4pin)*		•	Advance surf switch/socket outlet		**1 730.00**

Above ZAR prices do not include VAT. E&OE

2P+E 3P+E 3P+N+E

500.168...

505.328...

561.328...

561.328...

Industrial switched sockets *(interlocked)* **IEC 60309-1/-2**

- Protection degree: IP44 and IP67 *(non ageing elastomer seals)*
- Operating temp: -25...+40°C *(max operating temperature +60°C)*
- Material: Thermoplastic (RAL 7035)
- Mechanical interlock: Only operates with plug inserted - cannot be removed with switch "ON"

type	rated current	(h) pos.	pin configuration		IP protection 44/54	IP protection 67/8/9	description	price
OMNIA series - Switched sockets					*(I-O)*	*(interlocked)*		
• Surface mounting:			*(flush mountable with surface box removed)*					
• Impact resistance:			IK08 *(1.7kg with a striking energy of 2J)*					
OMNIA Series 16A - 32A							*(H)125 x (W)136 x (D)85 mm*	
500.1683	16A	6h	2P+E	*(3pin)*	•		surface switch socket outlet	**877.00**
500.1686	16A	6h	3P+E	*(4pin)*	•		surface switch socket outlet	**952.00**
500.1687	16A	6h	3P+N+E	*(5pin)*	•		surface switch socket outlet	**1 040.00**
500.3283	32A	6h	2P+E	*(3pin)*	•		surface switch socket outlet	**1 050.00**
500.3286	32A	6h	3P+E	*(4pin)*	•		surface switch socket outlet	**1 150.00**
500.3287	32A	6h	3P+N+E	*(5pin)*	•		surface switch socket outlet	**1 280.00**
505.1683	16A	6h	2P+E	*(3pin)*		•	surface switch socket outlet	**1 110.00**
505.1686	16A	6h	3P+E	*(4pin)*		•	surface switch socket outlet	**1 220.00**
505.1687	16A	6h	3P+N+E	*(5pin)*		•	surface switch socket outlet	**1 310.00**
505.3283	32A	6h	2P+E	*(3pin)*		•	surface switch socket outlet	**1 450.00**
505.3286	32A	6h	3P+E	*(4pin)*		•	surface switch socket outlet	**1 550.00**
505.32864*	32A	3h	3P+E	*(4pin)*		•	surface switch socket outlet	**1 550.00**
505.3287	32A	6h	3P+N+E	*(5pin)*		•	surface switch socket outlet	**1 700.00**
OMNIA Series 63A *(rectangular shape)*							*(H)275 x (W)136 x (D)186 mm*	
505.6383	63A	6h	2P+E	*(3pin)*		•	surface switch socket outlet	**2 630.00**
505.6386	63A	6h	3P+E	*(4pin)*		•	surface switch socket outlet	**2 850.00**
505.6387	63A	6h	3P+N+E	*(5pin)*		•	surface switch socket outlet	**3 150.00**
Accessories for above Omnia series switched sockets								
572.0310	base						surface base housing for 125 x 136 mm 16/32A switch sockets	**113.00**
654.0120	blank						plain blank cover for above surface box **5720310**	**156.00**
572.0120	6 way						6 module consumer insert and cover for box **5720310**	**546.00**
409.0428	cover						IP56 Omnia cover accepts Evolution domestic sockets	**1 310.00**
572.0200	wall box						flush mounting wall box for Omnia 16/32A switch socket outlets	**199.00**
572.0220	frame						flush frame *(IP55)* for above flush mounting box **5720200**	**90.00**
Advance 2 series - Industrial switch sockets					*(I-O)*	*(interlocked)*		
• Impact resistance			IK07 *(500g with a striking energy of 2J)*					
16A/32A - compact version							*(H)240 x (W)106 x (D)129 mm*	
560.1683	16A	6h	2P+E	*(3pin)*	•		surface switch socket outlet	**749.00**
560.1686	16A	6h	3P+E	*(4pin)*	•		surface switch socket outlet	**825.00**
560.1687	16A	6h	3P+N+E	*(5pin)*	•		surface switch socket outlet	**812.00**
560.3283	32A	6h	2P+E	*(3pin)*	•		surface switch socket outlet	**877.00**
560.3286	32A	6h	3P+E	*(4pin)*	•		surface switch socket outlet	**958.00**
560.3287	32A	6h	3P+N+E	*(5pin)*	•		surface switch socket outlet	**894.00**
561.1683	16A	6h	2P+E	*(3pin)*		•	surface switch socket outlet	**1 220.00**
561.1686	16A	6h	3P+E	*(4pin)*		•	surface switch socket outlet	**1 340.00**
561.16866	16A	7h	3P+E	*(4pin)*		•	surface switch socket outlet	**1 670.00**
561.1687	16A	6h	3P+N+E	*(5pin)*		•	surface switch socket outlet	**1 550.00**
561.16876	16A	7h	3P+N+E	*(5pin)*		•	surface switch socket outlet	**1 930.00**
561.3283	32A	6h	2P+E	*(3pin)*		•	surface switch socket outlet	**1 550.00**
561.3286	32A	6h	3P+E	*(4pin)*		•	surface switch socket outlet	**1 730.00**
561.32864*	32A	3h	3P+E	*(4pin)*		•	surface switch socket outlet	**1 730.00**
561.32866	32A	7h	3P+E	*(4pin)*		•	surface switch socket outlet	**2 160.00**
561.3287	32A	6h	3P+N+E	*(5pin)*		•	surface switch socket outlet	**1 900.00**
561.32876	32A	7h	3P+N+E	*(5pin)*		•	surface switch socket outlet	**2 370.00**
63A - large version							*(H)390 x (W)136 x (D)166-207 mm*	
561.6383	63A	6h	2P+E	*(3pin)*		•	surface switch socket outlet	**3 530.00**
561.6386	63A	6h	3P+E	*(4pin)*		•	surface switch socket outlet	**3 800.00**
561.63866	63A	7h	3P+E	*(4pin)*		•	surface switch socket outlet	**4 760.00**
561.6387	63A	6h	3P+N+E	*(5pin)*		•	surface switch socket outlet	**4 210.00**
561.63876	63A	7h	3P+N+E	*(5pin)*		•	surface switch socket outlet	**5 260.00**
125A - large version							*(H)460 x (W)212 x (D)217 mm*	
548.12586	125A	6h	3P+E	*(4pin)*		•	surface switch socket outlet	**14 600.00**
548.12587	125A	6h	3P+N+E	*(5pin)*		•	surface switch socket outlet	**16 100.00**

* *Refrigerated container (Reefer plugs)*

2P+E 3P+E 3P+N+E

568.168...

LED indication

503.638...

590.FEM6303

type	rated current	(h) pos.	pin configuration	IP protection 44/54	IP protection 67/8/9	description	price
Advance2 - Switch socket outlet							
ADVANCE2 is a complete range of industrial interlocked sockets available from 16 up to 125A making it ideal for applications in purely industrial environments. • DIN rail facility for 6 x modular devices - MCB's, earth leakage, contactors • With interlocked switch and 6 way distribution board							
16/32A - switched socket						*(H)410 x (W)136 x (D)163 mm*	
568.1683	16A	6h	2P+E *(3pin)*		•	surface switch socket outlet	**1 970.00**
568.1686	16A	6h	3P+E *(4pin)*		•	surface switch socket outlet	**2 110.00**
568.1687	16A	6h	3P+N+E *(5pin)*		•	surface switch socket outlet	**2 220.00**
						(H)420 x (W)136 x (D)176 mm	
568.3283	32A	6h	2P+E *(3pin)*		•	surface switch socket outlet	**2 430.00**
568.3286	32A	6h	3P+E *(4pin)*		•	surface switch socket outlet	**2 570.00**
568.3287	32A	6h	3P+N+E *(5pin)*		•	surface switch socket outlet	**2 790.00**
63A - switched socket						*(H)438 x (W)X136 (D)182 mm*	
568.6383	63A	6h	2P+E *(3pin)*		•	surface switch socket outlet	**4 830.00**
568.6386	63A	6h	3P+E *(4pin)*		•	surface switch socket outlet	**5 200.00**
568.6387	63A	6h	3P+N+E *(5pin)*		•	surface switch socket outlet	**5 630.00**
Advance-GRP *"extra heavy duty"* **interlocked switch socket outlet 16 - 125A** *(O-II)*							
Advance-GRP(Ex) series surface mounting interlocked socket outlets are designed to guarantee excellent mechanical resistance to impacts and chemical agents, even under extreme atmospheric and temperature conditions. • Material: Thermosetting ***(halogen free)*** RAL 7037 • Self-extinguishing: GW test: 960°C - UL94 V0 • Impact resistance: IK10 *(5kg with a striking energy of 20J)* • Ex classification: Atex code Ex II 2D • LED indication: Correct supply and all phases present							
16A/32A - extra heavy-duty						(H)260 x (W)130 x (D)170-185 mm	
503.1683	16A	6h	2P+E *(3pin)*		•	heavy duty switch socket outlet	**4 450.00**
503.1686	16A	6h	3P+E *(4pin)*		•	heavy duty switch socket outlet	**4 830.00**
503.1687	16A	6h	3P+N+E *(5pin)*		•	heavy duty switch socket outlet	**5 250.00**
503.3283	32A	6h	2P+E *(3pin)*		•	heavy duty switch socket outlet	**7 000.00**
503.3286	32A	6h	3P+E *(4pin)*		•	heavy duty switch socket outlet	**7 590.00**
503.3287	32A	6h	3P+N+E *(5pin)*		•	heavy duty switch socket outlet	**8 360.00**
63A - extra heavy-duty						(H)380 x (W)170 x (D)225 mm	
503.6386	63A	6h	3P+E *(4pin)*		•	heavy duty switch socket outlet	**10 900.00**
503.6387	63A	6h	3P+N+E *(5pin)*		•	heavy duty switch socket outlet	**12 100.00**
125A - extra heavy-duty						(H)575 x (W)280 x (D)253 mm	
503.12586-01	125A	6h	3P+E *(4pin)*		•	heavy duty switch socket outlet	**24 200.00**
503.12587-01	125A	6h	3P+N+E *(5pin)*		•	heavy duty switch socket outlet	**27 000.00**
FR series - Enclosed switch disconnectors "Fire rated" **IP65**							
FR series is a range of fire rated switch disconnectors able to resist at a temperature of 400°C for a period of 120 minutes ensuring the operation of the smoke extraction systems as required by the EN 12101-3 Standard *(2015)*. • Protection degree: IP65 • Operating ambient temp: -25...+ 60°C • Colour: RAL 3020 • Impact resistance: IK08 *(20A...160A)* • Material: Continuos-Casting- Aluminium Alloy • Locking mechanism: Padlockable handle in two positions *(ON or OFF)* • Conformity of standards: - BS EN 12101-3 *(smoke and heat control system)* - EN 60947-3 *(Low voltage switchgear and controlgear)* - EN 60529 *(Degrees of protection provided by enclosure)* **General application:** • Basement parking • Emergency evacuation exit							

type	AC-21A ≤ 690V	AC-23A ≤ 415V	poles	description	dimensions (mm) (H)	(W)	(D)	price
590.FEM2003	20A	9 kW	3	enclosed isolator switch	192	168	80	**4 400.00**
590.FEM3203	32A	15 kW	3	enclosed isolator switch	192	168	80	**6 130.00**
590.FEM6303	63A	35 kW	3	enclosed isolator switch	253	217	93	**10 300.00**

Larger sizes (up to 630A) available on request

Above ZAR prices do not include VAT. E&OE

672.2012.1102

672.4032.1102

672.4316

672.1200

654.0420

654.0410

Domino series - Distribution boards

- Protection degree: IP66
- Max. operating temperature: 60°C
- Material: Thermoplastic (RAL 7035)
- Standards: EN 62208 / EN 60670-24 / EN 61439-3
- Impact resistance: IK07 *(500g with a striking energy of 2J)*

Domino series - Distribution boards

- Reversible hinged door *(hinged from left or right side)*
- Adjustable DIN rail depth *(can accept rail mounted MCCBs)*
- Knock-outs on all sides *(can be coupled to other enclosures using coupler glands)*
- Facility to accept earth and neutral terminals

type	no. DIN modules		description	dimensions (mm) (H)	(W)	(D)	price
672.2002	2		IP66 consumer unit / distribution board	135	76	102	**306.00**
672.2004	4		IP66 consumer unit / distribution board	190	112	106	**406.00**
672.2008	8		IP66 consumer unit / distribution board	190	184	106	**556.00**
672.2012.1102	12	*(1 x 12)*	IP66 consumer unit / distribution board	250	256	140	**837.00**
672.4024.1102	24	*(2 x 12)*	IP66 consumer unit / distribution board	400	256	140	**1 400.00**
672.2016.1102	16	*(1 x 16)*	IP66 consumer unit / distribution board	250	328	140	**1 170.00**
672.4032.1102	32	*(2 x 16)*	IP66 consumer unit / distribution board	400	328	140	**1 770.00**
672.5048.1102	48	*(3 x 16)*	IP66 consumer unit / distribution board	550	328	140	**2 230.00**

.1102 *(supplied with mounted earth and neutral terminals)*

Boards with additional blank component section *(for mounting non modular devices)*

672.3100	12	*(1 x 12)*	with blank section (H) 150 x (D) 115 mm	400	256	140	**1 040.00**
672.4116	16	*(1 x 16)*	with blank section (H) 150 x (D) 115 mm	400	328	140	**1 080.00**
672.5116	16	*(1 x 16)*	with blank section (H) 300 x (D) 115 mm	550	328	140	**1 500.00**

Boards with section to accommodate industrial sockets

type	no. DIN modules		sockets No.			flange size (mm)	dimensions (mm) (H)	(W)	(D)	price
672.2300	8	*(1 x 8)*	board + 2 x 16A	sockets		70 x 87	340	184	106	**1 190.00**
672.3300*	12	*(1 x 12)*	board + 2 x 16A	sockets		70 x 87	400	256	140	**1 550.00**
672.3302	12	*(1 x 12)*	board + 1 x 63A	sockets		100 x 110	400	256	140	**1 550.00**
672.4316*	16	*(1 x 16)*	board + 3 x 16A	sockets		70 x 87	400	328	140	**2 050.00**
672.5616*	16	*(1 x 16)*	board + 6 x 16A	sockets		70 x 87	550	328	140	**2 730.00**
To accommodate Omnia interlocked switch sockets										
672.3200	12	*(1 x 12)*	board + 1 x 16/32A	sw/socket		136 x 125	400	256	140	**1 550.00**
672.4216	16	*(1 x 16)*	board + 2 x 16/32A	sw/socket		136 x 125	400	328	140	**2 110.00**
672.5316	16	*(1 x 16)*	2 x 16/32A + 1 x 63A	sw/socket		136 x 125	550	328	140	**2 810.00**
672.5416	16	*(1 x 16)*	board + 4 x 16/32A	sw/socket		136 x 125	550	328	140	**2 830.00**

Empty enclosures for Domino series boards

type	for boards					flange	(H)	(W)	(D)	price
• Enclosures can be attached to boards *(or one another)* using coupler glands *(below)*										
672.1101	12 way	enclosure		with blank cover		–	150	256	115	**414.00**
672.1301*	12 way	enclosure	2 x 16A	sockets		70 x 87	150	256	115	**441.00**
* *With suitable adaption, can accommodate 32A socket (84 x 106 mm flange)*										
672.1100	16 way	enclosure		with blank cover		–	150	328	115	**543.00**
672.1300*	16 way	enclosure	3 x 16A	sockets		70 x 87	150	328	115	**546.00**
672.1200	16 way	enclosure	2 x 16/32A	sw/socket		136 x 125	150	328	115	**576.00**

Accessories for Domino boards

654.0365	4 way	5 way insulated terminal block for boards	*(IP20)*	**94.00**
654.0363	8 way	10 way insulated terminal block for boards	*(IP20)*	**101.00**
654.0362	16 - 32	10 way insulated terminal block for boards	*(IP20)*	**108.00**
654.0360	12 - 48 way	additional 10 way insulated terminal block	*(IP20)*	**85.00**
654.0358	DIN rail mountable insulated terminal block	vertical	5 x 10 + 5 x 16 mm²	**175.00**
654.0359	DIN rail mountable insulated terminal block	horizontal	5 x 10 + 5 x 16 mm²	**175.00**
654.0400	4 module	blanking strip for boards	*(sectionable ½ and 1 module)*	**17.40**
654.0410	1 module	rail mount dummy module	*(assists heat dissipation)*	**51.00**
654.0420	½ module	rail mount dummy module	*(assists heat dissipation)*	**52.00**
654.0751	12 module	DIN rail kit	–	**87.00**

Coupler glands IP66 *(to join two enclosures together)*

805.3335	coupler gland PG21 for joining 12/24 way enclosures together	*(ea)*	**22.80**
805.3337	coupler gland PG36 for joining 16/32 way enclosures together	*(ea)*	**56.00**

(Excluding sockets & MCBs)

MBOX3

MBOX series - Distribution assemblies (EN 60670-1 / EN 61439-3 / EN 61439-4)

MBOX panels are made of engineering resin with high mechanical sturdiness suitable for outdoor installations with high impact resistance and excellent dimensional stability at high temperatures.

Numerous combinations of sockets ensure reliability to meet common installation requirements for construction sites, equipped areas, camping sites, harbours and outdoor areas in general.

- Incorporated fold-out carrying handle
- Wall, trestle, turret or pole mountable *(with additional accessories)*
- Incorporated emergency disconnect pushbutton RAL 7035
- Incorporated distribution board to accommodate modular devices MCBs, earth leakages

type	no. DIN modules		mountable accessories to be ordered separately	dimensions (mm) (H)	(W)	(D)	price
MBOX series - Distribution assemblies			**IP66**				
MBOX2 distribution assemblies *(no front door)*							
• Supplied with 16 mm² 5-pole terminal box							
656.0924-000	16 (2 x 8)	4 x16/32A	Omnia industrial switch sockets	365	332	290	**10 600.00**
656.0926-000	16 (2 x 8)	6 x16/32A	Optima industrial socket outlets	365	332	290	**10 600.00**
MBOX3 distribution assemblies *(supplied with door for socket compartment)*							
• Supplied with door for socket compartment • Incorporates extremely low consumption LED light connected to a daylight sensor *(for improved visibility at night or in areas with poor light)*							
657.0936-000	39 (3 x 13)	6 x16/32A	Omnia industrial switch sockets	520	465	380	**15 800.00**
657.0938-000	39 (3 x 13)	9 x16/32A	Optima industrial socket outlets	520	465	380	**15 800.00**
MBOX5 distribution assemblies *(supplied with door for socket compartment)*							
• Supplied with door for socket compartment • Internal frame to accept 4 x Omnia switch sockets with facilities to mount an additional 8 surface • Supplied with incoming terminal blocks *(5 x 16 mm² + 5 x 35 mm²)* • Incorporates extremely low consumption LED light connected to a daylight sensor *(for improved visibility at night or in areas with poor light)*							
658.0950-000	52 (4 x 13)	12 x16/32A	Omnia industrial switch sockets	670	775	400	**22 400.00**

(Excluding sockets & MCBs)

MBOX5

Accessories for MBOX distribution assemblies			for enclosure	
654.0051	cable support kit *(to wind feeder cable on rear of enclosure)*		MBOX2	**162.00**
654.0024	wall	mounting bracket for enclosures	MBOX2/3/5	**189.00**
655.46090	pole	mounting bracket for enclosures	MBOX2	**2 410.00**
655.32090	pole	mounting bracket for enclosures	MBOX3/5	**2 230.00**
657.0121	trestle	metal support trestle for enclosures	MBOX3/5	**8 810.00**

Characteristic of **MBOX2**

01 Compartment for sockets and protection

02 Can be equipped with OMNIA / OPTIMA sockets

03 Enclosure in shockproof and self extinguishing material

04 Possibility of emergency button

05 16 way (2 x 8) consumer unit

06 Protection window/door

07 Integrated tilting handle

(Excluding sockets & MCBs)

MBOX2

Above ZAR prices do not include VAT. E&OE

136.5121-303

136.5122-303

136.5123-303

136.5123-414

101.6303.G

101.6414.G

Unibox series - Surface mounting IP55

- Housing: Thermoplastic (RAL 7035) *(grey)*
- Impact resistance: IK06 *(500g with a striking energy of 1J)*
- Max. temperature: +60°C
- Standards: EN 60670-1

type	amps	poles	description	dimensions (mm) (H)	(W)	(D)	price
Unibox series - Surface mounting			**IP55**				
1 gang surface mount switches							
136.5121-303	16A	1P	1-way surface mount switch	82	68	66	**184.00**
136.5121-302	20A	2P	1-way surface mount switch	82	68	66	**282.00**
136.5121-323	16A	1P	2-way surface mount switch	82	68	66	**207.00**
136.5121-333	16A	1P	bell-push *(momentary action)*	82	68	66	**207.00**
2 gang surface mount switches							
136.5122-303	16A	2P	2 x 1-pole surface mount switch	82	68	66	**283.00**
136.5122-414	15A	2P+E	2-pole + earth socket only	82	68	66	**347.00**
3 gang surface mount switches							
136.5123-303	16A	3P	3 x 1-pole surface mount switch	82	98	66	**384.00**
Surface mount switch socket							
136.5123-414	15A	2P+E	switch socket outlet	82	98	66	**397.00**
Accessories for Unibox series							
136.5121	1 gang		surface mount empty housing only *(IP55)*	82	68	66	**122.00**
136.5122	2 gang		surface mount empty housing only *(IP55)*	82	68	66	**122.00**
136.5123	3 gang		surface mount empty housing only *(IP55)*	82	98	66	**185.00**
136.001	–		external mount brackets for surface boxes			*(10 pcs)*	**27.60**
570.5052*	2 gang		panel mount housing for switches or sockets	82	68	–	**167.00**
570.6001*	2 gang		panel mnt housing *(IP66 with plug inserted)*	107	84	–	**263.00**
136.5023	3 gang		flush mnt housing for switches or sockets	82	98	–	**201.00**
875.4303	3 gang		wall box for flush mount empty housing	82	98	–	**15.00**

* *Fits into housing for industrial sockets with 70 x 87 mm flange*

Evolution series - Switches and sockets for above boxes							
101.6303.G	16 A	1-pole	on/off switch for housings			*(1 module)*	**67.00**
101.6311.G	16 A	2-pole	changeover switch (I-O-II)			*(1 module)*	**120.00**
101.6403.G	16A	2P+E	Italian socket for housings			*(1 module)*	**69.00**
101.6414.G	15A	2P+E	SA socket for housings			*(2 module)*	**182.00**
101.6407.G	16A	2P+E	German socket for housings			*(2 module)*	**140.00**
DIN rail mount support for Evolution switches and sockets							
654.0091	support		rail mnt support for above switches/sockets			*(1 module)*	**21.60**
654.0092	support		rail mnt support for above switches/sockets			*(2 module)*	**26.40**

137.5012

137.5022

Protecta series - Switches and sockets IP66

- Housing: Thermoplastic *(halogen free)* RAL 7035 *(grey)*
- Mounting: Surface mount *(can be flush mounted)*
- Max temperature: +60°C
- Glow wire test: 850°C / IKO7

type	amps	poles	description	dimensions (mm) (H)	(W)	(D)	price
1 gang surface mount switches							
137.5012	20A	1P	surface mount switch	95	95	–	**369.00**
137.5462	20A	2P	surface mount switch	95	95	–	**465.00**
137.5212	20A	1P	2 way surface mnt switch	95	95	–	**453.00**
137.5311P	10A	1P	bell-push*(momentary action)*	95	95	–	**329.00**
2 gang surface mount switches							
137.5022	20A	2P	surface mount switch	95	95	–	**513.00**
Accessories for above Protecta switches							
137.101	surface		surface mount back box for above switches	95	95	–	**69.00**
137.141	pole		pole mount back box for above switches	95	95	–	**173.00**
137.002	cover		IP66 cover accepts 2 x evolution *(modules)*	–	–	–	**267.00**
137.121	flush		flush mount frame kit for above switches	95	95	–	**87.00**
137.123	flush		flush mount frame kit for above sockets	115	115	–	**108.00**

46.031.4553.1

46.032.4553.1

96.031.4253.1

96.051.5053.1

96.052.5053.1

96.031.4554.3

96.032.4554.3

97.051.4053.1

Z5.567.5653.0

RST connectors are an ideal solution to providing pluggable connections to products able to withstand severe conditions, the connectors easily replace conventional cable glands providing a flexible, pluggable solution.

- Rapid mounting through ease of handling
- UV-resistant *(Polymide - **Halogen free**)*
- Cross-sections up to 6 mm²
- Protection degree: IP65, IP66, IP67, IP68, IP69K
- Colour: Black

type	current (A)	No. poles	for cable (Ø mm)	wire (mm²)	description	panel hole Ø	price
RST MINI Twistlock technology 250V							
RST 16i3 16A 3-pole							
46.031.4553.1	16A	3-pole	5 - 9.5	.25 - 2.5	in-line female connector	–	**172.00**
46.032.4553.1	16A	3-pole	5 - 9.5	.25 - 2.5	in-line male connector	–	**172.00**
46.031.5053.1	16A	3-pole	–	.25 - 2.5	panel mnt female connector	M16	**152.00**
46.032.5053.1	16A	3-pole	–	.25 - 2.5	panel mount male connector	M16	**152.00**
46.030.1253.1	16A	3-pole	–	–	1in / 2out distribution block	–	**391.00**
06.563.8953.1	16A	3-pole	protection cover for above 3-pole male connectors			–	**46.00**
06.563.8753.1	16A	3-pole	protection cover for above 3-pole female connectors			–	**46.00**
RST 16i5 16A 5-pole							
46.051.4553.1	16A	5-pole	5 - 9.5	.25 - 2.5	in-line female connector	–	**297.00**
46.052.4553.1	16A	5-pole	5 - 9.5	.25 - 2.5	in-line male connector	–	**297.00**
46.051.5053.1	16A	5-pole	–	.25 - 2.5	panel mnt female connector	M20	**249.00**
46.052.5053.1	16A	5-pole	–	.25 - 2.5	panel mount male connector	M20	**249.00**
46.050.1253.1	16A	5-pole	–	–	1in / 2out distribution block	–	**512.00**
06.562.5853.1	16A	3/5-pole	mounting base for above 3/5-pole distribution blocks			–	**53.00**
06.563.9353.1	16A	5-pole	protection cover for above 5-pole male connectors			–	**49.00**
06.563.9153.1	16A	5-pole	protection cover for above 5-pole female connectors			–	**49.00**
RST 20i3 **20A** **3-pole** 250V							
96.031.4053.1	20A	3-pole	6 - 10	.75 - 6.0	in-line female connector	–	**186.00**
96.031.4153.1	20A	3-pole	10 - 14	.75 - 6.0	in-line female connector	–	**210.00**
96.032.4053.1	20A	3-pole	6 - 10	.75 - 6.0	in-line male connector	–	**210.00**
96.032.4153.1	20A	3-pole	10 - 14	.75 - 6.0	in-line male connector	–	**210.00**
96.031.5053.1	20A	3-pole	–	.75 - 6.0	panel mnt female connector	M25	**157.00**
96.032.5053.1	20A	3-pole	–	.75 - 6.0	panel mount male connector	M25	**177.00**
RST 20i5 20A 5-pole							
96.051.4153.1	20A	5-pole	10 - 14	.75 - 4.0	in-line female connector	–	**308.00**
96.052.4153.1	20A	5-pole	10 - 14	.75 - 4.0	in-line male connector	–	**346.00**
96.051.4353.1	20A	5-pole	10 - 14	.75 - 1.5	female splitter connector	–	**720.00**
96.051.5053.1	20A	5-pole	–	.75 - 4.0	panel mnt female connector	M25	**293.00**
96.052.5053.1	20A	5-pole	–	.75 - 4.0	panel mount male connector	M25	**293.00**
96.031.4253.1	20A	3/5-pole	6 - 10	.75 - 2.5	female splitter connector	–	**468.00**
96.031.4353.1	20A	3/5-pole	10 - 14	.75 - 2.5	female splitter connector	–	**468.00**
01.006.1553.1	20A	3/5-pole	mounting plate for 20A 3/5-pole splitter connectors			–	**110.00**
RST 25i3 **32A** *(using 6 mm² cable)* *PV applications*							
96.031.4554.3	32A	3-pole	10 - 14	.75 - 6.0	in-line female connector	–	**257.00**
96.032.4554.3	32A	3-pole	10 - 14	.75 - 6.0	in-line male connector	–	**257.00**
96.031.5054.3	32A	3-pole	–	.75 - 6.0	panel mnt female connector	M25	**175.00**
96.032.5054.3	32A	3-pole	–	.75 - 6.0	panel mount male connector	M25	**175.00**
RST 50i5 **50A** **5-pole** *power series*							
97.051.4053.1	50A	5-pole	15 - 25	4.0 - 16.0	in-line female connector	M32	**1 130.00**
97.052.4053.1	50A	5-pole	15 - 25	4.0 - 16.0	in-line male connector	M32	**1 130.00**
97.051.5553.1	50A	5-pole	–	4.0 - 16.0	panel mnt female connector	M32	**901.00**
97.052.5553.1	50A	5-pole	–	4.0 - 16.0	panel mount male connector	M32	**901.00**
Accessories for RST20/25/50 connectors							
05.564.8653.1	20/32A	–	manual disconnect tool *(easy release button)*			–	**15.90**
05.568.8853.1	20/32A	–	spacer ring *(manually actuated)* for M25 connectors			M25	**20.80**
99.416.6205.2	20/32A	3-pole	protection cover for 20/32A 3-pole female connector			–	**114.00**
99.414.6205.2	20/32A	3-pole	protection cover for 20/32A 3-pole male connector			–	**114.00**
99.532.0000.7	20/32A	5-pole	protection cover for 20/32A 5-pole female connector			–	**141.00**
99.530.0000.7	20/32A	5-pole	protection cover for 20/32A 5-pole male connector			–	**141.00**
Z5.567.5653.0	50A	cover	protection cover for 50A male or female connectors			–	**356.00**

Above ZAR prices do not include VAT. E&OE

91.931.3053.0

91.932.3053.0

91.931.9053.0

91.932.9053.0

92.931.3053.1

92.932.3053.1

91.030.4953.0

92.030.4853.1

73.300.0353.0

73.310.0353.0

76.320.0729.0

76.321.0753.0

76.352.0736.1

GST series - Multipole connectors

Rated voltage: 250V
Rated current: 16A
Protection degree: IP20
Colour: White *(black available on request)*

- Quick, easy and reliable connection technology with Integrated locking device

type	current (A)	No. poles	for cable (Ø mm)	wire (mm²)	description	panel hole Ø	price
GST 15i3 (Gesis mini) connectors			**16A/250V**				
In-line connectors *(with strain relief)*			*screw connection*				
91.921.3053.0	16A	2 pole	5.5 - 8.5	0.5 - 1.5	female in-line connector		**83.00**
91.922.3053.0	16A	2 pole	5.5 - 8.5	0.5 - 1.5	male in-line connector		**77.00**
91.931.3053.0	16A	3-pole	5.5 - 8.5	0.5 - 1.5	female in-line connector		**116.00**
91.932.3053.0	16A	3-pole	5.5 - 8.5	0.5 - 1.5	male in-line connector		**108.00**
91.931.9053.0	16A	3-pole	–	0.5 - 1.5	flush female p/mnt connector		**73.00**
91.931.9153.0	16A	3-pole	–	0.5 - 1.6	protruding female p/mnt conn.		**73.00**
91.932.9053.0	16A	3-pole	–	0.5 - 1.5	flush male p/mnt connector		**65.00**
91.932.9153.0	16A	3-pole	–	0.5 - 1.6	protruding male p/mnt conn.		**65.00**
GST 18i3 (Gesis) connectors			**16A/250V**				
In-line connectors *(with strain relief)*			*screw connection*				
92.931.3053.0	16A	3-pole	6.5 - 10.5	0.75 - 2.5	female in-line connector		**101.00**
92.932.3053.0	16A	3-pole	6.5 - 10.5	0.75 - 2.5	male in-line connector		**87.00**
Panel mounting *(snap-in)spring-loaded screwless connection*							
92.031.9658.0	16A	3-pole	–	0.75 - 2.5	female panel mount connector		**67.00**
92.032.9658.0	16A	3-pole	–	0.75 - 2.5	male panel mount connector		**62.00**
Accessories for GST connectors							
91.030.6053.0	16A	3-pole			1 in / 2 out distribution unit for GST15i connectors		**315.00**
91.030.4953.0	16A	3-pole			1 in / 3 out distribution unit for GST15i connectors		**359.00**
91.030.5853.0	16A	3-pole			U-type intermediate coupling for GST 15i connectors		**309.00**
91.030.5953.0	16A	3-pole			in-line intermediate coupling for GST 15i connectors		**159.00**
92.030.4853.0	16A	3-pole			1 in / 3 out distribution unit for GST18i connectors		**178.00**
92.030.5958.0	16A	3-pole			in-line intermediate coupling for GST 18i connectors		**86.00**
05.587.3156.0	lock	–			locking device for in-line connectors		**23.30**
05.561.3653.0	cover	–			protection cover for GST18i female connectors		**32.50**

Revos MINI - industrial multipole connectors

Protection degree: IP65 *(when used with appropriate cable gland)*

type	current (A)	No. poles	rated voltage	connect type	cable inlet	description	price
• Set is made up with - contact inserts *(male and female)* - base - hood							
Revos MINI			**10A/400V**				
Contact inserts			*Screw connection - (cables 0.5 - 2.5 mm²)*				
73.310.0353.0	10A	3p + ⏚	400 V	screw	–	male insert - screw terminal	**182.00**
73.310.0453.0	10A	4p + ⏚	400 V	screw	–	male insert - screw terminal	**225.00**
73.300.0353.0	10A	3p + ⏚	400 V	screw	–	female insert - screw terminal	**179.00**
73.300.0453.0	10A	4p + ⏚	400 V	screw	–	female insert - screw terminal	**252.00**
Crimp connection - *(crimp contacts to be ordered separately)*							
73.710.0753.0	10A	7p + ⏚	250 V	crimp	–	male insert - for crimp pins	**77.00**
73.710.0853.0	10A	8 pole	50 V	crimp	–	male insert - for crimp pins	**78.00**
05.544.1029.0	10A	–	250 V	crimp	.75 - 1.5 mm²	male crimp contact pins	**12.30**
73.700.0753.0	10A	7p + ⏚	250 V	crimp	–	female insert - for crimp pins	**73.00**
73.700.0853.0	10A	8 pole	50 V	crimp	–	female insert - for crimp pins	**74.00**
02.124.1029.0	10A	–	250 V	crimp	.75 - 1.5 mm²	female crimp contact pins	**12.90**
Bases			*with locking lever for hood connection*				
76.320.0729.0	metal	3/4/7/8		open	straight	base for contact inserts	**162.00**
76.321.0729.0	metal	3/4/7/8		open	90°	angled base for cont. inserts	**254.00**
76.320.0753.0	plastic	3/4/7/8		open	straight	base for contact inserts	**112.00**
76.321.0753.0	plastic	3/4/7/8		open	90°	angled base for cont. inserts	**222.00**
Hoods			*with threaded collar to accept M20 cable glands*				
76.352.0736.1	metal	3/4/7/8		M20	straight	hood for contact inserts	**155.00**
76.350.0736.1	metal	3/4/7/8		M20	90°	angled hood for cont. inserts	**253.00**
76.352.0760.1	plastic	3/4/7/8		M20	straight	hood for contact inserts	**113.00**
76.350.0760.1	plastic	3/4/7/8		M20	90°	angled hood for cont. inserts	**129.00**

Revos BASIC - **Industrial multipole connectors**

Heavy duty connectors for use in tough environment conditions. Used in the automotive industry, packaging, instrumentation, control and automation equipment.

They permit simple, time-saving installation of machinery and equipment, providing effective protection against mechanical impact, water and dust entry.

- Rated voltage: 690V
- Rated current: 10/16A
- Protection degree: *Supplied without gland (IP65 when used with appropriate cable gland)*

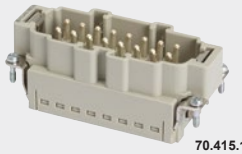
Scan to watch video

IP65

70.300.1040.0

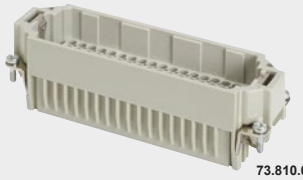
70.415.0653.0

70.405.0653.0


70.415.1653.0

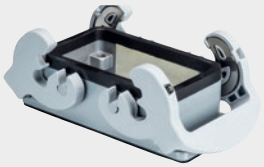
70.405.1653.0

73.810.2453.0


73.810.0853.0

type	current (A)	No. poles	rated voltage	connect type	cable inlet	**size**	description	price
Contact inserts	Fit into all revos bases and hoods to make up a complete connector.							
Revos BASIC	Standard contact inserts with screw termination - 6/10/16/24/32/48 pole + earth							
• Connector set is made up with - contact inserts *(male and female)* - base - hood								
Screw terminal *(with wire protection)*			*(for cables 0.5 - 2.5 mm²)*					
70.310.0640.0	16A	6p+ ⏚	690V	screw	–	**6**	male insert - screw term.	**179.00**
70.310.1040.0	16A	10p+ ⏚	690V	screw	–	**10**	male insert - screw term.	**213.00**
70.310.1640.0	16A	16p+ ⏚	690V	screw	–	**16**	male insert - screw term.	**276.00**
70.310.2440.0	16A	24p+ ⏚	690V	screw	–	**24**	male insert - screw term.	**344.00**
70.310.3253.0	16A	32p+ ⏚	690V	screw	–	**32**	male insert - screw term.	**619.00**
70.310.4840.0	16A	48p+ ⏚	690V	screw	–	**48**	male insert - screw term.	**708.00**
70.300.0640.0	16A	6p+ ⏚	690V	screw	–	**6**	female insert - screw term.	**182.00**
70.300.1040.0	16A	10p+ ⏚	690V	screw	–	**10**	female insert - screw term.	**216.00**
70.300.1640.0	16A	16p+ ⏚	690V	screw	–	**16**	female insert - screw term.	**280.00**
70.300.2440.0	16A	24p+ ⏚	690V	screw	–	**24**	female insert - screw term.	**349.00**
70.300.3253.0	16A	32p+ ⏚	690V	screw	–	**32**	female insert - screw term.	**627.00**
70.300.4840.0	16A	48p+ ⏚	690V	screw	–	**48**	female insert - screw term.	**715.00**
Push-in termination contact inserts								
New push-in technology allows flexible conductors with ferrules to be simply and quickly connected without the use of tools. Simply push-in the wire conductor for a high contact quality, reliable, gas-tight, vibration proof connection.								
• Extremely quick connection time - *(cables are simply withdrawn by pressing a release button)*								
70.415.0653.0	16A	6p+ ⏚	690V	push-in	–	**6**	male insert - push-in term.	**205.00**
70.415.1053.0	16A	10p+ ⏚	690V	push-in	–	**10**	male insert - push-in term.	**263.00**
70.415.1653.0	16A	16p+ ⏚	690V	push-in	–	**16**	male insert - push-in term.	**320.00**
70.415.2453.0	16A	24p+ ⏚	690V	push-in	–	**24**	male insert - push-in term.	**464.00**
70.405.0653.0	16A	6p+ ⏚	690V	push-in	–	**6**	female insert - push-in term.	**212.00**
70.405.1053.0	16A	10p+ ⏚	690V	push-in	–	**10**	female insert - push-in term.	**270.00**
70.405.1653.0	16A	16p+ ⏚	690V	push-in	–	**16**	female insert - push-in term.	**336.00**
70.405.2453.0	16A	24p+ ⏚	690V	push-in	–	**24**	female insert - push-in term.	**492.00**
Revos DD	High density contact inserts for crimp contacts - 24/42/72/108 poles							
High contact density in the most compact housing. Connection is made with proven turned crimp contacts.								
• Crimp connection - *(crimp contact pins to be ordered separately - see below)*								
• Connector set is made up with - contact inserts and crimp contact pins *(male and female)* - base - hood								
73.810.2453.0	10A	24p+ ⏚	250V	crimp	–	**6**	male insert - for crimp pins	**336.00**
73.810.4253.0	10A	42p+ ⏚	250V	crimp	–	**10**	male insert - for crimp pins	**392.00**
73.810.7253.0	10A	72p+ ⏚	250V	crimp	–	**16**	male insert - for crimp pins	**401.00**
73.810.0853.0	10A	108p+ ⏚	250V	crimp	–	**24**	male insert - for crimp pins	**423.00**
73.800.2453.0	10A	24p+ ⏚	250V	crimp	–	**6**	female insert - for crimp pins	**338.00**
73.800.4253.0	10A	42p+ ⏚	250V	crimp	–	**10**	female insert - for crimp pins	**395.00**
73.800.7253.0	10A	72p+ ⏚	250V	crimp	–	**16**	female insert - for crimp pins	**403.00**
73.800.0853.0	10A	108p+ ⏚	250V	crimp	–	**24**	female insert - for crimp pins	**426.00**
Crimp contacts for Revos DD contact inserts			*(cables 0.75 - 1 mm²)*					price *(ea)*
05.544.4329.8	10A	–	250 V		0.75 - 1 mm²		male crimp contact pins	**12.90**
02.125.4329.8	10A	–	250 V		0.75 - 1 mm²		female crimp contact pins	**14.10**
05.544.4429.8	10A	–	250 V		1.5 mm²		male crimp contact pins	**12.90**
02.125.4429.8	10A	–	250 V		1.5 mm²		female crimp contact pins	**14.10**
Accessories for contact inserts								
95.101.0800.0	tool	–	–	crimp	–		crimping tool for crimp contact pins	**6 260.00**
05.502.2100.0	die	–	–	crimp	–		die set for crimping contact pins	**2 780.00**
05.502.3100.0	pos.	–	–	crimp	–		contact pin positioner for crimping tool	**1 680.00**
05.502.0710.0	tool	–	extraction tool for removing crimp contact pins from contact inserts					**586.00**

Above ZAR prices do not include VAT. E&OE



70.320.1028.0

70.331.1035.1

70.350.1035.1
(excluding gland)

70.352.1035.1
(excluding gland)

70.372.0635.1

continued... **Revos - Industrial multipole connectors**

- Set is made up with - contact inserts *(male and female)* - base - hood

type	locking lever	gland entry	cable inlet	**size**	description	price
Bases (housings)					*(diecast aluminium)*	
Panel mount *(open bottom base - no cover)*						
Single locking lever						
70.320.0628.0	single	open	straight	**6**	bulkhead mounting base	**312.00**
71.320.1028.0	single	open	straight	**10**	bulkhead mounting base	**410.00**
71.320.1628.0	single	open	straight	**16**	bulkhead mounting base	**429.00**
71.320.2428.0	single	open	straight	**24**	bulkhead mounting base	**480.00**
70.320.4828.0	single	open	straight	**48**	bulkhead mounting base	**1 630.00**
Double locking lever						
70.320.1028.0	double	open	straight	**10**	bulkhead mounting base	**448.00**
70.320.1628.0	double	open	straight	**16**	bulkhead mounting base	**462.00**
70.320.2428.0	double	open	straight	**24**	bulkhead mounting base	**512.00**
70.320.3228.0	double	open	straight	**32**	bulkhead mounting base	**932.00**
Surface mount *(closed bottom base)*		metric threaded side cable gland entry				
Single locking lever						
70.331.0635.1	single	M20	side	**6**	side entry surface mount base	**451.00**
71.331.1035.1	single	M20	side	**10**	side entry surface mount base	**560.00**
71.331.1635.1	single	M25	side	**16**	side entry surface mount base	**571.00**
71.331.2435.1	single	M25	side	**24**	side entry surface mount base	**644.00**
70.344.4835.1	single	M40	side	**48**	side entry surface mount base	**4 350.00**
Double locking lever						
70.331.1035.1	double	M20	side	**10**	side entry surface mount base	**596.00**
70.331.1635.1	double	M25	side	**16**	side entry surface mount base	**604.00**
70.331.2435.1	double	M25	side	**24**	side entry surface mount base	**673.00**
Hoods *(with studs to receive locking lever on bases)*					*(diecast aluminium)*	
Lateral cable entry *(side entry)*		*metric threaded cable gland entry*				
Single locking lever						
70.350.0635.1	single	M20	side	**6**	lateral cable gland entry hood	**249.00**
71.350.1035.1	single	M20	side	**10**	lateral cable gland entry hood	**341.00**
71.350.1635.1	single	M25	side	**16**	lateral cable gland entry hood	**342.00**
71.350.2435.1	single	M25	side	**24**	lateral cable gland entry hood	**398.00**
70.350.4835.1	single	M32	side	**48**	lateral cable gland entry hood	**1 800.00**
Double locking lever						
70.350.1035.1	double	M20	side	**10**	lateral cable gland entry hood	**341.00**
70.350.1635.1	double	M25	side	**16**	lateral cable gland entry hood	**342.00**
70.350.2435.1	double	M25	side	**24**	lateral cable gland entry hood	**398.00**
70.350.3235.1	double	M32	side	**32**	lateral cable gland entry hood	**1 230.00**
Top cable entry		*metric threaded cable gland entry*				
Single locking lever						
70.352.0635.1	single	M20	top	**6**	top cable gland entry hood	**249.00**
71.352.1035.1	single	M20	top	**10**	top cable gland entry hood	**341.00**
71.352.1635.1	single	M25	top	**16**	top cable gland entry hood	**342.00**
71.352.2435.1	single	M25	top	**24**	top cable gland entry hood	**398.00**
70.352.4835.1	single	M32	top	**48**	top cable gland entry hood	**1 800.00**
Double locking lever						
71.352.1035.1	double	M20	top	**10**	top cable gland entry hood	**341.00**
70.352.1635.1	double	M25	top	**16**	top cable gland entry hood	**342.00**
70.352.2435.1	double	M25	top	**24**	top cable gland entry hood	**398.00**
70.352.3235.1	double	M32	top	**32**	top cable gland entry hood	**1 230.00**
With locking levers *(for in-line cable-to-cable connection)*						
70.372.0635.1	single	M20	top	**6**	locking levers for cable to cable	**331.00**
71.372.1035.1	single	M20	top	**10**	locking levers for cable to cable	**482.00**
71.372.1635.1	single	M25	top	**16**	locking levers for cable to cable	**522.00**
71.372.2435.1	single	M25	top	**24**	locking levers for cable to cable	**691.00**

07.417.6753.0

07.409.7356.0

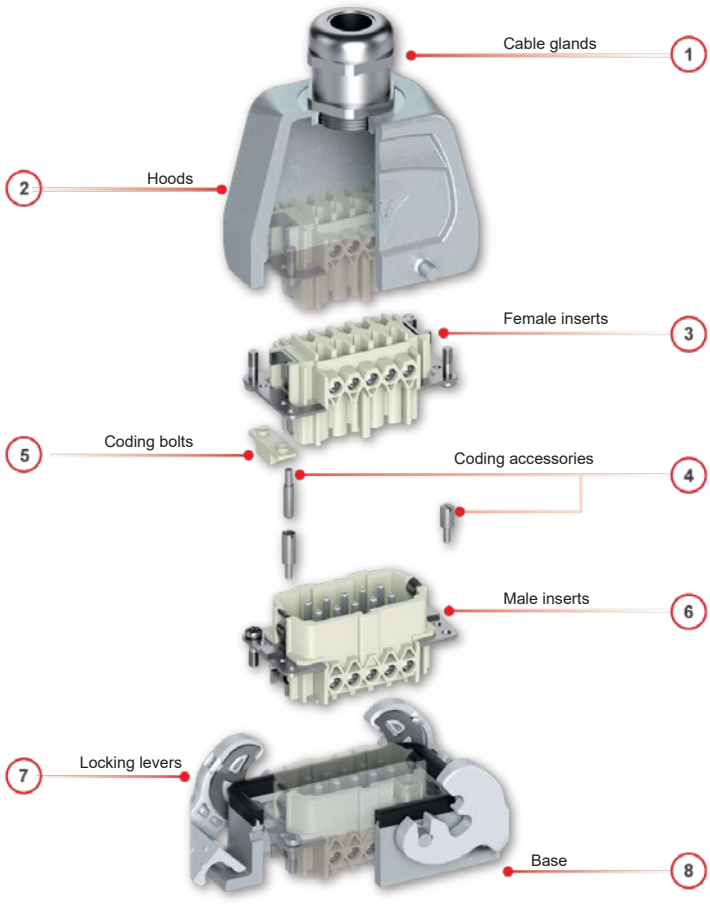
Z7.428.1453.0

Protective covers for Revos housings

type	size	locking lever	for	gasket	description	price
Covers without locking levers for bases						
07.417.6753.0	mini	single	male	no	protection cover for bases	**38.00**
07.409.7056.0	6	single	base	no	protection cover for bases	**74.00**
07.428.5553.0	10	single	base	no	protection cover for bases	**130.00**
07.428.5653.0	16	single	base	no	protection cover for bases	**145.00**
07.428.5753.0	24	single	base	no	protection cover for bases	**167.00**
07.409.7156.0	10	double	base	no	protection cover for bases	**85.00**
07.409.7256.0	16	double	base	no	protection cover for bases	**95.00**
07.409.7356.0	24	double	base	no	protection cover for bases	**109.00**
Z7.419.6228.0	32	double	base	no	protection cover for bases	**477.00**
Covers with locking levers for hoods						
07.417.6853.0	mini	single	female	yes	protection cover for hoods	**53.00**
Z7.428.1153.0	6	single	hood	yes	protection cover for hoods	**325.00**
Z7.428.5553.0	10	single	hood	yes	protection cover for hoods	**389.00**
Z7.428.5653.0	16	single	hood	yes	protection cover for hoods	**392.00**
Z7.428.5753.0	24	single	hood	yes	protection cover for hoods	**452.00**
Z7.428.1253.0	10	double	hood	yes	protection cover for hoods	**389.00**
Z7.428.1353.0	16	double	hood	yes	protection cover for hoods	**392.00**
Z7.428.1453.0	24	double	hood	yes	protection cover for hoods	**452.00**
Z7.419.6128.0	32	double	hood	yes	protection cover for hoods	**732.00**

Revos - Industrial multipole connector

– General configuration:



Above ZAR prices do not include VAT. E&OE

Photovoltaic connectors

Solar PV connectors are manufactured in high quality materials offering extremely high impact strength and chemical resistance with excellent UV and weather properties guaranteeing long-term stability and reliability, lower contact resistance and higher current transfer capability ensuring high product efficiency.

- TUV approved and quick and easy to install
- Stable connection reducing maintenance cost
- Protection class IP67/IP68 suitable for harsh outdoor environments

PVBN101A-F2-M

PVBN101A-F2-F

SY-CP4A-M

SY-CP4A-F

MTT2AB

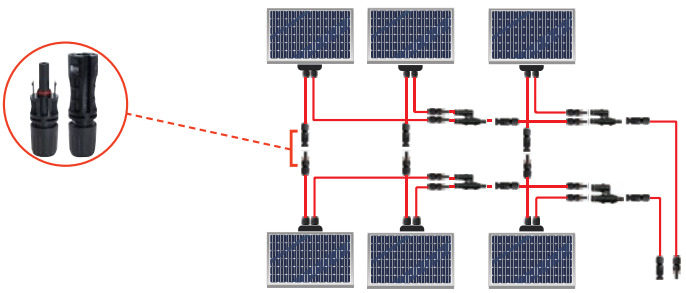
30199

MTHP46-M

MTHP46-F

TB006

type	for cable mm²	DC Volts IEC 62852	Amps	cable outer dia (mm)	male -	female +	description	price
PVBN series - In-line connectors		**1500V**		**IP68**				
Rated voltage:		IEC1500V / UL 2000V						
Ambient temperature:		-40ºC…+90ºC						
Protection degree:		IP68 (IEC 60529)						
Rated Impulse Voltage:		16 kV						
Contact/Insulation material:		Tin plated Copper/PC						
Locking system:		NEC locking type *(requires a tool to open connector)*						
Fire protection:		UL94-V 0						
Certification:		IEC 62852; UL 6703						
• Supplied individually - complete with insulated housing and open crimp contacts								
PVBN101A-F2-M	4.0/6.0	1500 V	35A	5.6…6.9	•		male solar coupler	**16.20**
PVBN101A-F2-F	4.0/6.0	1500 V	35A	5.6…6.9		•	female solar coupler	**16.20**
SY-CP series - Panel mount connectors		**1000V**		*(mounts through M12 panel hole)*				
Rated voltage:		IEC 1000V / UL 600V						
Ambient temperature:		-40ºC…+90ºC						
Protection degree:		IP68 (IEC 60529)						
Contact material:		Tin plated copper						
Fire protection:		UL94-V0						
Certification:		IEC 62852; UL 6703						
• Supplied individually - complete with insulated housing and open crimp contacts								
SY-CP4A-M	4.0/6.0	1000 V	30A	5.6…6.9	•		male p/mount connector	**19.20**
SY-CP4A-F	4.0/6.0	1000 V	30A	5.6…6.9		•	female p/mnt connector	**19.20**
MTT series - T-branch connectors		**1500V**						
MTT series branch connectors are suitable for solar cable 2.5 mm², 4 mm² and 6 mm² in solar connection project. Connecting solar panels in series or parallel, quickly and reliable connection of the solar cables to the photovoltaic system *(solar panels, converters)*.								
MTT2AB	branch	1500 V	30A	socket	2	1	socket branch connector	**177.00**
	branch	1500 V	30A	plug	1	2	plug branch connector	
Jokari PV-strip Pro	*Cable stripper for solar cables / photovoltaic cables*							
• For stripping solar and photovoltaic cables								
• Uniquely large stripping range from 1.5 - 16 mm² *(16 - 6 AWG)*								
• Length stop can be adjusted with millimetre precision from 5 to 26 mm								
30199	*1.5 - 16*			*cable stripper for solar cables / photovoltaic cables 1.5 - 16 mm²*				**648.00**
Tools and accessories for above connectors								
MTHP46-M	4.0/6.0	1500 V		open end male crimping contact pins only			*(ea)*	**6.70**
MTHP46-F	4.0/6.0	1500 V		open end female crimping contact pins only			*(ea)*	**6.70**
YS-C005	sealing caps for PV connectors						*(male + female pair)*	**20.90**
THB510	open end universal spanner and unlocking tool							**75.00**
TB006	PV connector set in carrying case comprising:							**1 740.00**
	- PV crimping tool for 2.5/4/6 mm² cables							
	- Wire cutter, wire stripper for 2.5/4/6 mm² cables							
	- Pair open end universal spanners with unlocking too							



Scan to watch

IP67

New

CN06-W02...

360° rotating plug

CN12-W01-120 + CN12-S02-M8

CN08-S01-M6

CN12-S02-M8

Battery storage connectors

Battery connectors can be connected in series or individually depending on specific application requirements, the connector is mounted on the front of the battery module, while connections are terminated from the rear.

Connectors can be rotated 360° and are mechanically coded to prevent polarity reversal or incorrect mating.

- Touch proof, safety, reliable
- 360° rotating plug
- Compact, robust design
- Various termination options
- Quick lock / press-to-release design

- Rated voltage: 1000 - 1500 VDC
- Operating temp: -40°C ~ +125°C
- Protection degree: IP67 *(mated)*
- Flammability: UL94 V-0
- Available colours: Orange, black *(red available on request)*

type	rated current	cable size	rated voltage	colour	Ø pin contact	termination type	description	price
Plug *(right angled)*			**IP67** *(mated)*			angled 90º		
CN06-W01-16	100A	16 mm²	1000V	orange	6 mm	crimp	angled plug	**155.00**
CN06-W02-16	100A	16 mm²	1000V	black	6 mm	crimp	angled plug	**155.00**
CN06-W01-25	120A	25 mm²	1000V	orange	6 mm	crimp	angled plug	**155.00**
CN06-W02-25	120A	25 mm²	1000V	black	6 mm	crimp	angled plug	**155.00**
CN08-W01-35	150A	35 mm²	1500V	orange	8 mm	crimp	angled plug	**223.00**
CN08-W02-35	150A	35 mm²	1500V	black	8 mm	crimp	angled plug	**223.00**
CN08-W01-50	200A	50 mm²	1500V	orange	8 mm	crimp	angled plug	**223.00**
CN08-W02-50	200A	50 mm²	1500V	black	8 mm	crimp	angled plug	**223.00**
CN12-W01-70	250A	70 mm²	1500V	orange	12 mm	crimp	angled plug	**435.00**
CN12-W02-70	250A	70 mm²	1500V	black	12 mm	crimp	angled plug	**435.00**
CN12-W01-95	300A	95 mm²	1500V	orange	12 mm	crimp	angled plug	**435.00**
CN12-W02-95	300A	95 mm²	1500V	black	12 mm	crimp	angled plug	**435.00**
CN12-W01-120	350A	120 mm²	1500V	orange	12 mm	crimp	angled plug	**435.00**
CN12-W02-120	350A	120 mm²	1500V	black	12 mm	crimp	angled plug	**435.00**

type	rated current	thread or hole Ø	rated voltage	colour	Ø pin contact	termination type	description	price
Socket *(receptacle)*			**IP67** *(mated)*			front installation		
CN06-S01-LD6	120A	M6	1000V	orange	6 mm	outer thread	straight socket	**124.00**
CN06-S02-LD6	120A	M6	1000V	black	6 mm	outer thread	straight socket	**124.00**
CN06-S01-LM6	120A	M6	1000V	orange	6 mm	inner thread	straight socket	**124.00**
CN06-S02-LM6	120A	M6	1000V	black	6 mm	inner thread	straight socket	**124.00**
CN06-S01-M5	120A	M5	1000V	orange	6 mm	threaded bar	straight socket	**124.00**
CN06-S02-M5	120A	M5	1000V	black	6 mm	threaded bar	straight socket	**124.00**
CN06-S01-H25	120A	25 mm²	1000V	orange	6 mm	crimp	straight socket	**124.00**
CN06-S02-H25	120A	25 mm²	1000V	black	6 mm	crimp	straight socket	**124.00**
CN08-S01-LD8	200A	M8	1500V	orange	8 mm	outer thread	straight socket	**186.00**
CN08-S02-LD8	200A	M8	1500V	black	8 mm	outer thread	straight socket	**186.00**
CN08-S01-LM6	200A	M6	1500V	orange	8 mm	inner thread	straight socket	**186.00**
CN08-S02-LM6	200A	M6	1500V	black	8 mm	inner thread	straight socket	**186.00**
CN08-S01-M6	200A	M6	1500V	orange	8 mm	threaded bar	straight socket	**186.00**
CN08-S02-M6	200A	M6	1500V	black	8 mm	threaded bar	straight socket	**186.00**
CN08-S01-H50	200A	50 mm²	1500V	orange	8 mm	crimp	straight socket	**186.00**
CN08-S02-H50	200A	50 mm²	1500V	black	8 mm	crimp	straight socket	**186.00**
CN12-S01-LD10	350A	M10	1500V	orange	12 mm	outer thread	straight socket	**339.00**
CN12-S02-LD10	350A	M10	1500V	black	12 mm	outer thread	straight socket	**339.00**
CN12-S01-LM10	350A	M10	1500V	orange	12 mm	inner thread	straight socket	**339.00**
CN12-S02-LM10	350A	M10	1500V	black	12 mm	inner thread	straight socket	**339.00**
CN12-S01-M8	350A	M8	1500V	orange	12 mm	threaded bar	straight socket	**339.00**
CN12-S02-M8	350A	M8	1500V	black	12 mm	threaded bar	straight socket	**339.00**
CN12-S01-H120	350A	120 mm²	1500V	orange	12 mm	crimp	straight socket	**339.00**
CN12-S02-H120	350A	120 mm²	1500V	black	12 mm	crimp	straight socket	**339.00**

LD: Outer thread

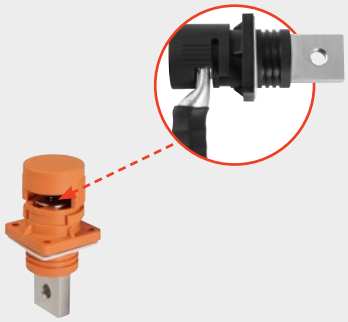
LM: Inner thread

M: Threaded bar

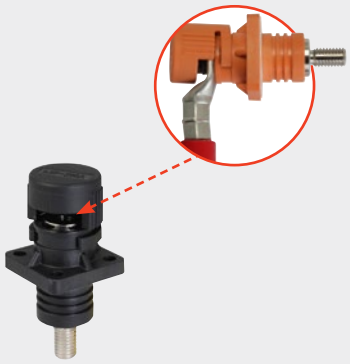
H: Crimp type

Above ZAR prices do not include VAT. E&OE

New



LSP120-02-M6



LSP200-02-LD8

LSP400-01-LM8

Battery terminals *(Bolt connector)*

LSP series energy storage connectors are through-wall high-voltage connectors which provide secure and reliable connection between energy storage systems and various electrical equipment and systems. Made of high-quality materials with excellent corrosion resistance, ensuring a long service life, essential for efficient energy transmission and distribution.

Convenient, easy to install and maintain, widely used in various industries such as renewable energy, electric vehicles and energy storage systems. An essential component for efficient energy transmission and distribution.

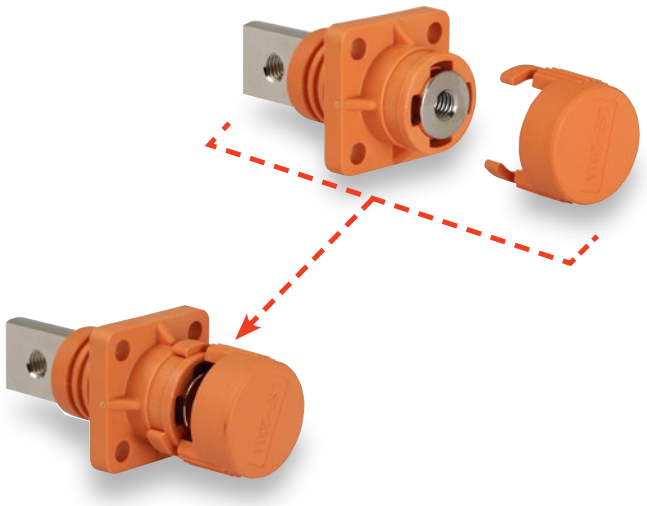
Termination is with a bolted cable lug and can be rotated 360°

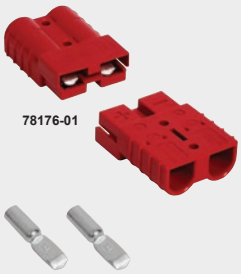
- Touch proof, safe and reliable connection
- Multi-directional *(360° rotation)* outlet
- Robust arc resistant design
- Polarity colour error-proof recognition

- Rated voltage: 1500 VDC
- Dielectric strength: 3000 VDC
- Material: PA66/T2Y silver plated copper
- Flammability: UL94 V-0
- Operating temperature: -40°C ~ +125°C
- Available colours: Orange *(+ positive)*, black *(- negative)*

type	rated current	cable size	rated voltage	colour	contact screw	termination type	description	price
100/120A bolt connector			**16/25 mm²**					
LSP120-01-M6	120A	25 mm²	1500V	orange	M6	threaded bar	bolt connector	**115.00**
LSP120-02-M6	120A	25 mm²	1500V	black	M6	threaded bar	bolt connector	**115.00**
LSP120-01-LD6	120A	25 mm²	1500V	orange	M6	outer thread	bolt connector	**115.00**
LSP120-02-LD6	120A	25 mm²	1500V	black	M6	outer thread	bolt connector	**115.00**
LSP120-01-LM6	120A	25 mm²	1500V	orange	M6	inner thread	bolt connector	**115.00**
LSP120-02-LM6	120A	25 mm²	1500V	black	M6	inner thread	bolt connector	**115.00**
150/200A bolt connector			**35/50 mm²**					
LSP200-01-M6	200A	50 mm²	1500V	orange	M6	threaded bar	bolt connector	**158.00**
LSP200-02-M6	200A	50 mm²	1500V	black	M6	threaded bar	bolt connector	**158.00**
LSP200-01-LD8	200A	50 mm²	1500V	orange	M8	outer thread	bolt connector	**158.00**
LSP200-02-LD8	200A	50 mm²	1500V	black	M8	outer thread	bolt connector	**158.00**
LSP200-01-LM6	200A	50 mm²	1500V	orange	M6	inner thread	bolt connector	**158.00**
LSP200-02-LM6	200A	50 mm²	1500V	black	M6	inner thread	bolt connector	**158.00**
300/400A bolt connector			**70/95/120 mm²**					
LSP400-01-M8	400A	120 mm²	1500V	orange	M8	threaded bar	bolt connector	**287.00**
LSP400-02-M8	400A	120 mm²	1500V	black	M8	threaded bar	bolt connector	**287.00**
LSP400-01-LD10	400A	120 mm²	1500V	orange	M10	outer thread	bolt connector	**287.00**
LSP400-02-LD10	400A	120 mm²	1500V	black	M10	outer thread	bolt connector	**287.00**
LSP400-01-LM8	400A	120 mm²	1500V	orange	M8	inner thread	bolt connector	**287.00**
LSP400-02-LM8	400A	120 mm²	1500V	black	M8	inner thread	bolt connector	**287.00**

Bolt connector (threaded bar)





Flat blade connectors *(two pole)*

REMA® flat blade contact connectors offer a cost effective, quick-disconnect DC power connector solution. Available in different colours used to differentiate the voltage types, ensuring compatibility of properly configured mating connectors according to their respective voltage.

General features:

- Housing constructed of glass fibre reinforced material for extreme durability and resistance to battery acid
- Genderless housing design *(same unit reversed plugs into opposite)*
- REMA® engineered contacts made of high grade electrolyte copper, silver plated for corrosion protection
- Different contacts with sizes epitomised for metric and AWG cable dimensions
- CE and UL 1977 certified component meets or exceeds EN 1175-1 industry standards
- In compliance with machinery directive 2006/42 EG an therefore with "CE" marking
- Accepts REMA® strain relief clamps and handles for easy intuitive assembly

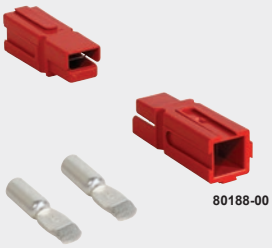
type	current (A)	colour	cable connection AWG	cable connection eq. mm²	description	price
SR 50	**50A connector**				(H) 48 x (W) 36.5 x (D) 15.9 mm	
78176-01	50A	red	AWG 8	10 mm²	heavy duty 2 pole connector	**133.00**
78184-00	50A	red	AWG 6	16 mm²	heavy duty 2 pole connector	**131.00**
78180-02	50A	grey	AWG 8	10 mm²	heavy duty 2 pole connector	**131.00**
78180-00	50A	grey	AWG 6	16 mm²	heavy duty 2 pole connector	**129.00**
78181-05	50A	black	AWG 8	10 mm²	heavy duty 2 pole connector	**131.00**
78181-00	50A	black	AWG 6	16 mm²	heavy duty 2 pole connector	**129.00**
SR 175	**175A connector**				(H) 79.4 x (W) 55.6 x (D) 25.4 mm	
78234-00	175A	red	AWG 4	25 mm²	heavy duty 2 pole connector	**305.00**
78235-00	175A	red	AWG 2	35 mm²	heavy duty 2 pole connector	**295.00**
78236-00	175A	red	AWG 0	50 mm²	heavy duty 2 pole connector	**289.00**
78220-01	175A	grey	AWG 4	25 mm²	heavy duty 2 pole connector	**259.00**
78220-02	175A	grey	AWG 2	35 mm²	heavy duty 2 pole connector	**249.00**
78220-00	175A	grey	AWG 0	50 mm²	heavy duty 2 pole connector	**245.00**
78224-01	175A	blue	AWG 4	25 mm²	heavy duty 2 pole connector	**259.00**
78224-02	175A	blue	AWG 2	35 mm²	heavy duty 2 pole connector	**249.00**
78224-00	175A	blue	AWG 0	50 mm²	heavy duty 2 pole connector	**246.00**
Acccessories for SR 175 *(above)*						
78290-00	–	grey	–	–	handle for SR 175 connectors	**191.00**
78291-00	–	red	–	–	handle for SR 175 connectors	**160.00**
78010-00	–	grey	–	–	cable clamp for SR 175	**166.00**
SR 350	**350A Connector**				(H) 108 x (W) 69.8 x (D) 33.3 mm	
78307-00	350A	red	AWG 0	50 mm²	heavy duty 2 pole connector	**403.00**
78308-00	350A	red	AWG 00	70 mm²	heavy duty 2 pole connector	**432.00**
78309-00	350A	red	AWG 000	95 mm²	heavy duty 2 pole connector	**841.00**
78299-00	350A	grey	AWG 0	50 mm²	heavy duty 2 pole connector	**439.00**
78300-00	350A	grey	AWG 00	70 mm²	heavy duty 2 pole connector	**468.00**
78301-00	350A	grey	AWG 000	95 mm²	heavy duty 2 pole connector	**879.00**
78303-00	350A	blue	AWG 0	50 mm²	heavy duty 2 pole connector	**395.00**
78304-00	350A	blue	AWG 00	70 mm²	heavy duty 2 pole connector	**424.00**
78304-01	350A	blue	AWG 000	95 mm²	heavy duty 2 pole connector	**836.00**
Acccessories for SR350 *(above)*						
78297-00	–	grey	–	–	handle for SR 350 connectors	**184.00**
78298-00	–	red	–	–	handle for SR 350 connectors	**184.00**
78011-00	–	grey	–	–	cable clamp for SR 350	**453.00**

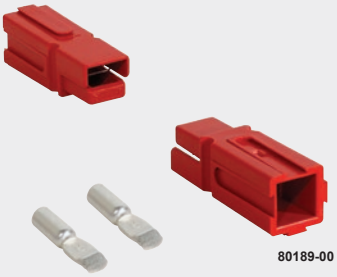
Reduction bushings		from	to		
79840-00	reduction bushing	AWG 6	6 mm²	cable reducing bushing	**20.50**
79844-00	reduction bushing	AWG 2	16 mm²	cable reducing bushing	**41.00**
79846-00	reduction bushing	AWG 0	25 mm²	cable reducing bushing	**35.40**
79847-00	reduction bushing	AWG 0	35 mm²	cable reducing bushing	**125.00**

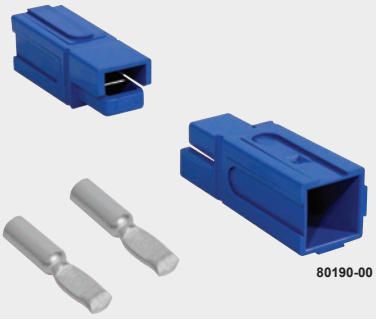
Recommended colour voltage coding:
Yellow: 12V - red: 24V - grey: 36V - blue: 48V

Above ZAR prices do not include VAT. E&OE

80100-00


80188-00


80189-00


80190-00

79840-00

Flat blade connectors *(single pole)*

REMA® flat blade contact connectors offer a cost effective, quick-disconnect power connector solution. Available in different colours used to differentiate the voltage types, ensuring compatibility of properly configured mating connectors according to their respective voltage.

General Features

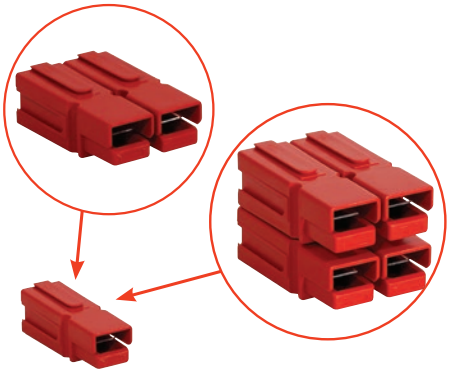
- Interlocking facility permitting multi-pole connections *(2P, 3P, 4P...)* in a flat horizontal or square format
- Constructed of glass fibre reinforced material for extreme durability and resistance to battery acid
- Genderless housing design *(same unit reversed plugs into opposite)*
- REMA® engineered contacts made of high grade electrolyte copper, silver plated for corrosion protection
- Different contacts with sizes optimised for metric and AWG cable dimensions
- CE and UL 1977 certified component meets or exceeds EN 1175-1 industry standards
- In compliance with machinery directive 2006/42 EG an therefore with “CE“ marking

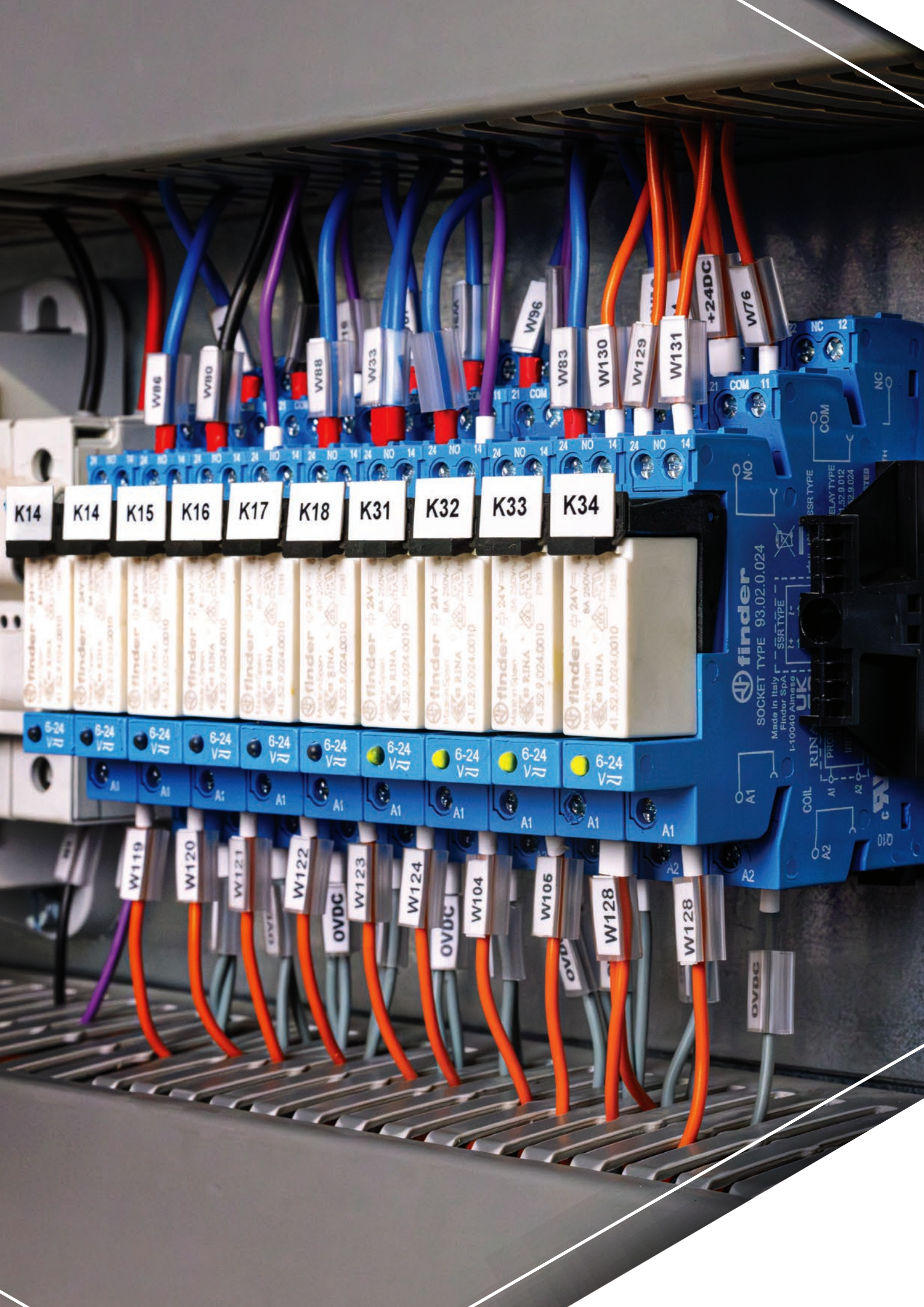
type	current (A)	colour	cable connection AWG	cable connection eq. mm²	description	pack qty	price (ea)
MC30		**30A connector**			(H) 41.3 x (W) 7.9 x (D) 7.9 mm		
80100-00	30A	red	AWG 12	2.5/4 mm²	single pole connector	100	**70.00**
80100-02	30A	black	AWG 12	2.5/4 mm²	single pole connector	100	**70.00**
80100-01	30A	white	AWG 12	2.5/4 mm²	single pole connector	100	**21.20**
80100-04	30A	blue	AWG 12	2.5/4 mm²	single pole connector	100	**21.20**
MC75		**75A connector**			(H) 81.4 x (W) 15.9 x (D) 15.9 mm		
80188-00	75A	red	AWG 6	16 mm²	single pole connector	50	**70.00**
80188-02	75A	black	AWG 6	16 mm²	single pole connector	50	**70.00**
80188-04	75A	white	AWG 6	16 mm²	single pole connector	50	**56.00**
80188-06	75A	green	AWG 6	16 mm²	single pole connector	50	**167.00**
80188-08	75A	blue	AWG 6	16 mm²	single pole connector	50	**65.00**
MC120		**120A connector**			(H) 117.5 x (W) 22.2 x (D) 22.2 mm		
80189-00	120A	red	AWG 2	35 mm²	single pole connector	25	**157.00**
80189-01	120A	black	AWG 2	35 mm²	single pole connector	25	**157.00**
80189-02	120A	white	AWG 2	35 mm²	single pole connector	25	**141.00**
80189-03	120A	green	AWG 2	35 mm²	single pole connector	25	**174.00**
80191-00	120A	blue	AWG 2	35 mm²	single pole connector	25	**157.00**
MC180		**180A connector**			(H) 139.7 x (W) 28.6 x (D) 28.6 mm		
80190-01	180A	red	AWG 0	50 mm²	single pole connector	25	**151.00**
80190-02	180A	black	AWG 0	50 mm²	single pole connector	25	**151.00**
80190-03	180A	white	AWG 0	50 mm²	single pole connector	25	**163.00**
80190-04	180A	green	AWG 0	50 mm²	single pole connector	25	**994.00**
80190-00	180A	blue	AWG 0	50 mm²	single pole connector	25	**151.00**

Reduction bushings		from	to			
79840-00	reduction bushing	AWG 6	6 mm²	cable reducing bushing	ea	**20.50**
79844-00	reduction bushing	AWG 2	16 mm²	cable reducing bushing	ea	**41.00**
79846-00	reduction bushing	AWG 0	25 mm²	cable reducing bushing	ea	**35.40**
79847-00	reduction bushing	AWG 0	35 mm²	cable reducing bushing	ea	**125.00**

Recommended colour voltage coding:
Red: 24V - blue: 48V - green: 72V

Interlocking facility permitting multi-pole connections




K14
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W96
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W130
W129
W131
+24DC
W76
finder
SOCKET TYPE 93.02.0.024
Made in Italy
Finder SpA
I-10040 Almese
SSR TYPE
RELAY TYPE
NC
COM
NO
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A1
A2
6-24 V
W119
W120
W121
W122
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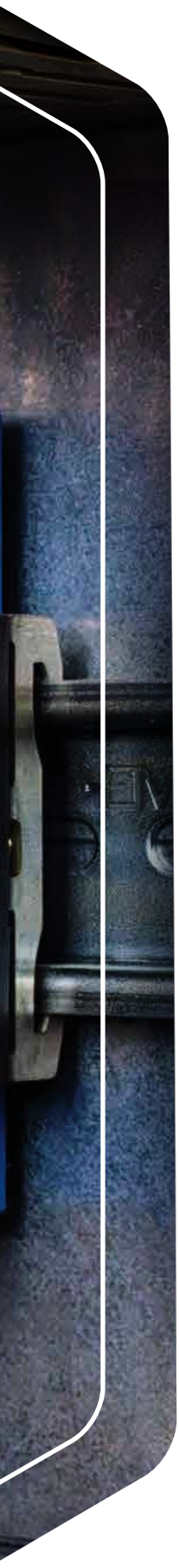
W123
W124
W104
W106
W128
W128
0VDC

J

Timers & Control Relays

Interactive Catalogue



Timers & Control Relays

J

PCB mount relays

J-1...2

Miniature relays

J-3...8

Relay interface modules

J-9...10

Modular contactors & Relays

J-11...12

Solid-state relays

J-13...16

Modular timing devices

J-17/23/27/30

Protection relays & Monitoring devices

J-18/25/31...32

Level control relays

J-19/26

Float switches

J-20

Daylight & Time switches

J-21/24

Analogue signal converters

J-28

Plug-in timing & Monitoring devices

J-33...36

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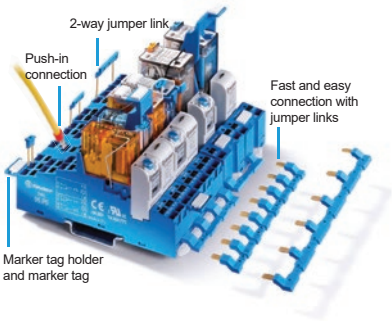
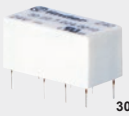
11-25_I2E



PCB mount relays

type	switch current	description	contact	pin pitch (mm)	coil voltage	price
30 series	Subminiature DIL relay		*(11.4 x 20.3 x 10 mm)*			
• 2-pole changeover contacts low level switching capability - **2A**						
• Sensitive DC coil - 200mW						
• Wash tight: RT III						
302270120010	2A	sealed DIL PCB relay	2 ch/over	5.08	12 VDC	**90.00**
302270240010	2A	sealed DIL PCB relay	2 ch/over	5.08	24 VDC	**90.00**
302270480010	2A	sealed DIL PCB relay	2 ch/over	5.08	48 VDC	**110.00**
32 series	Subminiature low profile relay		*(10.7 x 20 x 10 mm)*			
• 1-pole changeover contacts - **6A**						
• Sensitive DC coil - 200mW						
• Wash tight: RT III						
322170124000	6A	low profile PCB relay	1 ch/over	7.62	12 VDC	**77.00**
322170244000	6A	low profile PCB relay	1 ch/over	7.62	24 VDC	**77.00**
322170484000	6A	low profile PCB relay	1 ch/over	7.62	48 VDC	**83.00**
34 series	Ultra-slim relay *(5 mm)*		*(15 x 28 x 5 mm)*			
EMR - Electromechanical relays						
• 1-pole changeover contact - **6A**						
• Ultra-slim *(5 mm)* package						
• Sensitive DC coil - 170mW						
• 8 mm clearance/creepage distance						
• 6kV (1.2/50 µs) insulation, coil-contacts						
345170050010	6A	ultra-slim PCB relay	1 ch/over	5	5 VDC	**117.00**
345170120010	6A	ultra-slim PCB relay	1 ch/over	5	12 VDC	**83.00**
345170240010	6A	ultra-slim PCB relay	1 ch/over	5	24 VDC	**83.00**
345170480010	6A	ultra-slim PCB relay	1 ch/over	5	48 VDC	**117.00**
345170600010	6A	ultra-slim PCB relay	1 ch/over	5	60 VDC	**137.00**
SSR - Solid State relays	*silent, high speed switching with long electrical life*					
• 1-NO single circuit switching - 6A, 24 VDC / 2A, 240 VAC						
• Sensitive DC input circuit						
• 3.000V insulation, input-output				operating	switching	
348170129024	6A	slim solid state relay	1 NO	8 - 17 VDC	1.5 - 33 VDC	**359.00**
348170249024	6A	slim solid state relay	1 NO	16 - 30 VDC	1.5 - 33 VDC	**359.00**
348170609024	6A	slim solid state relay	1 NO	35 - 72 VDC	1.5 - 33 VDC	**383.00**
348170248240	2A	slim solid state relay	1 NO	16 - 30 VDC	12 - 275 VAC	**406.00**
348170608240	2A	slim solid state relay	1 NO	35 - 72 VDC	12 - 275 VAC	**406.00**
9311	PCB-mount socket with hinged retain/release clip for 34 series relays					**38.80**
36 series	Miniature "sugar cube" relay		*(15.5 x 19 x 15.2 mm)*			
• 1-pole changeover contact 10A *(10A N/O and 5A N/C)*						
• *DC coil - 360mW*						
• Wash tight: RTIII						
361190124011	10A	"sugar cube" PCB relay	1 ch/over	–	12 VDC	**42.00**
361190244011	10A	"sugar cube" PCB relay	1 ch/over	–	24 VDC	**42.00**
41 series	Low-profile PCB relay		*(15.7 x 29 x 12.6 mm)*			
• 1 and 2-pole changeover contact 8/12/16A						
• DC coil - 400mW						
• 8 mm 6kV (1.2/50 µs) insulation, *coil-contacts*						
• Flux proof: RT II *(standard)*						
Electromechanical relays						
413190120010	12A	low-profile PCB relay	1 ch/over	3.5	12 VDC	**73.00**
413190240010	12A	low-profile PCB relay	1 ch/over	3.5	24 VDC	**73.00**
416190120010	16A	low-profile PCB relay	1 ch/over	5	12 VDC	**76.00**
416190240010	16A	low-profile PCB relay	1 ch/over	5	24 VDC	**76.00**
415290120010	8A	low-profile PCB relay	2 ch/over	5	12 VDC	**85.00**
415290240010	8A	low-profile PCB relay	2 ch/over	5	24 VDC	**85.00**
Solid state relays						
• 1-NO single circuit switching						
• Silent, high speed switching with long electrical life						
• 2500 VAC insulation, input-output				operating	switching	
418170249024	5A	solid state PCB relay	1 NO	14 - 32 VDC	1.5 - 24 VDC	**412.00**
418170248240	3A	solid state PCB relay	1 NO	14 - 32 VDC	12 - 275 VAC	**393.00**
Other voltages available on request						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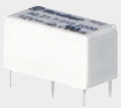
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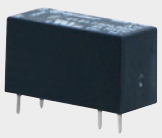

4181...

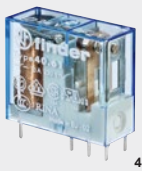
Above ZAR prices do not include VAT. E&OE

Control panels | Electronic circuit boards | Automation for blinds & shutters

Multi-function, suitable for a wide range of applications. Due to their versatility they are widely used in electronic circuit boards for household appliances *(refrigerators, washing machines)*, electric gates, boiler control boards and similar

For applications where the size/ratio is an issue, examples include household appliances, food industry and drying kilns

40519...



40618...

40516...

9505SPA

95152SMA

ER902220

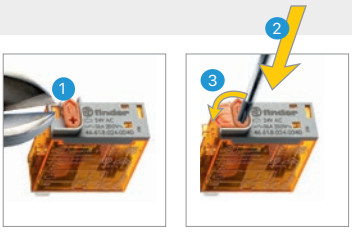
ES50CNER

4341...

9523SNA

type	current	description	contact	pin pitch	coil voltage	price
40 series		Miniature PCB relays *(25 x 29 x 12.4 mm)*				
• 8 mm, 6kV (1.2/50µs) isolation, coil-contacts • Flux proof: RT II *(standard)*						
405180120000	10A	miniature PCB relay	1 ch/over	5 mm	12 VAC	**83.00**
405180240000	10A	miniature PCB relay	1 ch/over	5 mm	24 VAC	**83.00**
405180480000	10A	miniature PCB relay	1 ch/over	5 mm	48 VAC	**94.00**
405181100000	10A	miniature PCB relay	1 ch/over	5 mm	110 VAC	**108.00**
405182400000	10A	miniature PCB relay	1 ch/over	5 mm	240 VAC	**136.00**
405190120000	10A	miniature PCB relay	1 ch/over	5 mm	12 VDC	**60.00**
405190240000	10A	miniature PCB relay	1 ch/over	5 mm	24 VDC	**60.00**
405190360000	10A	miniature PCB relay	1 ch/over	5 mm	36 VDC	**80.00**
405190480000	10A	miniature PCB relay	1 ch/over	5 mm	48 VDC	**80.00**
405191100000	10A	miniature PCB relay	1 ch/over	5 mm	110 VDC	**92.00**
406180120000	16A	miniature PCB relay	1 ch/over	5 mm	12 VAC	**87.00**
406180240000	16A	miniature PCB relay	1 ch/over	5 mm	24 VAC	**87.00**
406180480000	16A	miniature PCB relay	1 ch/over	5 mm	48 VAC	**98.00**
406181100000	16A	miniature PCB relay	1 ch/over	5 mm	110 VAC	**111.00**
406182400000	16A	miniature PCB relay	1 ch/over	5 mm	240 VAC	**139.00**
406190120000	16A	miniature PCB relay	1 ch/over	5 mm	12 VDC	**63.00**
406190240000	16A	miniature PCB relay	1 ch/over	5 mm	24 VDC	**63.00**
406190360000	16A	miniature PCB relay	1 ch/over	5 mm	36 VDC	**82.00**
406190480000	16A	miniature PCB relay	1 ch/over	5 mm	48 VDC	**82.00**
406191100000	16A	miniature PCB relay	1 ch/over	5 mm	110 VDC	**94.00**
405280120000	8A	miniature PCB relay	2 ch/over	5 mm	12 VAC	**99.00**
405280240000	8A	miniature PCB relay	2 ch/over	5 mm	24 VAC	**99.00**
405280480000	8A	miniature PCB relay	2 ch/over	5 mm	48 VAC	**110.00**
405281100000	8A	miniature PCB relay	2 ch/over	5mm	110 VAC	**123.00**
405282400000	8A	miniature PCB relay	2 ch/over	5 mm	240 VAC	**146.00**
405290120000	8A	miniature PCB relay	2 ch/over	5 mm	12 VDC	**73.00**
406290120000	10A	miniature PCB relay	2 ch/over	5 mm	12 VDC	**88.00**
405290240000	8A	miniature PCB relay	2 ch/over	5 mm	24 VDC	**73.00**
406290240000	10A	miniature PCB relay	2 ch/over	5 mm	24 VDC	**88.00**
405290360000	8A	miniature PCB relay	2 ch/over	5 mm	36 VDC	**94.00**
405290480000	8A	miniature PCB relay	2 ch/over	5 mm	48 VDC	**94.00**
405291100000	8A	miniature PCB relay	2 ch/over	5 mm	110 VDC	**105.00**
Other voltages available on request						
Other configurations:		*(replace **5th digit** with following): (e.g.405160120000)*				
6		Bistable *(single coil)* version				**85.10**
7		DC sensitive coil version 0.5 W				**8.05**
Sockets and accessories for 40 series relays					for relay	
95152SMA		PCB mount socket + retaining clip	*(solder)*		40 series	**26.70**
9505SPA*		surface/DIN mount socket + retaining clip	*(screw term)*		40 series	**99.00**
95P5SPA*		surface/DIN mount socket + retaining clip	*(push-in term)*		40 series	**143.00**
* *Accepts plug-in LED, diode, timing modules (plugs directly into socket)* *see page **J-8***						
09518		jumper link/bridge bar for sockets	*(8 way)*		9505	**60.00**
09758		jumper link/bridge bar for sockets	*(8 way)*		95P5	**116.00**
46392/PS		sheet marking tags *(mounts onto retain clip/holder)*	*(48 pcs)*		9505/P5	**91.00**
09700		tag holder for **46392/PS** *(mounts onto socket)*	*(10 pcs)*		9505/P5	**36.40**
ES50CNER		Ersce black surface/DIN mount socket	*(screw terminal)*		40 series	**103.00**
ER902220		spring securing/release clip for socket	*(10 pcs)*		ES50	**112.00**
ER902230		clip-on marking plate *(top or bottom)* for socket	*(10 pcs)*		ES50	**73.00**
43 series		Low-profile slimline PCB relays *(15.4 x 28.6 x 10.2 mm)*				
• 1-pole changeover contact 10A • Very high coil-contact isolation 10 mm, 6kV (1.2/50µs) • Flux proof: RT II *(standard)*						
434170122000	10A	low profile slim PCB relay	1 ch/over	3.2 mm	12 VDC	**60.00**
434170242000	10A	low profile slim PCB relay	1 ch/over	3.2 mm	24 VDC	**60.00**
9523SNA		PCB-mount socket 43 series relay *(with retaining clip)*			4341	**26.10**

Shipyards | Hoists & cranes | Elevators & lifts



Manual override option

46618...

46619...

46528...

9711

9702SPA

5514...

type	current	description	contact	coil voltage	price
46 series	Miniature industrial plug-in relays	*(32.8 x 29 x 12.4 mm)*			
• AC and DC coil voltages • Lockable test/override button • 8 mm, 6kV (1.2/50µs) isolation, coil-contacts • Manual override facility and mechanical flag indication of relay status • Plug-in or direct connection via robust Faston terminals *(1 pole 4.75 / 2-pole 2.5 mm)*					
466180120040	16A	miniature plug-in relay	1 ch/over	12 VAC	**135.00**
466180240040	16A	miniature plug-in relay	1 ch/over	24 VAC	**135.00**
466180480040	16A	miniature plug-in relay	1 ch/over	48 VAC	**146.00**
466181100040	16A	miniature plug-in relay	1 ch/over	110 VAC	**156.00**
466182300040	16A	miniature plug-in relay	1 ch/over	230 VAC	**189.00**
466190120040	16A	miniature plug-in relay	1 ch/over	12 VDC	**108.00**
466190240040	16A	miniature plug-in relay	1 ch/over	24 VDC	**108.00**
466190480040	16A	miniature plug-in relay	1 ch/over	48 VDC	**131.00**
466191100040	16A	miniature plug-in relay	1 ch/over	110 VDC	**145.00**
465280120040	8A	miniature plug-in relay	2 ch/over	12 VAC	**154.00**
465280240040	8A	miniature plug-in relay	2 ch/over	24 VAC	**154.00**
465280480040	8A	miniature plug-in relay	2 ch/over	48 VAC	**165.00**
465281100040	8A	miniature plug-in relay	2 ch/over	110 VAC	**176.00**
465282300040	8A	miniature plug-in relay	2 ch/over	230 VAC	**212.00**
465290120040	8A	miniature plug-in relay	2 ch/over	12 VDC	**126.00**
465290240040	8A	miniature plug-in relay	2 ch/over	24 VDC	**126.00**
465290480040	8A	miniature plug-in relay	2 ch/over	48 VDC	**150.00**
465291100040	8A	miniature plug-in relay	2 ch/over	110 VDC	**165.00**
Other configurations		*replace **last two digits** with following: (e.g.466180120054)*			
54	LED	internal LED indicator for		AC relays	**26.45**
74	LED	internal LED indicator for		DC relays	**26.45**
Sockets and accessories for 46 series relays				for relay	
9711	PCB mount relay socket (12A)		for relay	4661	**56.00**
9712	PCB mount relay socket		for relay	4652	**70.00**
9701SPA*	surface/DIN mount socket + retaining clip		*(screw term)*	4661	**98.00**
9702SPA*	surface/DIN mount socket + retaining clip		*(screw term)*	4652	**107.00**
97P1SPA*	surface/DIN mount socket + retaining clip		*(push-in term)*	4661	**134.00**
97P2SPA*	surface/DIN mount socket + retaining clip		*(push-in term)*	4652	**146.00**
* *Accepts plug-in LED, diode, timing modules (plugs directly into socket) see page **J-8***					
04607	DIN rail mountable support bracket for relays			4661/52	**44.00**
09518	jumper link/bridge bar for sockets		*(8 way)*	9701/02	**60.00**
09758	jumper link/bridge bar for sockets		*(8 way)*	97P1/2	**116.00**
46392/PS	marking tags *(mounts onto retain clip/holder)*		*(48 pcs)*	970/P1/2	**91.00**
09700	tag holder for **46392/PS** *(mounts onto socket)*		*(10pcs)*	970/P1/2	**36.40**
55 series	Miniature industrial PCB mount relays	*(35.8 x 20.7 x 27.7 mm)*			
PCB mount termination *(55 series)*					
• AC and DC coil voltages • Mounting and dedicated sockets, see **J-4**					
551280120000	10A	miniature PCB mount relay	2 ch/over	12 VAC	**162.00**
551280240000	10A	miniature PCB mount relay	2 ch/over	24 VAC	**162.00**
551281100000	10A	miniature PCB mount relay	2 ch/over	110 VAC	**191.00**
551282400000	10A	miniature PCB mount relay	2 ch/over	230 VAC	**179.00**
551290120000	10A	miniature PCB mount relay	2 ch/over	12 VDC	**162.00**
551290240000	10A	miniature PCB mount relay	2 ch/over	24 VDC	**162.00**
551290480000	10A	miniature PCB mount relay	2 ch/over	48 VDC	**191.00**
551291100000	10A	miniature PCB mount relay	2 ch/over	110 VDC	**179.00**
551292200000	10A	miniature PCB mount relay	2 ch/over	220 VDC	**327.00**
551480120000	7A	miniature PCB mount relay	4 ch/over	12 VAC	**173.00**
551480240000	7A	miniature PCB mount relay	4 ch/over	24 VAC	**173.00**
551481100000	7A	miniature PCB mount relay	4 ch/over	110 VAC	**202.00**
551482400000	7A	miniature PCB mount relay	4 ch/over	230 VAC	**191.00**
551490120000	7A	miniature PCB mount relay	4 ch/over	12 VDC	**173.00**
551490240000	7A	miniature PCB mount relay	4 ch/over	24 VDC	**173.00**
551490480000	7A	miniature PCB mount relay	4 ch/over	48 VDC	**202.00**
551491100000	7A	miniature PCB mount relay	4 ch/over	110 VDC	**191.00**
551492200000	7A	miniature PCB mount relay	4 ch/over	220 VDC	**338.00**

Above ZAR prices do not include VAT. E&OE

Control & management of electric power

Panels for electrical distribution

Road / tunnel lighting

55328...

55329...

9414SMA

9434SMA

9402SPA

type	current	description	contact	coil voltage	price
55 series	Miniature industrial plug-in relays	*(37.2 x 20.7 x 27.7 mm)*			
Plug-in relays *(55 series)*					

- 2 and 4-pole versions
- AC and DC coil voltages
- Plug-in or direct PCB mounting
- Lockable test/override button *(plug-in version only)*
- Mechanical flag indication of relay status *(plug-in version only)*

General application:

- Switchboard installations, industrial automation panels, auxiliary relays, interfacing relays

2 Changeover	*plug-in relays*				
553280120040	10A	miniature plug-in relay	2 changeover	12 VAC	**155.00**
553280240040	10A	miniature plug-in relay	2 changeover	24 VAC	**155.00**
553280360040	10A	miniature plug-in relay	2 changeover	36 VAC	**182.00**
553280480040	10A	miniature plug-in relay	2 changeover	48 VAC	**182.00**
553280600040	10A	miniature plug-in relay	2 changeover	60 VAC	**182.00**
553281100040	10A	miniature plug-in relay	2 changeover	110 VAC	**182.00**
553282300040	10A	miniature plug-in relay	2 changeover	240 VAC	**172.00**
553290120040	10A	miniature plug-in relay	2 changeover	12 VDC	**155.00**
553290240040	10A	miniature plug-in relay	2 changeover	24 VDC	**155.00**
553290360040	10A	miniature plug-in relay	2 changeover	36 VDC	**182.00**
553290480040	10A	miniature plug-in relay	2 changeover	48 VDC	**182.00**
553290600040	10A	miniature plug-in relay	2 changeover	60 VDC	**182.00**
553291100040	10A	miniature plug-in relay	2 changeover	110 VDC	**172.00**
553292200040	10A	miniature plug-in relay	2 changeover	220 VDC	**320.00**
4 Changeover	*plug-in relays*				
553480120040	7A	miniature plug-in relay	4 changeover	12 VAC	**165.00**
553480240040	7A	miniature plug-in relay	4 changeover	24 VAC	**165.00**
553480360040	7A	miniature plug-in relay	4 changeover	36 VAC	**194.00**
553480480040	7A	miniature plug-in relay	4 changeover	48 VAC	**194.00**
553480600040	7A	miniature plug-in relay	4 changeover	60 VAC	**194.00**
553481100040	7A	miniature plug-in relay	4 changeover	110 VAC	**194.00**
553482400040	7A	miniature plug-in relay	4 changeover	240 VAC	**175.00**
553490120040	7A	miniature plug-in relay	4 changeover	12 VDC	**159.00**
553490240040	7A	miniature plug-in relay	4 changeover	24 VDC	**159.00**
553490360040	7A	miniature plug-in relay	4 changeover	36 VDC	**194.00**
553490480040	7A	miniature plug-in relay	4 changeover	48 VDC	**194.00**
553490600040	7A	miniature plug-in relay	4 changeover	60 VDC	**194.00**
553491100040	7A	miniature plug-in relay	4 changeover	110 VDC	**182.00**
553492200040	7A	miniature plug-in relay	4 changeover	220 VDC	**331.00**

Other configurations: *replace **last two digits** with following: (e.g.553280120074)*

54	LED	internal LED indicator for	AC relays	**28.75**
74	LED	internal LED indicator for	DC relays	**28.75**

Sockets and accessories for 55 series relays

type	description		for relay	price
PCB mount				
9412SMA	2-pole PCB mount socket	*(solder terminal)*	5532	**46.00**
9414SMA	4-pole PCB mount socket	*(solder terminal)*	5534/32	**48.00**
Flange mount				
9432SMA	2-pole flange mount socket	*(solder terminal)*	5532	**45.00**
9434SMA	4-pole flange mount socket	*(solder terminal)*	5534	**47.00**
Surface/DIN mount				
9402SPA*	surface/DIN mount socket + retaining clip	*(screw terminal)*	5532	**106.00**
9404SPA*	surface/DIN mount socket + retaining clip	*(screw terminal)*	5534/32	**119.00**
94P4SPA*	surface/DIN mount socket + retaining clip	*(push-in term)*	5532/34	**154.00**
05627	DIN rail mountable support bracket for		5532/34	**32.80**

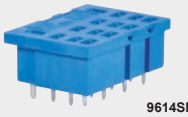
* *Accepts plug-in LED, diode, timing modules (plugs directly into socket) see page **J-8***

09406	jumper link/bridge bar for sockets	*(8 way)*	9402/04	**57.00**
09456	jumper link/bridge bar for sockets	*(8 way)*	94P4	**82.00**
09471	retaining clip for relays	*(10 pcs)*	94 series	**43.00**
46392/PS	sheet marking tags *(mounts onto retain clip/holder)*	*(48 pcs)*	940/P2/4	**91.00**
09700	tag holder for **46392/PS** *(mounts onto socket)*	*(10 pcs)*	940/P2/4	**36.40**

Industrial furnaces & ovens | Industrial motors | Control panels

5632...

5634...


9614SMA

9604SMA

6233...

9213SMA

9203SMA

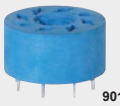
type	current	description	contact configuration	coil voltage	price
56 series	Miniature power relays	*(37.2 x 20.7(2-pole) 40.8(4-pole) x 27.7 mm)*			
• Faston 187, 4.8 x 0.5 mm termination • Mechanical flag indication of relay status • Lockable test/override button					
563280120040	12A	miniature power relay	2 changeover	12 VAC	**195.00**
563280240040	12A	miniature power relay	2 changeover	24 VAC	**195.00**
563280480040	12A	miniature power relay	2 changeover	48 VAC	**223.00**
563281100040	12A	miniature power relay	2 changeover	110 VAC	**223.00**
563282400040	12A	miniature power relay	2 changeover	240 VAC	**223.00**
563290120040	12A	miniature power relay	2 changeover	12 VDC	**195.00**
563290240040	12A	miniature power relay	2 changeover	24 VDC	**195.00**
563290480040	12A	miniature power relay	2 changeover	48 VDC	**223.00**
563290600040	12A	miniature power relay	2 changeover	60 VDC	**223.00**
563291100040	12A	miniature power relay	2 changeover	110 VDC	**223.00**
563292200040	12A	miniature power relay	2 changeover	220 VDC	**360.00**
563480120040	12A	miniature power relay	4 changeover	12 VAC	**358.00**
563480240040	12A	miniature power relay	4 changeover	24 VAC	**358.00**
563480480040	12A	miniature power relay	4 changeover	48 VAC	**381.00**
563481100040	12A	miniature power relay	4 changeover	110 VAC	**381.00**
563482400040	12A	miniature power relay	4 changeover	240 VAC	**381.00**
563490120040	12A	miniature power relay	4 changeover	12 VDC	**358.00**
563490240040	12A	miniature power relay	4 changeover	24 VDC	**358.00**
563490480040	12A	miniature power relay	4 changeover	48 VDC	**381.00**
563490600040	12A	miniature power relay	4 changeover	60 VDC	**381.00**
563491100040	12A	miniature power relay	4 changeover	110 VDC	**381.00**
563492200040	12A	miniature power relay	4 changeover	220 VDC	**523.00**
Other configurations:	*replace **last two digits** with following: (e.g 563280120040**74**)*				
54	LED	internal LED indicator for		AC relays	**60.95**
74	LED	internal LED indicator for		DC relays	**60.95**
PCB terminals:	replace **3rd digit (3)** with a **(4)** *(e.g.564280120040)*				
Sockets and accessories for 56 series relays				for relay	
9612SMA	2-pole PCB mount socket		*(solder terminal)*	5632	**50.00**
9614SMA	4-pole PCB mount socket		*(solder terminal)*	5634	**59.00**
9602SPA*	DIN mount socket + retaining clip		*(screw terminal)*	5632	**128.00**
9604SMA*	DIN mount socket + metal retaining clip		*(screw terminal)*	5634	**152.00**
05627	DIN rail mountable support bracket			5632	**32.80**
05647	DIN rail mountable support bracket			5634	**35.20**
* *Accepts plug-in LED, diode, timing modules (plugs directly into socket) see page **J-8***					*(per pack)*
095004	spare marking tags for sockets		*(10pcs)*	5632	**24.30**
090002	spare marking tags for sockets		*(10pcs)*	5634	**24.30**
62 series	Plug-in power relays	*(49.1 x 38.2 x 35.8 mm)*			
• Lockable test/override button • Mechanical flag indication of relay status • Plug-in or faston 187 *(4.8 x 0.5 mm)* termination • Reinforced insulation between coil and contacts to EN60335-1					
623380120040	16A	plug-in industrial power relay	3 changeover	12 VAC	**239.00**
623380240040	16A	plug-in industrial power relay	3 changeover	24 VAC	**239.00**
623380480040	16A	plug-in industrial power relay	3 changeover	48 VAC	**261.00**
623381100040	16A	plug-in industrial power relay	3 changeover	110 VAC	**261.00**
623382400040	16A	plug-in industrial power relay	3 changeover	240 VAC	**255.00**
623384000040	16A	plug-in industrial power relay	3 changeover	400 VAC	**314.00**
623390120040	16A	plug-in industrial power relay	3 changeover	12 VDC	**239.00**
623390240040	16A	plug-in industrial power relay	3 changeover	24 VDC	**239.00**
623390480040	16A	plug-in industrial power relay	3 changeover	48 VDC	**261.00**
623391100040	16A	plug-in industrial power relay	3 changeover	110 VDC	**255.00**
623392200040	16A	plug-in industrial power relay	3 changeover	220 VDC	**369.00**
Other configurations:	*replace **last two digits** with following: (e.g 623380120074) except 220VDC/400AC*				
54	LED	internal LED indicator for AC relays			**53.00**
74	LED	internal LED indicator for DC relays			**53.00**
Sockets and accessories for 62 series relays				for relay	
9213SMA	3-pole PCB mount socket		*(solder terminal)*	6233	**50.00**
9233SMA	3-pole flange mount socket		*(solder terminal)*	6233	**50.00**
9203SMA	3-pole surface/DIN mount socket		*(screw terminal)*	6233	**169.00**
06207	DIN rail mountable support bracket		*(top mount)*	6233	**32.80**
06208	DIN rail mountable support bracket		*(rear mount)*	6233	**32.80**

Above ZAR prices do not include VAT. E&OE

Wood-processing machines | Industrial furnaces & ovens | Shipyards

6012...

6013...

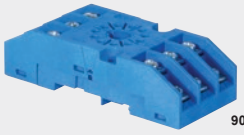

9015

9013

9020SMA

9026SMA

9027SMA


9048SMA

9003SMA

type	current	pins	description	contact configuration	coil voltage	price
60 series	General purpose plug-in relays		*(54.2 x 32.5 x 36.4 mm)*			

- AC and DC coil voltages
- Lockable test/override button
- 8 pin *(2-pole) 11pin (3-pole)* round pin plug-in termination
- Current sensing coil available: AC: 0.1 - 2.5A / DC: 0.1 - 2.0A
- Mechanical flag indication of relay status and manual override facility

601280120040	10A	8 pin	plug-in industrial relay	2 ch/over	12 VAC	**216.00**
601280240040	10A	8 pin	plug-in industrial relay	2 ch/over	24 VAC	**216.00**
601280360040	10A	8 pin	plug-in industrial relay	2 ch/over	36 VAC	**238.00**
601280480040	10A	8 pin	plug-in industrial relay	2 ch/over	48 VAC	**238.00**
601280600040	10A	8 pin	plug-in industrial relay	2 ch/over	60 VAC	**238.00**
601281100040	10A	8 pin	plug-in industrial relay	2 ch/over	110 VAC	**238.00**
601282400040	10A	8 pin	plug-in industrial relay	2 ch/over	240 VAC	**231.00**
601284000040	10A	8 pin	plug-in industrial relay	2 ch/over	400 VAC	**292.00**
601290120040	10A	8 pin	plug-in industrial relay	2 ch/over	12 VDC	**216.00**
601290240040	10A	8 pin	plug-in industrial relay	2 ch/over	24 VDC	**216.00**
601290360040	10A	8 pin	plug-in industrial relay	2 ch/over	36 VDC	**238.00**
601290480040	10A	8 pin	plug-in industrial relay	2 ch/over	48 VDC	**215.00**
601290600040	10A	8 pin	plug-in industrial relay	2 ch/over	60 VDC	**238.00**
601291100040	10A	8 pin	plug-in industrial relay	2 ch/over	110 VDC	**231.00**
601292200040	10A	8 pin	plug-in industrial relay	2 ch/over	220 VDC	**348.00**
601380120040	10A	11 pin	plug-in industrial relay	3 ch/over	12 VAC	**223.00**
601380240040	10A	11 pin	plug-in industrial relay	3 ch/over	24 VAC	**223.00**
601380360040	10A	11 pin	plug-in industrial relay	3 ch/over	36 VAC	**244.00**
601380480040	10A	11 pin	plug-in industrial relay	3 ch/over	48 VAC	**244.00**
601380600040	10A	11 pin	plug-in industrial relay	3 ch/over	60 VAC	**244.00**
601381100040	10A	11 pin	plug-in industrial relay	3 ch/over	110 VAC	**244.00**
601382400040	10A	11 pin	plug-in industrial relay	3 ch/over	240 VAC	**238.00**
601384000040	10A	11 pin	plug-in industrial relay	3 ch/over	400 VAC	**299.00**
601390120040	10A	11 pin	plug-in industrial relay	3 ch/over	12 VDC	**223.00**
601390240040	10A	11 pin	plug-in industrial relay	3 ch/over	24 VDC	**223.00**
601390360040	10A	11 pin	plug-in industrial relay	3 ch/over	36 VDC	**244.00**
601390480040	10A	11 pin	plug-in industrial relay	3 ch/over	48 VDC	**244.00**
601390600040	10A	11 pin	plug-in industrial relay	3 ch/over	60 VDC	**244.00**
601391100040	10A	11 pin	plug-in industrial relay	3 ch/over	110 VDC	**238.00**
601392200040	10A	11 pin	plug-in industrial relay	3 ch/over	220 VDC	**354.00**

Other configurations: *replace **last two digits** with following: (e.g. 60128012054) except 220VDC/400AC*

54	LED	internal LED indicator for		AC relays	**58.65**
74	LED	internal LED indicator for		DC relays	**58.65**
46392/PS	sheet marking tags	*(mounts onto retain clip/holder)*	*(48 pcs)*	6012/3	**91.00**

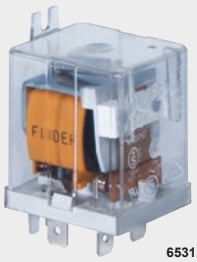
Sockets and accessories for 60 series relays

			for relay	
Flange mount				
9012	2-pole flange mount socket	*(solder terminal)*	6012	**39.40**
PCB mount				
9014	2-pole PCB mount socket	*(diameter 20.5 mm)*	6012	**39.40**
90141	3-pole PCB mount socket	*(diameter 17.5 mm)*	6013	**39.40**
9015	2-pole PCB mount socket	*(diameter 22.0 mm)*	6012	**41.00**
90151	3-pole PCB mount socket	*(diameter 19.0 mm)*	6013	**41.00**
Surface/DIN mount				
9020SMA	surface/DIN mount socket *(standard)*	*(screw terminal)*	6012	**100.00**
9021SMA	surface/DIN mount socket *(standard)*	*(screw terminal)*	6013	**111.00**
9022SMA	surface/DIN mount socket *(oval)*	*(screw terminal)*	6012	**65.00**
9023SMA	surface/DIN mount socket *(oval)*	*(screw terminal)*	6013	**76.00**
9026SMA	surface/DIN mount socket *(square)*	*(screw terminal)*	6012	**103.00**
9027SMA	surface/DIN mount socket *(square)*	*(screw terminal)*	6013	**115.00**
9048SMA	surface/DIN mount socket *(rectangular)*	*(screw terminal)*	6012	**146.00**
9049SMA	surface/DIN mount socket *(rectangular)*	*(screw terminal)*	6013	**165.00**
9002SMA*	surface/DIN mount socket *(for modules)*	*(screw terminal)*	6012	**109.00**
9003SMA*	surface/DIN mount socket *(for modules)*	*(screw terminal)*	6013	**121.00**
09006	jumper link/bridge bar for sockets	*(6 way)*	9002/3	**75.00**
090002	spare marking tag for sockets	*(10 pcs)*	9002/3	**24.30**

* *Accepts plug-in LED, diode, timing modules (plugs directly into socket) see page **J-8***

Industrial washing machines | Air conditioners | Power generators

6531...


6531...

6682... + 06607

6682...

PV

6822...

type	current	description	contact configuration	coil voltage	price
65 series	Power relays		*(42.2 x 32.2 x 36.6 mm)*		
• Flange mount with Faston 250 *(6.3 x 0.5 mm)* termination • Reinforced insulation between coil and contacts to EN60335-1					
20A - 1 NO + 1 NC relay					
653180120000	20A	plug-in industrial power relay	1 NO + 1 NC	12 VAC	**204.00**
653180240000	20A	plug-in industrial power relay	1 NO + 1 NC	24 VAC	**204.00**
653180480000	20A	plug-in industrial power relay	1 NO + 1 NC	48 VAC	**226.00**
653181100000	20A	plug-in industrial power relay	1 NO + 1 NC	110 VAC	**226.00**
653182400000	20A	plug-in industrial power relay	1 NO + 1 NC	240 VAC	**219.00**
653184000000	20A	plug-in industrial power relay	1 NO + 1 NC	400 VAC	**276.00**
653190120000	20A	plug-in industrial power relay	1 NO + 1 NC	12 VDC	**204.00**
653190240000	20A	plug-in industrial power relay	1 NO + 1 NC	24 VDC	**204.00**
653190480000	20A	plug-in industrial power relay	1 NO + 1 NC	48 VDC	**226.00**
653191100000	20A	plug-in industrial power relay	1 NO + 1 NC	110 VDC	**219.00**
653192200000	20A	plug-in industrial power relay	1 NO + 1 NC	220 VDC	**330.00**
30A - 1 Normally open relay	*≥ 3 mm contact gap*				
653180120300	30A	plug-in industrial power relay	1 NO	12 VAC	**197.00**
653180240300	30A	plug-in industrial power relay	1 NO	24 VAC	**197.00**
653180480300	30A	plug-in industrial power relay	1 NO	48 VAC	**219.00**
653181100300	30A	plug-in industrial power relay	1 NO	110 VAC	**219.00**
653182400300	30A	plug-in industrial power relay	1 NO	240 VAC	**212.00**
653184000300	30A	plug-in industrial power relay	1 NO	400 VAC	**269.00**
653190120300	30A	plug-in industrial power relay	1 NO	12 VDC	**197.00**
653190240300	30A	plug-in industrial power relay	1 NO	24 VDC	**197.00**
653190480300	30A	plug-in industrial power relay	1 NO	48 VDC	**219.00**
653191100300	30A	plug-in industrial power relay	1 NO	110 VDC	**212.00**
653192200300	30A	plug-in industrial power relay	1 NO	220 VDC	**323.00**
Accessories for 65 series relays					
06507		DIN rail mounting frame/bracket	*(terminals facing forward)*		**30.90**
06508		DIN rail mounting frame/bracket	*(terminals facing down)*		**30.90**
66 series	Power relays - 2-pole		*(31 x 67.5 x 33.5 mm)*		
• Faston 250 *(6.3 x 0.8 mm)* termination	8 mm, 6kV (1.2/50 µs) isolation, coil-contacts, flange mount				
2-pole changeover relay - 30A NO - 10A NC					
668280120000	30A	plug-in industrial power relay	2 changeover	12 VAC	**268.00**
668280240000	30A	plug-in industrial power relay	2 changeover	24 VAC	**268.00**
668281100000	30A	plug-in industrial power relay	2 changeover	110 VAC	**268.00**
668282400000	30A	plug-in industrial power relay	2 changeover	240 VAC	**285.00**
668290120000	30A	plug-in industrial power relay	2 changeover	12 VDC	**268.00**
668290240000	30A	plug-in industrial power relay	2 changeover	24 VDC	**268.00**
668291100000	30A	plug-in industrial power relay	2 changeover	110 VDC	**285.00**
Atex version available on request					
Accessories for 66 series relays					
06607		DIN rail mounting frame	*(terminals facing forward)*		**32.80**
67 series	High power relays - 2/3-pole		*(57.5 x 33 x 51.5 mm)*		
High power PCB mount relays for use in the photovoltaic sector • DC coil voltage - *with only 170mW holding power* • Contact gap ≥ 3 mm *(according to VDE 0126-1-1, EN 62109-1, EN 62109-2)* • Suitable for use at ambient temperatures up to 85 °C *(with energy-saving coil energisation)*					
50A - 2-pole NO relays					
672290124300	50A	PCB mount high power relay	2 NO	12 VDC	**732.00**
672290244300	50A	PCB mount high power relay	2 NO	24 VDC	**732.00**
68 series	High power 2-pole relays		*(57.5 x 52.2 x 52.2 mm)*		
High power PCB mount relays for use in the photovoltaic sector • DC coil voltage - *with only 700mW holding power* • Contact gap ≥ 3.6 mm *(according to VDE 0126-1-1, EN 62109-1, EN 62109-2)* • Suitable for use at ambient temperatures up to 85°C					
100A - 2-pole NO relays					
682290124300	100A	PCB mount high power relay	2 NO	12 VDC	**821.00**
682290244300	100A	PCB mount high power relay	2 NO	24 VDC	**821.00**

Above ZAR prices do not include VAT. E&OE

Machines for paper processing

Packaging machines

Printing machines

9902...

9902...59

9902...99

9902...09

8630...

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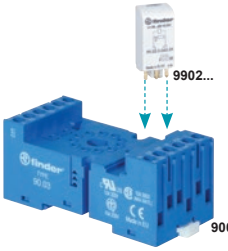
Plug-in LED / diode / timer modules

Plug-in modules are convenient add-on devices for relays which offer LED indication *(for ease of viewing relay status from a distance),* diode protection, RC circuits, bypass and timing facilities for all socket-mounted plug-in relays. The modules simply plug into specific sockets to enhance the relays functionality.

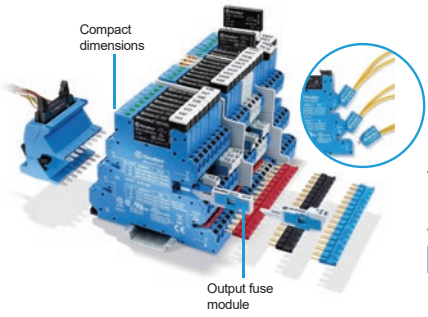
type	LED colour	description	voltage	price
Diode module				
Recovery diode modules are used for DC applications, reverse voltage peaks of the coil are short circuited by the recovery diode, release time is increased by a factor of 3 to 5.				
9902300000	–	diode module *(standard polarity A1/+)*	6...220 VDC	**37.60**
LED module				
Used for AC and DC, the LED indicator illuminates when the relay coil is energised. It is essential to connect "+" to terminal A1 in DC applications				
9902002459	green	plug-in LED module	6...24 VAC/DC	**57.00**
9902006059	green	plug-in LED module	28...60 VAC/DC	**58.00**
9902023059	green	plug-in LED module	110...240 VAC/DC	**57.00**
LED + diode module				
Recovery diode + LED module are used for DC, reverse voltage peaks are short circuited by the recovery diode *(positive to terminal A1),* release time is increased by approximately 3 times, if this is undesirable use a Varistor or RC module. LED indicator illuminates when coil is energised.				
9902902499	green	plug-in LED + diode module	6...24 VDC	**63.00**
9902906099	green	plug-in LED + diode module	28...60 VDC	**66.00**
9902922099	green	plug-in LED + diode module	110...220 VDC	**63.00**
LED + Varistor module				
LED + Varistor modules are used for AC and DC coils, reverse voltage peaks of the relay coil are limited by the Varistor to approximately 2.5 times the nominal voltage of the supply. Insignificant increase in release times.				
9902002498	green	plug-in LED + Varistor module	6...24 VAC/DC	**76.00**
9902006098	green	plug-in LED + Varistor module	28...60 VAC/DC	**77.00**
9902023098	green	plug-in LED + Varistor module	110...240 VAC/DC	**76.00**
RC circuit module				
RC circuit modules are used for AC and DC applications. The reverse voltage peaks of the coil are limited by th RC module to approximately 2.5 times the nominal supply voltage. Insignificant increase in release times. When using DC coils it is essential that positive is connected to terminal A1				
9902002409	green	plug-in RC module fo AC and DC lines	6...24 VAC/DC	**80.00**
9902006009	green	plug-in RC module fo AC and DC lines	28...60 VAC/DC	**82.00**
9902023009	green	plug-in RC module fo AC and DC lines	110...240 VAC/DC	**80.00**
Residual current bypass module				
Bypass modules are used in applications for 110 and 220 VAC relays with a tendency to fail to release, mainly caused by residual currents from AC proximity switches or inductive coupling caused by long parallel lying AC control lines.				
9902823007	–	plug-in residual current bypass module	110...240 VAC	**63.00**
Multi-function, multi-voltage timer modules				
• Time range1s, 10s, 100s, 10m, 100m, 10hr, 100hr *(adjustable)* • Plugs directly into sockets converting standard relays into timing devices • Can be used with ***9002/3, 9203, 9604*** sockets				
863000240000	green	multi-range, bi-functional timer module	12...24 VAC/DC	**497.00**
863082400000	green	multi-range, bi-functional timer module	230 VAC	**558.00**
860002400000	green	multi-range, multi-function timer module	12...240 VAC/DC	**875.00**

Mounting for **plug-in module**



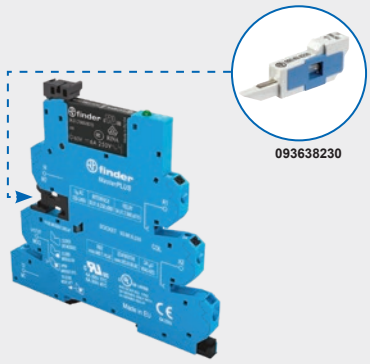
Multi-range / function timer module

AI: On-delay
DI: Interval
SW: Symmetrical flasher *(starting pulse on)*
BE: Off-delay with control signal
CE: On- and off-delay with control signal
DE: Interval with control signal on
EE: Interval with control signal off
FE: Interval with control signal on and off



39 series Master***INTERFACE*** **-** relay interface modules *(slimline)*

- Space saving 6.2 mm wide
- Connections for 16 way jumper links *(bridging bars)*
- Integral LED coil indication and protection circuit
- Secure retention and easy ejection by plastic clip
- DIN 35 rail mounting (EN60715)



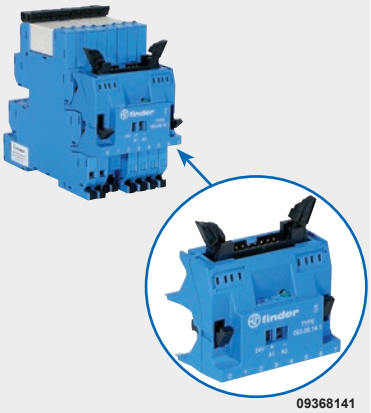
type	current	operating voltage	switching voltage	contact	type terminal	description	price
Master*PLUS* series - Relay interface modules							
• For general use in any type of system or application • Provides extra protection for the output circuit thanks to the replaceable fuse module • Can be used for input interface applications between auxiliary contacts, sensors etc. and controllers, PLCs or motors or for output interface between PLCs controllers and relays, solenoids etc. • Accepts output fuse module **(09363)** for quick/easy space efficient protection of output circuits							
Master***PLUS*** **- EMR**		**electromechanical relays**				*(H) 87 x (W) 6.2 x (D) 91 mm*	
393100120060	6A	12 VAC/DC	250/400 VAC	1 ch/over	screw	relay interface module	**279.00**
393100240060	6A	24 VAC/DC	250/400 VAC	1 ch/over	screw	relay interface module	**279.00**
396100240060	6A	24 VAC/DC	250/400 VAC	1 ch/over	push-in	relay interface module	**279.00**
393182300060	6A	230 VAC	250/400 VAC	1 ch/over	screw	relay interface module	**366.00**
Master***PLUS*** **- SSR**		**solid state relays**					
393070129024	6A	12 VDC	1.5...33 VDC	1 NO	screw	relay interface module	**590.00**
393070249024	6A	24 VDC	1.5...33 VDC	1 NO	screw	relay interface module	**590.00**
396070249024	6A	24 VDC	1.5...33 VDC	1 NO	push-in	relay interface module	**590.00**
396070248240	2A	24 VDC	12...275 VAC	1 NO	push-in	relay interface module	**620.00**
Plug-in output fuse module - for Master***PLUS*** interface - accepts std 20 x 5 mm fuses up to 6A, 250 V *- Quick easy plug-in connection to socket (fuse condition visibility with inspection window)*							
09363	fuse	–	plug-in	output fuse module for Master***PLUS*** interface			**88.00**
093630024	fuse	24 VAC/DC	plug-in	output fuse module LED fuse status indicator			**114.00**
093638230	fuse	230 VAC	plug-in	output fuse module LED fuse status indicator			**114.00**

Master*INPUT* series - Relay interface module							
• Interface between auxiliary contacts, sensors, limit switches and PLCs/controllers • Permits full termination of input devices *(no additional terminals required)* • Quick and easy distribution of supply voltage with jumper links • Gold plated output contacts for improved compatibility with low energy PLC inputs							
Master***INPUT*** **- EMR**		**electromechanical relays**					
394100245060	6A	24 VAC/DC	250/400 VAC	1 ch/over	screw	relay interface module	**336.00**
397100245060	6A	24 VAC/DC	250/400 VAC	1 ch/over	push-in	relay interface module	**336.00**
394182305060	6A	230 VAC	250/400 VAC	1 ch/over	screw	relay interface module	**423.00**
Master***INPUT*** **- SSR**		**solid state relays**					
394000249024	6A	24 VAC/DC	1.5...33 VDC	1 NO	screw	relay interface module	**624.00**
397070249024	6A	24 VDC	1.5...33 VDC	1 NO	push-in	relay interface module	**590.00**
394000248240	2A	24 VAC/DC	12...275 VAC	1 NO	screw	relay interface module	**648.00**

Master*OUTPUT* series - Relay interface module							
• Interface between PLCs and controllers and output devices, valves, motors etc… • Quick and easy distribution of supply voltage with jumper link							
Master***OUTPUT*** **- EMR**		**electromechanical relays**					
392100240060	6A	24 VAC/DC	250 / 400 VAC	1 NO	screw	relay interface module	**279.00**
395100240060	6A	24 VAC/DC	250 / 400 VAC	1 NO	push-in	relay interface module	**279.00**
392182300060	6A	230 VAC	250 / 400 VAC	1 NO	screw	relay interface module	**366.00**
Master***OUTPUT*** **- SSR**		**solid state relays**					
392070129024	6A	12 VDC	1.5...33 VDC	1 NO	screw	relay interface module	**590.00**
392070249024	6A	24 VDC	1.5...33 VDC	1 NO	screw	relay interface module	**590.00**
395070249024	6A	24 VDC	1.5...33 VDC	1 NO	push-in	relay interface module	**590.00**
392082309024	2A	230 VAC	1.5...33 VDC	1 NO	screw	relay interface module	**624.00**

*Accessories for **39 series** interface modules see page **J-10***
Atex version available on request

Above ZAR prices do not include VAT. E&OE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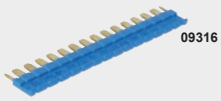
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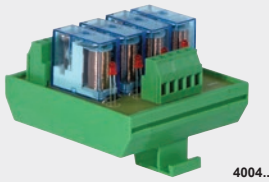

4004...

Accessories for 39 series relay interface modules

type	No. of ways	colour		description	price
16-way jumper link (bridging bar)					
- Possibility of multiple connection, side by side					
09316	16 way	blue	plug-in	plug-in jumper link *(bridge bar)* for interfaces	**73.00**
093160	16 way	black	plug-in	plug-in jumper link *(bridge bar)* for interfaces	**73.00**
093161	16 way	red	plug-in	plug-in jumper link *(bridge bar)* for interfaces	**73.00**
Separator dual-purpose *(1.8 mm or 6.2 mm separation)*					
- Useful for the visual separation of different groups or voltages of neighbouring interfaces,					
09360	partition			plastic separator for interface modules *(1,8 or 6.2 mm separation)*	**23.70**
Terminal doubler					
- For push-in terminal sockets only					
- Max. wire size 2 x 1.5 mm²					
09363	doubler	6 A/300V		terminal doubler (for two cables) push-in terminal sockets	**88.00**
*Master**ADAPTOR** - interconnects 8 interface modules (A1/A2 and power supply terminals)*					
- Connection of up to 8 interface modules to PLC outputs via 14-pole ribbon cable					
09368141	adaptor	24 VDC		Master**ADAPTOR** easy connection of up to 8 interface modules	**552.00**
09300020	cable	14-pole		PLC cable with 14-pole ribbon connector on end 2 meters	**848.00**
46392/PS	marking	6 x 12 mm		sheet of 48 marking tags *(mounts onto retain clip)*	**91.00**

38 series - Relay interface module *(1 pole 16A / 2-pole 8A)* *(H) 90 x (W) 14 x (D)77 mm*

- Sensitive DC coil or AC/DC coil versions
- Integral coil indication and protection circuit
- Easy ejection of relay using retaining clip
- DIN rail mounting (EN 60715)

type	switch current	supply voltage	switching voltage	contact	type terminal	description	price
Electromechanical relays							
380170240050*	16A	24 VDC	250 / 400 VAC	1 ch/over	screw	relay interface module	**366.00**
380100240060*	16A	24 VAC/DC	250 / 400 VAC	1 ch/over	screw	relay interface module	**467.00**
380102400060*	16A	240 VAC	250 / 400 VAC	1 ch/over	screw	relay interface module	**501.00**
* *Currents > 10A, contact terminals must be connected in parallel*							
385170240050	6A	24 VDC	250 / 400 VAC	1 ch/over	screw	slim interface module	**267.00**
385270120050	8A	12 VDC	250 / 400 VAC	2 ch/over	screw	relay interface module	**372.00**
385270240050	8A	24 VDC	250 / 400 VAC	2 ch/over	screw	relay interface module	**372.00**
385200240060	8A	24 VAC/DC	250 / 400 VAC	2 ch/over	screw	relay interface module	**477.00**
385202400060	8A	230 VAC	250 / 400 VAC	2 ch/over	screw	relay interface module	**510.00**
Solid state relays							
383170249024	5A	24 VDC	1.5...24 VDC	1 NO	screw	relay interface module	**718.00**
383170248240	3A	24 VDC	12...275 VAC	1 NO	screw	relay interface module	**698.00**
09308	8-way	blue	plug-in			jumper link/bridge bar for interfaces	**67.00**

ElectroDev - 4/8 way relay interface modules

- Incorporates LED relay status indication and diode protected coils
- Option of positive or negative common modules

4304 series *relay interface module 4-way* *(H) 90 x (W) 54 x (D) 30 mm (with relays)*							
• 4-way DIN rail mounting relay interface module *(43 series relay 10A)*							
43049024+	10A	24 VDC	up to 400V	ch/over	4 way	fixed relay interface	**570.00**
43049024-	10A	24 VDC	up to 400V	ch/over	4 way	fixed relay interface	**515.00**
34 series *relay interface module 8-way* *(H) 90 x (W) 54 x (D) 45 mm (with relays)*							
• 8-way DIN rail mounting relay interface module *(34 series relay 6A)*							
34089024+	6A	24 VDC	up to 400V	ch/over	8 way	fixed relay interface	**1 300.00**
34089024-	6A	24 VDC	up to 400V	ch/over	8 way	fixed relay interface	**1 180.00**
4004 series *relay interface module 4-way* *(H) 76 x (W) 71 x (D) 55 mm (with relays)*							
• 4-way DIN rail mounting relay interface module *(40 series relay 10A)*							
40049024+	10A	24 VDC	up to 400V	ch/over	4 way	fixed relay interface	**880.00**
40048230-	10A	230 VAC	up to 400V	ch/over	4 way	fixed relay interface	**873.00**

Note: *(-) denotes negative common and (+) positive common*

Pump Control

Office Lighting Control

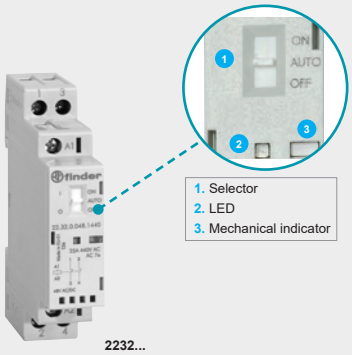
Hotel room energy- enabling units

Modular contactors 25A

- Modular DIN rail mount
- Auto - On - Off selector
- Continuous duty coils and contacts
- AC/DC silent coil *(with varistor protection)*
- Mechanical flag and LED indicators as standard
- Clip-on auxiliary contact module available *(1NO+1NC or 2NO)*
- Protective separation *(reinforced insulation)* between coil and contacts

General applications:

- Pump control
- Office lighting control
- Garden and night lighting
- Bathrooms lighting control
- Streetlights and car park lighting
- Hotel room energy enabling units



2232...

type	rated power AC-1 (A)	rated power AC-3 kW (230V)	description	modules width in 17.5 mm	contact configuration	coil voltage AC/DC	price
22 series - Two-pole modular contactor	25A				(H) 89 x (W) 17.5 (D) 61 mm		
• Compact - one module *(17.5 mm wide)*							
223200124340	25A	1.0 kW	modular contactor	1	2 NO	12V	**684.00**
223200244340	25A	1.0 kW	modular contactor	1	2 NO	24V	**684.00**
223200484340	25A	1.0 kW	modular contactor	1	2 NO	48V	**684.00**
223202304340	25A	1.0 kW	modular contactor	1	2 NO	230V	**684.00**
223200124440	25A	1.0 kW	modular contactor	1	2 NC	12V	**684.00**
223200244440	25A	1.0 kW	modular contactor	1	2 NC	24V	**684.00**
223202304440	25A	1.0 kW	modular contactor	1	2 NC	230V	**684.00**
223200124540	25A	1.0 kW	modular contactor	1	1NO + 1NC	12V	**684.00**
223200244540	25A	1.0 kW	modular contactor	1	1NO + 1NC	24V	**684.00**
223200484540	25A	1.0 kW	modular contactor	1	1NO + 1NC	48V	**684.00**
223202304540	25A	1.0 kW	modular contactor	1	1NO + 1NC	230V	**684.00**
AC-3 single phase motor rating at 230 VAC							

2234...

22 series - Four-pole modular contactor	25A				(H) 89 x (W) 35 (D) 61 mm		
• Compact - two modules *(35 mm wide)*							
223400124340	25A	4.0 kW	modular contactor	2	4 NO	12V	**938.00**
223400244340	25A	4.0 kW	modular contactor	2	4 NO	24V	**938.00**
223402304340	25A	4.0 kW	modular contactor	2	4 NO	230V	**938.00**
223400124740	25A	4.0 kW	modular contactor	2	3NO + 1NC	12V	**938.00**
223400244740	25A	4.0 kW	modular contactor	2	3NO + 1NC	24V	**938.00**
223402304740	25A	4.0 kW	modular contactor	2	3NO + 1NC	230V	**938.00**
223400124640	25A	4.0 kW	modular contactor	2	2NO + 2NC	12V	**938.00**
223400244640	25A	4.0 kW	modular contactor	2	2NO + 2NC	24V	**938.00**
223402304640	25A	4.0 kW	modular contactor	2	2NO + 2NC	230V	**938.00**

02235

Accessories *for above modular contactors*

Clip-on auxiliaries for above contactors *(8.8 mm wide)*						contactor	
02235	6A	clip-on auxiliary contact block	0.5	1NO + 1NC	2232/4	**466.00**
02233	6A	clip-on auxiliary contact block	0.5	2 NO	2232/4	**466.00**
02218	jumper	bridge bar for 2-pole contactors	8-way	blue	2232	**99.00**
02226	jumper	bridge bar for 4-pole contactors	6-way	blue	2234	**99.00**
02001	adaptor	for chassis mounting contactors	1	adaptor	2232	**6.70**
01101	adaptor	for chassis mounting contactors	2	adaptor	2234	**7.30**
02209	spacer	rail mount heat dissipation	0.5	module	2232/4	**20.60**
46392/PS	marking tags *(sheet)*	mounts directly onto contactor		*(48 pcs)*	2232/4	**91.00**

192100240000

19 series - Modular DIN rail mount relay					*(H) 84 x (W) 11.2 (D) 57 mm*		

Ideally suited for industrial control systems applications to control pumps, blowers or motor groups. Allows automatic control of pumps, blowers, groups of motors or in case of maintenance or failure, forcing the controlled load to "Off" or "On".

- 3 function selector switch - Auto: works as a monostable relay
  - Off: relay permanently OFF
  - On: relay permanently ON
- Slimline *(11.2 mm wide)* modular relay
- LED indication - auto-off-on selector
- DIN rail mounting

192100240000	10A	slimline	modular relay	1 changeover	24 VAC/DC	**752.00**

Above ZAR prices do not include VAT. E&OE

2603...

Modular step relays

Allows you to perform up to 6 sequences to achieve maximum flexibility for every application.

General applications:

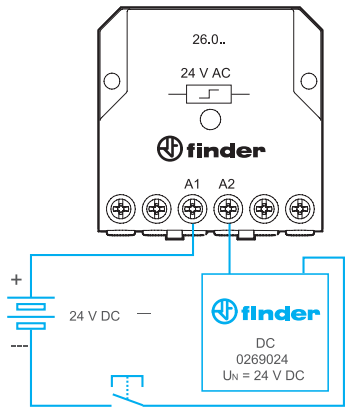
- Bedroom light control
- Living room light control
- Automation for blinds, grilles and shutters
- Lighting control in corridors *(for hotels, offices and hospitals)*

type	switch current	No. steps	description	contact configuration	coil voltage	price
26 series - Step relays	*(pulse "ON", pulse "OFF")*		*(H) 46,6 x (W) 45 (D) 22 mm*			
• AC coil • Panel mount • Base/chassis mounting • Screw terminal connections • Maximum pulse duration: 1 hour • Electrically separated coils and contact circuits						
260380120000	10A	2 step	base mounting step relay	1NO+1NC	12 VAC	**313.00**
260380240000	10A	2 step	base mounting step relay	1NO+1NC	24 VAC	**313.00**
260381100000	10A	2 step	base mounting step relay	1NO+1NC	110 VAC	**313.00**
260382300000	10A	2 step	base mounting step relay	1NO+1NC	230 VAC	**313.00**
0269012	module for operating 26 series relays with			DC supply	12 VDC	**246.00**
0269024	module for operating 26 series relays with			DC supply	24 VDC	**246.00**

2023...

20 series - Modular step relays			*(H) 84 x (W) 17.5 x (D) 57 mm*			
• AC and DC coils • Modular DIN rail mounting • Compact one module *(17.5 mm)* wide • Maximum pulse duration: 1 hour • Manual override/test button • Mechanical flag indicators of contact positions						
202380120000	16A	2 step	modular pulse step relay	2 contact	12 VAC	**509.00**
202380240000	16A	2 step	modular pulse step relay	2 contact	24 VAC	**509.00**
202382300000	16A	2 step	modular pulse step relay	2 contact	230 VAC	**509.00**
202390120000	16A	2 step	modular pulse step relay	2 contact	12 VDC	**509.00**
202390240000	16A	2 step	modular pulse step relay	2 contact	24 VDC	**509.00**
202680120000	16A	3 step	modular pulse step relay	2 contact	12 VAC	**509.00**
202680240000	16A	3 step	modular pulse step relay	2 contact	24 VAC	**509.00**
202682300000	16A	3 step	modular pulse step relay	2 contact	230 VAC	**509.00**
202690120000	16A	3 step	modular pulse step relay	2 contact	12 VDC	**509.00**
202690240000	16A	3 step	modular pulse step relay	2 contact	24 VDC	**509.00**
202480120000	16A	4 step	modular pulse step relay	2 contact	12 VAC	**509.00**
202480240000	16A	4 step	modular pulse step relay	2 contact	24 VAC	**509.00**
202482300000	16A	4 step	modular pulse step relay	2 contact	230 VAC	**509.00**
202490120000	16A	4 step	modular pulse step relay	2 contact	12 VDC	**509.00**
202490240000	16A	4 step	modular pulse step relay	2 contact	24 VDC	**509.00**
202880120000	16A	4 step	modular pulse step relay	2 contact	12 VAC	**509.00**
202880240000	16A	4 step	modular pulse step relay	2 contact	24 VAC	**509.00**
202882300000	16A	4 step	modular pulse step relay	2 contact	230 VAC	**509.00**
202890120000	16A	4 step	modular pulse step relay	2 contact	12 VDC	**509.00**
202890240000	16A	4 step	modular pulse step relay	2 contact	24 VDC	**509.00**

Modular **step relay**



20 series Sequence Table

Type	No of steps	Sequence 1	2	3	4
20.23	2				
20.26	3				
20.24	4				
20.28	4				

Okpac® SO series power relays

All **Celduc SSRs** *(Solid State Relays)* are fitted with back-to-back thyristors and employ 4th generation TMS² technology with a very long lifetime expectancy.

- Very high immunity according to IEC/EN 61000-4-4 *(bursts)* and IEC/EN 61000-4-5 *(spikes)*
- UL/cUL, VDE (EN 60950), IEC/EN 60947-4-3, CE marking
- Regulated input current
- EMC compatible for industrial environment
- Control status LED

Note: All current ratings are based on utilising SSRs with suitable heat sink.
Consult product datasheet for inductive applications (motors - AC53)

SO942460

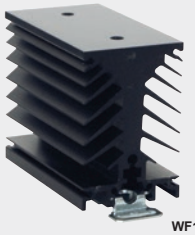
type	thyristor rating	switching voltage	peak voltage	control voltage	I²t	description	price
SO9 series	*for resistive loads (AC-51) - heating*				*(H) 58.5 x (W) 45 x (D) 30 mm*		
• Zero-cross switching specifically designed for resistive loads • Input overvoltage protection							
SO941460	12A	12 - 280 VAC	600V	3 - 32 VDC	128A²s	solid state relay	**486.00**
SO942460	25A	12 - 280 VAC	600V	3 - 32 VDC	600A²s	solid state relay	**589.00**
SO943460	40A	12 - 280 VAC	600V	3 - 32 VDC	1250A²s	solid state relay	**665.00**
SO945460	50A	12 - 280 VAC	600V	3 - 32 VDC	2800A²s	solid state relay	**697.00**
SO965460	60A	24 - 600 VAC	1200V	3.5 -32 VDC	2800A²s	solid state relay	**794.00**
SO967460	90A	24 - 600 VAC	1200V	3.5 - 32 VDC	7200A²s	solid state relay	**1 060.00**
SO8 series	*for most load types - lamps and infrared*				*(H) 58.5 x (W) 45 x (D) 30 mm*		
• Zero-cross switching with low zero-crossing level (<12V) for most loads • Voltage protection on input *(transil)* and output (VDR)							
DC control							
SO842074	25A	12 - 275 VAC	600V	3 - 32 VDC	600A²s	solid state relay	**811.00**
SO845070	50A	12 - 275 VAC	600V	3 - 32 VDC	2800A²s	solid state relay	**972.00**
SO865070	50A	24 - 510 VAC	1200V	3.5 - 32 VDC	2800A²s	solid state relay	**1 160.00**
SO867070	75A	24 - 510 VAC	1200V	3.5 - 32 VDC	7200A²s	solid state relay	**1 670.00**
SO868070	95A	24 - 510 VAC	1200V	3.5 - 32 VDC	16200A²s	solid state relay	**2 290.00**
SO869070	125A	24 - 510 VAC	1200V	3.5 - 32 VDC	22000A²s	solid state relay	**3 030.00**
AC control							
SO842974	25A	12 - 275 VAC	600V	20 - 265 VAC/DC	600A²s	solid state relay	**811.00**
SO865970	50A	24 - 510 VAC	1200V	20 - 265 VAC/DC	2800A²s	solid state relay	**1 280.00**
SO867970	75A	24 - 510 VAC	1200V	20 - 265 VAC/DC	7200A²s	solid state relay	**1 980.00**
SO868970	95A	24 - 510 VAC	1200V	20 - 265 VAC/DC	16200A²s	solid state relay	**2 400.00**
SO869970	125A	24 - 510 VAC	1200V	20 - 265 VAC/DC	22000A²s	solid state relay	**3 120.00**

SO867070

SO7 series	*suitable for (AC-53) inductive loads and phase angle control applications*						
• Random switching solid state relay designed for high inductive loads, motors (AC-53) • Large control voltage range 3.5-32 VDC with input current limiter • Over-Voltage protection on input *(transil)* and output (RC and VDR)							
DC control	(AC51)						
SO765090	50A	24 - 510 VAC	1200V	3.5 - 32 VDC	2800A²s	solid state relay	**1 670.00**
SO767090	75A	24 - 510 VAC	1200V	3.5 - 32 VDC	7200A²s	solid state relay	**2 340.00**
SO768090	95A	24 - 510 VAC	1200V	3.5 - 32 VDC	16200A²s	solid state relay	**2 600.00**

SO765090

SOB series	*two phase SSRs*						
• Dual zero cross solid state relay with LED indication for each input • Plug-in control terminals *(connector to be ordered separately)*							
SOB9 *designed for resistive loads*							
SOB965660	2 x 50A	24 - 600 VAC	1200V	10 - 30 VDC	2500A²s	solid state relay	**3 110.00**
1Y042715			plug-in input screw terminal for above dual phase relay				**129.00**


WF151200

type	thermal rating	description	dimensions (mm) (H)	(W)	(D)	price
Heatsinks	*SSR current ratings are based on sufficient cooling by the use of heatsinks*					
WF151200	2.2K/W	DIN rail mountable heatsink for SO series relays	80	45	73	**464.00**
WF108110	1.1K/W	DIN rail mountable heatsink for SO series relays	98	90	81	**669.00**
WF115100	0.9K/W	DIN rail mountable heatsink for SO series relays	90	110	100	**2 090.00**
5TH23000	pads	thermal transfer pads for mounting SO solid state relays onto heat sinks				**15.10**
1LD12020	adaptor	adaptor for direct mounting of SO relays on DIN rail				**140.00**

Above ZAR prices do not include VAT. E&OE

SU963460

SU865070

ESUC0450

WF311100

Celpac® SU series power relays *(Pluggable control terminals)*

All **Celduc SSRs** *(Solid State Relays)* are fitted with back-to-back thyristors and employ 4th generation TMS² technology with a very long life expectancy.

- Cost-effective, reliable and compact solution *(22.5 mm pitch SSR solution)*
- Mounting configuration compatible with all standard hockey puck style relays
- Over-voltage protection on input *(transil)*
- IP20 terminal protection cover *(removable)*
- Control status LED indication

Note: Current ratings are based on utilising SSRs with suitable heat sink.
Consult product datasheet for inductive applications (motors - AC53)

type	thyristor rating	switching voltage	peak voltage	control voltage	I²t	description	price
SU9 series	*for resistive loads (AC-51) - heating*				*(H) 90 x (W) 22.5 x (D) 42 mm*		
• Zero-cross switching specifically designed for resistive loads							
SU942460	25A	12 - 280 VAC	600V	3 - 32 VDC	600A²s	solid state relay	**606.00**
SU963460	35A	24 - 600 VAC	1200V	3.5 - 32 VDC	882A²s	solid state relay	**766.00**
SU965460	50A	24 - 600 VAC	1200V	3.5 - 32 VDC	1680A²s	solid state relay	**819.00**
SU967460	75A	24 - 600 VAC	1200V	3.5 - 32 VDC	7200A²s	solid state relay	**1 090.00**
SU8 series	*for most load types - lamps and infrared*				*(H) 90 x (W) 22.5 x (D) 42 mm*		
• Zero-cross switching with low zero-crossing level (<12V) for most loads							
DC control							
SU842070	25A	12 - 275 VAC	600V	3 - 32 VDC	600A²s	solid state relay	**836.00**
SU865070	50A	24 - 510 VAC	1200V	3.5 - 32 VDC	1680A²s	solid state relay	**1 200.00**
SU867070	75A	24 - 510 VAC	1200V	3.5 - 32 VDC	7200A²s	solid state relay	**1 690.00**
AC control							
SU842970	25A	12 - 275 VAC	600V	160 - 240 VAC	600A²s	solid state relay	**826.00**
SU865970	50A	24 - 510 VAC	1200V	160 - 240 VAC	1680A²s	solid state relay	**1 290.00**

Accessories for SU series SSRs

ESUC **current monitoring module for SU range**

Mounted directly onto SU or SUL devices, this module provides diagnostic information for up to 5 heating elements in parallel.

ESUC0450	2 - 40A	8 - 30 VDC	current monitoring module	**2 730.00**

Heatsinks *SSR current ratings are based on sufficient cooling by the use of heatsinks*

type	thermal rating	description	dimensions (mm) (H)	(W)	(D)	price
WF311100	3.0 K/W	DIN rail mountable heatsink for SU series relays	80	22.5	73	**633.00**
WF151200	2.2 K/W	DIN rail mountable heatsink for SU series relays	80	45	73	**464.00**
WF112100	1 K/W	DIN rail mountable heatsink for SU series relays	120	50	118	**722.00**
5TH24000	pads	thermal transfer pads for mounting SU relays onto heatsinks				**19.50**

SSR + Heatsink complete unit *ready for use*

type	thyristor rating	switching current 25°C	switching voltage	peak voltage	I²t	control voltage	price
SUL9 range	*for resistive loads (AC-51) - heating*				*(H) 90 x (W) 22.5 x (D) 112 mm*		
SUL942460	25A	23A	12 - 280 VAC	600V	600A²s	3 - 32 VDC	**1 430.00**
SUL 8 range	*- for most load types - lamps and infrared*				*(H) 90 x (W) 22.5 x (D) 112 mm*		
DC control							
SUL842070	25A	23A	12 - 275 VAC	600V	600A²s	3 - 32 VDC	**1 850.00**
AC control	*(H) 90 x (W) 22.5 x (D) 112 mm*						
SUL842970	25A	23A	12 - 275 VAC	600V	600A²s	160 - 240 VAC	**826.00**
SUL865970	50A	32A	24 - 510 VAC	1200V	1680A²s	160 - 240 VAC	**1 290.00**

Fuse protection of solid state relays

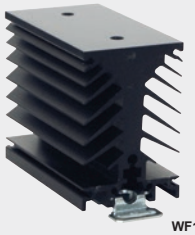
Type 2 coordination: In case of short circuit the protection device must react before damaging the SSR, rendering the SSR suitable for further use.

Ultra-fast fuses must be used to protect solid state relays against short-circuits of the load.
The I²t value of the fuse must be less than half of the typical I²t value of the solid state relay.

SO465420

SOM040200

SCI0251700


WF151200

type	thyristor rating	switching voltage	peak voltage	control voltage	description	price
SO4 series - Proportional controllers					*(H) 58.5 x (W) 45 x (D) 30 mm*	
• Control status LED • Overvoltage protection by varistor • IP20 protection cover *(removeable)* • 4-20mA / 0-10V / Potentiometer control • Analog switching SSR for resistive load power control *(phase angle principle)*						
4-20mA control current input						
SO465420	50A	200 - 480 VAC	–	4-20mA	proportional output SSR	**2 710.00**
SO467420	75A	200 - 480 VAC	–	4-20mA	proportional output SSR	**3 110.00**
SO468420	95A	200 - 480 VAC	–	4-20mA	proportional output SSR	**3 480.00**
SO469420	125A	200 - 480 VAC	–	4-20mA	proportional output SSR	**4 200.00**
0-10V Analog input						
• Control supply voltage 8 - 30 VDC						
SO465020	50A	200 - 480 VAC	–	0-10V	proportional output SSR	**2 980.00**
SO468020	95A	200 - 480 VAC	–	0-10V	proportional output SSR	**3 800.00**
SO469020	125A	200 - 480 VAC	–	0-10V	proportional output SSR	**4 570.00**
Potentiometer analog input						
• Control supply voltage 8 - 30 VDC						
SO465320	50A	200 - 480 VAC	–	resistance	proportional output SSR	**2 980.00**
SOM series - Latest MOSFET technology generation					*(H) 58.5 x (W) 45 x (D) 30 mm*	
• MOSFET technology • Ultra low on-state resistance • Built-in overvoltage protection • DC solid state relays DC-in, DC-out • Low output leakage current and control current • Designed to switch DC loads e.g solenoid valves, brakes, indicators						
SOM020100	20A	5 - 60 VDC	100V	3.5 - 32 VDC	DC output solid state relay	**1 370.00**
SOM040200	40A	5 - 110 VDC	200V	3.5 - 32 VDC	DC output solid state relay	**1 840.00**
IGBT technology for high DC voltage applications						
SCI series - Integrated reverse diode					*(H) 58.2 x (W) 45 x (D) 27 mm*	
• Ultra low output leakage current • Low control current consumption • Low conducted and radiated disturbances • Latest high voltage IGBT technology generation • Triggered control input to avoid linear control risks • New innovative isolated driver ensures fast power transistor turn on and off ensuring low power transient						
SCI0251700	25A	0 - 1700 VDC	1700V	4.5 - 32 VDC	DC output solid state relay	**27 000.00**
SCI0501200	50A	0 - 1200 VDC	1200V	4.5 - 32 VDC	DC output solid state relay	**14 400.00**
SCI0100600	100A	0 - 600 VDC	600V	4.5 - 32 VDC	DC output solid state relay	**14 400.00**
SDI series - Integrated protection					*(H) 157 x (W) 68 x (D) 83 mm*	
• Overvoltage protection • Load short circuit protection • Overload temperature protection						
SDI0501700	50A	24 - 940 VDC	1700V	24 - 48 VDC	DC output solid state relay	**44 400.00**
SDI0501710	50A	24 - 940 VDC	1700V	72- 110 VDC	DC output solid state relay	**44 400.00**

Accessories for above solid state relays

type	thermal rating	description	dimensions (mm) (H)	(W)	(D)	price
Heatsinks	*SSR current ratings are based on sufficient cooling by the use of heatsinks*					
WF151200	2.2K/W	rail mountable heatsink for SO,SC series relays	80	45	72	**464.00**
WF108110	1.1K/W	rail mountable heatsink for SO,SC series relays	98	90	78	**669.00**
WF115100	0.9K/W	rail mountable heatsink for SO,SC series relays	90	110	100	**2 090.00**
5TH23000	pads	thermal transfer pads for SO,SC solid state relays				**15.10**
1LD12020	adaptor	adaptor for mounting heat sinks on DIN rail				**140.00**

Above ZAR prices do not include VAT. E&OE

SMB8650510

SMT8620520

SGB8850200

SGT8670500

Three-phase solid state relays

All three-phase solid state relays incorporate new high efficiency back to back thyristors on output with TMS² technology for a long lifetime expectancy and high surge currents.

- Three-phase Zero Cross solid state relays
- Control status LED
- Conforms to: IEC/EN 60947-4-3, CEI 62314, UL-cUL

Note: Current ratings are based on utilising SSRs with suitable heat sink.
Consult product datasheet for inductive applications (motors - AC53)

type	max. thyristor rating	switching current AC-51 (40°C)	switching voltage	peak voltage	control voltage	I^2t	price
Sightpac series - Three-phase solid state relays						*(H) 100 x (W) 45 x (D) 48 mm*	
SMB series - Two leg Three-phase solid state relay *(New compact - 45 mm wide version)*							
Designed for controlling three-phase loads connected in star or delta *(if balanced)* Two of the Three-phases are switched by the SSR the third phase being directly connected							
• Three-phase Zero Cross solid state relay with one direct connected phase • Designed for resistive loads							
SMB8650510	2 x 50A	3 x 30A	24 - 520 VAC	1600V	4 - 30 VDC	2800A²s	**3 450.00**
SMB8670910	2 x 75A	3 x 35A	150 - 520 VAC	1600V	4 - 30 VDC	7200A²s	**4 320.00**
SMT series - Three-phase solid state relay - for controlling three-wire three-phase loads							
• Three-phase Zero Cross solid state relay (SSR) designed for most load types • Plug-in control terminals and spring clamp power terminals							
SMT8620520	3 x 25A	3 x 20A	24 - 520 VAC	1200V	4 - 30 VDC	380A²s	**2 540.00**
SMT8628520	3 x 25A	3 x 20A	24 - 520 VAC	1200V	24 - 255 VAC/DC	380A²s	**2 560.00**
Cel3pac series - Three-phase solid state relays						*(H) 100 x (W) 76.5 x (D) 35.5 mm*	
SGB series - Two leg Three-phase solid state relays							
Designed for controlling three-phase loads connected in star or delta *(if balanced)* Two of the Three-phases are switched by the SSR with the third being directly connected							
• Three-phase Zero Cross solid state relay with one direct connected phase • Designed for resistive loads							
SGB8850200	2 x 50A	3 x 50A	24 - 640 VAC	1600V	4 - 30 VDC	2800A²s	**3 130.00**
SGB8890200	2 x 125A	3 x 85A	24 - 640 VAC	1600V	4 - 30 VDC	22000A²s	**5 090.00**
SGT series - Three-phase solid state relays - for controlling three-wire three-phase loads							
SGT9 series - Zero Cross for resistive loads (AC-51)							
SGT9834300	3 x 35A	3 x 30A	24 - 660 VAC	1600V	4 - 30 VDC	1250A²s	**3 140.00**
SGT9854300	3 x 50A	3 x 42A	24 - 660 VAC	1600V	4 - 30 VDC	2800A²s	**3 030.00**
SGT9874300	3 x 75A	3 x 54A	24- 660 VAC	1600V	4 - 30 VDC	7200A²s	**3 590.00**
SGT8 series - Zero Cross for most load types							
DC control							
SGT8850200	3 x 50A	3 x 42A	24 - 640 VAC	1600V	4 - 30 VDC	2800A²s	**3 830.00**
SGT8670500	3 x 75A	3 x 54A	24 - 520 VAC	1600V	4 - 30 VDC	7200A²s	**4 280.00**
SGT8690500	3 x 125A	3 x 64A	24 - 520 VAC	1600V	4 - 30 VDC	22000A²s	**7 230.00**
AC control							
SGT8658500	3 x 50A	3 x 42A	24 - 520 VAC	1600V	24 - 255 VAC/DC	2800A²s	**3 840.00**
SGT8678500	3 x 75A	3 x 54A	24 - 520 VAC	1600V	24 - 255 VAC/DC	7200A²s	**4 320.00**
SGT8698500	3 x 125A	3 x 64A	24 - 520 VAC	1600V	24 - 255 VAC/DC	22000A²s	**5 950.00**
SGTA series - Three-phase proportional controllers						*(H) 75 x (W) 100 x (D) 46 mm*	
• Control supply voltage 8 - 30 VDC							
4-20mA control current input							
SGTA4654	3 x 50A		300 - 510 VAC	4 - 20mA	proportional output SSR		**9 830.00**
0-10V analog input							
SGTA4650	3 x 50A		300 - 510 VAC	0 - 10V	proportional output SSR		**9 600.00**

Accessories for above Three-phase series relays						
type	thermal rating	description	dimensions (mm) (H)	(W)	(D)	price
Heatsinks	*SSR current ratings are based on sufficient cooling by the use of heatsinks*					
WF108110	1.1 K/W	rail mountable heatsink for SM series relays	98	90	78	**669.00**
WF115100	0.9 K/W	rail mountable heatsink for SM, SG, series relays	90	110	100	**2 090.00**
1K199000	cover	transparent terminal cover for relays SGB and SGT				**118.00**

TMP

TMM1

TMM1NFC

TMPL

TMST

Modular timing devices

- Wide range of functions and time scales
- High accuracy and repeatability of the time settings
- Green LED indicator for power on
- Red LED indicator for relay state; flashing for delay and steady when relay energized
- Multi-time range: 1s/10s/60s/10m/60m/10h/1day/10days/ON or OFF
- Excellent time accuracy and stability
- Compact robust DIN rail mounting modular housing *(one 17.5 mm wide module)*
- 1 x changeover relay 8A 250 VAC

type	description	supply voltage	price
On-delay timer - delay-on make	*(relay switches after preset time elapses)*		
• Multi-time range:	1s/10s/60s/10m/60m/10h/1day/10days/ON or OFF		
• Multi-voltage:	24...48 VDC / 24...240 VAC		
TMP	multi-time range, multi-voltage, on-delay modular electronic timer		**874.00**
Multi-function timer	*(several selectable timing functions in one module)*		
• Multi-voltage:	12...240 VAC/DC		
• Multi-function:	Selectable functions:		
A On-delay	*(relay only switches after preset time lapse)*		
B Interval	*(relay switches for preset time when energised)*		
C Equal repeat	*(start with OFF time first)*		
D Equal repeat	*(start with ON time first)*		
E Pulsed controlled interval	*(relay switches on close of external contact timing only begins on opening of contact)*		
F Pulsed controlled Interval	*(timing begins on closing of external contact)*		
G Pulsed controlled Interval	*(timing begins on opening of external contact)*		
H Pulse cont. On-delay/Interval	*(timing begins on opening and closing of external contact)*		
I Step relay	*(relay changes state on each closure of external contact)*		
J Pulse generator	*(unequal repeat adjustable OFF time/fixed 0.5 sec ON time)*		
TMM1	multi-time range, multi-voltage, multi-function modular elect. timer	12 - 240 VAC/DC	**1 080.00**
NFC programmability Multi-function timer *(without front adjustable knob)*			
• 40 selectable functions			
• Counter and hour counter included			
• Simple, fast and intuitive programming			
• Very high accuracy and repeatability of settings			
• Programmable via smartphone or tablet with NFC technology and APP			
• Access to settings can be protected by setting a 4-digit password via the App			
• Programming via NFC ensures excellent accuracy in time settings and tripping thresholds			
TMM1NFC	multi-time range, multi-voltage, multi-func. mod. elect. timer (NFC)	12 - 240 VAC/DC	**1 080.00**
Unequal repeat timer	*(separately adjustable ON and OFF times)*		
Programmable time relay with a asymmetrical recycle time, with independent timing adjustment for ON and OFF times. Multi-time range and multi-voltage.			
• Multi-time range:	1s/10s/60s/10m/60m/10h/1day/10days/30 days/100days		
• Multi-voltage:	12...240 VAC/DC		
TMPL	multi-time, multi-voltage, modular unequal repeat electronic timer	12 - 240 VAC/DC	**1 660.00**
Delay-on de-energisation timer			
Electronic time relay. True off delay - relay energises on applying supply and remains energised *(for pre-set time period)* after supply is removed and then resets.			
• Relay remains energised for preset time after removal of supply			
• Selectable time ranges:	0.6s/6s/60s/180s *(adjustable)*		
• Multi-voltage:	24...240 VAC/DC		
TMD	multi-time, multi-voltage, delay-on de-energisation elect. timer	24 - 240 VAC/DC	**2 090.00**
Star-delta timer	*(star connection delay and adjustable transition delay)*		
Electronic time relay for starting star-delta, impedance, auto transformer starters etc. Adjustable "star" time delay where after a 20…300ms "transition" delay before "delta" is energised			
• Selectable time ranges:	1s/10s/60s/10min - transition: 20...300ms *(adjustable)*		
TMST	multi-time, multi-voltage, mod. star-delta elect. timer	24 - 48 VDC / 24 - 240 VAC	**1 030.00**
TMSTA440	multi-time, multi-voltage, modular star-delta elect. timer	380 - 440 VAC	**1 030.00**

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PMV10A440

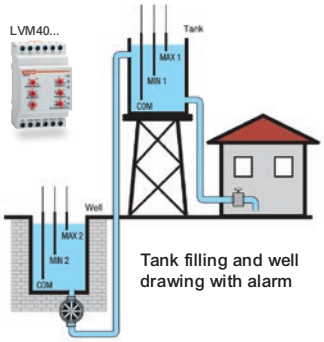
PMV55A240

PMV95NA575NFC

PMA30240

PMA50...

type	description	monitored voltage	width in 17.5 mm	price
Voltage monitoring modular relays				
• Modular DIN rail mounting *(aligns with standard MCBs)*				
• True RMS measurements				
Phase failure / reversal relay *instantaneous trip*				
PMV10A440	phase failure / reversal relay	208 - 480 VAC L-L	1	**911.00**
PMV20A575	phase failure / reversal relay	208 - 575 VAC L-L	2	**1 180.00**
Voltage monitors		*single-phase or three-phase*		
• Voltage monitoring relays, self powered, for minimum and maximum voltage				
• Adjustments	- “V max” maximum voltage tripping threshold	105 - 115% Ue		
	- "V min" minimum voltage tripping threshold	80 - 95% Ue		
	- “tripping" and “reset” time delay	0.1 - 20sec		
Single-phase monitoring				
PMV55A240	single-phase over/under voltage monitor	208 - 240 VAC	2	**2 210.00**
Three-phase monitoring *(without neutral)*				
• Self powered, for minimum and maximum voltage, phase loss and incorrect phase sequence				
PMV50A575	3-phase over/under voltage monitor	380 - 575 VAC L-L	2	**2 160.00**
Three-phase monitoring *(with or without neutral)*		self powered		
• For minimum and maximum voltage, phase loss, neutral loss and incorrect phase sequence				
PMV50NA440	minimum and maximum AC voltage	380 - 440 VAC L-L	3	**3 110.00**
PMV50NA600	minimum and maximum AC voltage	480 - 600 VAC L-L	3	**4 280.00**
NFC programmability Three-phase monitoring *(same functionality as above unit)*				
Multifunction voltage and frequency monitoring relay, self powered, for minimum and maximum voltage and frequency, phase loss, neutral loss, incorrect phase sequence and asymmetry.				
• Without front adjustment knobs				
• Programmable via smartphone or tablet with NFC technology and APP				
• Simple, fast and intuitive programming *(password protected)*				
• Very high accuracy and repeatability of settings				
PMV95NA575NFC	multi-func. voltage and frequency relay (NFC)	380 - 575 VAC L-L	2	**4 070.00**
Current monitoring relays	*(TRMS measurements)*			
Single and three-phase, AC/DC minimum or maximum current control with delayed trip. Auxiliary AC/DC power supply, automatic or manual reset.				
• AC/DC minimum or maximum current control with programmable delayed trip				
• Multi-voltage auxiliary power supply 24...240 VAC/DC				
• Direct connection up to 16A or by current transformer (CT) 5A secondary				
• Automatic or manual reset				
• Adjustments	- maximum or minimum current tripping threshold	5 - 100% Ie		
	- maximum or minimum hysteresis threshold	1 - 50%		
	- “trip” delay *(selectable)*	0.1 - 30sec		
	- “inhibition” time - external input or power up	1 - 60sec		
	- current scale selection:	5A or 16A		
	- tripping memory *(latch)*	On or Off		
PMA30240	minimum or maximum current monitor	24 - 240 VAC/DC	2	**2 360.00**
Pump protection relay	*single and three-phase systems (selectable)*			
Maximum AC current and minimum cosφ. Delayed trip. Phase loss and incorrect sequence. Instantaneous trip *(automatic or manual reset)*				
• Pump protection relay against dry running, auxiliary AC power supply				
• Maximum AC current and minimum cosφ *(delayed trip)*				
• Direct connection up to 16A or by current transformer (CT) 5A secondary				
• Phase loss and incorrect phase sequence *(instantaneous trip)*				
• Voltage control range 80...660 VAC				
• Adjustments	- “minimum” cosφ threshold *(underload/dry running)*	0.1 - 0.99		
	- "maximum" *(over)* current threshold	10 - 100% Ie		
	- “trip” delay for min cosφ and max current	0.1 - 10sec		
	- “inhibition” time - external input or power up	1 - 60sec		
	- automatic reset time	Off - 100min		
	- current selection:	5A or 16A		
PMA50A240	pump protection relay *(against dry running)*	220 - 240 VAC	3	**4 050.00**
PMA50A415	pump protection relay *(against dry running)*	380 - 415 VAC	3	**4 050.00**



Tank filling and well drawing with alarm

LVM series - Level control relays

- Level monitoring for conductive liquids
- Modular DIN rail mounting *(aligns with standard MCB's)*
- Double insulation between supply, electrodes and output relay

General applications:

- Adjustable sensitivity for water level control applications eg. wastewater (6...8k), rain or condensed water (15...25k)
- Probe signal detection circuit for applications where the electrode cables are significantly long and the liquid to control is highly resistive i.e. low conductivity (LVM40)
- Fail-safe operation for pump control applications by use of N/O contact for both emptying and filling functions avoiding false activations
- Time delay circuit for starting mainly used to avoids frequent pump startings

LVM20A240

LVM25240

LVM40...

SN1

LVMP10A240

type	description	supply voltage	width in 18 mm	price
LVM20	*single voltage level control relay*			
	• Three detecting probes *(Min, Max and Com)* • Emptying function *(automatic reset)* • Adjustable sensitivity (2.5...50kΩ) • Relay outputs: 1 x changeover (SPDT)			
LVM20A240	liquid level control relay for "emptying" function	220 - 240 VAC	2	**1 040.00**
LVM20A415	liquid level control relay for "emptying" function	380 - 415 VAC	2	**1 040.00**
LVM25	*multi-voltage supply 24...240 VAC/DC*			
	• Slimline one module *(18 mm)* wide • Relay outputs: 1 x changeover (SPDT) • Adjustments – sensitivity (2.5...100kΩ) • Selectable – "emptying" *(or)* "filling" function *(with fail safe operation)*			
LVM25240	multi-voltage liquid level control relay	24 - 240 VAC/DC	1	**1 480.00**
LVM30	*dual-voltage supply delay start level control relay*			
	• Relay outputs: 2 x changeover (SPDT) • Adjustments – probe signal delay 1-10sec / pump start delay 0-300sec • Selectable – "emptying" (or) "filling" function *(with fail safe operation)*			
LVM30A240	dual-voltage liquid level control relay	24/220-240 VAC	3	**1 730.00**
LVM30A415	dual-voltage liquid level control relay	110-127/380-415 VAC	3	**1 730.00**
LVM40	*Multifunction level control relay*			
	• Adjustments - sensitivity (2.5...200kΩ) *(separate adj for Max electrodes for foam detection)* - probe signal delay 1-10s / pump start delay 0-30min • Relay outputs: 1 x changeover (SPDT) • Detecting probes: Five detecting probes (Min1, Max1, Min2, Max2 and Com) • Selectable 5 different functions: (A) standard emptying function and alarms (B) standard filling function and alarms (C) emptying function with priority start-up change control (D) filling function with priority start-up change control (E) well draining and tank filling and alarms			
LVM40A240	5 probe multi-function liquid level control relay	220 - 240 VAC	3	**2 600.00**
LVM40A415	5 probe multi-function liquid level control relay	380 - 415 VAC	3	**2 600.00**
Level electrodes and holders for conductive liquids				
SN1	1-pole insulated electrode *(AISI 303 stainless steel)* for LVM relays			**186.00**
PS3S	electrode holder for 3 rod probes/electrodes			**191.00**
P1000S	electrodes for above PS3S holder	*(1 meter length)*		**91.00**
FS03-3P	electrode spacer disc	*(for extending probe length)*		**37.00**
PXL	electrode extension locknut	*(for extending probe length)*		**34.90**
Pump start-up priority change relay				
	To balance operation times, hence wear of two pumps, compressors, generators when two units *(primary and standby)* are installed. • Outputs: 2 x NO (SPST) • Multi-voltage: 24/48 VDC / 2...240 VAC			
LVMP05	pump priority change relay	24 - 48 VDC / 24 - 240 VAC	1	**1 130.00**
LVMP10A240	pump priority change relay with 4 I\O	220 - 240 VAC	3	**1 730.00**

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LVFS series - Float switches

Float switches for automation of electrical equipment - pumps, solenoid valves, alarms, motorised sluice gates etc. They feature an internal changeover contact operated in accordance with the level of liquid where the float is located. Cables used are high-quality and offer excellent mechanical and chemical resistance over time.

- Relay with changeover contact 10A 250 VAC 50/60Hz
- Compliant with standards: TUV, IEC/EN 60730-1, IEC/EN 60730-2-15

Scan to watch video

LVFSP1W05

For grey water — IP68

Used for civil and industrial control of grey water levels, e.g. rainwater, groundwater, or cooling water from industry.

- PVC cable
- The MIN and MAX levels can be adjusted by varying the distance between counterweight and float
- Changeover contact permits selection of filling and emptying function during regulator wiring

type	activation angle	cable length	supplied with counterweight	max. pressure	description	price
LVFSP1W05	30°	5 meter	yes	2 bar	float level switch for grey water	**541.00**
LVFSP1W10	30°	10 meter	yes	2 bar	float level switch for grey water	**751.00**
LVFSP1W15	30°	15 meter	yes	2 bar	float level switch for grey water	**1 510.00**

LVFSA1D10

For drinking water — IP68

These float switches are suitable for drinking water and foodstuff applications such as aqueducts, fountains, aquariums, drinks, fish hatcheries, swimming pools, etc. Realised with a non-toxic polypropylene outer shell, a stainless steel untreated sphere, and an AD8 cable with health certification ACS *(Attestation de Conformité Sanitaire)* outer sheath in PVC suitable for drinkable water immersion and use with food products.

- PVC cable ACS + AD8 certified
- Provided with stainless steel counterweight (AISI 316)
- The MIN and MAX levels can be adjusted by varying the distance between counterweight and float
- Changeover contact permits selection of filling and/or emptying function during regulator wiring

LVFSA1D05	30°	5 meter	yes (AISI 316)	2 bar	float level switch for drinking water	**1 710.00**
LVFSA1D10	30°	10 meter	yes (AISI 316)	2 bar	float level switch for drinking water	**2 250.00**
LVFSA1D15	30°	15 meter	yes (AISI 316)	2 bar	float level switch for drinking water	**2 940.00**

LVFSN1B05

For dirty water — IP68

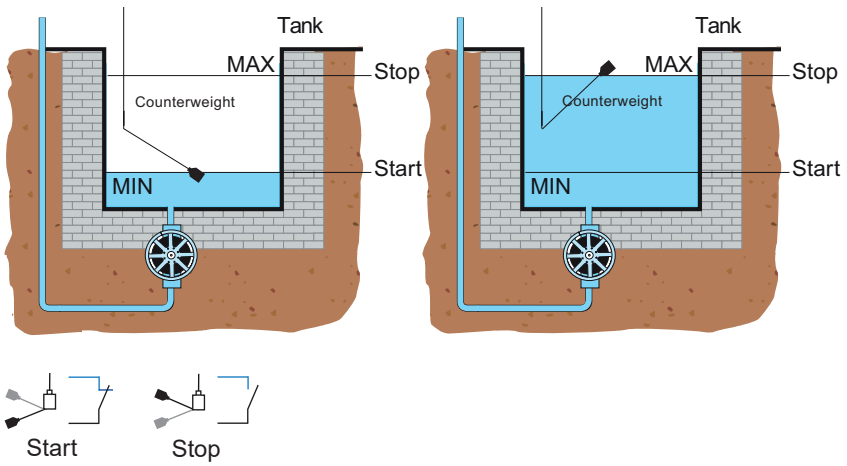
For civil and industrial control of dirty water levels, e.g. sewage or waste water from industry. Made of one-piece blow-moulded external polypropylene casing, with fixed internal counterweight located in the cable exit area. The regulator contact is positioned centrally in its own watertight chamber, insulated from external casing by injected closed-cell foam.

- Level control usually performed using two float switches, one for MIN. and another for MAX. levels
- Cable H07 RN-F3X1 *(Neoprene)*

LVFSN1B05	30°	5 meter	yes *(internal)*	10 bar	float level switch for dirty water	**2 070.00**
LVFSN1B10	30°	10 meter	yes *(internal)*	10 bar	float level switch for dirty water	**2 580.00**
LVFSN1B15	30°	15 meter	yes *(internal)*	10 bar	float level switch for dirty water	**4 120.00**

Example: Filling function for LVFS series

The level regulator contact closes the lower circuit at minimum level and opens the circuit when the float reaches the upper maximum/minimum level.



ENERGY COMFORT SAVINGS

10 series - Daylight switches

Light dependant relays for automatic control of external lighting according to ambient light level.

- Adjustable sensitivity: 1…80 lux
- Built-in time delay: *(ON - 15 sec / OFF - 30 sec)*
- Ambient range: -30…+70°C

104182300000

type	switch current	contact config.	supply voltage	lux setting	delay ON/OFF	description	price
10 series - Daylight switches				**IP54**			
10.41 – Light dependant relays *(daylight switches)*						*(H) 111 x (W) 59 x (D) 40 mm*	
• LED indication of relay status • Wall or pole mounting *(brackets supplied)*							
104182300000	16A	1 NO	230 VAC	1...80 lux	15/30s	standard daylight switch	**1 080.00**
10.42 – 2 independent outputs with individual lux settings							
104282300000	16A	2x 1 NO	230 VAC	2x 1...80	15/30s	2 circuit daylight switch	**1 350.00**
10.51 – Miniature light dependant relays *(daylight switches)*						*(H) 81 x (W) 37 x (D) 37 mm*	
• LED indication of relay status • Wall or pole mounting *(brackets supplied)*							
105182300000	12A	1 NO	230 VAC	1...80 lux	15/30s	mini daylight switch	**959.00**
10.61 – Hole mount *(Ø 18 mm)*						*(H) 48 x (Ø) 81*	
• Can be mounted directly on street light body							
106182300000	16A	1 NO	230 VAC	*(fixed)* 10	15/30s	hole mount daylight switch	**700.00**

105182300000

11 series - Daylight switches with separate light sensor

Light dependant relays for automatic control of external lighting according to ambient light level - with separate light sensor.

- Modular DIN rail mounting *(same cutout as standard MCBs)*
- Selectable: std range 1...80lux / high range 30…1000lux / permanent ON or OFF
- LED indication of relay status

11.31 series - 17.5 mm wide						*(H) 89 x (W) 17.5 x (D) 61 mm*	
113182300000	16A	1 NO	230 VAC	1…100	15/30s	modular daylight switch	**1 050.00**
113100240000	16A	1 NO	12/24 VAC/DC	1…100	15/30s	modular daylight switch	**1 270.00**
11.42 series - 2 independent outputs with individual lux settings						*(H) 89 x (W) 35 x (D) 61 mm*	
114282300000	12A	2x 1 NO	230 VAC	2x 1-1000	15/30s	2 circuit daylight switch	**2 080.00**
Light sensors for 11 series modular light dependant relays							
01102	sensor	IP54	surface			mount light sensor for 11 series modular relays	**271.00**
Flush mount light sensor *(mounts through 15/18 mm Ø hole)* **for modular relays**							
01103	sensor	IP66/67	flush			mount light sensor for 11 series modular relays	**487.00**

1131...

01103

Modular time switches NFC programmable *(with smartphone)* *(H) 89 x (W) 35 x (D) 61 mm*

Finder digital time switches incorporate easy to use NFC *(Near Field Communication)* for fast, flexible programming of time via a smartphone, can also be performed via the front mounted joystick control

- Versions with 1 or 2 contacts - 16A
- 110…230 VAC/DC supply
- Internal battery *(easily replaceable)* for set-up and programming without supply voltage
- Wide backlit display for easy programming and visualisation

type	time range	contact config.	reserve	min. setting	description	price
Digital *(analogue-style)* **time switch**					easily configurable for daily or weekly programming	
125182300000	24hr/7 day	1 CO	yes	30 min.	digital time switch	**1 820.00**
Digital time switch with programmable pulse output *(for school bell lunch/tea/interval ringing)*						
• Manual override facility • Pulse output adjustable *(1 sec...59 min)* • Holiday program						
126182300000	7 day	1 CO	yes	1 min.	digital time switch with pulse output	**2 170.00**
Astro time switches *(calculates sunrise/sunset according to longitude/latitude coordinates)*						
• Astro program: calculation of sunrise and sunset times through date, time, location coordinates • Programmable offset from Astronomic times *(up to 90 min)* *(H) 89 x (W) 35 x (D) 57 mm*						
12A182300000	7 day	1 CO	yes	1 min.	astro programmable time switch	**2 350.00**
12A282300000	7 day	2 CO	yes	1 min.	astro programmable time switch	**2 810.00**

126182300000

Above ZAR prices do not include VAT. E&OE

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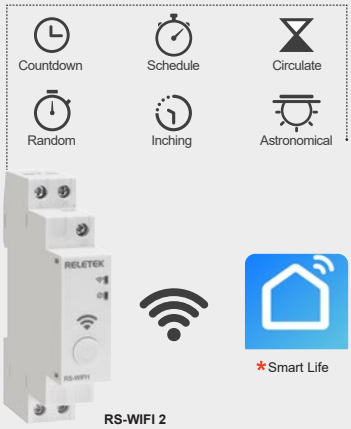


RS-WIFI 2

* *Downloadable via the Play Store or App store*

WiFi smart switch

The RS-WIFI smart switch is a programmable switch/timer, easily programmable via a smart phone using WiFi or Bluetooth. Simply download the Smart Life app for use with Android or iPhone.

The smart switch can easily be programmed as a:

Switch: Remotely controlled ON/OFF switch *(phone indication of switch status)*
Timer: Permits a countdown timing function of the connected device
Time switch: Daily, weekly programs/cycles down to second pulses *(using inching mode)*
Also with astronomical function to calculate sunrise and sunset times based on geographic positioning *(longitudinal and latitudinal location)* and time zone, thus avoiding the need for external daylight switches and sensors

- Front facia override button *(external pulse terminal also provided)*
- Output contacts: 1 NO - 16A / AC1
- Compact dimensions: 1 module *(18 mm wide)* DIN rail mounting
- Connection: WiFi and Bluetooth connection available

type	supply voltage	output relay	description	width in 18 mm	price
RS-WIFI 2	24 - 240 VAC/DC	1 x NO	modular WiFi smart switch	1	**500.00**
RS-WIFI 12	12 - 24 VAC/DC	1 x NO	modular WiFi smart switch	1	**560.00**

RS-TA14

Electronic timing devices

Time relays

- Micro controller based
- Electrical life: 10^5
- Mechanical life: 10^6
- Output contacts: 1 C/O 8A / AC1
- LED indication: “Power” and “Relay” status
- Housing: Self-extinguishing material UL94-V-0
- Dimensions: 1 module *(18 mm wide)* DIN rail mounting

Multi-voltage, multi-range timer

- Rep accuracy: <0.2%
- Supply voltage: Multi-voltage - AC/DC 12...240V
- Time ranges: Multi-range - 1s / 10s / 1m / 10m / 1h / 10h / 1day/ 10days / ON / OFF

ON-Delay timer

RS-TA14	12 - 240 VAC/DC	1 x C/O	ON-delay modular timer	1	**373.00**

Interval (OFF-delay) timer

RS-TB14	12 - 240 VAC/DC	1 x C/O	interval (OFF-delay) modular timer	1	**373.00**

RS-TM14

Multi-function, multi-voltage, multi-range timer (10 functions)

- ON-delay
- OFF-delay
- Flasher OFF first
- Flasher ON first
- Delay impulse generation (0.5s)
- OFF-delay on impulse *(rising edge)*
- OFF-delay on impulse *(falling edge)*
- Switch ON/OFF delay
- Latching relay
- Time impulse released by rising edge with switch OFF-delay

- Time ranges: Multi-range - 1s / 10s / 1m / 10m / 1h / 10h / 1d / 10d / ON / OFF

RS-TM14	12 - 240 VAC/DC	1 x C/O	multi-function modular timer	1	**450.00**

Asymmetric cycler timer - Multi-range

- Unequal repeat timer with separate adjustment of ON and OFF times
- Can be configured for ON or OFF time first
- Cycler beginning with pulse or pause *(selectable)*
- Output contacts: 2 C/O 8A / AC1
- Time ranges: Multi-range - 1s / 10s / 1m / 10m / 1h / 10h / 1d / 10d / 30d / 100days

RS-TC23	24 - 240 VAC/DC	2 x C/O	asymmetric cycler modular timer	1	**560.00**

RS-TT13

Delay on de-energisation *(true OFF-delay without power supply)*

Relay energises on applying supply and remains energised for a preset time period after supply has been removed.

- Output contacts: 1 C/O 8A / AC1
- Time ranges: 0.1-1s / 1s-10s / 0.1m-1m / 1m-10m *(selectable)*

RS-TT13	24 - 240 VAC/DC	1 x C/O	delay on de-energisation timer	1	**711.00**

Above ZAR prices do not include VAT. E&OE

Time switches

RD-TPD1

Digital time switches

Used for programming time functions for various applications such as lighting control, heating, household appliances, shop windows and many other devices.

The pulse program can be used for school or factory bell ringing. An internal battery maintains clock time and all program settings in the event of power failure.

- Compact dimensions: 2 module *(36 mm wide)* DIN rail mounting
- Number of programs: 52 programs
- Programs: Weekly, daily and pulse
- Operating modes: Manual, automatic, holiday
- Contact rating: 16A / 250V AC1
- Standards: EN/IEC60730-1, EN/IEC60730-2-7

type	supply voltage	time range	min. setting	power reserve	description	width in 18 mm	price
Digital time switches							
Single channel digital weekly time switch							
• 52 programs • Automatic transfer of weekdays • Holiday mode • LCD display • 1 changeover contact • Sealable front cover, easy setting via 4 frontal buttons							
RD-TPD1	220 - 240 VAC	7 day	1 sec	3 year	digital time switch	2	**373.00**
Dual channel digital weekly time switch							
• 90 programs • Back-lit LCD display • 2 changeover contacts • 10 year power reserve *(lithium battery)* • Double channel *(each channel programmable independently)*							
RD-TPD2	24 - 264 VAC/DC	7 day	1 sec	10 year	digital time switch	2	**711.00**

RD-TPD2

Digital astronomical time switches

RD-TPA series astronomical time switches calculate sunrise and sunset times based on geographic positioning *(longitudinal and latitudinal location)* and time zone. Thus avoiding the need for external daylight switches and sensors.

- Contact rating: 16A / 250V AC1
- Operating modes: Manual, automatic, holiday
- Standards: EN/IEC60730-1, EN/IEC60730-2-7
- Compact dimensions: 2 module *(36 mm wide)* DIN rail mounting
- Program: Astronomical program *(for sunrise and sunset calculation)*

Single channel digital astronomical time switch							
• LCD display • 1 changeover contact • Sealable front cover, easy setting via 4 frontal buttons							
RD-TPA1	220 - 240 VAC	7 day	–	3 year	astronomical time switch	2	**418.00**
Dual channel digital weekly time switch							
• Back-lit LCD display • 2 changeover contacts • 10 year power reserve *(lithium battery)* • Double channel *(each channel programmable independently)*							
RD-TPA2	24 - 264 VAC/DC	7 day	–	10 year	astronomical time switch	2	**728.00**

RD-TPA2

Staircase timer

The staircase timer provides a pre-determined ON time to operate a light or group of lights for illumination of a staircase, corridor, passageway, bathroom etc.

On receiving a pulsed input, the unit operates a contact *(switching lights on)* for a predetermined time period, where after it switches off until the next pulse

- 1 NO - 16A contact AC1
- 1 module DIN-rail mounting
- Possibility of 3 or 4 wire connection
- Preselect time range 0.5...20 minutes
- LED indication of “Power” and “Relay”status
- ON - AUTO - OFF slide switch on facia of timer *(manual override)*

RS-TSL	220 - 240 VAC	20 min	1 min	–	modular staircase timer	1	**338.00**

RS-TSL

Voltage monitoring devices

- 1 CO 8A /AC1
- Micro-processor based
- 1 module DIN-rail mounting
- Supply voltage monitoring *(True RMS measurement)*
- Threshold voltage and trip delay independently adjustable

RS-MV13

type	overvoltage setting (V)	undervoltage setting (V)	trip delay (s)	description	width in 18 mm	price
Single-phase voltage monitor						
The **RS-MV13** relay monitors its supply voltage. If the monitored voltage exceeds the preset overvoltage or undervoltage settings, the relay trips until the voltage returns to within the preset levels. An adjustable *(0.1...10sec)* trip delay is also incorporated. • Microcontroller based • Auto reset • LED indication of control state						
RS-MV13	225 - 275V	1\65 - 215V	0.1…10s	single-phase voltage monitor	1	**444.00**
Three-phase voltage monitor						

RS-MV31M

- Microcontroller based
- 1NO + 1NC output 8A
- True RMS measurement
- LED indication of “supply” and “output” state
- N phase failure protection in 3 phase 4 wire setting

Phase failure/reversal relay

Monitors supply, ensuring all phases *(+ Neutral in 4 wire system)* are present and in correct sequence. **RS-MV32M** additionally monitors phase asymmetry/imbalance *(fixed at 8%)*

RS-MV31M	–	–	phase failure/phase reversal relay	1	**400.00**
RS-MV32M	–		phase failure/phase reversal/asymmetry (8%) relay	1	**427.00**

Under/Over voltage monitor + phase failure/reversal relay

RS-MV34M relay monitors its 3 phase supply. If the monitored voltage exceeds the preset overvoltage or undervoltage settings the relay trips until voltage returns to within preset levels.

RS-MV36M additionally monitors phase failure and phase sequence *(reversal)* and will only reset once monitored voltage is within the preset level and all phases *(including Neutral in 4 wire setting)* are present and in sequence. An adjustable *(0.1...10sec)* trip delay is also incorporated.

Select - 3 phase 3 wire *(or)* 3 phase 4 wire and voltage selectable via facia:

RS-MV36M

Modes	**3 PH 3 wire**	**3 PH 4 wire**	*(selectable)*
Supply Terminals	L1,L2,L3	L1,L2,L3,N	*(selectable)*
Supply voltage	380/400/415V	220/230/240V	
Operating voltage range	266...540V	154-312V	

RS-MV34M	(105-125%) xUn	(75-95%) xUn	0.1…10s	under/over voltage monitor	1	**515.00**
RS-MV36M	(105-125%) xUn	(75-95%) xUn	0.1…10s	U/O volt+PH failure/reversal monitor	1	**622.00**

Current monitoring relay

RS-MI*A monitors a preset overcurrent or **RS-MI*B** undercurrent. If monitored current exceeds *(or)* falls below preset level the relay trips after completion of a preset trip delay, and only resets once current is within the preset limits. An adjustable *(1-6sec)* start-up delay is also incorporated.

General features:

- 1 C/O output - 8A AC1
- 1 module DIN-rail mounting
- Adjustable trip and start-up delay
- Adjustable current actuation threshold
- Can be used in conjunction with Current Transformers (CT’s) up to 600A
- Hysteresis - 5% current setting value
- Rated insulation voltage - 250 VAC
- Measurement frequency 45-65Hz

RS-MI5A

Current monitor - overcurrent

RS-MI5A	0.5-5A	–	0.5…10s	modular overcurrent monitor	1	**560.00**
RS-MI10A	1-10A	–	0.5…10s	modular overcurrent monitor	1	**560.00**

Current monitor - undercurrent

RS-MI5B	–	0.5-5A	0.5…10s	modular undercurrent monitor	1	**560.00**

Above ZAR prices do not include VAT. E&OE

RS-LC3

SNL1

Liquid level control relays

RS-LC liquid level relay monitors conductive liquid levels using electrodes to provide level status. When level reaches upper level, the relay disconnects the pump until the level reaches the lower level whereupon the relay re-energises switching the pump on.

RS-LC3 permits selection for "filling" or "draining" application and adjustable *(0.5...10s)* trip delay.

- Microprocessor based
- Adjustable sensitivity 5kΩ...100kΩ
- Operates with 2 or 3 electrodes
- Selectable "draining" or "filling" function ***(RS-LC3)***
- 1 module DIN-rail mounting

type	supply voltage	sensitivity adjustment	trip delay	description	width in 18 mm	price
Liquid level relays						
RS-LC1	24 - 240 VAC/DC	5~100kΩ	2s *(fixed)*	modular liquid level relay	1	**489.00**
With adjustable trip delay and "filling" or "draining" selector						
RS-LC3	24 - 240 VAC/DC	5~100kΩ	0.5-10s	modular liquid level relay	1	**578.00**
Accessories for liquid level relays						
SNL1	–	stainless steel Aisi 316 electrodes for liquid level relays			*(ea)*	**72.00**

TS-01

Twilight *(daylight)* switches

Surface or pole mounting *(IP54)*

- 16A/250 VAC AC1
- Sensitivity adjustment 2 to 200 lux
- LED indication for calibration point

TS-01	230 VAC	–		surface/pole mounting day/night switch	–	**338.00**

RD-ST1

Modular daylight switch *(2 module DIN-rail mount)*

- 25A/250 V AC1
- Sensitivity adjustment 2 to 100 lux
- External light sensor *(included with switch) 1m*
- Fixed switching delay - ON (2...5s) and OFF (10...15s) delay

RD-ST1	230 VAC			modular day/night switch with external sensor	2	**338.00**

Electro: Relay interface module - Slimline *(IP20)*

The CF41 series relay interface module *(slimline)* is a cost effective solution for interfacing to PLCs and automation controllers. They provide an ultra-slim solution *(6.2 mm wide)* with high current switching (6A...250VAC).

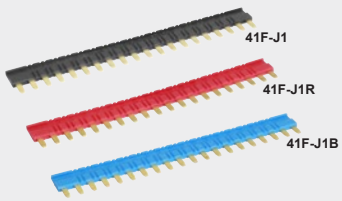
- Slimline (6.2 mm) (H) 88.3 x (W) 6.3 x (D) 72.4 mm
- DIN-rail mounting - screw terminal
- Integrated LED indication and protection circuit
- Integrated retaining clip/relay ejector *(for ease of relay removal)*
- Provision for fitting pluggable jumper bars *(reducing wiring time)*

Rated current:	6A...250 VAC / 30 VDC	
Rated AC1 load:	1500VA	
Maximum switching voltage:	400 VAC / 125 VDC	
Approvals:	VDE (40020043), UL (E133481)	
Dielectric strength	- Coil and contacts	4kV *(1 min)*
	- Open contacts	1kV *(1 min)*

C41F-1Z-C2-1

type	supply voltage	contact	description	terminal type	price
C41F-1Z-C2-1	24V AC/DC	1 CO (SPDT)	DIN-rail mount relay interface module	screw	**160.00**

Accessories for above relay interface



type	colour	No. ways	description		price
41F-J1	black	20 way	jumper link *(bridge bar)* for relay interface	–	**32.10**
41F-J1R	red	20 way	jumper link *(bridge bar)* for relay interface	–	**32.10**
41F-J1B	blue	20 way	jumper link *(bridge bar)* for relay interface	–	**32.10**
Adaptor *(8 way) - interconnects 8 interface modules to PLC outputs via 14-pole ribbon cable*					
AR-8P	black	8 way	interconnect adaptor for relay modules	–	**106.00**

Modular electronic timer

261018

type	description	supply voltage	price

Multi-range - Multi-function - Multi-voltage, modular timer

- Output contact: 1 C/O 5A 250 VAC
- Operating temp: -20...+60°C
- Supply frequency: 35 - 70 Hz
- Multi- time range: Seconds: 1/10/100, Minutes: 1/10, Hours 1/10/100, Days 1/10
- Multi-voltage: 24…300 VAC/DC
- Multi-function:

On-delay	*(on energising, relay only switches after preset time period)*
Interval (off-delay)	*(on energising, relay switches for preset time then resets)*
On/off delay	*(on energising, relay remains OFF for preset off-time, then switches ON for preset on-time, then resets)*
Equal repeat (off)	*(equal repeating starting with preset OFF time first)*
Equal repeat (on)	*(equal repeating starting with preset ON time first)*

T1-M5 Multi-Range/Function/Voltage electronic timer *(IP20)* *(width: 17.5 mm)*

- Modular DIN rail mounting - *(H) 90.4 x (W) 17.5 x (D) 66.5 mm (aligns with standard 1 pole MCB)*

261018	multi-range, multi-function, multi-voltage modular electronic timer	24 - 300 VAC/DC	**768.00**

261022

T1-K Multi-function modular timer *(pulse controlled)*

As above T1-M5 also with pulse control of functions *(via external contact)*
configurable with interval on rising or falling edge triggering as well as on-delay with memory

261019	multi-range/function/voltage modular timer with pulse control	24 - 300 VAC/DC	**837.00**

SD1 Star-Delta modular timer *(IP20)* *(width: 17.5 mm)*

Applying supply activates the preset "star" time period where after the preset (20…500msec) transition delay occurs before the "delta" relay is energised, it remains in this position until supply is removed.

- Modular DIN rail mounting - *(H) 90.4 x (W) 17.5 x (D) 66.5 mm (aligns with standard 1 pole MCB)*
- Multi-voltage: 150...500 VAC
- Star time: tλ 1…30 seconds

261022	modular DIN rail mounting electronic star-delta timer	150 - 500 VAC	**993.00**

Liquid level controller — IP20 — *(width: 36 mm)*

LC3 controls levels of conductive liquids by measuring the resistance of the liquid between probes.
If measured resistance is less than the preset value, the output relay will be activated.
To avoid electrolysis, an AC signal is applied to the liquid

- Modular DIN rail mounting - *(H) 90 x (W) 36 x (D) 58 mm (aligns with standard 2-pole MCB)*
- Sensitivity adjustment: 5...100kΩ
- Time delay: 0.1 - 10 sec

270272

270299	modular DIN rail mounting electronic liquid level controller	150 - 500 VAC	**813.00**

Protection relays — IP20 — *(width: 17.5 mm)*

- Output contact: 1 C/O 10A 250 VAC

Phase-failure/reversal/imbalance M1D-SA

- Fixed time delay: 500msec

270272	modular DIN rail mount 3 ph phase failure/reversal/imbalance relay	380 - 480 ±25%	**948.00**

Voltage monitor with phase-failure/reversal/imbalance — IP20 — *(width: 17.5 mm)*

- Modular DIN rail mounting - *(H) 90.4 x (W) 17.5 x (D) 66.5 mm (aligns with standard 1 pole MCB)*
- Adjustable - *(via front facia dials)*

Over voltage:	+5...+20% with OFF *(override)* selection
Under voltage:	-5…-20% with OFF *(override)* selection
Delay time:	0.1…10sec

G1D-SA - 3 phase (L1-L3)

270283	modular 3ph over/under voltage monitor with ph failure/reversal	380 - 480 ±25%	**948.00**

G1-SA - 3 phase + neutral (L3-N)

270282	modular 3ph+N over/under voltage monitor + ph failure/reversal	230 ±25%	**810.00**

270282

Current monitor relay — *36 mm (2 modules wide)*

CPR-16	Current measurement:	0.1 … 16A AC	Hysteresis: 5…20%	
	Time delay adjustment:	0.1 … 10 sec		
270270	0.1…16A	modular DIN rail mounting current monitor	36 - 300 VAC/DC	**1 470.00**

Above ZAR prices do not include VAT. E&OE

ASCON series

Analog signal converters

602310

The Ascon range of signal converters are compact electronic devices which measure input parameters converting them to another signal form continuously.
Converting temperature, voltage and current parameters into V, mV, mA, and RS485 outputs.

- Different inputs and outputs are configurable via front mounted rotary selector dials
- 3 way - 1.5kV RMS Isolation (Input, output and supply electrically isolated from one another)
- Compact modular *(H) 90.4 x (W) 17.5 x (D) 66.5 mm (same dimensions as single pole MCB)*

type	supply voltage	selectable inputs		selectable outputs	description	price
ASCON 311		Signal converter *(configurable)*				
602300	11 - 30 VDC	0…60mV	0…5mA	0…5V	configurable analog signal converter	**4 520.00**
		0…100mV	0…10mA	5…0V		
		0…250mV	0…20mA	0…10V		
		0…500mV	-5…5mA	10…0V		
		0…1V	-10…10mA	-5…5V		
		0…2V	-20…20mA	0…20mA		
		0…2.5V	4…20mA	20…0mA		
		0…5V	0…24mA	4…20mA		
		0…10V	4…24mA	20…4mA		
		0…20V	0…12mA	-20…20mA		

602320

ASCON 321		PT100 converter *(configurable)*				
602310	11 - 30 VDC	PT100 (2,3,4 wire) -150°C…800°C *(configurable)*		**V/mA** same as Ascon 311 *(above)*	configurable PT100 signal converter	**4 520.00**
ASCON 331		Thermocouple converter *(configurable)*				
602320	11- 30 VDC	**J:**	-200°C...1200°C	**V/mA** same as Ascon 311 *(above)*	configurable thermocouple signal converter	**4 520.00**
		K:	-200°C...1350°C			
		E:	-200°C… 950°C			
		R:	-50°C...1750°C			
		S:	-50°C...1750°C			

602400

ASCON 352		Signal temperature converter *(with RS485)*			
602400	11 - 30 VDC	mV, V, mA PT100 (2,3,4 wire) Thermocouple (J,K,E,R,S)	**RS485**	signal temperature converter to RS485	**3 790.00**

Voltage and current transducers

IBR1...

Converts voltage and current signals into analog signals for monitoring/managing purposes

- 3 way - 1.5kV RMS Isolation
- Compact modular *(H) 90 x (W) 36 x (D) 57.5 mm (same dimensions as 2-pole MCB)*

VT3-AC		TRMS voltage transducer			
600111	85 - 265 VAC	0-24/36/54/80/120/170/250/ 400/450/500V AC *(10 ranges)*	**V/mA** same as Ascon 311 *(above)*	TRMS AC voltage transducer	**4 260.00**
600113	10 - 36 VDC			TRMS AC voltage transducer	**5 080.00**
600115	9 - 30 VDC			loop powered voltage t/ducer	**4 260.00**
VT3-ACDC-24		TRMS voltage transducer			
600116	10 - 36 VDC	0-24/54/120/250/450V AC/DC *(10 ranges)*	**V/mA** same as Ascon 311 *(above)*	TRMS AC/DC voltage transducer	**2 260.00**
CT3		TRMS current transducer			
600110	85 - 265 VAC	0-1/2/3/4/5A AC/DC *(10 ranges)*	**V/mA** same as Ascon 311 *(above)*	TRMS AC current transducer	**3 980.00**
600112	10 - 36 VDC			TRMS AC current transducer	**2 260.00**
600114	9 - 30 VDC			loop powered current t/ducer	**3 980.00**

CTA4100A

Delta - CTA - Timer / Counter / Tachometer *(Panel mount 48 x 48 mm²)*

CTA 3-in-1 Timer/Counter/Tachometer is able to receive external input signals and calculate the times of events, frequency and speed. The CTA unit can be applied to batch counting, total counting, length measurement.

- External power supply: 12 VDC ±10%, 100mA *(integrated power supply)*
- Display: Double-line, 6-digit negative transmissive LCD display
- Input signal: Non-voltage input (NPN) / Voltage input (PNP)
- Output 1: Relay: SPST max.250 VAC, 5A + Transistor: NPN open collector
- Output 2: Relay: SPDT max.250 VAC, 5A *(or)* Transistor: NPN open collector
- Easy DIP switch setup:
  - Timer - timing up or down 0.01 sec - 999.999 hours; on-delay, interval, repeat *(power on, pulse on, pulse off)*
  - Counter - counting up or down 1 or 2 stage, batch, total, dual counting *(speed selection: 1/30/200/3k/5k/10k Cps)*
  - Tachometer - measurement in Hz *(can be configured to read RPM)*

type	description	output 2	RS-485	supply	price
CTA4100A	multi-function timer-counter-tachometer	relay	no	100 - 240 VAC	**1 770.00**
CTA4000A	multi-function timer-counter-tachometer	transistor	no	100 - 240 VAC	**1 770.00**
CTA4001A	multi-function timer-counter-tachometer	transistor	yes	100 - 240 VAC	**1 870.00**
CTA4100D	multi-function timer-counter-tachometer	relay	no	24 VDC	**1 770.00**
CTA4101D	multi-function timer-counter-tachometer	relay	yes	24 VDC	**1 930.00**

L48TP...

Lovato - Panel mounting timers *(48 x 48 mm²)* *Changeover relay (5A 250 VAC)*

- Multi-voltage: 24 VAC/DC, 110, 220...240 VAC
- Housing: 8-pin plug-in housing

On-delay timer - delay-on make *(relay switches after preset time elapses)*

- Multi-time range, multi-voltage, on-delay panel mount electronic timer

		time range	
L48TPS240	on-delay multi-range/voltage panel mount electronic timer	3/12/100/780sec	**803.00**
L48TPM240	on-delay multi-range/voltage panel mount electronic timer	3/12/100/780min	**803.00**

Two changeover relays *(one configurable for instantaneous switching)*

- Multi-range, single voltage, on-delay panel mount electronic timer

L48TPBM240	on-delay multi-time range panel mount electronic timer	1s/10s/1min/10min	**935.00**

Accessories for above L48 series panel mount timers

ES8CNER	8 pin surface/DIN rail mounting relay socket for L48 timers	*(screw terminals)*	**143.00**
P3G08	8 pin socket for panel mounting L48 timers *(rear terminals)*	*(screw terminals)*	**48.00**
D-48Y	flush-mounting bracket for panel mounting above L48 timers		**32.70**

S48/704/B6/...

CDC - Electromechanical timing devices *(motorised)*

Multi-range motorised timers 6/60sec - 6/60min - 6/60hrs *(on one timer)*

Surface/DIN rail mount motorised timer

S45/604/B6/02A	1x instantaneous + 1x delay multi-range motorised timer	24 VAC	**4 620.00**
S45/604/B6/11A	1x instantaneous + 1x delay multi-range motorised timer	110 VAC	**4 620.00**
S45/604/B6/22A	1x instantaneous + 1x delay multi-range motorised timer	220 VAC	**4 620.00**

Flush/panel mount motorised timer

S48/704/B6/02A	1x inst + 1x delay multi-range motorised timer	p/mount 48 mm²	24 VAC	**4 360.00**
S48/704/B6/11A	1x inst + 1x delay multi-range motorised timer	p/mount 48 mm²	110 VAC	**4 360.00**
S48/704/B6/22A	1x inst + 1x delay multi-range motorised timer	p/mount 48 mm²	220 VAC	**4 360.00**
1400/704/B6/22A	1x inst + 1x delay multi-range motorised timer	p/mount 72 mm²	220 VAC	**4 950.00**

Accessories

L48P8	rear connected 8 pin screw terminal socket	for S48/1400 timers	**194.00**

1400/704/B6/11A

Finder - Asymmetrical timer *(up to 300hrs)* *(use **L48P8** for termination)*

889202400000	2-pole	panel mount asymmetrical flasher	240 VAC	**2 990.00**

EM - Mechanical clockwork timers - panel mount *16 A 250 VAC (1NO + 1NC)*

- Mounting by 2 x M4 screws
- Supplied with graduated dial + knob

type	Amps	contact	time range	description	price
XTI2049	16A	1NO + 1NC	60 min	MI2 mechanical clockwork timer	**969.00**
XTI2048	16A	1NO + 1NC	120 min	MI2 mechanical clockwork timer	**969.00**
XTI2045	16A	1NO + 1NC	12 hour	MI2 mechanical clockwork timer	**1 040.00**
XTI15163*	16A	1NO + 1NC	24 hour	MI5 mechanical clockwork timer	**1 510.00**

XTI15163

* *Requires separate supply for 220V internal motor*

Above ZAR prices do not include VAT. E&OE

DOD

Electro D series - Modular timing devices

The **Electro "D"** range of control and timing devices are compact modular units for easy introduction into standard panels and/or distribution boards. They mount directly onto DIN rail and align with standard miniature circuit breakers *(MCB's)*.

- Compact DIN rail mounting: *(H) 92 x (W) 36 x (D) 64 mm - (2 modules wide)*

	No.	time ranges
multi-range (adjustable time ranges)	**1**	6 sec
	2	60 sec
	3	6 min
	4	60 min
	5	6 hr
	6	60 hr
	7	ON
	8	OFF

	No.	functions
multi-function	**A**	on-delay
	B	interval
	C	equal repeat
	D	0ff delayed *(pulse controlled)*
	E	interval *(pulse controlled)*
	F	step relay
	G	pulse generator
	H	on/off delay

type	supply voltage*	time range	function	description	price
Multi-range/multi-function timers - *(8 x selectable time ranges / 8 x selectable functions)*					
Multi-function, multi-range timers designed with latest technology includes all commonly used functions and time ranges *(selectable via front mounted dials).*					
Single voltage version					
DMFT012AD	12 VAC/DC	selectable via rotary selector on facia of timer **1...8**	selectable via rotary selector on facia of timer **A...H**	multi-range/function timer	**1 040.00**
DMFT110A	110 VAC			multi-range/function timer	**1 040.00**
DMFT230A	230 VAC			multi-range/function timer	**1 040.00**
DMFT400A	400 VAC			multi-range/function timer	**1 040.00**
DMFT024AD	24 VAC/DC			multi-range/function timer	**1 040.00**

DSD

True off delay *(delay on de-energisation)* **electronic timer**

Multi-range OFF delay *(delay on release)* timer with advanced power back-up circuitry to deliver wide time ranges. The unit must be powered for no less than 30 sec + 30% of set time range.
(If permanent power is available DMFT timer should be used.)

- Delay on de-energisation timer *(delay on removal of supply)*

DOD230A	230 VAC	**1...4**	off delay	delay on de-energisation timer	**999.00**

Unequal repeating electronic timer multi-range (ON/OFF)

Multi-range electronic timer designed with latest technology covers most combinations of ON/OFF time ranges selectable via front mounted dials and DIP switch.

- Asymmetrical recycler with independently adjustable ON and OFF times

DUR110A	110 VAC	selectable via selector on facia **1...8**	repeat	multi-range unequal repeat timer	**1 040.00**
DUR230A	230 VAC		repeat	multi-range unequal repeat timer	**1 040.00**
DUR024AD	24 VAC/DC		repeat	multi-range unequal repeat timer	**1 040.00**

Star-Delta timer

Star/Delta timer with adjustable transition delay for starting inductive motors. Applying supply activates a contact for the preset "star" period *(3-60 sec)* the contact disconnects on lapse of this period for the preset transition period *(4-180 ms)* where after the relay switches to the "delta" position until supply is removed.

- Adjustable "star" time: 3-60 sec
- Adjustable "transition" time: 40-180 ms

DSD110A	110 VAC	3-60 sec	star delta	rail mount star-delta timer	**939.00**
DSD230A	230 VAC	3-60 sec	star delta	rail mount star-delta timer	**939.00**
DSD400A	400 VAC	3-60 sec	star delta	rail mount star-delta timer	**939.00**

DDCT

Digital counter / timer *(H) 92 x (W) 54 x (D) 64 mm*

Multi-function four digit preselect impulse counter/timer Setup and ranges can be adjusted with an easy to access and control menu system to make all common functions available.

- 4 digit preselect impulse counter with selectable prescaler, configurable for *(up/down)* counting
- Digital timer with pulse start/stop configurable for *(up/down)* lapse time indication
- 4 time ranges: 1...999.9s / 9999 min

DDCT230A	230 VAC	1s - 9999m	counter/timer	digital rail mount counter / timer	**1 530.00**

* *Other voltage options available on request*

DLL4

DPP4

DPF

DVW3

type	supply voltage*	output	function	description	price
Liquid level controllers		*(H) 92 x (W) DLL/DLL4 36/54 x (D) 64 mm*			
Controlling of conductive liquid levels with two/ four probes.					
3 - probe unit - *(2 + common)*		*(H) 92 x (W) 36 x (D) 64 mm*			
• **Function:**	Emptying/ Filling				
DLL230A	230 VAC	2 probes+com	emptying/ filling	liquid level controllers	**921.00**
DLL400A	400 VAC	2 probes+com	emptying/ filling	liquid level controllers	**921.00**
DLL024AD	24 VAC/DC	2 probes+com	emptying/ filling	liquid level controllers	**921.00**
5 - probe unit - *(4 + common)*		*(H) 92 x (W) 54 x (D) 64 mm*			
• **Function:**	Emptying/filling with alarm, emptying/filling with pump priority, container filling/well draining with alarm, electrode test				
DLL4230A	230 VAC	4 probes+com	emptying/ filling	liquid level controllers	**1 420.00**
DLL4400A	400 VAC	4 probes+com	emptying/ filling	liquid level controllers	**1 420.00**
DLL4024AD	24 VAC/DC	4 probes+com	emptying/ filling	liquid level controllers	**1 420.00**
Radio level controller		*(wireless)*			
• DIN radio receiver - 5 km transmission *(line of sight)*					
• Coin Battery CR2032 for level transmitters *(3 year life span)*					
• Two configurable *(radio connected)* relay outputs					
ANT 2	–	–	antenna	one per DWL.. module	**756.00**
Advanced pump protection relay					
Advance pump protection relay to safeguard borehole pumps against damage. The unit is easily calibrated to monitor all important pump characteristics.					
• Over / under current protection					
• Over / under voltage protection and phase rotation *(on 3 phase units)*					
• Running dry restart delay / over current retires					
DPP1230A	230 VAC	1 phase	pump protection	pump monitoring relay	**1 220.00**
DPP3400A	400 VAC	3 phase	pump protection	pump monitoring relay	**1 350.00**
DPP4400A	400 VAC	3 phase	pump protection	with adj./function selection	**1 420.00**
Phase failure/reversal relay		*(sequence and imbalance)*			
Phase failure / reversal monitor for Three-phase supply voltage. For protection against phase reversal, and/or phase loss and phase imbalance.					
DPF1110A	110 VAC	3-phase	phase monitor	phase failure/reversal relay	**828.00**
DPF1400A	400 VAC	3-phase	phase monitor	phase failure/reversal relay	**828.00**
DPF1/K400A*	400 VAC	3-phase	phase monitor	phase failure/reversal relay	**921.00**
DPF1/N400A	400 VAC	3-ph + neutral	phase monitor	phase failure/reversal relay	**921.00**
DPF1525A	525 VAC	3-phase	phase monitor	phase failure/reversal relay	**828.00**
DPF1/K525A*	525 VAC	3-phase	phase monitor	phase failure/reversal relay	**921.00**
* *With adjustable parameters*					
Automatic phase selector					
Monitors three-phase + neutral and selects the phase most suitable for providing a single-phase 230V 50Hz supply to industrial and domestic installations.					
Ideal for supplying essential uninterrupted single phase supply, preventing unacceptable voltage variations.					
• Automatically selects the optimum phase falling within user define pre-set limits					
DPS3230A	230 VAC	3-phase	phase selector	automatic phase selector	**1 740.00**
Voltage window comparator + phase failure					
Monitors supply, ensuring voltage remains within preset over and under limits and that all phases are present and in sequence.					
• Delays :	No delay - startup delay *(10 sec)* - recovery delay *(180 sec)* - reaction delay *(10 sec)*				
DVW1230A	230 VAC	1-phase	comparator	over / under voltage monitor	**1 050.00**
DVW3400A	400 VAC	3-phase	comparator	over / under voltage monitor	**1 060.00**
DVW3N400A	400 VAC	3-ph + neutral	comparator	over / under voltage monitor	**1 050.00**
DVW3525A	525 VAC	3-phase	comparator	over / under voltage monitor	**1 060.00**
Voltage monitor		*monitors a separate voltage than supply.*			
DVM400A-230A	230 VAC		400 VAC monitoring	voltage monitor device	**993.00**
DVM024D-24A	24 VDC		400 VAC monitoring	voltage monitor device	**1 410.00**
DVM30MV-30MV	10-30 VDC		10-30 VDC monitoring	voltage monitor device	**1 050.00**
* *Other voltage options available on request*					

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Modular digital monitoring devices

DCM

The **Electro "D"** range of control and timing devices are compact modular units for easy introduction into standard panels and/or distribution boards. They mount directly onto DIN rail and align with standard miniature circuit breakers *(MCB's)*.

- Compact DIN rail mounting: *(H) 92 x (W) 36 x (D) 64 mm - (2 modules wide)*

type	supply voltage*	current	interface	description	price
Current monitors			*(H) 92 x (W) 36 x (D) 64 mm*		
• Delays :	No delay - startup delay *(10 sec)* - recovery *(180 sec)* - reaction delay *(10 sec)*				
Over (or) under current monitoring.					
Monitors supply, ensuring current remains within preset over (or) under current limits					
DCM5230A	230 VAC	5A	with 5A CT	modular current monitor	**1 210.00**
DCM5400A	400 VAC	5A	with 5A CT	modular current monitor	**1 210.00**
DCM5024D	24 VDC	5A	with 5A CT	modular current monitor	**1 630.00**
DCM15230A	230 VAC	15A	direct 15 A	modular current monitor	**1 210.00**
Current window comparator			*(H) 92 x (W) 54 x (D) 64 mm*		
Monitors supply, ensuring current remains within preset over and under current limits					
DCW5230A	230 VAC	5A	with 5A CT	over / under current monitor	**1 210.00**
DCW15230A	230 VAC	15A	direct 15 A	over / under current monitor	**1 210.00**
Load shed relay			*(H) 92 x (W) 36 x (D) 64 mm*		
Load shed relay featuring high resolution analog converter for precise switching levels. The relay monitors current consumed and disconnects unnecessary load when necessary					
DLS230A	230 VAC	15A	1 circuit	modular load shed relay	**1 160.00**

DLS

type	supply	outputs	function	description	price
Digital temperature controller with timer			*(interfaces with TP1 digital probe)*		
4 digit digital temperature controller, monitors temperature via the TP1 temperature probe *(supplied separately)* Setup and range selection can be adjusted via an easy to access control menu system to make all common functions available.					
• Two set points / relay outputs / PID control					
• Over / under temperature					
DDTC230A	230 VAC	relay	controller	digital temperature controller	**1 530.00**
DDTCT230A	230 VAC	relay	controller	temp controller / 24 hour clock	**1 760.00**
TP1	temperature probe			*(with 3 meter cable)*	**312.00**

Digital voltage window comparator

Monitors supply, ensuring voltage remains within preset over and under limits and that all phases are present and in sequence.

- Over / under voltage and frequency monitoring
- 2 relay outputs for individual functions
- Adjustable delays
- Phase failure/reversal

DDVW3400A	400 VAC	3 phase	monitor	digital voltage monitor	**1 910.00**

DDVW3

Wireless signal extender			*(3 inputs and 3 outputs: Tx and Rx)*		
• Power supply: 10 - 30 VAC/DC					
• License free radio band					
• 7 km transmission - line of sight *(includes Watchdog protection)*					
DRC/M 10-30VDC	10-30 VAC/DC	3 relay	master transceiver	wireless signal extender	**2 220.00**
DRC/S 10-30VDC	10-30 VAC/DC	3 relay	slave transceiver	wireless signal extender	**2 090.00**
ANT 2	antenna for DRC signal extender			for DRC module	**756.00**

* *Other voltage options available on request*

T2M

T2D

R2U

TNE

The **Electro 11 pin plug-in** range of control and timing devices to be installed into a standard 11 pin base making installation and potential future replacement simple and convenient.

- Compact 11 pin plug-in modules: *(H) 80 x (W) 35 x (D) 79 mm*

multi-range (adjustable time ranges)	No.	time ranges
	1	6 sec
	2	60 sec
	3	6 min
	4	60 min

multi-function	No.	functions
	A	on-delay
	B	interval
	C	equal repeat
	D	interval *(pulse controlled)*

type	supply voltage*	time range	function	description	price
Multi-range/multi-function timers - *(4 x selectable time ranges / 4 x selectable functions)*					
Multi-range multi-function plug-in timers incorporating most commonly required functions. Any change made to function or time range by means of front mounted dials will result in a reset of the unit.					
T2M110A	110 VAC	selectable via rear mounted DIP switches **1…4**	selectable via rear mounted DIP switches **A, B, C**	multi-range/function timer	**856.00**
T2M230A	230 VAC			multi-range/function timer	**856.00**
T2M400A	400 VAC			multi-range/function timer	**856.00**
T2M012AD	12 VAC/DC			multi-range/function timer	**856.00**
T2M024AD	24 VAC/DC			multi-range/function timer	**856.00**
T2M048AD	48 VAC/DC			multi-range/function timer	**856.00**
T3M110A	110 VAC		DIP switches **A…D**	multi-range/function timer	**1 010.00**
T3M230A	230 VAC			multi-range/function timer	**1 010.00**
T3M024AD	24 VAC/DC			multi-range/function timer	**1 010.00**
True OFF delay on de-energisation timer *(delay on removal of supply)*					
Multi-range OFF delay *(delay-on release)* timer with advanced power back-up circuitry to deliver wide time ranges. The unit must be powered for no less than 30 sec + 30% of set time range.					
T2D10S230A	230 VAC	10 sec	off delay	delay on de-energise timer	**982.00**
T2D30S230A	230 VAC	30 sec	off delay	delay on de-energise timer	**982.00**
T2D30S400A	400 VAC	30 sec	off delay	delay on de-energise timer	**982.00**
T2D60S230A	230 VAC	60 sec	off delay	delay on de-energise timer	**982.00**
T2D180S024AD	24 VAC/DC	180 sec	off delay	delay on de-energise timer	**982.00**
T2D180S230A	230 VAC	180 sec	off delay	delay on de-energise timer	**982.00**
T2D360S024AD	24 VAC/DC	360 sec	off delay	delay on de-energise timer	**982.00**
T2D360S230A	230 VAC	360 sec	off delay	delay on de-energise timer	**982.00**
T2D/B10M230A	230 VAC	10 min	off delay	delay on de-energise timer	**1 090.00**
T2D/B30M230A	230 VAC	30 min	off delay	delay on de-energise timer	**1 090.00**
T2D/B60M230A	230 VAC	60 min	off delay	delay on de-energise timer	**1 090.00**
T2D/B180M230A	230 VAC	180 min	off delay	delay on de-energise timer	**1 090.00**
Unequal repeating timer **multi-range** *(for ON and OFF ranges)*					
Asymmetrical recycler timer with two independently adjustable time ranges. On application of supply the relay operates for the pre-set "on" time, thereafter the relay releases for the separately pre-set "off" time. Cycle repeats until supply is removed.					
Cycle can be reversed *("off" time first)* by bridging terminals *(7 and 9)*					
• Unequal repeating timer *(asymmetrical recycler independently adjustable ON time and OFF time)*					
Dip switch selectable: **ON:** 6sec, 60sec, 6min, 60min, 6 hr **OFF:** 6sec, 60sec, 6min, 60min, 6 hr					
R2U110A	110 VAC	selectable via rear DIP switches	repeat	unequal repeating timer	**899.00**
R2U230A	230 VAC		repeat	unequal repeating timer	**899.00**
R2U400A	400 VAC		repeat	unequal repeating timer	**899.00**
R2U012AD	12 VAC/DC		repeat	unequal repeating timer	**899.00**
R2U024AD	24 VAC/DC		repeat	unequal repeating timer	**899.00**
Star-delta timer					
Applying supply activates a contact for the preset "star" period the contact disconnects on lapse of this period for the preset transition period *(4-180 ms)* where after the relay switches to the "delta" position until supply is removed.					
TNE30S024AD	24 VAC/DC	30 sec	star delta	plug-in star delta timer	**745.00**
TNE30S110A	110 VAC	30 sec	star delta	plug-in star delta timer	**745.00**
TNE30S230A	230 VAC	30 sec	star delta	plug-in star delta timer	**745.00**
TNE30S400A	400 VAC	30 sec	star delta	plug-in star delta timer	**745.00**
TNE60S024AD	24 VAC/DC	60 sec	star delta	plug-in star delta timer	**745.00**
TNE60S230A	230 VAC	60 sec	star delta	plug-in star delta timer	**745.00**
TNE60S400A	400 VAC	60 sec	star delta	plug-in star delta timer	**745.00**
TNE180S230A	230 VAC	180 sec	star delta	plug-in star delta timer	**745.00**

* *Other voltage options available on request*

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DEF1/F230A

T10

GAM3

RRP1

The **Electro 11 pin plug-in** range of control and timing devices to be installed into a standard 11 pin base making installation and potential future replacement simple and convenient.

- Compact 11 pin plug-in modules: *(H) 80 x (W) 35 x (D) 79 mm*

type	supply voltage*	time range	function	description	price
Defrost timer	*(with fan delay)*				
• Configurable for 4-hour *(defrost cycle every 4 hours)* or 8 hour cycle. Applying supply starts the pre-set *(1-60 min)* defrost cycle, thereafter the relay switches to the cooling cycle, activating the pre-set *(1-60 sec)* fan delay period *(to prevent water splatter and warm air blowing into the room)* and then starts the fan.					
• Defrost time:	3-60 min				
• Fan delay:	3-60 sec				
DEF1/F230A	230 VAC	see above	defrost	plug-in electronic defrost timer	**1 030.00**
Econo range timers	*econo single adjustable time range and supply voltage*				
T10/10S230A	230 VAC	10 sec	on-delay	plug-in electronic timer timer	**616.00**
T10/10S400A	400 VAC	10 sec	on-delay	plug-in electronic timer timer	**616.00**
T10/30S230A	230 VAC	30 sec	on-delay	plug-in electronic timer timer	**616.00**
T10/60S230A	230 VAC	60 sec	on-delay	plug-in electronic timer timer	**616.00**
T10/180S024AD	24 VAC/DC	180 sec	on-delay	plug-in electronic timer timer	**616.00**
T10/180S230A	230 VAC	180 sec	on-delay	plug-in electronic timer timer	**616.00**
T10/360S230A	230 VAC	360 sec	on-delay	plug-in electronic timer timer	**616.00**
T10/360S400A	400 VAC	360 sec	on-delay	plug-in electronic timer timer	**616.00**
T10/600S230A	230 VAC	600 sec	on-delay	plug-in electronic timer timer	**616.00**
T10/600S400A	400 VAC	600 sec	on-delay	plug-in electronic timer timer	**616.00**
T10/600S525A	525 VAC	600 sec	on-delay	plug-in electronic timer timer	**616.00**
T10/60M230A	230 VAC	60 min	on-delay	plug-in electronic timer timer	**616.00**
T1IP/30S024AD	24 VAC/DC	30 sec	interval	econo pulsed internal timer	**845.00**
T1IP/30S230A	230 VAC	30 sec	interval	econo pulsed internal timer	**845.00**
T1P/230A	230 VAC	–	one-shot	econo impulse relay	**745.00**
FRT1/230A	230 VAC	–	timer	econo forward/reverse timer	**903.00**
Two hand control	*(safety control)*				
Two hand control designed as a safety device for machines, forcing the operator to operate two pushbuttons within 0.5 secs for machine to operate. A latch facility is provided for use foot switches.					
THC1230A	230 VAC	–	safety	two safety hand controller	**828.00**
Flip flop relays					
Flip flop relays to control many applications such as dividing work load and controlling conveyor direction. *(F30 mains controlled function has to be energised for at least 30 sec before the supply is removed)*					
F12230A	230 VAC	flip-flop		pulse controlled without memory	**903.00**
F30230A	230 VAC	flip-flop		mains or pulse controlled + memory	**1 010.00**
F30024AD	24 VAC/DC	flip-flop		mains or pulse controlled + memory	**1 010.00**
Alarm module	*(3 circuits)*				
Alarm module to control alarm signals and generate the appropriate output for simple annunciator panels. Control of alarm outputs from 3 separate N/O inputs. System can be expanded by bridging all common terminals of the modules.					
GAM3012D	24 VDC	–	alarm	alarm annunciator module	**971.00**
GAM3024D	12 VDC	–	alarm	alarm annunciator module	**971.00**
Tachometer relay					
Multi-function tachometer relay with four selectable speeds. The unit can be selected for OVER and UNDER speeds, interfaces directly with Namur two wire proximity sensor or limit switch. Relay remains energised for as long as detected speed remains within the pre-set limits.					
• Selectable speeds:	1-10, 10-100, 100-1000,1000-10,000 (RPM)				
RRP1024AD	24 VAC/DC	–	relay	over/under speed monitor	**917.00**
RRP1110A	110 VAC	–	relay	over/under speed monitor	**917.00**
RRP1230A	230 VAC	–	relay	over/under speed monitor	**917.00**
RRP1012D	12 VAC	–	relay	over/under speed monitor	**917.00**

* *Other voltage options available on request*

SFK1

V3E...

T1R

SC1

The **Electro 11 pin plug-in** range of control and timing devices to be installed into a standard 11 pin base making installation and potential future replacement simple and convenient.

- Compact 11 pin plug-in modules: *(H) 80 x (W) 35 x (D) 79 mm*

type	supply voltage*	monitored voltage	function	description	price
Phase failure / sequence relay					
The SF1 monitors 3 phase supplies to detect phase failure, phase reversal and phase imbalance. The relay only operates while all Three-phases are present and in sequence.					
SF1110A	110VAC	3-phase	phase failure	plug-in phase failure relay	**706.00**
SF1400A	400VAC	3-phase	phase failure	plug-in phase failure relay	**706.00**
SF1525A	525VAC	3-phase	phase failure	plug-in phase failure relay	**706.00**
• With sensitivity adjustment for Negative Phase Sequence (NPS)					
SF1K400A	400VAC	3-phase	phase failure	phase failure with adj.for NPS	**731.00**
SF1K525A	525VAC	3-phase	phase failure	phase failure with adj.for NPS	**731.00**
Over / under voltage monitors *(incorporating phase failure)*					
Monitors own supply. Relay will only operate whilst the supply voltage is within the presettable "over" and "under" voltage limits and all Three-phases present and in sequence. Provides effective power supply supervision and protection.					
• Over / under voltage protection • Phase failure/reversal protection					
V1E230A	230 VAC	3-phase	voltage	over / under voltage monitor	**1 020.00**
V3E110A	110 VAC	3-phase	voltage	over / under voltage monitor	**1 060.00**
V3E400A	400 VAC	3-phase	voltage	over / under voltage monitor	**1 060.00**
V3E525A	525 VAC	3-phase	voltage	over / under voltage monitor	**1 060.00**
V3EN400A	400 VAC	3-ph + N	voltage	voltage monitor with neutral	**1 060.00**
Voltage monitor *under (or) over voltage*					
V1C voltage monitor monitors a voltage separate from its supply. Relay will operate while the monitored voltage *(below)* the preset "over" voltage limit *(or) (above)* the preset "under" voltage limit.					
V1C230A400MV	230 VAC	40 - 400 VAC	voltage	plug-in voltage monitor	**946.00**
Frequency monitor					
The relay is energised as long as measured frequency is within the presettable limits.					
• Upper setting: 50-56 Hz • Lower setting: 40-50 Hz					
H1E0230A	230 VAC	3-phase	frequency	over and under freq monitor	**896.00**
Current monitor					
The module directly interfaces with conventional 1/5ACTs.The relay only operates as long as monitored current remains below the pre-set upper limit (or) above the pre-set under limit.					
• Hysteresis: 5-50% *(adjustable)*					
LA51230A	230 VAC	0 - 1A	current	over (or) under current monitor	**1 060.00**
LA55230A	230 VAC	0 - 5A	current	over (or) under current monitor	**1 060.00**
LA55400A	400 VAC	0 - 5A	current	over (or) under current monitor	**1 060.00**
WA55230A	400 VAC	0 - 5A	current	over and under current monitor	**1 060.00**
Temperature relays *(direct conn. to PT100)*					
Directly interface with conventional PT100 *(3 wire)* sensors, the relay energises and remains so until pre-set maximum temperature limit is reached.					
• Standard temperature : -20°…+80°C • Ranges: 80°...180°C					
T1R/180S110A	110 VAC	180s	relay	plug-in temperature controller	**1 030.00**
T1R/180S230A	230 VAC	180s	relay	plug-in temperature controller	**1 030.00**
Converters / Isolators					
Compact signal converter with built-in 24VDC power supply for the output. The unit is designed for low amplitude signals where isolation is not needed. *(Use SI100 for isolation).*					

type	supply voltage*	input signal	output signal	description	price
SC120A111230A	230 VAC	0 - 1A	4 - 20mA	current converter	**1 580.00**
SC120A211230A	230 VAC	0 - 5A	4 - 20mA	current converter	**1 580.00**

* *Other voltage options available on request*

Above ZAR prices do not include VAT. E&OE

Plug-in electronic timing devices

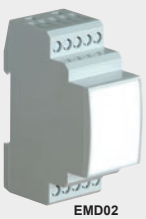
LV1

LP3

SN1

PS3S

EX11 + EX08


EMD02

EMD03

The **Electro 11 pin plug-in** range of control and timing devices to be installed into a standard 11 pin base making installation and potential future replacement simple and convenient.

- Compact 11 pin plug-in modules: (H) 80 x (W) 35 x (D) 79 mm

type	supply voltage*	time range	function	description	price
Level controllers	*(failsafe control and monitoring of high and / or low levels)*				
Level control unit of conductive liquids, can be configured for "Filling" or "Emptying" Can be used as a two probe system for alarm purposes or a three probe system to control HIGH and LOW levels of a reservoir. Up to four LV1 can be utilized in the same reservoir by connecting all commons (pin7)					
• Emptying/ filling		• Adjustable sensitivity			
LV1024A	24 VAC	–	level control	liquid conductive controller	**856.00**
LV1110A	110 VAC	–	level control	liquid conductive controller	**856.00**
LV1230A	230 VAC	–	level control	liquid conductive controller	**856.00**
LV1400A	400 VAC	–	level control	liquid conductive controller	**856.00**
LV1525A	525 VAC	–	level control	liquid conductive controller	**856.00**
LV1024D	24 VAC	–	level control	liquid conductive controller	**1 280.00**
LVC1230A	230 VAC	–	level control	DC capacitive probe control	**799.00**
Knobs for above LV series to be purchased separately					
Pump sequence relay	*(Three circuits)*				
Alternating relays designed to minimize pump and motor wear by equalizing run time between parallel components in a multi-pump system. Controlled by an external control switch.					
• Three normally open pump outputs • Permanent memory for next pump to be activated after power off • Three pressure switch inputs *(voltage free)*					
PSR1230A	230 VAC	3 circuits	relay	pump sequencing relay	**974.00**
Pump protection relay					
Pump protection relay to safeguard submersible pumps against damage. The unit is easily calibrated to monitor all important pump characteristics.					
• Over / under current protection • Over / under voltage protection and phase rotation *(on 3 phase units)* • Running dry restart delay / over current retires					
Function: Voltage, Current monitoring / Security switch trip / Star / Delta connection					

type	supply voltage*	phase time	recovery	description	price
LP1230A	230 VAC	1-phase	6 hours	pump protection relay	**956.00**
LP2230A	230 VAC	1-phase	1-2-4-8 hrs	pump protection relay	**1 220.00**
LP3400A	400 VAC	3-phase	1-2-4-8 hrs	pump protection relay	**1 250.00**

Accessories for level controls

SN1	single line insulated stainless steel probe for conductive liquids		**186.00**
PS3S	3 electrode holder *(mounts through 50.5 mm hole)*		**191.00**
P1000S	electrodes for PS3S holder *(1 meter length)*		**91.00**
FS03-3P	electrode spacer disc *(for extended probe length)*		**37.00**
PXL	extension locknut *(each)*		**34.90**

Empty plastic housings *(for electronic components)*

11 pin plug-in black plastic housings

EX02		panel mount adaptor for 11 pin modules	**93.00**
EX11	*(H) 80 x (W) 35 x (D) 79*	11 pin empty housing complete *(black)*	**60.00**
EX08	front label	blank adhesive label for front of housing	**7.60**
EX06B	black knob	potentiometer knob for above housing	**10.30**
EX06G	grey knob	potentiometer knob for above housing	**10.30**

Empty modular housings - *(grey) 6.3 mm terminal centre spacing*

- Aligns with standard DIN rail MCBs and modular devices *(2 or 3 modules wide)*

EMD02	92 x 35.5 x 64	2 module complete housing DIN rail mount	**78.00**
EMD03	92 x 35.5 x 64	3 module complete housing DIN rail mount	**72.00**
EMX02	front label	blank adhesive front label for EMD02 *(2 modular)* housing	**18.50**
EMX03	front label	blank adhesive front label for EMD03 *(3 modular)* housing	**18.50**
EMX04	adj. knob	screw adjustable knob for internal potentiometer	**13.70**

* *Other voltage options available on request*

MOSAIC
MA4
ANALOG INPUT EXPANSION UNIT
REER
SR SELECT
MZERO
SAFEGATE
REER
REER

K

Field Switching, Sensing & Safety

Interactive Catalogue

Field Switching, Sensing & Safety

K

Inductive proximity sensors

K-1...3/15

Capacitive proximity sensors

K-4

Photoelectric sensors

K-5...11/13...14/16

Ultrasonic sensors

K-12

Fibre-optic & Laser sensors

K-17...18

Pressure transmitters & Switches

K-19...21/28...29

Flow sensors & Switches

K-22/36/38

Temperature controllers & Thermocouple sensors

K-25...27

Limit switches

K-30...34

Float switches & Liquid level sensors

K-35/37/39

Occupancy sensors

K-40

Safety switches

K-43...48

Safety light curtains & Controllers

K-49...52

Safety lockout hasps

K-53

Smoke detectors

K-54

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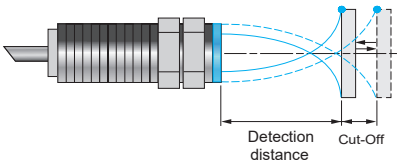
11-25_I2E



Inductive sensors used for metal object detection. Operational integrity is maintained even in harsh environments e.g. presence of oils, powders, liquids and vibrations etc. Commonly utilized in various types of industrial machinery/ applications for position monitoring *(e.g. textile machines, transport systems, packaging machines and automation systems).*

- Protection degree: IP67
- Ambient limits: -25°C ... +70°C
- LED indication: Incorporated
- Housing: Nickel-plated brass (***PFM/PFK*** *- AISI 303 / AISI 316L stainless steel housing)*
- Short circuit and polarity reversal protection

AB1/AP-3A

AD1/AP-3A

AE1/CP-1A

AE6/AP-3A

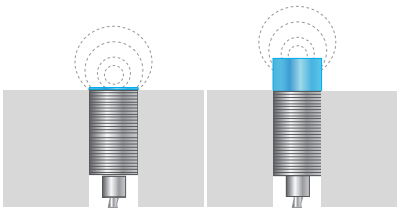
AM6/AP-3H

type	supply voltage	flush	non flush	detection distance	NPN	PNP	NO	NC	connector	body length (mm)	price
M4 proximity switches *(standard detection range)*											
Standard detection range				cable connection *(2m)*							
AB1/AP-3A	10 - 30 VDC	•		1 mm		•	•		cable	22	**1 420.00**
AB1/CP-3A	10 - 30 VDC	•		1 mm		•		•	cable	22	**1 420.00**
M5 proximity switches *(standard detection range)*											
Standard detection range				cable connection *(2m)*							
AD1/AP-3A	10 - 30 VDC	•		1.5 mm		•	•		cable	31	**910.00**
AD1/CP-3A	10 - 30 VDC	•		1.5 mm		•		•	cable	31	**954.00**
M8 proximity switches											
Standard detection range				cable connection *(2m)*							
AE1/AP-1A	10 - 30 VDC	•		1.5 mm		•	•		cable	46	**534.00**
AE1/CP-1A	10 - 30 VDC	•		1.5 mm		•		•	cable	46	**534.00**
AE1/AP-2A	10 - 30 VDC		•	2.5 mm		•	•		cable	46	**534.00**
AE1/CP-2A	10 - 30 VDC		•	2.5 mm		•		•	cable	46	**534.00**
Long detection range											
AE6/AP-3A*	10 - 30 VDC	•		2 mm		•	•		cable	36	**646.00**
AE6/CP-3A*	10 - 30 VDC	•		2 mm		•		•	cable	36	**646.00**
AE6/AP-4A*	10 - 30 VDC		•	4 mm		•	•		cable	36	**646.00**
AE6/CP-4A*	10 - 30 VDC		•	4 mm		•		•	cable	36	**646.00**
				M8 *(3pin)* plug connection							
AE6/AP-3F*	10 - 30 VDC	•		2 mm		•	•		M8 plug	40	**690.00**
AE6/CP-3F*	10 - 30 VDC	•		2 mm		•		•	M8 plug	40	**690.00**
AE6/AP-4F*	10 - 30 VDC		•	4 mm		•	•		M8 plug	40	**690.00**
AE6/CP-4F*	10 - 30 VDC		•	4 mm		•		•	M8 plug	40	**690.00**
M12 proximity switches											
Standard detection range				cable connection *(2m)*					standard body		
AM1/AP-1A	10 - 30 VDC	•		2 mm		•	•		cable	50	**459.00**
AM1/CP-1A	10 - 30 VDC	•		2 mm		•		•	cable	50	**490.00**
AM1/AN-1A	10 - 30 VDC	•		2 mm	•		•		cable	50	**490.00**
AM1/CN-1A	10 - 30 VDC	•		2 mm	•			•	cable	50	**490.00**
AM1/AP-2A	10 - 30 VDC		•	4 mm		•	•		cable	50	**490.00**
AM1/CP-2A	10 - 30 VDC		•	4 mm		•		•	cable	50	**490.00**
AM1/AN-2A	10 - 30 VDC		•	4 mm	•		•		cable	50	**490.00**
AM1/CN-2A	10 - 30 VDC		•	4 mm	•			•	cable	50	**490.00**
Long detection range											
AM6/AP-3A*	10 - 30 VDC	•		4 mm		•	•		cable	40	**601.00**
AM6/CP-3A*	10 - 30 VDC	•		4 mm		•		•	cable	40	**601.00**
AM6/AP-4A*	10 - 30 VDC		•	8 mm		•	•		cable	40	**601.00**
AM6/CP-4A*	10 - 30 VDC		•	8 mm		•		•	cable	40	**601.00**
				M12 *(4pin)* plug connection							
AM6/AP-3H*	10 - 30 VDC	•		4 mm		•	•		M12 plug	53	**605.00**
AM6/CP-3H*	10 - 30 VDC	•		4 mm		•		•	M12 plug	53	**646.00**
AM6/AP-4H*	10 - 30 VDC		•	8 mm		•	•		M12 plug	53	**646.00**
AM6/CP-4H*	10 - 30 VDC		•	8 mm		•		•	M12 plug	53	**646.00**
2 wire version				M12 *(4pin)* plug connection							
AM1/A0-1H	10 - 30 VDC	•		2 mm	•	•	•		M12 plug	75	**640.00**
AM1/A0-2H*	10 - 30 VDC		•	4 mm	•	•	•		M12 plug	75	**640.00**
AM1/A0-3H*	10 - 30 VDC	•		4 mm	•	•	•		M12 plug	75	**801.00**
AM1/A0-4H*	10 - 30 VDC		•	8 mm	•	•	•		M12 plug	75	**801.00**
NO + NC output				M12 *(4pin)* plug connection							
AM1/BP-1H	10 - 30 VDC	•		2 mm		•	•	•	M12 plug	65	**646.00**
AM1/BP-2H	10 - 30 VDC		•	4 mm		•	•	•	M12 plug	65	**646.00**

* *Long detection range*

*For **NPN** version, replace the **"P"** with **"N"** – See sensor connectors and cables page*

Above ZAR prices do not include VAT. E&OE



Inductive proximity sensors - Ø M12 and M18

type	supply voltage	flush	non flush	detection distance	NPN	PNP	NO	NC	connector	body length (mm)	price
M12 proximity switches											
Decout version	**NPN/PNP/NO/NC** *(on one sensor)*								M12 *(4pin)* plug connection		
PM3/00-1H	10 - 30 VDC	•		2 mm	•	•	•	•	M12 plug	74	**1 060.00**
PM3/00-2H	10 - 30 VDC		•	4 mm	•	•	•	•	M12 plug	74	**1 060.00**
AC version				cable connection - 3 wire (2m)							
VM2/A0-1B	20 - 253 VAC	•		2 mm	TRIAC	•			cable	72	**1 230.00**
VM2/C0-1B	20 - 253 VAC	•		2 mm	TRIAC		•		cable	72	**1 230.00**
VM2/A0-2B	20 - 253 VAC		•	4 mm	TRIAC	•			cable	73	**1 230.00**
VM2/C0-2B	20 - 253 VAC		•	4 mm	TRIAC		•		cable	73	**1 230.00**
For food and beverage applications									M12 (4pin) plug connection		
• AISI 316L (DIN 1.4404) stainless steel housing • IP67 (EN60529) - IP68 (1m - 7 days) - IP69K protection degree • -40ºC...+80ºC *(up to 100ºC for short exposure during cleaning process)*											
PFM1/BP-3H*	10 - 30 VDC	•		4 mm		•	•	•	M12 plug	65	**1 210.00**
PFM1/BP-4H*	10 - 30 VDC		•	8 mm		•	•	•	M12 plug	65	**1 260.00**
See sensor connectors and cables page											
M18 cylindrical proximity switches											
Standard detection range				cable connection - 3 wire (2m)							
AK1/AP-1A	10 - 30 VDC	•		5 mm		•	•		cable	50	**579.00**
AK1/CP-1A	10 - 30 VDC	•		5 mm		•		•	cable	50	**579.00**
AK1/AN-1A	10 - 30 VDC	•		5 mm	•		•		cable	50	**579.00**
AK1/CN-1A	10 - 30 VDC	•		5 mm	•			•	cable	50	**579.00**
AK1/AP-2A	10 - 30 VDC		•	8 mm		•	•		cable	50	**579.00**
AK1/CP-2A	10 - 30 VDC		•	8 mm		•		•	cable	50	**579.00**
AK1/AN-2A	10 - 30 VDC		•	8 mm	•		•		cable	50	**579.00**
AK1/CN-2A	10 - 30 VDC		•	8 mm	•			•	cable	50	**579.00**
Short body - NO + NC				cable connection - 4 wire (2m)							
AK6/BP-1A	10-30 VDC	•		5 mm		•	•	•	cable	39	**660.00**
AK6/BN-1A	10-30 VDC	•		5 mm	•		•	•	cable	39	**660.00**
AK6/BP-2A	10-30 VDC		•	8 mm		•	•	•	cable	39	**740.00**
AK6/BN-2A	10-30 VDC		•	8 mm	•		•	•	cable	39	**740.00**
Long detection range - NO + NC				M12 *(4pin)* plug connection							
AK6/BP-3H*	10 - 30 VDC	•		8 mm		•	•	•	M12 plug	49	**800.00**
AK6/BN-3H*	10 - 30 VDC	•		8 mm	•		•	•	M12 plug	49	**854.00**
AK6/BP-4H*	10 - 30 VDC		•	12 mm		•	•	•	M12 plug	49	**854.00**
AK6/BN-4H*	10 - 30 VDC		•	12 mm	•		•	•	M12 plug	49	**854.00**
2 wire version				M12 *(4pin)* plug connection							
AK1/A0-1H	10 - 30 VDC	•		5 mm	•	•	•		M12 plug	64	**737.00**
AK1/A0-2H	10 - 30 VDC		•	8 mm	•	•	•		M12 plug	64	**737.00**
AK1/A0-3H*	10 - 30 VDC	•		8 mm	•	•	•		M12 plug	64	**890.00**
AK1/A0-4H*	10 - 30 VDC		•	12 mm	•	•	•		M12 plug	64	**890.00**
Decout version	**NPN/PNP/NO/NC** *(on one sensor)*								M12 *(4pin)* plug connection		
PK3/00-1H	10 - 30 VDC	•		5 mm	•	•	•	•	M12 plug	72	**1 160.00**
PK3/00-2H	10 - 30 VDC		•	8 mm	•	•	•	•	M12 plug	72	**1 160.00**
AC version				cable connection							
VK2/A0-1B	20 - 253 VAC	•		5 mm	TRIAC	•			cable	77	**1 170.00**
VK2/C0-1B	20 - 253 VAC	•		5 mm	TRIAC		•		cable	77	**1 170.00**
VK2/A0-2B	20 - 253 VAC		•	8 mm	TRIAC	•			cable	77	**1 170.00**
VK2/C0-2B	20 - 253 VAC		•	8 mm	TRIAC		•		cable	77	**1 170.00**
For food and beverage applications									M12 (4pin) plug connection		
• AISI 316L (DIN 1.4404) stainless steel housing • IP67 (EN60529) - IP68 (1m - 7 days) - IP69K protection degree • -40ºC...+80ºC *(up to 100ºC for short exposure during cleaning process)*											
PFK1/BP-3H*	10 - 30 VDC	•		8 mm		•	•	•	M12 plug	63	**1 470.00**
PFK1/BP-4H*	10 - 30 VDC		•	12 mm		•	•	•	M12 plug	63	**1 550.00**

* *Long detection range* *See sensor connectors and cables page*

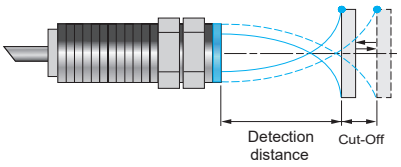
PM3/00-1H

AK1/CP-1A

PK3/00-1H

PFK1/BP-3H

ECOLAB Diversey Ex IP67K



Inductive proximity sensors

Inductive sensors are used for metal object detection. Operational integrity is maintained even in harsh environments e.g. presence of oils, powders, liquids and vibrations etc. Commonly utilized in various types of industrial machinery/ applications for position monitoring *(e.g. textile machines, transport systems, packaging machines and automation systems)*.

General features:

- Protection degree: IP67
- Ambient limits: -25ºC...+70°C
- LED indication: Incorporated
- Housing: Nickel-plated brass
- Short circuit and polarity reversal protection

AT6/BP-3H

AT6/BP-4H

AK6/D2-5H

IL8/AP-3A

IL1/AP-3A

type	supply voltage	flush	non flush	detection distance	NPN	PNP	NO	NC	connector	body length (mm)	price
M30 cylindrical proximity switches											
Standard detection range				cable connection (2m)							
AT1/AP-1A	10 - 30 VDC	•		10 mm		•	•		cable	60	**760.00**
AT1/CP-1A	10 - 30 VDC	•		10 mm		•		•	cable	60	**760.00**
AT1/AN-1A	10 - 30 VDC	•		10 mm	•		•		cable	60	**760.00**
AT1/CN-1A	10 - 30 VDC	•		10 mm	•			•	cable	60	**760.00**
AT1/AP-2A	10 - 30 VDC		•	15 mm		•	•		cable	60	**760.00**
AT1/CP-2A	10 - 30 VDC		•	15 mm		•		•	cable	60	**760.00**
AT1/AN-2A	10 - 30 VDC		•	15 mm	•		•		cable	60	**760.00**
AT1/CN-2A	10 - 30 VDC		•	15 mm	•			•	cable	60	**760.00**
Long detection range - NO + NC				M12 (4pin) plug connection							
AT6/BP-3H*	10 - 30 VDC	•		15 mm		•	•	•	M12 plug	60	**1 080.00**
AT6/BP-4H*	10 - 30 VDC		•	20 mm		•	•	•	M12 plug	60	**1 080.00**
AT6/BN-3H*	10 - 30 VDC	•		15 mm	•		•	•	M12 plug	60	**1 080.00**
AT6/BN-4H*	10 - 30 VDC		•	20 mm	•		•	•	M12 plug	60	**1 080.00**
2 wire version				M12 (4pin) plug connection							
AT1/A0-1H	10 - 30 VDC	•		10 mm	•	•	•		M12 plug	76	**1 200.00**
AT1/A0-2H	10 - 30 VDC		•	15 mm	•	•	•		M12 plug	76	**1 200.00**
AT1/A0-3H*	10 - 30 VDC	•		15 mm	•	•	•		M12 plug	76	**1 290.00**
AT1/A0-4H*	10 - 30 VDC		•	20 mm	•	•	•		M12 plug	76	**1 290.00**
AC version				cable connection							
VT2/A0-1B	20 - 253 VAC	•		10 mm	TRIAC	•			cable	80	**1 590.00**
VT2/C0-1B	20 - 253 VAC	•		10 mm	TRIAC			•	cable	80	**1 590.00**
VT2/A0-2B	20 - 253 VAC		•	15 mm	TRIAC	•			cable	80	**1 590.00**
VT2/C0-2B	20 - 253 VAC		•	15 mm	TRIAC			•	cable	80	**1 590.00**

* *Long detection range* *See sensor connectors and cables page*

Analog output proximity switches 1 x 0-10V and 1 x 4-20mA output

- Voltage 0 - 10 VDC and Current 4 - 20mA outputs *(in the same device)*
- Wide usable detection ranges: M12 *(6 mm)* and M18 *(10 mm)*
- Excellent resolution *(no digitalisation)*

M12 proximity switches				M12 *(4pin)* plug connection							
AM1/D2-5H	15 - 30 VDC	•		0...6 mm	**0-10V**	**4-20mA**			M12 plug	60	**4 200.00**
M18 proximity switches				M12 *(4pin)* plug connection							
AK6/D2-5H	15 - 30 VDC	•		0...10 mm	**0-10V**	**4-20mA**			M12 plug	49	**4 400.00**
Rectangular housing inductive proximity switches											
8 x 8 x 40 mm rectangular body				cable connection (2 m)							
IL8/AP-3A	10 - 30 VDC	•		2 mm		•	•		cable	40	**1 790.00**
IL8/CP-3A	10 - 30 VDC	•		2 mm		•		•	cable	40	**897.00**
IL8/AN-3A	10 - 30 VDC	•		2 mm	•		•		cable	40	**1 790.00**
IL8/CN-3A	10 - 30 VDC	•		2 mm	•			•	cable	40	**1 790.00**
28 x 10 x 16 mm rectangular body				*(aligns with standard mechanical micro switch)*							
IL1/AP-3A	10 - 30 VDC	•		3 mm		•	•		cable	28	**686.00**
IL1/CP-3A	10 - 30 VDC	•		3 mm		•		•	cable	28	**686.00**
IL1/AN-3A	10 - 30 VDC	•		3 mm	•		•		cable	28	**686.00**
IL1/CN-3A	10 - 30 VDC	•		3 mm	•			•	cable	28	**686.00**

Above ZAR prices do not include VAT. E&OE

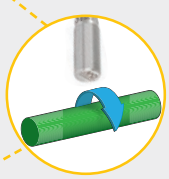
Capacitive proximity sensors

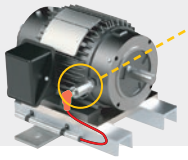
C12P/00-3E

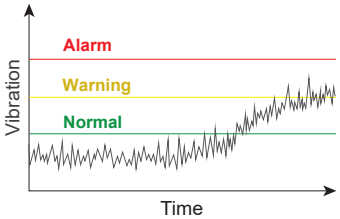
C30P/BN-1E

CQ55/BP-3E

VBR1/D0-3A







Capacitive proximity sensors are utilised in detection of a variety of materials, whether in solid or liquid state *(e.g. water, wood, metals, granules, powders, etc...)* Performance is upheld even through plastic or glass barriers. The robust nature of the technology ensures extremely high electromagnetic compatibility (EMC), high shock/vibration resistance, minimalistic sensitivity to dust and moisture. This ensures reliable object detection even in harsh environments.

- Detects powders, granulates, liquids and solids
- Sensitivity adjustment
- Short circuit and polarity reversal protection
- Protection degree: IP67/68/69K
- Ambient limits: -25ºC/-20ºC...+85°C
- LED indication: Incorporated
- Housing material: Thermoplastic polyester

type	supply voltage	flush	non flush	detection distance	NPN	PNP	NO	NC	connector	body length (mm)	price
M12 Capacitive proximity switches									M12 *(4pin)* plug connection		
• Adjustable sensitivity via Teach-in button • Automatic detection of NPN or PNP load											
C12P/00-3E	10 - 40 VDC	•		0.5…8 mm	•	•	•	•	M12 plug	80	**1 780.00**
M18 Capacitive proximity switches									M12 *(4pin)* plug connection		
• Adjustable sensitivity via potentiometer • Standard output: NO and NC											
C18P/BP-1E	10 - 40 VDC	•		3…8 mm		•	•	•	M12 plug	83	**1 750.00**
C18P/BN-1E	10 - 40 VDC	•		3…8 mm	•		•	•	M12 plug	83	**1 750.00**
C18P/BP-2E	10 - 40 VDC		•	3…12 mm		•	•	•	M12 plug	91	**1 670.00**
C18P/BN-2E	10 - 40 VDC		•	3…12 mm	•		•	•	M12 plug	91	**1 670.00**
AC version				cable connection (2m)							
C18P/A0-1A	20 - 250 VAC	•		3…8 mm	SCR		•		cable	87	**2 220.00**
C18P/C0-1A	20 - 250 VAC	•		3…8 mm	SCR			•	cable	87	**2 220.00**
C18P/A0-2A	20 - 250 VAC		•	3…12 mm	SCR		•		cable	99	**2 140.00**
C18P/C0-2A	20 - 250 VAC		•	3…12 mm	SCR			•	cable	99	**2 140.00**
M30 Capacitive proximity switches									M12 *(4pin)* plug connection		
• Adjustable sensitivity via potentiometer • Standard output: NO and NC											
C30P/BP-1E	10 - 40 VDC	•		2…16 mm		•	•	•	M12 plug	79	**2 140.00**
C30P/BN-1E	10 - 40 VDC	•		2…16 mm	•		•	•	M12 plug	79	**2 140.00**
C30P/BP-2E	10 - 40 VDC		•	4…25 mm		•	•	•	M12 plug	91	**2 020.00**
C30P/BN-2E	10 - 40 VDC		•	4…25 mm	•		•	•	M12 plug	91	**2 020.00**
AC version				cable connection (2m)							
C30P/00-1A	20 - 250 VAC	•		2…16 mm	SCR		•	•	cable	79	**2 630.00**
C30P/00-2A	20 - 250 VAC		•	4…25 mm	SCR		•	•	cable	91	**2 440.00**
Cubic capacitive sensors *(flat pack housing)*											
• Adjustable sensitivity via potentiometer • Standard output: NO and NC											
CQ55 series cubic sensors *(flat body)*				M12 *(4pin)* plug connection					*58 x 35 x 15 mm*		
CQ55/BP-3E	10 - 40 VDC	•		4…25 mm		•	•	•	M12 plug	58	**2 350.00**
CQ55/BN-3E	10 - 40 VDC	•		4…25 mm	•		•	•	M12 plug	58	**2 350.00**

M18 VBR/INC series - Vibration and inclination sensor **IP67**

VBR series shock and vibration sensor incorporates a MEMS 3-axis accelerometer to monitor all accelerations and vibrations. Designed to be easy to use without any special training for operators.

	VBR	INC
• Programmable operating range:	±2g, ±4g, ±8g, ±16g	360° - 0.025° resolution
• Reference axis:	3 (X, Y, Z)	1 direction
• Frequency range:	0 … 400Hz	< 3 msec

- Fully programmable in all its functions, thresholds, alarms and node addresses
- 1 output RS485 *(addressable)* 57600 Baud rate - 1 bit stop - parity
- 1 analogue output *(programmable voltage or current)*

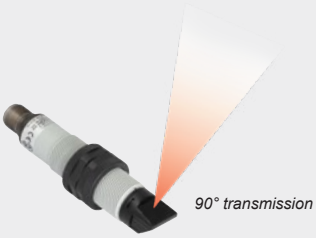
VBR1/D0-3A	24 VDC	vibration sensor	0 - 10V / 4-20mA	cable	40.5	**5 970.00**
INC1/D0-3A	24 VDC	inclination sensor	0 - 10V / 4-20mA	cable	50.5	**7 550.00**

1250Hz available on request

Mounting accessories for VBR/INC sensors

ST18-S	bracket	M18 mounting bracket/housing for above VBR/INC sensor	**131.00**
ST18-V	bracket	M18 metal mounting bracket for above VBR/INC sensor	**101.00**

FAI6/BP-0A



90° transmission

FAI6/BN-2E

MV2/A0-0A

MVC/A0-0A

Photoelectric sensors transmit a beam which is reflected back from a detected object ***(diffused),*** reflector ***(retro-reflective)*** or used with a separate transmitter and receiver ***(through-beam),*** typically used for long range detection.

- Protection degree: IP67 (EN60529)
- Ambient limits: -25ºC...+70°C
- Supply protection: Polarity reversal, transient, short circuit
- LED indication: Incorporated
- Housing material: PBT *(plastic)* available in metal *(on request only)*

type	supply voltage	sensitivity adj.	diffused	retro-reflective	polarised retro	through-beam	detection distance (mm)	NPN	PNP	NO	NC	connector	price
M18 FA series axial beam	*10 - 30 VDC*		**IP67** *(EN60529)*				Ø18 mm x 65/80 mm						
Diffuse reflection			*proximity type detection (no transmitter or reflector required)*										
FAR2/BN-0A	10 - 30 VDC		•				100 mm	•		•	•	cable (2m)	**1 080.00**
FAR2/BP-0A	10 - 30 VDC		•				100 mm		•	•	•	cable (2m)	**1 080.00**
FAI6/BN-0A	10 - 30 VDC		•				400 mm	•		•	•	cable (2m)	**1 190.00**
FAI6/BP-0A	10 - 30 VDC		•				400 mm		•	•	•	cable (2m)	**1 190.00**
FAI6/BN-2E*	10 - 30 VDC		•				400 mm	•		•	•	M12 plug	**1 400.00**
FAI6/BP-2E*	10 - 30 VDC		•				400 mm		•	•	•	M12 plug	**1 400.00**
FAI7/BN-0E	10 - 30 VDC	•	•				400 mm	•		•	•	M12 plug	**1 400.00**
FAI7/BP-0E	10 - 30 VDC	•	•				400 mm		•	•	•	M12 plug	**1 400.00**
FAI8/BN-2E*	10 - 30 VDC	•	•				800 mm	•		•	•	M12 plug	**1 770.00**
FAI8/BP-2E*	10 - 30 VDC	•	•				800 mm		•	•	•	M12 plug	**1 770.00**
FAI8/BN-0E	10 - 30 VDC	•	•				1000 mm	•		•	•	M12 plug	**1 520.00**
FAI8/BP-0E	10 - 30 VDC	•	•				1000 mm		•	•	•	M12 plug	**1 520.00**
With adjustable background suppression													
FARS/BP-0E	10 - 30 VDC	•	•				30…130		•	•	•	M12 plug	**2 310.00**
FARW/BP-0E	10 - 30 VDC	•	•				35…350		•	•	•	M12 plug	**2 800.00**
Retro-reflective			*used together with a reflector*										
FAIC/BN-0A	10 - 30 VDC			•			5 meters	•		•	•	cable (2m)	**1 110.00**
FAIC/BP-0A	10 - 30 VDC			•			5 meters		•	•	•	cable (2m)	**1 110.00**
FAIC/BN-2E*	10 - 30 VDC			•			4 meters	•		•	•	M12 plug	**1 320.00**
FAIC/BP-2E*	10 - 30 VDC			•			4 meters		•	•	•	M12 plug	**1 320.00**
Retro-reflective	**(polarised)**		*used together with a reflector*										
FARP/BN-0A	10 - 30 VDC				•		4 meters	•		•	•	cable (2m)	**1 300.00**
FARP/BP-0A	10 - 30 VDC				•		4 meters		•	•	•	cable (2m)	**1 300.00**
Through beam	*(receiver)*		*requires an emitter and receiver*										
FAIZ/BN-0A	10 - 30 VDC					•	20 meters	•		•	•	cable (2m)	**1 030.00**
FAIZ/BP-0A	10 - 30 VDC					•	20 meters		•	•	•	cable (2m)	**1 030.00**
FAIZ/BP-2E*	10 - 30 VDC					•	15 meters		•	•	•	M12 plug	**1 220.00**
FAIH/00-0A	10 - 30 VDC					•	20 meters	emitter				cable (2m)	**887.00**
FAIH/00-2E*	10 - 30 VDC					•	15 meters	emitter				M12 plug	**1 100.00**

* *Radial optic (90° transmission)*

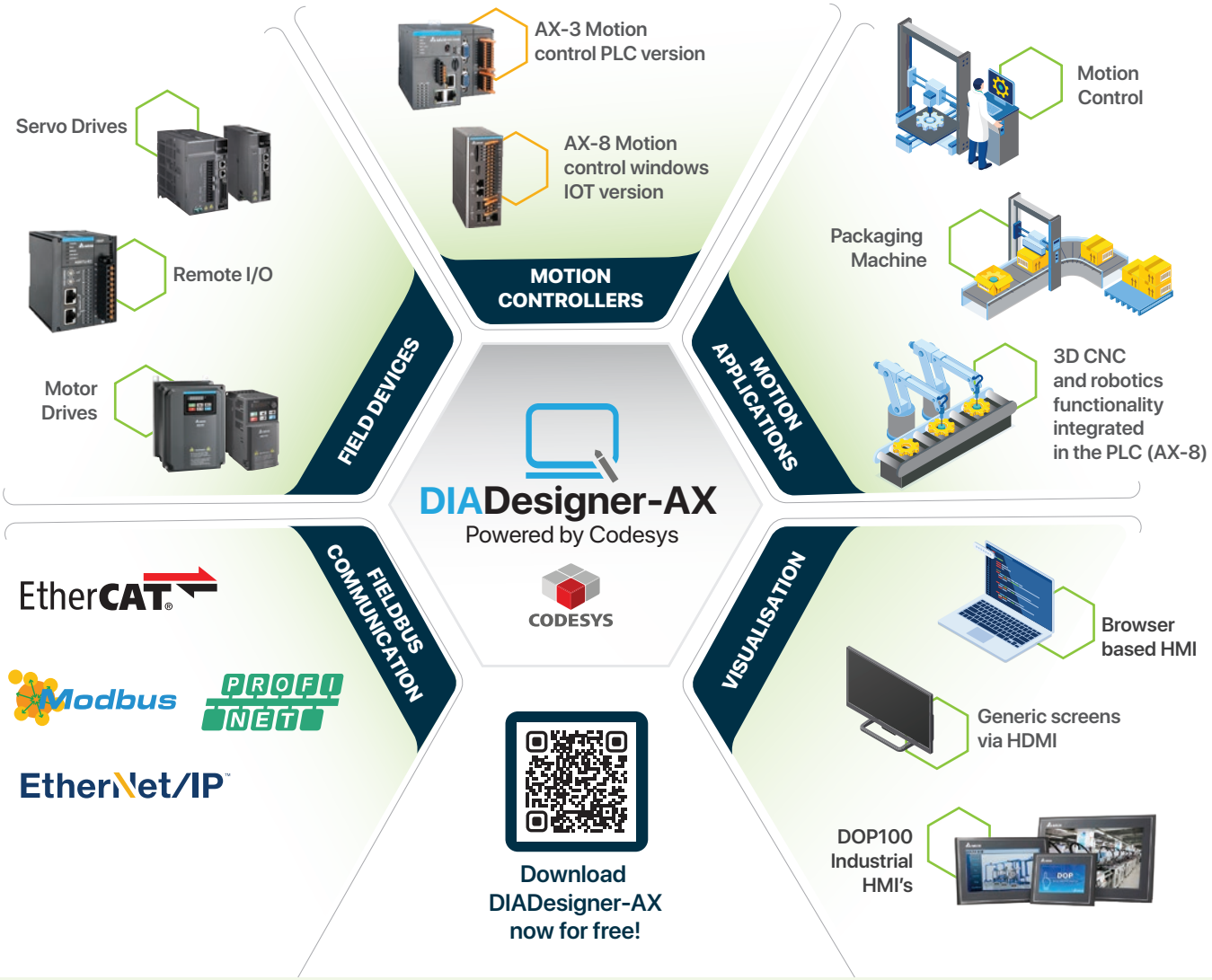
type	supply voltage	sensitivity adj.	diffused	retro-reflective	polarised retro	through-beam	detection distance (mm)	NPN	PNP	NO	NC	connector	price
M18 MV series axial beam	*20 - 253 VAC*		**IP67** *(EN60529)*				Ø18 mm x 79 mm						
Diffuse reflection			*proximity type detection (no transmitter or reflector required)*										
MV2/A0-0A	20 - 253 VAC		•				100 mm	TRIAC	•			cable (2m)	**2 050.00**
MV2/C0-0A	20 - 253 VAC		•				100 mm	TRIAC		•		cable (2m)	**2 050.00**
MV4/A0-0A	20 - 253 VAC		•				200 mm	TRIAC	•			cable (2m)	**2 050.00**
MV4/C0-0A	20 - 253 VAC		•				200 mm	TRIAC		•		cable (2m)	**2 050.00**
MV6/A0-0A	20 - 253 VAC		•				400 mm	TRIAC	•			cable (2m)	**2 140.00**
MV6/C0-0A	20 - 253 VAC		•				400 mm	TRIAC		•		cable (2m)	**2 140.00**
Retro-reflective	20 - 253 VAC		*used together with a reflector*										
MVC/A0-0A	20 - 253 VAC			•			4 meters	TRIAC	•			cable (2m)	**2 140.00**
MVC/C0-0A	20 - 253 VAC			•			4 meters	TRIAC		•		cable (2m)	**2 140.00**
Through beam	(receiver)		*requires a transmitter and receiver*										
MVR/A0-0A	20 - 253 VAC					•	16 meters	TRIAC	•			cable (2m)	**1 920.00**
MVR/C0-0A	20 - 253 VAC					•	16 meters	TRIAC		•		cable (2m)	**1 920.00**
MVE/00-0A	20 - 253 VAC					•	16 meters	emitter				cable (2m)	**1 550.00**

*For mounting accessories, cables, connectors and reflectors see pages **K-11**, **K-23...24***

Above ZAR prices do not include VAT. E&OE

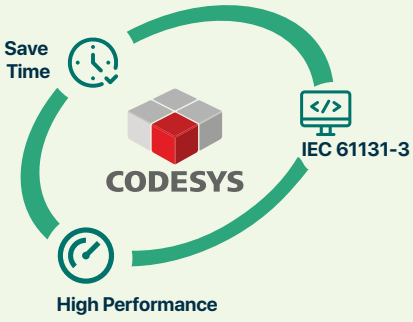
The comprehensive automation software

DIADesigner AX powered by Codesys offers a comprehensive PLC and motion-control software development solution. With adherence to the IEC 61131-3 standard, users can expect a familiar and internationally recognised programming environment. It is the perfect platform for integrating components like Delta PLCs, HMIs, servos, motor drives, and remote I/O, making it a versatile choice for automation projects.



DIADesigner-AX key features:

- **Comprehensive Editors:** Supports all IEC 61131-3 editors (FBD, LD, ST, SFC) and their variants
- **Proven Libraries:** Extensive library concept for reusable applications
- **Advanced Debugging:** Fast optimization and testing with extensive debugging and online features
- **Device Compatibility:** Intergrate devices from various manufacturers
- **Versatile POUs:** Support for single and multi-axis movements with PLCopen POUs
- **Dynamic Monitoring:** Additional POUs for monitoring dynamic data, error tracking, and CAM controllers



S3N mini series - Photoelectric cubic sensors

S3N mini series - Cubic photoelectric sensors

Top performances series in a rugged, miniaturized standard housing. Complete solution for any detection application in any automation industry. Available with trimmer and Teach-in models with high connectivity features thanks to extended IO-Link communication.

General features:

- Bright LED and Safe Laser emission models - for easy alignment
- Smart BGS and clear detection functions
- Single, Double trimmer & Push Button models - for easy setup
- Rugged IP67 Plastic Polymer Fibre glass reinforced miniature case
- IO-Link with extended Smart Tasks
- Sensitivity adjustment via 1 or 9 turn trimmer
- Compact dimensions: *(H) 31 x (W) 11 x (D) 19 mm*

Scan to watch video

New

Robust housing

SN3...

SN3...

type	supply voltage	diffused	polarised retro	through-beam	backgrnd suppress	t/parent objects	mark reader	detection distance (mm)	NPN	PNP	light ON	dark ON	connector	price
Diffused narrow beam								*635 nm red LED emission*						
S3N-PR-5-C01-PL	10…30 VDC	•						1…250 mm		•	•		M8 plug	**3 250.00**
S3N-PR-5-C01-PD	10…30 VDC	•						1…250 mm		•		•	M8 plug	**3 250.00**
S3N-PR-5-C01-N	10…30 VDC	•						1…250 mm	•		•	•	M8 plug	**3 760.00**
S3N-PR-5-C11-PL	10…30 VDC	•						0…1 m		•	•		M8 plug	**3 230.00**
Polarized retroreflective								*635 nm red LED emission*						
S3N-PR-5-B01-PL	10…30 VDC		•					0.05…7 m		•	•		M8 plug	**3 270.00**
S3N-PR-5-B01-PD	10…30 VDC		•					0.05…7 m		•		•	M8 plug	**3 270.00**
S3N-PR-5-B01-N	10…30 VDC		•					0.05…7 m	•		•	•	M8 plug	**3 800.00**
Through beam emitter and receiver								*635 nm red LED emission*						
S3N-PR-5-FG01-PL	10…30 VDC			•				0…20 m		•	•		M8 plug	**5 630.00**
S3N-PR-5-FG01-PD	10…30 VDC			•				0…20 m		•		•	M8 plug	**5 630.00**
S3N-PR-5-FG01-N	10…30 VDC			•				0…20 m	•		•	•	M8 plug	**6 370.00**
Background suppression								*635 nm red LED emission*						
S3N-PR-5-M01-PL	10…30 VDC				•			10…800 mm		•	•		M8 plug	**5 200.00**
S3N-PR-5-M01-PD	10…30 VDC				•			10…800 mm		•		•	M8 plug	**5 200.00**
S3N-PR-5-M01-N	10…30 VDC				•			10…800 mm	•		•	•	M8 plug	**5 910.00**
Polarized retroreflective for clear objects								*635 nm red LED emission*						
S3N-PR-5-T51-PL	10…30 VDC					•		0…2 m		•	•		M8 plug	**5 130.00**
S3N-PR-5-T51-PD	10…30 VDC					•		0…2 m		•		•	M8 plug	**5 130.00**
S3N-PR-5-T51-N	10…30 VDC					•		0…2 m	•		•	•	M8 plug	**5 770.00**
Laser emission sensors														
Polarized retroreflective								*650 nm LASER Red class 1*						
S3N-PH-5-B01-P	10…30 VDC		•					0.1…12 m		•	•	•	M8 plug	**6 120.00**
S3N-PH-5-B01-N	10…30 VDC		•					0.1…12 m	•		•	•	M8 plug	**6 120.00**
Through beam emitter and receiver								*650 nm LASER Red class 1*						
S3N-PH-5-FG01-P	10…30 VDC			•				0…30 m		•	•	•	M8 plug	**8 080.00**
S3N-PH-5-FG01-N	10…30 VDC			•				0…30 m	•		•	•	M8 plug	**8 080.00**
Background suppression								*650 nm LASER Red class 1*						
S3N-PH-5-M01-P	10…30 VDC				•			10…500 mm		•	•	•	M8 plug	**7 140.00**
S3N-PH-5-M01-N	10…30 VDC				•			10…500 mm	•		•	•	M8 plug	**7 140.00**

Accessories for S3N sensors				
95A151340	reflector	R4 - prismatic refl. 47x47 mm - frame 51x61 mm	for reflex	**250.00**
95A151360	reflector	R7 - microprismatic refl. 38x40 mm - frame 51x61 mm	for laser	**891.00**
S940700075	reflector	R5 - prismatic refl. Ø 75 mm - frame Ø 82 mm	for reflex	**206.00**
95ACC0024	mnt bracket	S3N L-shaped mnt bracket	**ST-1051**	**961.00**
95ACC0025	mnt bracket	S3N protection mnt bracket-horizontal	**ST-1049**	**1 540.00**
95ACC0026	mnt bracket	S3N protection mnt bracket-vertical U shaped	**QM ST-103**	**1 540.00**
95ACC0033	mnt bracket	S3N bracket for M03 products over the belt app.	**ST-1053**	**1 730.00**

See sensor connectors and cables page

Above ZAR prices do not include VAT. E&OE

IO-Link

LOW JITTER

S3N mini series - Photoelectric IO-Link communication

Top performances series in a rugged, miniaturized standard housing. Complete solution for any detection application in any automation industry. Available with trimmer and Teach-in models with high connectivity features thanks to extended IO-Link communication.

- Bright LED and Safe Laser emission models - for easy alignment
- Smart BGS and clear detection functions
- Single, Double trimmer & Push Button models - for easy setup
- Very fast and very precise RGB Contrast sensor
- Rugged IP67 Plastic Polymer Fiber glass reinforced miniature case
- IO-Link with extended Smart Tasks
- IO-Link models have Teach-In push button
- Compact dimensions: *(H) 31 x (W) 11 x (D) 19 mm*

type	supply voltage	diffused	polarised retro	through-beam	backgrnd suppress	t/parent objects	mark reader	detection distance (mm)	communication interface	connector	price
Diffused narrow beam								*635 nm red LED emission*			
S3N-PR-5-C03-OZ	10…30 VDC	•						1…250 mm	IO-Link	M8 plug	**5 820.00**
S3N-PR-5-C13-OZ	10…30 VDC	•						0…1 m	IO-Link	M8 plug	**5 760.00**
Polarized retroreflective								*635 nm red LED emission*			
S3N-PR-5-B03-OZ	10…30 Vdc		•					0.05…7 m	IO-Link	M8 plug	**5 920.00**
Through beam emitter and receiver								*635 nm red LED emission*			
S3N-PR-5-FG03-OZ	10…30 VDC			•				0…20 m	IO-Link	M8 plug	**10 400.00**
Background suppression								*635 nm red LED emission*			
S3N-PR-5-M03-OZ	10…30 VDC				•			25…180 mm	IO-Link	M8 plug	**6 840.00**
Polarized retroreflective for clear objects								*635 nm red LED emission*			
S3N-PR-5-T53-OZ	0…30 VDC					•		0…2 m	IO-Link	M8 plug	**6 920.00**
Contrast sensor								*RGB blue (460 nm) / green (525 nm) / red (633 nm)*			
S3N-PR-5-W03-OZ	10…30 VDC						•	12 mm ±3 mm	IO-Link	M8 plug	**23 800.00**
Laser emission sensors											
Polarized retroreflective								*650 nm LASER Red class 1*			
S3N-PH-5-B03-OZ	10…30 VDC		•					0.1…12 m	IO-Link	M8 plug	**8 120.00**
Through beam emitter and receiver								*650 nm LASER Red class 1*			
S3N-PH-5-FG03-OZ	10…30 VDC			•				0…30 m	IO-Link	M8 plug	**14 200.00**
Background suppression								*650 nm LASER Red class 1*			
S3N-PH-5-M03-OZ	10…30 VDC				•			22…130 mm	IO-Link	M8 plug	**10 800.00**

S3N mini: Position tracking applications

IO-Link

– Easy installation

– Extended configuration

– Real time monitoring

– Predictive maintenance

Footprint comparison

Photoelectric sensors transmit a beam which is reflected back from a detected object ***(diffused)***, reflector ***(retro-reflective)*** or used with a separate transmitter and receiver ***(through-beam)***, typically used for long range detection.

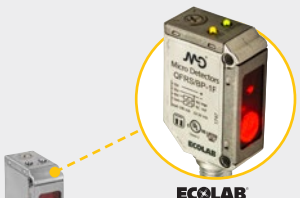
- Sensitivity: Adjustable *(trimmer)*
- Ambient limits: -25ºC...+70°C
- Supply protection: Polarity reversal, impulse overvoltage, short circuit
- LED indication: Yellow *(output status)* / green *(supply present)*

type	supply voltage	diffused	retro-reflective	polarised retro	through-beam	detection distance (mm)	NPN	PNP	NO	NC	connector	price
QM series - Miniature cubic sensor		*IP67 (EN60529)*				(H)40.6 x (W)21 x (D)13 mm						
• Miniaturize high performance photoelectric sensors • 2 kHz switching frequency • Selectable LO/DO output state • M8 *(4pin)* plug connection												
Diffuse reflection		*proximity type detection (no transmitter or reflector required)*										
QMRS/0P-0F*	10 - 30 VDC	•				30…200		•	•	•	M8 plug	**2 190.00**
QMR7/0N-0F	10 - 30 VDC	•				400 mm	•		•	•	M8 plug	**1 770.00**
QMR7/0P-0F	10 - 30 VDC	•				400 mm		•	•	•	M8 plug	**1 770.00**
QMR8/0N-0F	10 - 30 VDC	•				1 meter	•		•	•	M8 plug	**1 850.00**
QMR8/0P-0F	10 - 30 VDC	•				1 meter		•	•	•	M8 plug	**1 850.00**
QMI9/0P-0F	10 - 30 VDC	•				1.5 meter		•	•	•	M8 plug	**1 960.00**
* *With adjustable background suppression*												
Retro-reflective		*used together with a reflector*										
QMIC/0P-0F	10 - 30 VDC		•			7 meter		•	•	•	M8 plug	**1 970.00**
Retro-reflective	**(polarised)**	*used together with a reflector*										
QMRN/0N-0F	10 - 30 VDC			•		5 meter	•		•	•	M8 plug	**1 970.00**
QMRN/0P-0F	10 - 30 VDC			•		5 meter		•	•	•	M8 plug	**1 970.00**
Retro-reflective		*(transparent objects)*										
QMRL/0N-0F	10 - 30 VDC		•			0.4...4 m	•		•	•	M8 plug	**2 320.00**
QMRL/0P-0F	10 - 30 VDC		•			0.4...4 m		•	•	•	M8 plug	**2 320.00**
Through beam		*(transmitter and receiver kit)*										
QMRHD/0N-0F	10 - 30 VDC				•	20 meter	•		•	•	M8 plug	**3 020.00**
QMRHD/0P-0F	10 - 30 VDC				•	20 meter		•	•	•	M8 plug	**3 020.00**
QF series - For food and beverage applications						(H)31.4 x (W)21 x (D)11 mm						
• M8 *(4pin)* plug connection • -26ºC...+60ºC *(without freeze)* • IP67 (EN60529) - IP68 *(1m - 7 days)* - IP69K protection degree • AISI 316L (DIN 1.4404) stainless steel housing - Active head PPSU • Approvals: CE cULus, ECOLAB, IEC60947-5-2												
Diffuse reflection		*proximity type detection (no transmitter or reflector required)*										
QFI4/BP-1F	10 - 30 VDC	•				20…200		•	•	•	M8 plug	**2 560.00**
QFRS/BP-1F*	10 - 30 VDC	•				25…200		•	•	•	M8 plug	**3 250.00**
QFR8/BP-1F	10 - 30 VDC	•				0.1…1 m		•	•	•	M8 plug	**2 610.00**
* *With adjustable background suppression*												
Retro-reflective	**(polarised)**	*used together with a reflector*										
QFRN/BP-1F	10 - 30 VDC			•		6 meter		•	•	•	M8 plug	**2 610.00**

QMR7/0P-0F

QMRN/0N-0F

QMIC/0N-0F



QFRS/BP-1F

Accessories for above QM / QF series

ST 101	metal	vertical mounting L shaped bracket for sensors	QM/QF	**145.00**
ST 102	metal	side mounting vertical L bracket for sensors	QM/QF	**145.00**
ST 103	metal	vertical mount with protective cover bracket for	QM/QF	**355.00**
ST 104	metal	horizontal mount protective cover bracket for	QM/QF	**275.00**
STQMO	adaptor	vertical/horizontal diaphragms (0.5-1-2) for	QM/QF	**466.00**

*Mounting accessories and reflectors see page **K-11** (reflectors sold separately)*
See sensor connectors and cables page

Above ZAR prices do not include VAT. E&OE

Photoelectric sensors transmit a beam which is reflected back from a detected object ***(diffused),*** reflector ***(retro-reflective)*** or used with a separate transmitter and receiver ***(through-beam),*** typically used for long range detection.

Q50I8/B0-0E

type	supply voltage	diffused	retro-reflective	polarised retro	through-beam	detection distance (mm)	NPN	PNP	NO	NC	connector	price
Q50 - Compact cubic universal photoelectric sensor												
• Universal photoelectric sensor, excellent performance and high versatility • Totally protected against electrical damage • Sensitivity: Adjustable • Dimensions: 50 x 50 x 17 mm • Protection degree: IP67 (EN60529) • Mounting: Bracket included												
DC supply 10…30 VDC												
• Revolving M12 *(4 pin)* connector *(for rear or bottom cable entry)*												
Diffuse reflection	*proximity type detection (no transmitter or reflector required)*											
Q50I8/B0-0E	10 - 30 VDC	•				0.3...2 m	•	•	•	•	M12 plug	**1 910.00**
Q50IS/B0-0E*	10 - 30 VDC	•				120…500	•	•	•	•	M12 plug	**3 480.00**
* *With adjustable background suppression*												
Retro-reflective - *(polarised)*	*used together with a reflector*											
Q50RN/B0-0E	10-30 VDC			•		0.2...6 m	•	•	•	•	M12 plug	**2 140.00**
Through beam *(receiver)*	*requires a transmitter and receiver*											
Q50ID/B0-0E	10 - 30 VDC				•	20 meter	•	•	•	•	M12 plug	**1 740.00**
Q50IH/00-0E	10 - 30 VDC				•	20 meter	emitter				M12 plug	**1 470.00**
Multi-voltage supply 12…240 VDC / 24…240 VAC												
• Relay - SPDT output (3A / 240 VAC)												
Diffuse reflection	*proximity type detection (no transmitter or reflector required)*											
Q50I8/0T-0A	multi-voltage	•				0.3...2 m	SPDT				cable	**2 300.00**
Retro-reflective - *(polarised)*	*used together with a reflector*											
Q50RN/0T-0A	multi-voltage			•		0.2...6 m	SPDT				cable	**2 530.00**
Through beam *(receiver)*	*requires a transmitter and receiver*											
Q50ID/0T-0A	multi-voltage				•	20 meter	SPDT				cable	**2 250.00**
Q50IH/0T-0A	multi-voltage				•	20 meter	emitter				cable	**1 520.00**

Q50RN/0T-0A

QX3/A0-1A

QXR/A0-1A

BS8/00-0C

ST300D

RL 110

type	supply voltage	diffused	retro-reflective	polarised retro	through-beam	detection distance (mm)	NPN	PNP	NO	NC	connector	price
QX series *(rectangular)*		*IP65 (EN60529)*									40 x 15 x 23 mm	
Diffuse reflection		*proximity type detection (no transmitter or reflector required)*										
QX3/A0-1A	10 - 30 VDC	•				300 mm	•	•	•		cable (2m)	**3 310.00**
QX3/C0-1A	10 - 30 VDC	•				300 mm	•	•		•	cable (2m)	**3 310.00**
Retro-reflective		*used together with a reflector*										
QXC/A0-1A	10 - 30 VDC		•			5 meter	•	•	•		cable (2m)	**3 380.00**
QXC/C0-1A	10 - 30 VDC		•			5 meter	•	•		•	cable (2m)	**3 380.00**
Through beam	*(receiver)*	*requires a transmitter and receiver*										
QXR/A0-1A	10 - 30 VDC				•	8 meter	•	•	•		cable (2m)	**3 310.00**
QXR/C0-1A	10 - 30 VDC				•	8 meter	•	•		•	cable (2m)	**3 310.00**
QXX/00-1A	10 - 30 VDC				•	8 meter	emitter				cable (2m)	**2 210.00**
BS/BV series *(rectangular)* **cubic photoelectric sensors**											37 x 16 x 64/70 mm	
• Sensitivity:	Adjustable											
• LED indication:	Incorporated											
• Protection degree:	IP65 (EN60529)											
• Supply protection:	Transient, short circuit (BS)											
Diffuse reflection		*proximity type detection (no transmitter or reflector required)*										
BS6/00-0C	10 - 30 VDC	•				400 mm	•	•	•	•	cable (2m)	**2 660.00**
BS8/00-0C	10 - 30 VDC	•				1.6 meter	•	•	•	•	cable (2m)	**2 740.00**
BV4/00-0C	20 - 253 VAC	•				200 mm	TRIAC	•	•		cable (2m)	**3 320.00**
BV6/00-0C	20 - 253 VAC	•				400 mm	TRIAC	•	•		cable (2m)	**3 440.00**
Retro-reflective		*used together with a reflector*										
BSC/00-0C	10 - 30 VDC		•			8 meter	•	•	•	•	cable (2m)	**2 660.00**
BVC/00-0C	20 - 253 VAC		•			8 meter	TRIAC	•	•		cable (2m)	**3 440.00**

Mounting accessories - (below) *See sensor connectors and cables page*

DC sensor tester

The **ST300D** is a compact and highly flexible accessory for DC sensor testing. Suitable for offline functionality testing on photoelectric, proximity and ultrasonic sensors. The unit comes equipped with an onboard *(non-removable)* Li-ion battery.

type	supply voltage	description	NPN	PNP	NO	NC	connector	price
ST300D	24 VDC	DC sensor functionality tester	•	•			terminal post	**3 950.00**

Accessories for proximity / photoelectric / ultrasonic sensor

Mounting accessories for sensors				
ST 02	plastic	adjustable swivel mounting bracket for all	M18 sensors	**261.00**
ST 18-A	metal	axial mounting bracket for all	M18 sensors	**36.60**
ST 18-C	metal	right angled mounting bracket for all	M18 sensors	**49.00**
ST 30-A	metal	axial mounting bracket for all	M30 sensors	**99.00**
ST 30-C	metal	right angled mounting bracket for all	M30 sensors	**122.00**
ST 01	metal	mounting bracket for rectangular sensors	BS - BV	**48.00**
ST 80	metal	top mount bracket for rectangular sensors	RX	**102.00**
ST 81	metal	side mount bracket for rectangular sensors	RX	**102.00**
ST 101	metal	vertical mounting L shaped bracket for sensors	QM/QF	**145.00**
ST 102	metal	side mounting vertical L bracket for sensors	QM/QF	**145.00**
ST 103	metal	vertical mount with protective cover bracket for	QM/QF	**355.00**
ST 104	metal	horizontal mount protective cover bracket for	QM/QF	**275.00**
STQMO	adaptor	vertical/horizontal diaphragms (0.5-1-2) for	QM/QF	**466.00**
ST 03	adaptor	right angled beam adaptor for photoelectric	M18 sensors	**326.00**
ST 03U	adaptor	right angled beam deflector for ultrasonic	M18 sensors	**892.00**

Reflectors for photoelectric switches				(H)	(W)	(D)	Ø	
RL 103	02232510	round	reflector	–	7.4	–	34.5	**174.00**
RL 104	02292510	round	reflector	–	–	6.5	46	**190.00**
RL 110	80392510	round	reflector	–	–	7.3	84	**206.00**
RL 113G	00042510	square	reflector	61	51	8	–	**222.00**
RL 107	03132510	square	reflector	100	100	9	–	**411.00**
RL 112G	03312510	rectangular	reflector	73	19	8.2	–	**222.00**
RL 116	00082510	rectangular	reflector	60	40	8	–	**269.00**

Above ZAR prices do not include VAT. E&OE

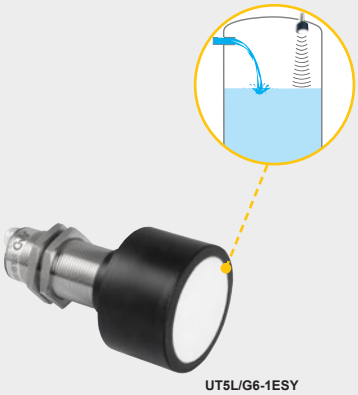
UQ1A/G6-0E

UK6A/HP-0EUL

UK6A/HP-0EUL

UK1D/G6-0ESY

UT2F/G6-0ESY



UT5L/G6-1ESY

Ultrasonic sensors IP67 (EN60529)

Ultrasonic transducer emits an ultrasonic signal which is reflected back by the target towards the sensor. The trigger circuit measures the time between the emission and the detection of the signal.

Since the speed of the ultrasonic beam in air is known, it is easy to have an indication of the presence of the target, as well as a measure of the distance between sensor and target.

A Teach-in button is used to set working distance, output status (NO/NC) and slope of analog output and to change the function.

All models are temperature compensated to ensure reliability throughout the entire detection range and are totally resin filled for applications subject to vibration offering an IP67 protection degree.

General features:

- Sensitivity: Adjustable *(via external Teach-in)*
- Ambient limits: -20ºC... +70°C
- Supply protection: Polarity reversal, transient, short circuit
- LED indication: Orange *(output/regulation), green (echo reception)*
- Housing material: PBT plastic *(AISI 316L stainless steel available on request only)*

type	supply voltage	detection distance (mm)	description	NPN	PNP	NO	NC	0...10V	4...20mA	connector	price
M18 UQ1 series - Cubic ultrasonic sensor with head										(H) 53 x (W) 20 x (D) 38 mm	
Analog + Digital NO/NC output			M12 *(4pin)* plug connection								
UQ1A/G6-0E	10 - 30 VDC	40…300	ultrasonic sensor		•	•	•		•	M12 plug	**5 530.00**
UQ1C/G6-0E	10 - 30 VDC	60…800	ultrasonic sensor		•	•	•		•	M12 plug	**3 770.00**
UQ1D/G6-0E	10 - 30 VDC	80…1.200	ultrasonic sensor		•	•	•		•	M12 plug	**4 240.00**
UQ1A/G7-0E	10 - 30 VDC	40…300	ultrasonic sensor		•	•	•	•		M12 plug	**5 530.00**
UQ1C/G7-0E	10 - 30 VDC	60…800	ultrasonic sensor		•	•	•	•		M12 plug	**5 930.00**
UQ1D/G7-0E	10 - 30 VDC	80…1.200	ultrasonic sensor		•	•	•	•		M12 plug	**6 470.00**
M18 UK6 series - Cylindrical ultrasonic sensors											
UK6 series - M18 short body			M12 *(4pin)* plug connection							*M18 x 60.3 mm*	
Digital NO/NC output											
UK6A/HP-0EUL	10 - 30 VDC	40...300	ultrasonic sensor		•	•	•			M12 plug	**3 580.00**
UK6C/HP-0EUL	10 - 30 VDC	60...800	ultrasonic sensor		•	•	•			M12 plug	**3 710.00**
UK6D/HP-0EUL	10 - 30 VDC	80…1.200	ultrasonic sensor		•	•	•			M12 plug	**4 200.00**
Analog output											
UK6A/H1-0EUL	10 - 30 VDC	40...300	ultrasonic sensor					•		M12 plug	**3 920.00**
UK6C/H1-0EUL	10 - 30 VDC	60...800	ultrasonic sensor					•		M12 plug	**4 050.00**
UK6D/H1-0EUL	10 - 30 VDC	80…1.200	ultrasonic sensor					•		M12 plug	**4 550.00**
UK6A/H2-0EUL	10 - 30 VDC	40...300	ultrasonic sensor						•	M12 plug	**3 920.00**
UK6C/H2-0EUL	10 - 30 VDC	60...800	ultrasonic sensor						•	M12 plug	**4 050.00**
UK6D/H2-0EUL	10 - 30 VDC	80…1.200	ultrasonic sensor						•	M12 plug	**4 550.00**
UK1 series - M18 standard body			M12 *(4pin)* plug connection							*M18 x 91.6 mm*	
Analog + Digital NO/NC output											
UK1D/G6-0ESY	10 - 30 VDC	150...1.600	ultrasonic sensor		•	•	•		•	M12 plug	**7 060.00**
UK1D/G7-0ESY	10 - 30 VDC	150...1.600	ultrasonic sensor		•	•	•	•		M12 plug	**7 060.00**
UK1F/G6-0ESY	10 - 30 VDC	200...2.200	ultrasonic sensor		•	•	•		•	M12 plug	**8 220.00**
UK1F/G7-0ESY	10 - 30 VDC	200...2.200	ultrasonic sensor		•	•	•	•		M12 plug	**8 220.00**
M30 UT series - Standard body *(with larger heads for longer distance detection)*										M30 x 99 mm	
• **M30** - standard body **UT1** or with larger head - **UT2** *(38.8 mm)* **UT5** *(61 mm)*											
• Synchronism - up to 10 sensors connected on the same SYNC wire											
Analog + Digital NO/NC output			M12 *(5pin)* plug connection								
UT1B/G6-0ESY	10 - 30 VDC	250...3.500	ultrasonic sensor		•	•	•		•	M12 plug	**8 350.00**
UT1B/G7-0ESY	10 - 30 VDC	250...3.500	ultrasonic sensor		•	•	•	•		M12 plug	**8 350.00**
UT2F/G6-0ESY	10 - 30 VDC	350...6.000	ultrasonic sensor		•	•	•		•	M12 plug	**13 500.00**
UT2F/G7-0ESY	10 - 30 VDC	350...6.000	ultrasonic sensor		•	•	•	•		M12 plug	**13 500.00**
UT5L/G6-1ESY*	10 - 30 VDC	600…8.000	ultrasonic sensor		•	•	•		•	M12 plug	**19 100.00**
UT5L/G7-1ESY	10 - 30 VDC	600…8.000	ultrasonic sensor		•	•	•	•		M12 plug	**19 100.00**

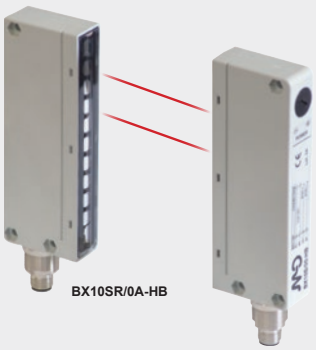
* *Mechanical dimension M30 x 115 mm*

Mounting accessories see page ***K-11***
See sensor connectors and cables page

Photoelectric area and fork sensors

type	supply voltage	diffused	retro-reflective	polarised retro	through-beam	detection distance (mm)	NPN	PNP	NO	NC	connector	price
CR0 series - Area sensors												
CR0 series retroreflective polarised area sensors						IP67 (EN60529)						
CR0 area sensors are retroreflective and work in conjunction with RL106G reflector *(supplied)*. Comprises of synchronised photo element arrays for mutual interference avoidance.												
• Nominal detection distance:	0.2 … 4.5 meter											
• Controlled height:	69 mm											
• Minimum detectable object:	3…6 mm @ 2m - 3…10 mm @ 4.5m											
• Connection:	250 mm pigtail with M12 5pin plug											
• Dimensions:	*(H) 107 X (W) 20 X (D) 36 mm*											
CR0/0B-1V	16…30 VDC			•		0.2…4.5 m	•	•	•	•	M12 plug	**5 260.00**
***CRX** area sensor available on request*												
BX series - Through-beam area sensors						(H) 145 x (W) 20 x (D) 45 mm						
BX area sensors are supplied as two parts - emitter and receiver elements. The optics comprise of synchronised photo element arrays for mutual interference avoidance. Ideal as a solution for irregular shaped object detection.												
• Nominal detection distance:	0.3… 2 meter											
• Controlled height:	90 mm											
• Minimum detectable object:	**BX4** Ø15 mm / **BX10** Ø5 mm											
• Sensitivity:	Adjustable *(trimmer)*											
• LED indication:	Green *(supply)* - red *(alarm sync.)* - yellow *(area stable)*											
• Supply protection:	Polarity reversal, transient, short circuit *(auto reset)*											
• Protection degree:	IP67 (EN60529)											
BX04 area sensor	4 optics - *30 mm optic step*											
BX04SR/0A-HB	10... 26 VDC				•	0.3…2 m	•	•	•		M12 plug	**8 000.00**
BX10 area sensor	10 optics - *10 mm optic step*											
BX10SR/0A-HB	10... 26 VDC				•	0.3…2 m	•	•	•		M12 plug	**10 300.00**
Available with 4 and 6 meter detection distances on request												
Available in IP69K version (food and beverage) on request												
See sensor connectors and cables page												

CR0/0B-1V



BX10SR/0A-HB

FC series - Fork sensors

type	supply voltage	slit/fork depth	slit/fork width	NPN	PNP	NO	NC	connector	price
FC5 series - For object detection without regulation									
• Minimum size object detection:	0.8 mm								
• Switching frequency:	4 KHz								
• Connector:	M8 plug connection *(3 pin)*								
FC5R/DP-0506-1F	12…24 VDC	60 mm	50 mm		•	•		M8 plug	**2 730.00**
FC5R/DP-0806-1F	12…24 VDC	60 mm	80 mm		•	•		M8 plug	**2 910.00**
FC5R/DP-1212-1F	12…24 VDC	124 mm	120 mm		•	•		M8 plug	**3 380.00**
FC6 series - For object detection with regulation									
• Minimum size object detection:	0.2 mm								
• Switching frequency:	10 KHz								
• Connector:	M8 plug connection *(4 pin)*								
FC6I/0B-0304-1F	12…24 VDC	42 mm	30 mm	•	•	•	•	M8 plug	**4 740.00**
FC6I/0B-0306-1F	12…24 VDC	59 mm	30 mm	•	•	•	•	M8 plug	**4 850.00**
FC6I/0B-0506-1F	12…24 VDC	59 mm	50 mm	•	•	•	•	M8 plug	**4 920.00**
FC6I/0B-0510-1F	12…24 VDC	95 mm	50 mm	•	•	•	•	M8 plug	**5 550.00**
FC6I/0B-0806-1F	12…24 VDC	59 mm	80 mm	•	•	•	•	M8 plug	**5 430.00**
FC6I/0B-0810-1F	12…24 VDC	95 mm	80 mm	•	•	•	•	M8 plug	**5 780.00**
FC7/8 series - Fork sensors for label detection									
- Minimum object detection:	2 mm *(gap between labels)* / 2 mm *(label size)*								
- FC7: Photoelectric type label detection *(opaque labels)*									
- FC8: Ultrasonic type label detection *(transparent labels)*									
FC7I/0B-M304-0F	12…24 VDC	42 mm	3 mm	•	•	•	•	M8 plug	**2 780.00**
FC8U/0B-M307-1F	12…24 VDC	69 mm	3 mm	•	•	•	•	M8 plug	**13 600.00**
See sensor connectors and cables page									

FC5R/DP-0506-1F

FC6I/0B-0506-1F

FC7I/0B-M304-0F

Above ZAR prices do not include VAT. E&OE

Photoelectric sensor with onboard processing

AI enabled
MLAS - Machine Learning Assisted Setting

New

MR-5-150...

Smart vision sensor - SMART-VS+ series

The **Smart-VS+** is an intelligent smart vision sensor, simple and easy to integrate into any application. It can be handled and used like a standard photoelectric sensor, but is powerful and smart with a multiprocessor platform supporting (AI) Artificial Intelligence technology.

Customised machine learning algorithms empower the detection system, enabling very complex and accurate object classification, ensuring very simple setup procedure without having to take care of programming or setting thresholds of different vision tools. All complex functionalities are performed by the Smart-VS **"brain".**

The detection function is accomplished by three simple steps. The initial step is the "GOOD" condition teaching and the second step is "BAD" condition teaching, the third will turn the sensor in learning and normal run status ready to detect "GOOD" or "BAD" scenarios. Place the objects in front of the sensor and press a button to change acquisition steps until the sensor starts to think and act precisely.

Application mainly related to print and apply applications to detect the presence or absence of labels or text printing, in liquid filling machines to detect the presence / absence of any type of cap on any type of bottles, vials, flasks, phials of any material made of glass, plastic or with bright dark colour shiny surfaces with different dimensions.

General features:

- Green/Red LED spot for GOOD/BAD part
- Ethernet point to point communication available
- Machine Learning assisted trigger for sensor set up
- TEACH button and comprehensive UI with 5 status LEDs
- 50...150 mm operating distance with electronic focus control
- Easy and Intuitive WEB Server GUI for maintenance and job setting
- Bright and visible red LED pointer and powerful white polarized illuminator
- No vision tools, skilled installers or programming required just photosensor like setting

type	supply voltage	max. images to handle (GOOD+BAD)	detection distance (mm)	Inputs and Outputs	connector	price
SMART-VS+		**Smart vision sensor**		(H) 58 x (W) 47.1 x (D) 38 mm		
MR-5-150-WH-O	10…30 VDC	6 images	50…150 mm	3 Out+2 In + Ethernet	M12 plug	**76 100.00**
PL-5-150-WH-O	10…30 VDC	20 images	50…150 mm	3 Out+2 In + Ethernet	M12 plug	**95 500.00**

Accessories

type	gender	no. pins	plug angle	cable length	description	price
95A900052	female	17	straight	3 meter	M12 connector	**3 040.00**
95A900053	female	17	straight	5 meter	M12 connector	**3 950.00**
93A050124	male	8	straight	5 meter	M12 connector	**7 820.00**
93A050128	male	8	straight	5 meter	M12-RJ45 conn.	**5 770.00**
93ACC0230	–	–	–	–	fixed bracket	**1 990.00**

Application types

Label presence detection	
Bottle orientation detection	
Cap presence detection	
Print-on label detection.	

Smart-VS+

The new vision for your smart manufacturing

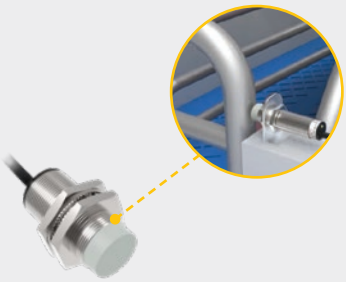
Scan to watch

LE40XZ...

LE40SZ...

LE80XZ...

LR12XA...


LR18XA...

CR18XSCN...

Inductive proximity sensors

Inductive sensors are used for metal object detection. Operational integrity is maintained even in harsh environments e.g. presence of oils, powders, liquids and vibrations etc. Commonly mounted on machines tools, textile machines, transport systems packaging machines and all automation applications.

- Protection degree: IP65/67
- Ambient limits: -25ºC... +70°C
- LED indication: Incorporated
- Supply protection: Polarity reversal, short circuit, power surge

type	supply voltage	flush	non flush	detection distance	NPN	PNP	NO	NC	connector	body length (mm)	price
Rectangular housing inductive proximity switches										**IP67**	
40 x 40 mm rectangular body											
DC standard version				*terminal block connection*							
LE40XZSF15DPR-D	10-30 VDC	•		15 mm		•	•	•	terminal	120	**1 050.00**
LE40XZSN20DPR-D	10-30 VDC		•	20 mm		•	•	•	terminal	129	**1 050.00**
LE40XZSN20DNR-D	10-30 VDC		•	20 mm		•	•	•	terminal	129	**1 050.00**
Short body version				*M12 plug connection*							
LE40SZSN20DPR-E2	10-30 VDC		•	20 mm		•	•	•	M12 plug	66	**1 050.00**
AC version				*terminal block connection*							
LE40XZSN20ATO-D	20-250 VAC		•	20 mm			•		terminal	129	**1 100.00**
80 x 80 x 50 mm square body				*terminal block connection*						**IP67**	
DC version											
LE80XZSN50DPR-D	10-30 VDC		•	50 mm		•	•	•	terminal	98	**2 210.00**
AC version											
LE80XZSN50ATO-D	20-250 VAC		•	50 mm			•	•	terminal	98	**2 270.00**
NAMUR proximity switches										**IP67**	
NAMUR inductive sensors are two-wire non amplified D.C. devices containing only the oscillator and are adapted to control an electronic amplified threshold circuit "which" can be utilised in hazardous areas.											
M12 cylindrical body											
LR12XAF02FLCN	8.2 VDC	•		2 mm				•	cable (2m)	31	**654.00**
LR12XAN04FLCN	8.2 VDC		•	4 mm				•	cable (2m)	35	**654.00**
M18 cylindrical body											
LR18XAF05FLCN	8.2 VDC	•		5 mm				•	cable (2m)	32	**710.00**
LR18XAN08FLCN	8.2 VDC		•	8 mm				•	cable (2m)	32	**710.00**
Capacitive proximity sensors										**IP67**	
Capacitive proximity sensors are used to detect a variety of materials, whether in liquid or solid state *(e.g. water, wood, metals, granules, powders, etc...)* Performance is upheld even when operating through plastic or glass barriers. The robust nature of the technology ensures extremely high electromagnetic compatibility *(EMC)*, high shock/vibration resistance and minimal sensitivity to dust and moisture. This ensures reliable object detection in harsh industrial environments.											
M18 - Capacitive proximity sensors											
CR18XSCF08DPRY-E2	10-30 VDC	•		0…8 mm		•	•	•	M12 plug	70	**1 550.00**
CR18XSCN12DPRY-E2	10-30 VDC		•	0...12 mm		•	•	•	M12 plug	84	**1 550.00**
CR18XSCN12DNRY-E2	10-30 VDC		•	0...12 mm	•		•	•	M12 plug	84	**1 550.00**
CR18SCF05ATO	20-250 VAC	•		0...5 mm			•		cable (2m)	70	**1 430.00**
CR18SCN08ATO	20-250 VAC		•	0...8 mm			•		cable (2m)	84	**1 430.00**
M30 - Capacitive proximity sensors											
CR30XSCF15DPRY-E2	10-30 VDC	•		0...15 mm			•	•	M12 plug	62	**1 600.00**
CR30XSCN25DPRY-E2	10-30 VDC		•	0...25 mm		•	•	•	M12 plug	79	**1 600.00**
CR30XSCN25DNRY-E2	10-30 VDC		•	0...25 mm			•	•	M12 plug	79	**1 600.00**

Above ZAR prices do not include VAT. E&OE

PSE-BC30DPBR-E3

PSE-GM2DPBB-E3

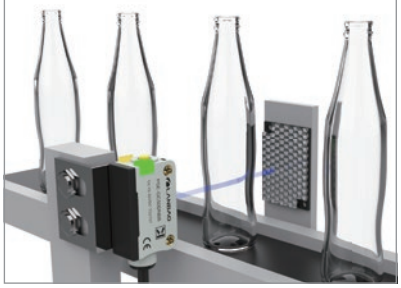
PR18S...

Photoelectric sensors transmit a single beam which is reflected or interrupted by an infringing object. Diversified detection methods include diffuse reflection, through-beam, retro-reflection, polarized reflection and transparent object detection.

type	supply voltage	diffused	retro-reflective	polarised retro	through-beam	detection distance (mm)	NPN	PNP	NO	NC	connector	price
PSE series - Standard compact sensors											*M8 - 4-pin connector*	
PSE series designed with universal housing, an ideal replacement for a wide variety of sensors through a vast range of applications. One click distance setting for accurate and fast installation equipped with an M12 plug for quick and efficient changeover for reduced production stoppage time.												
• Light source: Red light (640 nm) • Supply protection: Short-circuit, overload and reverse polarity protected • Dimensions: 33 x 10.6 x 20 mm • Feature Visible light spot for easy calibration / alignment												
Diffuse reflective						*proximity type detection (no transmitter or reflector required)*						
PSE-BC30DPBR-E3	12-24 VDC	•				300 mm		•	•	•	M8 plug	**955.00**
Retro-reflective						*used together with a reflector (supplied with reflector)*						
PSE-PM3DPBR-E3	12-24 VDC			•		3 meter		•	•	•	M8 plug	**1 050.00**
PSE-GM2DPBB-E3*	12-24 VDC		•			2 meter		•	•	•	M8 plug	**1 790.00**
* *Transparent object detection*												
Thru-beam (long range)						*not supplied as a set (emitter bought separately)*						
PSE-TM10DPBR-E3	12-24 VDC				•	10 meter		•	•	•	M8 plug	**1 100.00**
PSE-TM20DPB-E3	12-24 VDC				•	30 meter		•	•	•	M8 plug	**1 190.00**
PSE-TM10DR-E3*	12-24 VDC				•	10 meter	Emitter				M8 plug	**1 100.00**
PSE-TM20D-E3*	12-24 VDC				•	30 meter	Emitter				M8 plug	**1 190.00**
PR18S series - Cylindrical sensors						Ø 18 mm x 68 mm						
PR18S series cylindrical sensors - utilized on long and short range detection applications. The standard M18 housing ensures easy adaptability to a vast amount of applications. Due to the non-contact nature of operation *(unlike limit switches)* the service life is longer, thusly ensuring good return on investment.												
• Supply protection: Overload and reverse polarity protected • Light source: Infrared LED • Output indication: LED • Connection: M12 - 4-pin connector • Housing material: M12 - 4-pin connector • Feature Excellent anti-interference performance												
Diffuse-reflective						*proximity type detection (no transmitter or reflector required)*						
Sender and receiver within the same housing, beam reflects on detected object.												
PR18S-BC10DPR-E2	12-24 VDC	•				100 mm		•	•	•	M12 plug	**863.00**
PR18S-BC40DPC-E2	12-24 VDC	•				400 mm		•		•	M12 plug	**863.00**
PR18S-BC40DPO-E2	12-24 VDC	•				400 mm		•	•		M12 plug	**863.00**
Retro-reflective						*utilisation with a reflector (must be ordered separately)*						
Sender and receiver within the same housing, beam transmission returned via reflector.												
PR18S-DM3DPC-E2	12-24 VDC		•			3 meter		•		•	M12 plug	**909.00**
PR18S-DM3DPO-E2	12-24 VDC		•			3 meter		•	•		M12 plug	**909.00**
Through-beam (long range)						*not supplied as a set (emitter ordered separately)*						
Sender and receiver in different housing, detection through beam interruption.												
PR18S-TM20DPC	12-24 VDC			•		20 meter		•		•	M12 plug	**1 050.00**
PR18S-TM20DPO	12-24 VDC			•		20 meter		•	•		M12 plug	**1 050.00**
PR18S-TM20D*	12-24 VDC					20 meter	Emitter				M12 plug	**1 050.00**
* *Sender / Emitter*												
Accessories												
ZJP-8	33 x 30 mm					PSE/PSR mounting rack					PSE sensors	**35.30**
ZJP-9	M18 x 37 mm					PSS/PSM mounting rack					PR sensors	**35.30**
TD-02	40 x 65 mm					surface mount reflector for photo sensors					PR/PSE sensors	**99.00**
TD-09	40 x 60 mm					surface mount reflector for photo sensors					PR/PSE sensors	**72.00**
See sensor connectors and cables page												

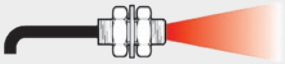
Transparent object **detection**

PSE-GM2DPBB-E3 - sensor

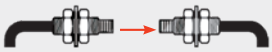


FX102P-Z

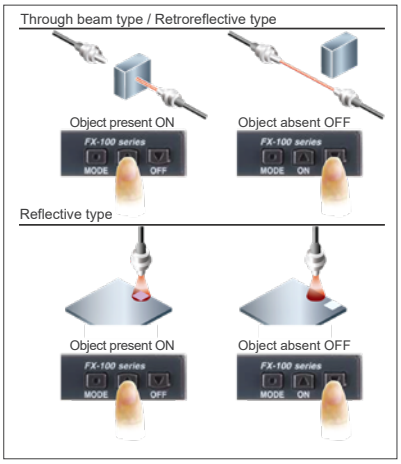
FX-551P



Reflective types



Through beam types



FX series - Fibre optic amplifier

DIN rail mounting

Significantly improved stability and operation ease, due to industry's top emission power.
- 3 times higher emission power
- 1.6 times longer detection range than conventional models
- Simplified functions for ease of usage improvement

- Connection: Connector with cable *(supplied separately)*
- Sensitivity setting: 2-point teaching / limit teaching / Full-auto teaching *(manual setting **FX5** series)*
- Timer function: ON-delay, OFF-delay, One shot, no timer *(selectable)* 0.1ms - 32sec, 1-1000ms **FX1** series

type	supply voltage	detection distance (mm)	NPN	PNP	light-on	dark-on	connector	price
Amplifier for optical fibres		**FX1** (H) 66.4 x (W) 9 x (D) 32 - **FX5** (H) 75 x (W) 10 x (D) 32 mm						
FX102P-Z	12 - 24 VDC	dependant on fibre used		•	•	•	M8 plug	**3 320.00**
FX-551P	12 - 24 VDC	dependant on fibre used		•	•	•	connector	**5 030.00**
Accessories for above FX551 amplifiers								
CN-73-C2		main cable with connector for above amplifier *(2 meter)*					connector	**435.00**
CN-73-C5		main cable with connector for above amplifier *(5 meter)*					connector	**506.00**
CN-71-C2		sub cable with connector for above amplifier *(2 meter)*					connector	**361.00**

Optical fibre sensors for above amplifiers

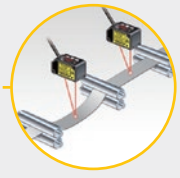
Due to the vast range of optical fibres available, we illustrate a basic range *(indicated below)*.
Vast range of available optical fibre sensors available, request fibre guide, available as a PDF file.

type	supply voltage	diffused	retro-reflective	polarised retro	through-beam	detection distance (mm) FX102	detection distance (mm) FX551 hyper mode	cuttable fibre	head type	fibre length	price
Reflective types		*proximity type detection (no transmitter or reflector required)*									
Cylindrical threaded body *(straight)*						*(IP67)*					
FD-31	M3	•				140	515	yes	cylindrical	2 meter	**1 630.00**
FD-41	M4	•				140	515	yes	cylindrical	2 meter	**1 630.00**
FD-61	M6	•				410	1400	yes	cylindrical	2 meter	**1 630.00**
Square threaded body *(right angled)*											
FD-R31G	M3	•				150	530	yes	square	2 meter	**2 670.00**
FD-R41	M4	•				170	710	yes	square	2 meter	**3 520.00**
Protective tube *(for FD series reflective fibres)*											
FDP-N500	M4	non-corrosive stainless steel protective tube for								0.5 meter	**763.00**
FDP-N1000	M4	non-corrosive stainless steel protective tube for								1.0 meter	**876.00**
FDP-N1500	M4	non-corrosive stainless steel protective tube for								1.5 meter	**1 010.00**
Thru-beam types		*supplied as a set with transmitter and receiver*									
Cylindrical threaded body *(straight)*											
FT-31	M3				•	340	1200	yes	cylindrical	2 meter	**1 630.00**
FT-42	M4				•	800	3600	yes	cylindrical	2 meter	**1 470.00**
Square threaded body *(right angled)*											
FT-R31	M3				•	340	1000	yes	square	2 meter	**3 020.00**
FT-R43	M4				•	640	3000	yes	square	2 meter	**2 670.00**
High temperature fibres											
FT-H20-WM1	+200°C				•	300	1600	no	cylindrical	1 meter	**9 970.00**
FT-H35-M2S6	+350°C				•	490	1200	no	cylindrical	2 meter	**14 700.00**
Expansion lenses *(for through beam type fibres)*		*-60°C...+350°C*									
For fibres: FT-42/43, FT-H20-WM1, FT-H35-M2S6											
FX-LE1	M4	fibre expansion lens side view 90° beam axis								FT-42/43	**385.00**
FX-SV1	M4	fibre expansion lens *(5 times increased detection)*								FT-42/43	**621.00**
Protective tube *(for FT series through beam fibres)*											
FTP-500	M4	non-corrosive stainless steel protective tube for								0.5 meter	**763.00**
FTP-1000	M4	non-corrosive stainless steel protective tube for								1.0 meter	**876.00**
FTP-1500	M4	non-corrosive stainless steel protective tube for								1.5 meter	**1 010.00**
Fibre accessories											
FX-CT1		fibre cutting tool *(to cut fibres to desired length)*									**79.00**

Above ZAR prices do not include VAT. E&OE

LX-101-P-Z

EX-L221-P



Material slack detection

HG-C1050-P

LX-100 - Mark sensor *(can detect any mark)*

The **LX-100** mark sensor detects any marking or colour, the sensor is equipped with red, green and blue LED. In addition, it utilises a coaxial reflective optics system to realise high precision detection when used with 1/4000 resolution 12-bit A/D converter.

type	supply voltage	diffused	retro-reflective	polarised retro	through-beam	detection distance (mm)	NPN	PNP	light-on	dark-on	connector	price
LX-100 series - Mark / Colour sensor												
• Detection:	3 LEDs: red, green, blue											
• Detection modes:	2 *(selectable)*: Mark mode and Colour mode											
• Sensitivity:	2-level teaching/Limit teaching - Mark / 1-level teaching - colour											
• LED indication:	4-digit red LED display and various LED indicators											
• Dimensions:	*35 x 24 x 57 mm*											
• Response time:	Mark mode - 45 µs \ Colour mode 150 µs											
Mark/colour sensor	M12 - 4-pin connector *(supplied separately)*											
LX-101-P-Z	12 - 24 VDC					10...±3 mm		•	•	•	M12 plug	**9 820.00**
MSLX1	bracket	metallic *(side mount)* mounting bracket for above									LX-101	**737.00**

Note: *LX-101 can be used in conjunction with ASDA-A3 for high speed mark position applications.*

EX-L200 series - Miniature laser sensor *(ultra compact) - amplifier integrated*

Due to the customised IC and optical design, high precision detection is fulfilled with directivity and visibility achievable only by laser. Class 1 (IEC / JIS / FDA) laser is safe to use, no need to separate the area of sensor usage.

		diffused	retro-reflective	polarised retro	through-beam	detection distance (mm)	NPN	PNP	light-on	dark-on	connector	price
• Detection:	Minute object detection *(high precision - high accuracy)*											
• Easy beam-axis alignment:	Visible beam											
• Sensitivity:	Adjustable *(to eliminate background detection)*											
• Supply protection:	Short-circuit / reverse polarity protection											
• LED indication:	Orange and green LED indicators											
• Ultra compact:	*29.9 x 8.2 x 1³ mm*											
Spot reflective type	*(Ø1 mm at a detection distance of 300 mm)*											
- Minimum detection object - 0.01 mm												
EX-L221-P	12 - 24 VDC		•			45...300 mm		•	•	•	cable (2m)	**7 810.00**
Thru-beam	*supplied as a set with transmitter and receiver*											
- Minimum detection object - 0.03 mm												
EX-L211-P	12 - 24 VDC				•	1 meter		•	•	•	cable (2m)	**8 050.00**

NPN *output available on request (remove* ***"-P"*** *from the part number)*

MS-EX201	bracket	L shaped metallic mounting bracket for sensor	EX-L2…	**160.00**

HG-C series - Micro laser distance/measurement sensor *(with built-in amplifier)* IP67

HG-C measurement sensors measure and indicate measured values in mm as well as analog voltage outputs. The data can be used for various calculations and storage *(logging)* when the output is sent to a PLC + analog unit.

- Reliable detection in 10 µm precision *(for HG-C1030-P)*
- Indicates real measurements
- Equipped with 0 - 5V analog output
- Compact and light weight: *44 x 20 x 25 mm*

type	supply voltage	repeatability	measurement center distance (mm)	measurement range (mm)	NPN	PNP	light-on	dark-on	connector	price
HG-C1030-P	12 - 24 VDC	10 µm	30	±5		•			cable (2m)	**24 600.00**
HG-C1050-P	12 - 24 VDC	30 µm	50	±15		•			cable (2m)	**24 600.00**
HG-C1100-P	12 - 24 VDC	70 µm	100	±35		•			cable (2m)	**24 600.00**
HG-C1200-P	12 - 24 VDC	200 µm	200	±80		•			cable (2m)	**27 500.00**
HG-C1400-P	12 - 24 VDC	300 µm	400	±200		•			cable (2m)	**32 100.00**
MS-HG-01	bracket	for above HG-C micro laser sensors								**512.00**

NPN *available on request (remove* ***"-P"*** *from the part number)*
Note: *I/O link available on request*
See sensor connectors and cables page

Pressure transmitters/sensors *IP67*

- Compact, rugged construction
- Accuracy: ± 0.3 % fs
- Response time: < 2 ms, *(1 ms typical)*
- Medium temperature range: -15°C… +125°C / 525 (-15°C...+85°C)
- Material: Connection stainless steel 1.4404 / AISI 316L
- Conformity: EN 61326-2-3 / IEC 68-2-27 / IEC 68-2-29 / IEC 68-2-6 / UL E325110

type	pressure range (bar)[1]	power supply	output DC[2]	electrical connection[3]	description	pressure connection[4]	price
Type **525/28** compact pressure transmitter based on well proven ceramic technology developed by Huba Control. Transmitter suitability extends across a broad spectrum of industries.							
• Medium: Liquids and gases							
Type 528	pressure range: -1…0...60 Bar *(external thread)*					Ø24 x 40.9 mm	
528.9010033411	-1 ... 0	7 - 33 VDC	4 - 20 mA	M12x1	transmitter	G 1/4"	**2 140.00**
528.9120033411	0 ... 1.6	7 - 33 VDC	4 - 20 mA	M12x1	transmitter	G 1/4"	**2 140.00**
528.9140033411	0 ... 2.5	7 - 33 VDC	4 - 20 mA	M12x1	transmitter	G 1/4"	**2 140.00**
528.9150033411	0 ... 4	7 - 33 VDC	4 - 20 mA	M12x1	transmitter	G 1/4"	**2 140.00**
528.9170033411	0 ... 6	7 - 33 VDC	4 - 20 mA	M12x1	transmitter	G 1/4"	**2 140.00**
528.9300033411	0 ... 10	7 - 33 VDC	4 - 20 mA	M12x1	transmitter	G 1/4"	**2 140.00**
528.9310033411	0 ... 16	7 - 33 VDC	4 - 20 mA	M12x1	transmitter	G 1/4"	**2 140.00**
528.9320033411	0 ... 25	7 - 33 VDC	4 - 20 mA	M12x1	transmitter	G 1/4"	**2 140.00**
528.9330033411	0 ... 40	7 - 33 VDC	4 - 20 mA	M12x1	transmitter	G 1/4"	**2 140.00**
528.9400033411	0 ... 60	7 - 33 VDC	4 - 20 mA	M12x1	transmitter	G 1/4"	**2 140.00**

528.9300033411

Type 520	pressure range: 0 - 1000 Bar					Ø24 x 46.7 mm	
Type 520 compact pressure transmitter based on Huba Control developed thick film technology with fully welded pressure measurement cell. **Meets high burst protection demands** and is ideal for refrigeration applications suitable for use in all types of refrigerants including ammonia.							
• Welded without sealing parts *(no elastomer seals)*							
• Medium: Liquids, gases and refrigerants *(including ammonia)*							
520.906S033401	-1 ... 9	7 - 33 VDC	4 - 20 mA	M12x1	transmitter	G 1/4"	**2 350.00**
520.917S033401	0 ... 6	7 - 33 VDC	4 - 20 mA	M12x1	transmitter	G 1/4"	**2 350.00**
520.930S033401	0 ... 10	7 - 33 VDC	4 - 20 mA	M12x1	transmitter	G 1/4"	**2 350.00**
520.931S033401	0 ... 16	7 - 33 VDC	4 - 20 mA	M12x1	transmitter	G 1/4"	**2 350.00**
520.932S033401	0 ... 25	7 - 33 VDC	4 - 20 mA	M12x1	transmitter	G 1/4"	**2 350.00**
520.933S033401	0 ... 40	7 - 33 VDC	4 - 20 mA	M12x1	transmitter	G 1/4"	**2 350.00**
520.940S033401	0 ... 60	7 - 33 VDC	4 - 20 mA	M12x1	transmitter	G 1/4"	**2 350.00**
520.941S033401	0 ... 100	7 - 33 VDC	4 - 20 mA	M12x1	transmitter	G 1/4"	**2 860.00**
520.942S033401	0 ... 160	7 - 33 VDC	4 - 20 mA	M12x1	transmitter	G 1/4"	**2 860.00**
520.943S033401	0 ... 250	7 - 33 VDC	4 - 20 mA	M12x1	transmitter	G 1/4"	**2 860.00**
520.954S033401	0 ... 400	7 - 33 VDC	4 - 20 mA	M12x1	transmitter	G 1/4"	**2 860.00**
520.955S033401	0 ... 600	7 - 33 VDC	4 - 20 mA	M12x1	transmitter	G 1/4"	**2 860.00**

520.930S033401

Explosion proof version	EC type examination certificate:				SEV 10 ATEX 0145		
• Intrinsic safety:	Ex II 1/2 G Ex ia IIC T4 Ga/Gb / Ex II 1/2 D Ex ia IIC T125°C Da/Db						
520.917S043401	0 ... 6	7 - 33 VDC	4 - 20 mA	M12x1	transmitter	G 1/4"	**3 680.00**
520.930S043401	0 ... 10	7 - 33 VDC	4 - 20 mA	M12x1	transmitter	G 1/4"	**3 680.00**
520.931S043401	0 ... 16	7 - 33 VDC	4 - 20 mA	M12x1	transmitter	G 1/4"	**3 680.00**
520.932S043401	0 ... 25	7 - 33 VDC	4 - 20 mA	M12x1	transmitter	G 1/4"	**3 680.00**
520.933S043401	0 ... 40	7 - 33 VDC	4 - 20 mA	M12x1	transmitter	G 1/4"	**3 680.00**
520.934S043401	0 ... 60	7 - 33 VDC	4 - 20 mA	M12x1	transmitter	G 1/4"	**3 680.00**

520.917S043401

Accessories for transmitters *other connectors and cables see page* ***K-23...24***

Heat sink for high temperature applications

Heat sink effectively reduces temperatures of hot media, permitting usage of transmitters in applications with temperatures in excess of 200°C.

105074 G 1/4" heat sink for transmitters in high temperature applications (L +101 mm) **2 680.00**

105074

[1] *Other pressure ranges available on request*

[2] *Other outputs available on request:* 0 - 5V, 0 - 10V, Radiometric 10 … 90%

[3] *Other electrical connections available:* DIN EN 175301-803-A/C, RAST2.5, Swift, M12 x 1, with cable

[4] *Pressure connections: inside/outside thread:* ¼"-18NPT, ½"-14NPT, G¼", G½", M20 x 1.5, R ¼ to DIN 2999

Above ZAR prices do not include VAT. E&OE

Electronic programmable pressure switches

Drinking water application safe

Pressure transmitter with display and programmable switching outputs

The **548/540** series µP-regulated, programmable pressure transmitter has a robust industry design, easily adjustable parameters *(via function keys in the configuration menu)* with up to two programmable switching points. All units are equipped with a large 4 digit display assuring reliable, accurate readings.

- Compact, rugged construction
- Clearly readable display *(rotatable 180°)* - 7 segment LED, 4 digits for pressure and parameter values
- Programmable time delay functions rise and switch off delay 0 - 50 s, response time 5 …500 ms
- Electrical connection: M12 x 1 *(5 pin) See sensor connectors and cables page*
- 1 x Analog signal output 4 … 20 mA *(0 … 10 V available on request)*
- 2 x programmable switching outputs NO or NC (250 mA)
- Medium: Liquids and gasses -20°C… +80°C
- Protection standard: IP67 - IEC 60529
- Conformity: EN 61326-2-3 / IEC 68-2-27 / IEC 68-2-6 / UL 61610-1

548.9300152401

type	pressure range (bar)[1]	supply VDC	output DC[2]	electrical connection[3]	description	pressure connection[4]	price
Type 548	pressure range: 0 - 40 Bar			(H) 73 x (W) 41 x (D) 42 mm			
Based on the well proven ceramic technology developed by Huba Controls.							
• Accuracy:	± 0.3 % fs						
• Overload:	≤ 10 Bar 4 x fs > 10 Bar 3.5 x fs						
548.9300152401	0 ... 10	17 - 33	4 - 20 mA	M12x1 PNP	transmitter	G 1/4"	**6 210.00**
548.9310152401	0 ... 16	17 - 33	4 - 20 mA	M12x1 PNP	transmitter	G 1/4"	**6 210.00**
548.9320152401	0 ... 25	17 - 33	4 - 20 mA	M12x1 PNP	transmitter	G 1/4"	**6 210.00**
548.9330152401	0 ... 40	17 - 33	4 - 20 mA	M12x1 PNP	transmitter	G 1/4"	**6 210.00**
Type 540	pressure range: 0 - 600 Bar			(H) 73 x (W) 41 x (D) 42 mm			
Based on Huba Control developed thick film technology with fully welded pressure measurement cell.							
• Accuracy:	± 0.3 % fs						
• Overload:	3 x fs *(max. 1500 Bar)* rupture pressure 6 x fs *(max. 2500 Bar)*						
540.941S052401	0 ... 100	17 - 33	4 - 20 mA	M12x1 PNP	transmitter	G 1/4"	**6 320.00**
540.943S052401	0 ... 250	17 - 33	4 - 20 mA	M12x1 PNP	transmitter	G 1/4"	**6 320.00**
540.955S052401	0 ... 600	17 - 33	4 - 20 mA	M12x1 PNP	transmitter	G 1/4"	**6 320.00**
Other pressure ranges available on request.							

540.943S052401

Level detection pressure transmitters

- Medium temperature range: -20°C… +80°C
- Accuracy: ± 0.25 % fs
- Drinking water approval: KTW, W270, WRAS, ACS
- Protection class: *(IP68)* Cable PE-HD
- Material: Stainless Steel 1.4404 / AISI 316L - Ceramic sensor Al2O3 *(99.6%)*

type	pressure range (bar)[1]	supply VDC	output DC[2]	electrical connection[3]	description	cable length	price
Type 712 - Level detection pressure transmitters *Ø23.4 x 116 mm*							
Type 712 level detection pressure transmitters are manufactured using a relative and absolute pressure measuring cell. Diesel oil (Ex version).							
• Medium:	Fuel oil, ultra-light/heavy - SN 181 160-2, Diesel oil, Drinking water						
712.913101210	0.0 ... 0.3	10 - 30	4 - 20 mA	cable	transmitter	5 meter	**10 200.00**
712.911103210	0.0 ... 1.0	10 - 30	4 - 20 mA	cable	transmitter	15 meter	**8 730.00**
712.912104210	0.0 ... 1.6	10 - 30	4 - 20 mA	cable	transmitter	20 meter	**9 370.00**
Type 713 - Level detection pressure transmitters *Ø18.5 x 138 mm*							
Type 713 pressure level transmitter used for continuous fluid level measurement of ground and drinking water. The compact design permits use in applications with restricted access as small as 20 mm i.d. pipes. Available with enhanced energy efficient ratiometric and digital outputs, for battery powered applications.							
• Applicable in ¾ inch pipes							
• Continuous level measurement							
• Suitable for ground and drinking water							
• Excellent linearity and long term stability							
• Medium: Liquids *(suitable for drinking water and borehole application)*							
713.9301013111	0 … 10	10 - 30	4 - 20 mA	cable	transmitter	80 meter	**21 700.00**
713.9301015111	0 … 10	10 - 30	4 - 20 mA	cable	transmitter	100 meter	**23 400.00**
713.9301016111	0 … 10	10 - 30	4 - 20 mA	cable	transmitter	125 meter	**25 600.00**
713.9301017111	0 … 10	10 - 30	4 - 20 mA	cable	transmitter	150 meter	**27 700.00**
713.9301018111	0 … 10	10 - 30	4 - 20 mA	cable	transmitter	175 meter	**29 900.00**
713.9311018111	0 … 16	10 - 30	4 - 20 mA	cable	transmitter	175 meter	**29 300.00**

712.911103210

713.9301015111

699.931011010

699.931024110

692.912007141 + 103510

Differential pressure transmitter

Type 699 transmitters are available in switchable pressure ranges, with or without digital display. They include customer specific adjustment possibilities. Specially developed sensors for each pressure range ensure accurate long term stable measurement and provide the perfect platform for use in air conditioning technology.

- Fast, easy mounting. *(housing incorporates integral wall or ceiling mount bracket)*
- Switchable response curve *(linear or root-extracted)*
- Adjustable measurement range
- Switchable output signals
- Resettable Zero Point *(reset button)*
- Full scale adjustable

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Application fields

- Check air flows, monitor filters and fan systems
- Measuring slightest differential pressures in ventilation and air conditioning ducts
- Pressure supervision in labs, production, storage and clean rooms *(conversion: 100 Pa = 1 mbar)*

type	pressure range (mbar)[1]	supply VDC	output DC[2]	electrical connection[3]	description	pressure connection[4]	price
Type 699 - Differential pressure transmitter					(H) 75 x (W) 92 x (D) 47.9 mm		
• Medium:	Air and neutral gases - temperature range: 0°C… 70°C						
• Response time:	< 20 ms						
• Output:	4 … 20 mA[2] *(others available on request 0 … 5/10V)*						
• Degree of protection:	IP54 according to EN 60529						
• Conformity:	EN 61326-1, UL 60730-1, UL 60730-2-6						
• Supply:	13...33 VDC / 24 VAC ± 15%						
699.931014010	0.3/0.5/**1**	13 - 33	4 - 20 mA	screw term.	transmitter	Ø6.2 mm	**3 320.00**
699.913014010	1/3/**5**	13 - 33	4 - 20 mA	screw term.	transmitter	Ø6.2 mm	**3 320.00**
699.915014010	5/10/**16**	13 - 33	4 - 20 mA	screw term.	transmitter	Ø6.2 mm	**3 320.00**
699.931011010	0.3/0.5/**1**	13 - 33	0 - 10V	screw term.	transmitter	Ø6.2 mm	**3 320.00**
699.913011010	1/3/**5**	13 - 33	0 - 10V	screw term.	transmitter	Ø6.2 mm	**3 320.00**
699.915011010	5/10/**16**	13 - 33	0 - 10V	screw term.	transmitter	Ø6.2 mm	**3 320.00**
As above with LCD Digital display							
699.931024110	0.3/0.5/**1**	13 - 33	4 - 20 mA	screw term.	transmitter	Ø6.2 mm	**4 760.00**
699.913024110	1/3/**5**	13 - 33	4 - 20 mA	screw term.	transmitter	Ø6.2 mm	**4 760.00**
699.915024110	5/10/**16**	13 - 33	4 - 20 mA	screw term.	transmitter	Ø6.2 mm	**4 760.00**
699.931021110	0.3/0.5/**1**	13 - 33	0 - 10V	screw term.	transmitter	Ø6.2 mm	**4 760.00**
699.913021110	1/3/**5**	13 - 33	0 - 10V	screw term.	transmitter	Ø6.2 mm	**4 760.00**
699.915021110	5/10/**16**	13 - 33	0 - 10V	screw term.	transmitter	Ø6.2 mm	**4 760.00**

[1] *Other pressure ranges available on request* [2] *Other outputs available on request (0 … 5/10V)*

Accessories for type 699 above

104312	connection kit for vent duct *(metal)* 90° angled - including 2 m long tube	**362.00**
100064	connection kit for vent duct *(plastic)* straight - including 2 m long tube	**242.00**

Type 692 - Differential pressure sensor (H) 95 x (Ø) 44 mm

Type 692 pressure transmitters feature unique, well proven ceramic technology. The wide pressure range together with several standard output signals make these transmitters ideal for applications across a broad spectrum of industries. For the measurement of pressure differentials in HVAC systems.

- Robust stainless steel enclosure
- High resistance to extreme temperatures
- High measurement accuracy
- Very low temperature sensitivity

Type 692 - Differential pressure transmitter EN 61326-2-3 compact design

- Response time: < 5 ms
- Medium: Liquids and neutral gases -15°C… +85 °C
- Output: 4…20 mA[2] *(others available on request 0 … 5/10V)*
- Electrical connection: DIN EN 175301-803-A connector *(female not supplied with transmitter)*
- Degree of protection: IP65 according to EN 60529

type	range BAR	max BAR	power supply	output (DC)[2]	electrical connection[3]	description	screw fitting	price
692.912007141	0...1	5	11-33	4 - 20 mA	DIN plug	transmitter	Ø6 mm	**10 000.00**
692.916007141	0...2.5	12	11-33	4 - 20 mA	DIN plug	transmitter	Ø6 mm	**10 000.00**
692.919007141	0...6	12	11-33	4 - 20 mA	DIN plug	transmitter	Ø6 mm	**10 000.00**
692.930007141	0...10	20	11-33	4 - 20 mA	DIN plug	transmitter	Ø6 mm	**10 000.00**

Accessories for above 692 transmitters

103510	DIN EN 175301-803-A female connector for type 692 transmitters	**180.00**
101999	mounting bracket *(including screws)* for type 692 transmitters	**274.00**

Above ZAR prices do not include VAT. E&OE

CE

210.906441K

Flow sensors for liquid medium

Huba Control flow sensors are based on the Karman Vortex trail principle and are available in various options. No moving parts, the flow sensor is not sensitive to debris with marginal pressure loss combined with high accuracy.

- Protection class: *(IP65)*
- Medium temperature: < +125 °C
- Measuring principle: Vortex - Piezoelectric sensor element
- Excellent media resistance: Measuring element not in contact with the media
- Drinking water approval: KTW, W270, WRAS, ACS
- Accuracy at < 50% fs: < 1 % fs *(>50% - 2% measuring value)*
- Material: Fibreglass-reinforced plastic, sensor paddle ETFE
- Electrical connection: M12 x 1 - 4 pin *(See sensor connectors and cables page)*
- Flow medium: Heating water with standard additives, drinking water
- Flow pipe connection: External thread K connection G½ ...G1¼" *(others on request)*

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210...

type	nominal diameter	measuring range (l/min)	power supply	output DC[2]	description	connect	price
Type 210 - Fibreglass-reinforced plastic				PA6T/6I (40% GF)			
Type 210 flow sensor for liquid media							
210.906441K	DN 6	0.5 ... 10	8 - 33 VDC	4 - 20 mA	flow sensor	G ½"	**3 440.00**
210.908441K	DN 8	0.9 ... 15	8 - 33 VDC	4 - 20 mA	flow sensor	G ½"	**3 440.00**
210.910441K	DN 10	1.8 ... 32	8 - 33 VDC	4 - 20 mA	flow sensor	G ½"	**3 440.00**
210.915441K	DN 15	3.5 ... 50	8 - 33 VDC	4 - 20 mA	flow sensor	G ¾"	**3 440.00**
210.920441K	DN 20	5.0 ... 85	8 - 33 VDC	4 - 20 mA	flow sensor	G 1"	**3 440.00**
210.925441K	DN 25	9.0 ... 150	8 - 33 VDC	4 - 20 mA	flow sensor	G 1¼"	**3 440.00**
[2] *other outputs available on request*				*0 - 10V, Frequency square pulse output*			
Above flow switches can be provided with additional internal PT1000 temperature sensor							**+ 470.00**

Type 236 - Brass bodied flow sensors

The Type 236 is based on the Type 210 but incorporates a brass housing. The vortex sensor has a rugged construction of brass connection.

- Brass (CuZn40PbZ), PA6T/6I *(40% GF)*

236...

Type 236	Brass bodied flow sensors						
236.910441K	DN 10	1.8 ... 32	8 - 33 VDC	4 - 20 mA	flow sensor	G ½"	**5 380.00**
236.911441K	DN 10	2.0 ... 40	8 - 33 VDC	4 - 20 mA	flow sensor	G ½"	**5 380.00**
236.932441K	DN 32	14 ... 240	8 - 33 VDC	4 - 20 mA	flow sensor	G 1½"	**7 000.00**
Above flow switches can be provided with additional internal PT1000 temperature sensor.							**+ 470.00**
See sensor connectors and cables page							

Type 604 - Mechanical pressure switches

Type 604 pressure switch is used as a Δp flow switch in ventilation ducts for the control of filters and fans in primary and secondary control systems for the control of air dampers.
Ideally suited to protect heating coils from overheating and for monitoring industrial air cooling circuits.

- Easy to install, user friendly snap cover
- Case geometry permits easy cable entry - cable strain relief integrated
- Supplied with Combi-bracket for vertical or horizontal installation
- For ventilation and air conditioning plants *(monitor differential pressure under/over pressure)*
- To monitor air filters and air flow

- Medium: Air and neutral gases -30°C…+85 °C
- Electrical contact: 1 x changeover contact - 5A 250 VAC *(resistive)*
- Protection class: *(IP54) (with cover)*
- Conformity: EN 61326-2-3, EN 60730-1

604.9000000

type	pressure range[1] mbar	pressure range[1] Pa	switch	electrical connection[3]	description	pressure connection[4]	price
Type 604 - Mechanical pressure switch				*(H) 52 x (Ø) 81*			
• Tolerable overload on one side:	50 mbar						
• Pressure connection:	PVC nipples - Ø6.2 mm						
604.9000000	0.2 ... 3	20 ... 300	1 ch/over	screw term.	pressure switch	Ø6.2 mm	**795.00**
604.9100000	0.5 ... 5	50 ... 500	1 ch/over	screw term.	pressure switch	Ø6.2 mm	**795.00**
604.9200000	1 ... 10	100 ... 1000	1 ch/over	screw term.	pressure switch	Ø6.2 mm	**795.00**
604.9400000	5... 20	500 ... 2000	1 ch/over	screw term.	pressure switch	Ø6.2 mm	**795.00**
604.9500000	10... 50	1000 ... 5000	1 ch/over	screw term.	pressure switch	Ø6.2 mm	**795.00**
***Note:** Other pressure ranges available on request*							

Accessories for type 604 above

104312	connection kit for vent duct *(metal)* 90° angled - including 2 m long tube	**362.00**
100064	connection kit for vent duct *(plastic)* straight - including 2 m long tube	**242.00**

080104-02-001

M8 and M12 - Round sensor connectors

- Contact resistance: ≥10mΩ
- Protection degree: IP67/68
- Operating temperature: -25°C…+85°C
- Termination: Screw clamp terminal
- Contact material: Gold plated phosphor brass/bronze
- Body material: 60% glass fibre reinforced Polyamide

M12 pin configuration - ***A coding***

080103-01-001

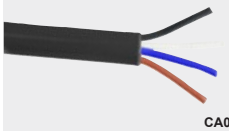
120105-02-024

120103-01-022

120108-02-006

120104-03-001

type	gender	No. pins	term.	plug angle	nominal current	rated voltage AC/DC	description	price
M8 assembly connectors				***(A coding)***			**IP67/68**	
• Plastic body:		PA66+GF		• Cable Ø:	Ø 3…5.5 mm			
080103-02-001	female	**3**	screw	straight	3A	60V	M8 connector	**175.00**
080104-02-001	female	**4**	screw	straight	3A	60V	M8 connector	**179.00**
080103-01-001	male	**3**	screw	straight	3A	60V	M8 connector	**172.00**
080104-01-001	male	**4**	screw	straight	3A	60V	M8 connector	**175.00**
M8 panel mount connectors *(through hole)*				***(A coding)***			**IP67/68**	
080103-04-004	female	**3**	cable (5 m)	straight	3A	60V	M8 panel mount	**183.00**
080104-04-004	female	**4**	cable (5 m)	straight	3A	60V	M8 panel mount	**190.00**
080103-03-003	male	**3**	solder	straight	3A	60V	M8 panel mount	**183.00**
080104-03-003	male	**4**	solder	straight	3A	60V	M8 panel mount	**190.00**
M12 assembly connectors				***(A coding)***			**IP67/68**	
• Plastic body:		PA66+GF		• Cable Ø:	Ø 3…8 mm			
120103-02-022	female	**3**	screw	straight	4A	250V	M12 connector	**184.00**
120104-02-022	female	**4**	screw	straight	4A	250V	M12 connector	**188.00**
120105-02-022	female	**5**	screw	straight	4A	60V	M12 connector	**192.00**
120108-02-022	female	**8**	screw	straight	2A	30V	M12 connector	**203.00**
120104-02-024	female	**4**	screw	90°	4A	250V	M12 connector	**188.00**
120105-02-024	female	**5**	screw	90°	4A	60V	M12 connector	**192.00**
120108-02-024	female	**8**	screw	90°	2A	30V	M12 connector	**238.00**
120103-01-022	male	**3**	screw	straight	4A	250V	M12 connector	**180.00**
120104-01-022	male	**4**	screw	straight	4A	250V	M12 connector	**184.00**
120105-01-022	male	**5**	screw	straight	4A	60V	M12 connector	**188.00**
120108-01-022	male	**8**	screw	straight	2A	30V	M12 connector	**199.00**
120104-01-024	male	**4**	screw	90°	4A	250V	M12 connector	**184.00**
120105-01-024	male	**5**	screw	90°	4A	60V	M12 connector	**188.00**
M12 metallic body assembly connectors				***(A coding)***				
• Gland:		PG9 with shield		• Cable Ø:	Ø 6…8 mm			
• Termination:		Solder terminal						
120104-02-006	female	**4**	solder	straight	4A	250V	M12 connector	**254.00**
120105-02-006	female	**5**	solder	straight	4A	60V	M12 connector	**259.00**
120108-02-006	female	**8**	solder	straight	2A	30V	M12 connector	**275.00**
120104-01-006	male	**4**	solder	straight	4A	250V	M12 connector	**254.00**
120105-01-006	male	**5**	solder	straight	4A	60V	M12 connector	**259.00**
120108-01-006	male	**8**	solder	straight	2A	30V	M12 connector	**275.00**
M12 metallic circular connectors				***(A coding)***			**IP67/68**	
• M16 x 1.5 rear mounting								
120104-04-001	female	**4**	solder	straight	4A	250V	M12 panel mount	**223.00**
120105-04-001	female	**5**	solder	straight	4A	60V	M12 panel mount	**233.00**
120108-04-001	female	**8**	solder	straight	2A	30V	M12 panel mount	**257.00**
120104-03-001	male	**4**	solder	straight	4A	250V	M12 panel mount	**215.00**
120105-03-001	male	**5**	solder	straight	4A	60V	M12 panel mount	**223.00**
120108-03-001	male	**8**	solder	straight	2A	30V	M12 panel mount	**250.00**


CA00015

Cable multi-core sensor cable - PUR *(Polyurethane)*

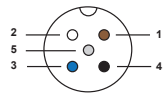
type	(mm^2)	cores	colour	insul. material	wire colours	price per meter
CA00142	0.34	**3**	black	cable (1m) PUR	brown-blue-black	**49.00**
CA00015	0.34	**4**	black	cable (1m) PUR	brown-white-blue-black	**52.00**
CA00148	0.34	**5**	black	cable (1m) PUR	brown-white-blue-black-grey	**54.00**
CA00103	0.25	**8**	black	cable (1m) PUR	pnk-red-yel-brn-wht-blu-grn-gry	**50.00**

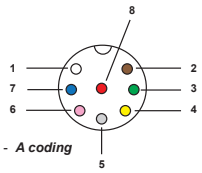
Above ZAR prices do not include VAT. E&OE

080104-06-054

M8 and M12 - Round sensor connectors

- Contact resistance: ≥10mΩ
- Protection degree: IP67/68
- Operating temperature: -25°C …+85°C
- Termination: Moulded on cable
- Contact material: Gold plated phosphor brass/bronze
- PUR cable: High flexibility, oil and abrasion resistant





M12 pin configuration - ***A coding***

type	gender	No. pins	colour	plug angle	cable material	cable length	description	price
M8 sensor cable with female connector					***(A coding)***			
080103-06-027	female	**3**	black	straight	PUR	2 meter	M8 sensor cable	**220.00**
080103-06-020	female	**3**	black	straight	PUR	5 meter	M8 sensor cable	**391.00**
080103-06-058	female	**3**	black	90°	PUR	2 meter	M8 sensor cable	**220.00**
080103-06-024	female	**3**	black	90°	PUR	5 meter	M8 sensor cable	**391.00**
080104-06-054	female	**4**	black	straight	PUR	2 meter	M8 sensor cable	**220.00**
080104-06-029	female	**4**	black	straight	PUR	5 meter	M8 sensor cable	**443.00**
080104-06-063	female	**4**	black	90°	PUR	2 meter	M8 sensor cable	**220.00**
080104-06-036	female	**4**	black	90°	PUR	5 meter	M8 sensor cable	**443.00**

120105-06-127

M12 sensor cable with female connector					***(A coding)***			
120104-06-053	female	**4**	black	straight	PUR	2 meter	M12 sensor cable	**220.00**
120104-06-061	female	**4**	black	straight	PUR	5 meter	M12 sensor cable	**443.00**
120104-06-624	female	**4**	black	straight	PUR	7.5 meter	M12 sensor cable	**537.00**
120104-06-625	female	**4**	black	straight	PUR	10 meter	M12 sensor cable	**685.00**
120104-06-017	female	**4**	black	90°	PUR	2 meter	M12 sensor cable	**220.00**
120104-06-010	female	**4**	black	90°	PUR	5 meter	M12 sensor cable	**400.00**
120104-06-924	female	**4**	black	90°	PUR	7.5 meter	M12 sensor cable	**537.00**
120104-06-925	female	**4**	black	90°	PUR	10 meter	M12 sensor cable	**685.00**
120105-06-075	female	**5**	black	straight	PUR	2 meter	M12 sensor cable	**220.00**
120105-06-053	female	**5**	black	straight	PUR	5 meter	M12 sensor cable	**443.00**
120105-06-127	female	**5**	black	90°	PUR	2 meter	M12 sensor cable	**220.00**
120105-06-055	female	**5**	black	90°	PUR	5 meter	M12 sensor cable	**443.00**
120108-06-008	female	**8**	black	straight	PUR	2 meter	M12 sensor cable	**285.00**
120108-06-009	female	**8**	black	straight	PUR	5 meter	M12 sensor cable	**481.00**
120108-06-115	female	**8**	black	90°	PUR	2 meter	M12 sensor cable	**285.00**
120108-06-119	female	**8**	black	90°	PUR	5 meter	M12 sensor cable	**481.00**

120108-06-008

M12 round connectors - for power applications ***(S & K coding)***

- Contact resistance: ≥3mΩ
- Protection degree: IP67/68
- Operating temperature: -25°C…+85°C
- Termination: Solder terminal

S coding

K coding

type	gender	No. pins	poles	contact coding	nominal current	rated voltage	description	price
M12 power assembly connectors				***(S & K coding)***			IP67/68	
• Plastic body:			Insulation PA66+GF					
• Wire gauge:			max. 1.5 mm²					
• Cable Ø:			Ø 3…8 mm					
120504-01-001	male	**4**	3+PE	**S**	12A	630 VAC	M12 connector	**237.00**
121305-01-001	male	**5**	4+PE	**K**	12A	630 VAC	M12 connector	**397.00**
120504-02-001	female	**4**	3+PE	**S**	12A	630 VAC	M12 connector	**245.00**
121305-02-001	female	**5**	4+PE	**K**	12A	630 VAC	M12 connector	**426.00**
M12 metallic panel mount power connectors				***(S & K coding)***			IP67/68	
• Metallic panel mount circular connectors								
• M16 x 1.5 rear mounting								
120504-03-001	male	**4**	3+PE	**S**	12A	630 VAC	M12 connector	**237.00**
121305-03-001	male	**5**	4+PE	**K**	12A	630 VAC	M12 connector	**397.00**
120504-04-001	female	**4**	3+PE	**S**	12A	630 VAC	M12 connector	**245.00**
121305-04-001	female	**5**	4+PE	**K**	12A	630 VAC	M12 connector	**426.00**

120504-02-001

121305-04-001

DT... series

DTK4848R01

DT320...

DT360...

Temperature controllers

type	panel size (mm) W x H		description	output 1	output 2	price
DTK series - "Standard" temperature controller			100 - 240 VAC 50/60Hz (60 mm deep)			
• Universal sensor inputs:			Thermocouple: Type (K-J-T-E-N-R-S-B-L-U-TXK) Platinum RTD: Pt100, JPt100			
• LCD display:			Process Value *(PV)* Red colour - Set point *(SV)* Green colour			
• Control method:			PID, ON/OFF, Manual control mode			
• Alarms:			1 alarm output *(9 selectable alarm modes)*			
• Display:			High resolution LCD display			
• Speed:			High speed sampling time *(100ms)*			
DTK4848R01	48	48	standard temperature controller	relay *(5A AC1)*	–	**1 050.00**
DTK4848V01	48	48	standard temperature controller	12 VDC pulse	–	**1 220.00**
DTK4848C01	48	48	standard temperature controller	4-20mA	–	**1 220.00**
DTK4896R01	48	96	standard temperature controller	relay *(5A AC1)*	–	**1 350.00**
DTK4896V01	48	96	standard temperature controller	12 VDC pulse	–	**1 350.00**
DTK4896C01	48	96	standard temperature controller	4-20mA	–	**1 350.00**
DTK7272R01	72	72	standard temperature controller	relay *(5A AC1)*	–	**1 510.00**
DTK7272V01	72	72	standard temperature controller	12 VDC pulse	–	**1 510.00**
DTK9696R01	96	96	standard temperature controller	relay *(5A AC1)*	–	**1 720.00**
DTK9696V01	96	96	standard temperature controller	12 VDC pulse	–	**1 720.00**
DTA/DTB series - Temperature controllers						
DTA4896R0	48	96	standard temperature controller	relay	–	**1 800.00**
DTA9648R0	96	48	standard temperature controller	relay	–	**1 800.00**
DTB4824RR	48	24	advanced temperature controller	relay	relay	**1 880.00**
DT3 series - Advanced "high speed intelligent" temperature controller			100 - 240 VAC 50/60Hz			
New DT3 series temperature controller designed with upgraded hardware and higher specifications offering smart operation, fast response, simple expandability and user-defined function keys.						
• Built-in sensor input modes:			Thermocouple: K, J, T, E, N, R, S, B, L, U, TXK Platinum RTD: Pt100, JPt100, RTD: Cu50, Ni120 Analog input: 0-5 V, 0-10 V, 0-20 mA, 4-20 mA, 0-50 mV			
• Various Control Modes:			Auto Tuning, FUZZY, Manual, On/Off, PID Process Control, Self Tuning			
• Various Output Modes:			Relay, Voltage pulse, Current DC, Linear voltage			
• Communication:			RS-485 communication MODBUS ASCII / RTU protocol			
• Display:			Large 3-colour LCD Display			
• IP protection:			IP66 protection level and CE, UL certified			
• Output:			Dual output control function for heating and cooling			
• Detection:			Heater disconnection detection			
• Sampling rate:			100ms	output 1	output 2	
DT320RA-0200	48	48	advanced temperature controller	relay	*see*	**1 770.00**
DT320VA-0200	48	48	advanced temperature controller	12 VDC pulse	***output 2***	**1 770.00**
DT340RA-0200	48	96	advanced temperature controller	relay	*options*	**2 310.00**
DT340VA-0200	48	96	advanced temperature controller	12 VDC pulse	*(below)*	**2 310.00**
DT360RA-0200	96	96	advanced temperature controller	relay		**2 540.00**
DT360VA-0200	96	96	advanced temperature controller	12 VDC pulse		**2 540.00**
***Note:** 24 VDC (change **7th digit "A"** of part number to **"D" for 24 VDC** application on request)*						

Expansion facilities and accessories *for above DT3 controllers*

- Max 1 extra output card
- Max 2 optional cards

Replace the **last 4 digits** for additional options: *(first 2 digits identify the output - Last 2 digits the options)*

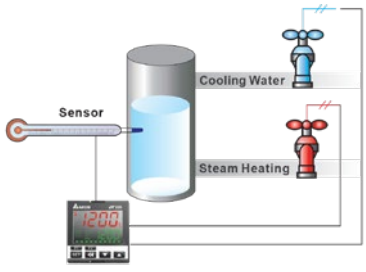
Example: **V213** = voltage output with event and remote set up input

0233 = no extra control output but with retransmission output and remote set up input

- **R200**	Relay output	*(5A 250 VAC)*	output card	DT3-R	**265.00**
- **V200**	Voltage pulse output	*(14 VDC pulse)*	output card	DT3-V	**265.00**
- **C200**	DC current output	*(4 - 20mA)*	output card	DT3-C	**265.00**
- **L200**	Linear voltage output	*(0 - 10VDC)*	output card	DT3-L	**265.00**
- **0210**	Event input 1		option card	DT3-EVENT	**265.00**
- **0220**	CT input 1		option card	DT3-CT1	**265.00**
- **0230**	Retransmission output		option card	DT3-RETRANS	**265.00**
- **0203**	Remote setup input		option card	DT3-REMOTE	**265.00**

DT3-CT30A	30A	current transformer for heater disconnection or overcurrent detection	**383.00**
DT3-CT100A	100A	current transformer for heater disconnection or overcurrent detection	**515.00**

Simultaneous temperature control



Above ZAR prices do not include VAT. E&OE

DTM series

DTM series - Multi-Loop modular temperature controller

With increasingly complex temperature control application requirements, Delta introduces the DTM series, multi-loop modular temperature controller, designed for ease of application and installation. Data collection by host and total isolation between channels improves communication speed and stability. From hardware to software, the intuitive design enables a quick start, while advanced functions provide data management flexibility with communication address customisation.

The DTM series consists of host, measurement module, I/O module and extension cassette. A fully extended DTM group consists of a host plus 7 measurement modules and 8 I/O modules, for up to 64 points temperature control. Modules simply slide onto one another to expand the system to total user requirements for simplified wiring.

The DTM series controller is an ideal solution for advanced and complex temperature control applications, where several groups can be connected via RS-485 or Ethernet for temperature control of up to 1 000 points.

New

DTM-BDV

DTME08

DTMN08

DTM-DOV

DTC1000...

DTC2000...

DTM series Multi-Loop modular temperature controller

type	supply voltage	temp control points	communication	description	price
Host module CPU				(H) 114 x (W) 71 x (D) 81 mm	

- Supports up to 7 measurement modules + 8 I/O modules
- incorporates cassette slots to receive up to 2 extension cassettes *(with 4 outputs each)*
- Communication: RS-485 or RS-485 + Ethernet *(model dependant)*
- Internal interconnects for 24 V supply and communication signal transmission to other modules
- Input sensor support — Thermocouple: K, J, T, E, N, R, S, B, L, U, TXK; Platinum RTD: Pt100, JPt100, Ni120, Cu50; Analog input: 0-10 V, 0-5 V, 0-50 mV, 0-20 mA, 4-20 mA

DTMR04	24 VDC	4-channel	RS-485	host temperature module	**5 520.00**
DTMR08	24 VDC	8-channel	RS-485	host temperature module	**8 330.00**
DTME04	24 VDC	4-channel	RS-485 + Ethernet	host temperature module	**8 510.00**
DTME08	24 VDC	8-channel	RS-485 + Ethernet	host temperature module	**11 400.00**
UC-PRG015-01A	cable	Mini USB cable	for programming	*(1.5 meter)*	**216.00**

Measurement modules				(H) 113 x (W) 70 x (D) 80 mm	
DTMN04	fm host	4-channel	–	measurement module	**5 290.00**
DTMN08	fm host	8-channel	–	measurement module	**8 100.00**

I/O modules

Provide outputs for measurement modules, plug-into *(cassettes)* or slide-on *(modules)*

type	supply voltage	output points	outputs	description	price
Extension cassettes - for measurement modules				(H) 48 x (W) 25 x (D) 77 mm	
Plug into host and measurement modules, providing outputs (without increasing dimensions)					
DTM-BDV	fm host	4-channel	0/12 V pulse voltage	plug-in output cassette	**877.00**
DTM-BDR	fm host	4-channel	2 A relay contact	plug-in output cassette	**877.00**
DTM-BDC	fm host	4-channel	4 - 20 mA output	plug-in output cassette	**877.00**
DTM-BDL	fm host	4-channel	0 - 10 V output	plug-in output cassette	**877.00**
I/O module	*clips onto host or measurement modules*			(H) 113 x (W) 30 x (D) 80 mm	
Slides onto right side of measurement modules, providing outputs					
DTM-DOV	fm host	8-channel	0/12 V pulse voltage	slide-on I/O Module	**2 020.00**
DTM-DOR	fm host	8-channel	2 A relay contact	slide-on I/O Module	**2 020.00**
DTM-DOC	fm host	8-channel	4 - 20 mA output	slide-on I/O Module	**2 020.00**
DTM-DOL	fm host	8-channel	0 - 10 V output	slide-on I/O Module	**2 020.00**

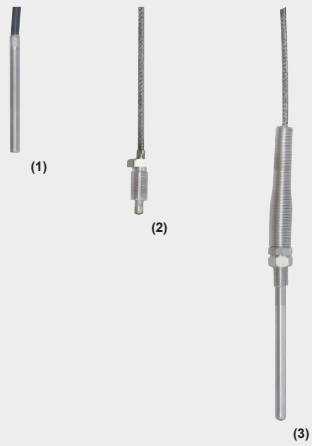
DTC series - "Modular" temperature controller (H) 90 x (W) 25.2 x (D) 60 mm

DTC features modular, wire-saving structure able to monitor multiple temperature points in parallel.
Modular extensions, providing user configurable outputs according to actual requirements
Programmable PID control allows users up to 64 groups of different temperature and control time.

- PID, programmable PID, On/Off, Manual control
- Analog inputs: 0-5V, 0-10V, 0-20mA, 4-20mA, 0-50mA
- Communication: RS-485 communication, 2.400 - 38.400 bps

DTC1000R	24 VDC	2-channel	3A SPST relay	main unit temp controller	**1 580.00**
DTC1000C	24 VDC	2-channel	DC current, 4-20 mA	main unit temp controller	**1 580.00**
DTC2000R	24 VDC	2-channel	3A SPST relay	extension unit	**1 580.00**
DTC2000C	24 VDC	2-channel	DC current, 4-20 mA	extension unit	**1 580.00**

Thermocouple sensors



type	sensor type	fitting type	probe type	type	cable length	description	probe dia. Ø	SUS304 length (mm)	price
RTD (PT100) sensors		*sensor probe/tube: SUS304 material*							
SJ-301/P505P	PT100	none	(1)	PVC	**1**	plain tube sensor	5	50	**654.00**
SJ-301/P505P3	PT100	none	(1)	PVC	**3**	plain tube sensor	5	50	**784.00**
SJ-301/P510T	PT100	none	(1)	teflon	**1**	plain tube sensor	5	100	**741.00**
SJ-301/P510T3	PT100	none	(1)	teflon	**3**	plain tube sensor	5	100	**937.00**
SJ-301/P520T	PT100	none	(1)	teflon	**1**	plain tube sensor	5	200	**741.00**
SJ-301/P520T3	PT100	none	(1)	teflon	**3**	plain tube sensor	5	200	**937.00**
SJ-302/P510T	PT100	M8 thread	(3)	teflon	**1**	threaded coupling	5	100	**741.00**
SJ-302/P510T3	PT100	M8 thread	(3)	teflon	**3**	threaded coupling	5	100	**937.00**
SJ-302/P520T	PT100	M8 thread	(3)	teflon	**1**	threaded coupling	5	200	**741.00**
SJ-302/P520T3	PT100	M8 thread	(3)	teflon	**3**	threaded coupling	5	200	**937.00**
SJ-305/P520T	PT100	1/4" PT	(4)	teflon	**1**	threaded adj. coupling	5	200	**1 400.00**
SJ-305/P520T3	PT100	1/4" PT	(4)	teflon	**3**	threaded adj. coupling	5	200	**1 590.00**
KN-1/2PT-8-200-PT	PT100	1/2" PT	(6)	terminal box		screw terminal box	8	200	**1 750.00**
KN-1/2PT-8-300-PT	PT100	1/2" PT	(6)	terminal box		screw terminal box	8	300	**1 830.00**
Type "J" thermocouples		*sensor probe/tube: SUS304 material*							
SJ-100/J505B	type J	none	(1)	braid	**1**	plain tube sensor	5	50	**214.00**
SJ-100/J505B3	type J	none	(1)	braid	**3**	plain tube sensor	5	50	**305.00**
SJ-100/J510B	type J	none	(1)	braid	**1**	plain tube sensor	5	100	**214.00**
SJ-100/J510B3	type J	none	(1)	braid	**3**	plain tube sensor	5	100	**305.00**
SJ-100/J520B	type J	none	(1)	braid	**1**	plain tube sensor	5	200	**214.00**
SJ-100/J520B3	type J	none	(1)	braid	**3**	plain tube sensor	5	200	**305.00**
SJ-105/J510B	type J	M8 thread	(3)	braid	**1**	threaded coupling	5	100	**214.00**
SJ-105/J510B3	type J	M8 thread	(3)	braid	**3**	threaded coupling	5	100	**305.00**
SJ-105/J520B	type J	M8 thread	(3)	braid	**1**	threaded coupling	5	200	**214.00**
SJ-105/J520B3	type J	M8 thread	(3)	braid	**3**	threaded coupling	5	200	**305.00**
SJ-106/JM8B	type J	screw-in	(2)	braid	**1**	screw-in sensor	M8	–	**131.00**
SJ-106/JM8B3	type J	screw-in	(2)	braid	**3**	screw-in sensor	M8	–	**223.00**
SJ-107/J5BB	type J	bayonet	(5)	braid	**1**	bayonet fixing sensor	5	–	**218.00**
SJ-107/J5BB3	type J	bayonet	(5)	braid	**3**	bayonet fixing sensor	5	–	**310.00**
KN-1/2PT-8-200-J	type J	1/2" PT	(6)	terminal box		screw terminal box	8	200	**1 570.00**
KN-1/2PT-8-300-J	type J	1/2" PT	(6)	terminal box		screw terminal box	8	300	**1 660.00**
Type "K" thermocouples		*sensor probe/tube: SUS304 material*							
SJ-100/K505B	type K	none	(1)	braid	**1 m**	plain tube sensor	5	50	**192.00**
SJ-100/K505B3	type K	none	(1)	braid	**3 m**	plain tube sensor	5	50	**284.00**
SJ-100/K510B	type K	none	(1)	braid	**1 m**	plain tube sensor	5	100	**192.00**
SJ-100/K510B3	type K	none	(1)	braid	**3 m**	plain tube sensor	5	100	**284.00**
SJ-100/K520B	type K	none	(1)	braid	**1 m**	plain tube sensor	5	200	**192.00**
SJ-100/K520B3	type K	none	(1)	braid	**3 m**	plain tube sensor	5	200	**284.00**
SJ-105/K510B	type K	M8 thread	(3)	braid	**1 m**	threaded coupling	5	100	**192.00**
SJ-105/K510B3	type K	M8 thread	(3)	braid	**3 m**	threaded coupling	5	100	**284.00**
SJ-105/K520B	type K	M8 thread	(3)	braid	**1 m**	threaded coupling	5	200	**192.00**
SJ-105/K520B3	type K	M8 thread	(3)	braid	**3 m**	threaded coupling	5	200	**284.00**
SJ-106/KM8B	type K	screw-in	(2)	braid	**1 m**	screw-in sensor	M8	–	**131.00**
SJ-106/KM8B3	type K	screw-in	(2)	braid	**3 m**	screw-in sensor	M8	–	**223.00**
SJ-107/K5BB	type K	bayonet	(5)	braid	**1 m**	bayonet fixing sensor	5	–	**218.00**
SJ-107/K5BB3	type K	bayonet	(5)	braid	**3 m**	bayonet fixing sensor	5	–	**310.00**
KN-1/2PT-8-200-K	type K	1/2" PT	(6)	terminal box		screw terminal box	8	200	**1 570.00**
KN-1/2PT-8-300-K	type K	1/2" PT	(6)	terminal box		screw terminal box	8	300	**1 660.00**
Thermocouple wire		*supplied in any length - priced per meter*							
RTD/T19W	PT100	teflon		teflon coated wire		19/0.13RTD-AFF-3C		*(per meter)*	**131.00**
TC-IC-H/S	type J	braided		steel braided covered		thermocouple wire		*(per meter)*	**61.00**
TC-CA-H/S	type K	braided		steel braided covered		thermocouple wire		*(per meter)*	**61.00**
Thermocouple connectors									
M-7-J	type J	male		thermocouple connector		plug		black	**88.00**
F-7-J	type J	female		thermocouple connector		socket		black	**96.00**
M-7-K	type K	male		thermocouple connector		plug		yellow	**88.00**
F-7-K	type K	female		thermocouple connector		socket		yellow	**96.00**
AC05-1/2		threaded sliding coupling for probe				1/2" PT ID dia	5	–	**872.00**
AC05-1/4		threaded sliding coupling for probe				1/4" PT ID dia	5	–	**610.00**

Above ZAR prices do not include VAT. E&OE

Display color for upper / lower limit (green / red)

Parameter Setup (orange)

Various Unit Conversion

DPA...

DPA series - Compact miniature pressure sensors

Delta's new-generation and slim pressure sensor is small in size and light, supporting many installation methods. DPA features high measurement accuracy, excellent stability, high shock and vibration resistance, good over-load capacity, anti-corrosion and heat resistance, and can work with all Delta's industrial automation products in hi-tech electronics industry, general processing industry, food packaging industry and automatic assembly industry.

Various unit conversion

The DPA series offers 6 kinds of globally adopted pressure units for measurement and display.

3-colour LCD display *(green, red, orange)*

The large LCD with a green, red and orange 3-colour LCD display allows users to set the display colour according to the ambient environment, such as when the pressure is within normal range or exceeds the allowed range. The display's colour is orange when in parameter setup mode. This makes it easy for reading and reduces operation errors.

Safety control mode

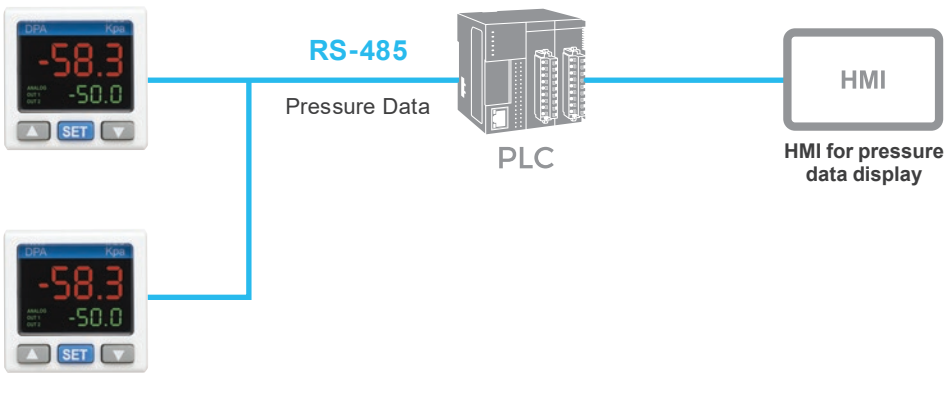
The safety control mode prevents operators from carelessly touching relevant parameters and affecting the operation and production of the equipment.

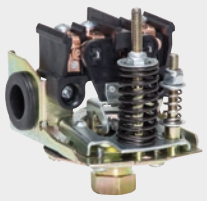
Functions:

- RS485 port, 2 x digital outputs (NPN or PNP) and 1 x analog output *(1 - 5V or 4 - 20mA)*
- Various unit conversion functions (kPa, kg/cm², bar, mmHg, psi, inchHg)
- Selectable LED *(3 colours)* set different colours for different parameters
- 10 sets of output response times available *(2ms - 5.000ms)*
- Connection: 1/8 PT, inner pore M5
- Safety control function *(to prevent unwanted parameter changes)*
- *For air pressure applications only*

type	pressure range (kPa)	output type: 2 x digital	output type: 1 x analog	description	price
Multifunction miniature pressure sensor				(H) 30 x (W) 30 x (D) 26 mm	
2 x digital and 1 x 4 - 20mA output					
DPA01P-P	-100 - 100kPa	PNP	4 - 20mA	mini pressure sensor	**2 000.00**
DPA10P-P	-100 - 1000kPa	PNP	4 - 20mA	mini pressure sensor	**2 000.00**
DPA01N-P	-100 - 100kPa	NPN	4 - 20mA	mini pressure sensor	**2 000.00**
DPA10N-P	-100 - 1000kPa	NPN	4 - 20mA	mini pressure sensor	**2 000.00**
2 x digital and 1 x 1 - 5V					
DPA01Q-P	-100 - 100kPa	PNP	+1 - 5V	mini pressure sensor	**2 000.00**
DPA01M-P	-100 - 100kPa	NPN	+1 - 5V	mini pressure sensor	**2 000.00**
DPA10M-P	-100 - 1000kPa	NPN	+1 - 5V	mini pressure sensor	**2 000.00**
Accessories for pressure sensors					
DPA-PFKIT	panel mount accessory			*(31 x 31 mm cut-out)*	**42.00**
DPA-FMKIT	surface mount support bracket			*(all sides mounting)*	**20.90**

Real-time Data Collection: Pressure Data via RS- 485





LF16-1...

LF10 series - Air pressure switches *(IP20)*

Pressure switches used to regulate tank pressures between two preset values on small *(up to 200psi)* electrically driven air compressors. Supplied with unloader valve *(preventing starting under load)* and manual auto-off override switch.

- Visible contact / no wire looping / ample wiring space
- Automatic unloader valve / manual “auto-off”override facility
- 2 x NC contacts 12A 240 VAC

type	operating pressure min ON PSI	operating pressure max OFF PSI	differential range PSI	factory setting PSI	pipe fitting female [1]	contact rating 240V	price
LF10-1H11123-80	25	100	20-35	55-80	1/4 NPT	12A	**339.00**
LF10-1H11123-115	35	150	30-40	85-115	1/4 NPT	12A	**339.00**
LF10-1H11123-150	50	175	35-55	110-150	1/4 NPT	12A	**339.00**

LF16 series - Water pump pressure switch IP20

LF16 pressure switches provide time tested, reliable control for automatic water systems. Universally accepted for use as original equipment on water well pumps or pumping systems.

- Visible contact / no wire looping / ample wiring space
- Automatic unloader valve / manual “auto-off”override facility
- 2 x NC contacts 16A 240 VAC

LF16-111-40PSI	20	80	15-30	20-40	1/4 NPT	16A	**339.00**
LF16-111-50PSI	20	80	15-30	30-50	1/4 NPT	16A	**339.00**
LF16-111-60PSI	20	80	15-35	40-60	1/4 NPT	16A	**339.00**

LF18-1...

LF19/18 series - Air compressor pressure switch IP44

Designed to regulate tank pressure between two preset values on three-phase electrically driven compressors.

- Non-metallic, corrosion-resistant cover
- Automatic unloader valve / manual “auto-off”override facility

type	Bar	Bar	Bar	Bar	Bar	240V	price
LF19 - 1 phase pressure switch			2 x NC contacts 16A		250 VAC		
LF19-111121-3BAR	1	6	2.0-4.0	1-3	G1/4”	16A	**284.00**
LF19-111121-4BAR	5	14	8.0-10.0	1.8-4	G1/4”	16A	**284.00**
LF18 - 3 phase pressure switch			3 x NC contacts 16A		400 VAC		
LF18-111121-5BAR	2	8	1.0-3.0	3.8-5	G1/4”	16A	**378.00**
LF18-111121-7BAR	3	11	1.4-4.0	5.6-7	G1/4”	16A	**378.00**
LF18-111121-10BAR	4	16	1.8-4.5	8-10	G1/4”	16A	**378.00**

1 BAR = 14.5 PSI

[1] *Other pipe fittings available on request*

LF55...

LF55 series - Pressure switch for refrigeration systems

LF55 series pressure switches are used with fluorinated refrigerants to control the pressure of compressors in refrigeration system, can also used in air and water applications.

- Medium: Refrigerant, air, water, oil -10°C...+100°C
- Contact: SPDT 10A 250 VAC

type	Bar	Bar	Bar	Bar OFF	Bar ON	fitting	250V	price
LF5503	-0.5	3	0.35-1.5	2.0	1.0	M12 X 1.25	10A	**551.00**
LF5506	-0.5	6	0.6-4	3.0	2.0	M12 X 1.25	10A	**551.00**
LF5510	1	10	1-3	6.0	5.0	M12 X 1.25	10A	**551.00**
LF5516	3	16	1-4	10.0	8.0	M12 X 1.25	10A	**551.00**
LF5520	5	20	2-5	16.0	13.0	M12 X 1.25	10A	**551.00**

FS52

FS series - Liquid flow switches *(paddle type)*

Designed for managing liquid flow changes of water, ethylene glycol or other non-hazardous liquids in pipes. When liquid flow is higher or lower than pre-set value a SPDT switch operates.

- Supplied with 3 fitted paddles for Ø25...75 mm pipes +spare for pipes up to Ø 200 mm
- Adjustable flow setting for different requirements
- Brass 1” NPT connection *(available in stainless steel for ammonia and other medium)*
- Max liquid pressure: 1 Bar - *can be used in multiple applications*

FS51	IP33	paddle type liquid flow switch	1” NPT	10A	**805.00**
FS52	IP55	paddle type liquid flow switch	1/2” NPT	10A	**1 060.00**

Above ZAR prices do not include VAT. E&OE

CMV100D

CMV105D

CMV104D

CMV103D

CM1305

CM1307

CM1308

CM1704

CM1701

CM1703

CZ-7121

CZ-7141

Miniature snap-action micro switches

- Snap-action micro switch with wiping contacts, silver alloy

type	current Ith		actuator	length	description	contacts	price
CMV series - Snap-action micro switches							
10A 250 VAC changeover							
• Terminals:	Fast-on 187 *(4.8 x 0.5 mm)*						
• Mounting:	Ø3 mm - 22.2 x 10.3 mm apart *(diagonal)*						
CMV100D	10A	**0**	standard plunger	–	miniature micro switch	SPDT	**23.70**
CMV101D	10A	**1**	short plain lever	35.6 mm	miniature micro switch	SPDT	**28.20**
CMV105D	10A	**5**	long plain lever	62.2 mm	miniature micro switch	SPDT	**28.20**
CMV104D	10A	**4**	short roller lever	20.1 mm	miniature micro switch	SPDT	**31.60**
CMV103D	10A	**3**	long roller lever	34.0 mm	miniature micro switch	SPDT	**30.50**
16A 250 VAC changeover							
• Terminals:	Fast-on 250 *(6.35 x 0.8 mm)*						
CMV16001C	16A	**0**	standard plunger	–	miniature micro switch	SPDT	**31.60**
CMV16011C	16A	**1**	short plain lever	35.6 mm	miniature micro switch	SPDT	**30.50**
CMV16051C	16A	**5**	long plain lever	62.2 mm	miniature micro switch	SPDT	**31.60**
CMV16041C	16A	**4**	short roller lever	20.1 mm	miniature micro switch	SPDT	**32.70**
CMV16031C	16A	**3**	long roller lever	34.0 mm	miniature micro switch	SPDT	**36.10**
CM series - Standard snap-action micro switch							
• Terminals:	Screw-type terminals						
• Mounting:	Ø4 mm - 25.4 mm apart *(horizontal)*						
CM1300	15A	**F**	pin plunger		standard micro switch	SPDT	**100.00**
CM1305	15A	**G**	extended plunger		standard micro switch	SPDT	**124.00**
CM1306	15A	**H**	button plunger		standard micro switch	SPDT	**96.00**
CM1307	15A	**I**	ext. panel mnt plunger		standard micro switch	SPDT	**134.00**
CM1308	15A	**J**	ext. panel mnt roller plunger		standard micro switch	SPDT	**150.00**
CM1309	15A	**K**	ext. p/mnt roller plunger 90º		standard micro switch	SPDT	**154.00**
CM1701	15A	**L**	long plain lever		standard micro switch	SPDT	**98.00**
CM1703	15A	**M**	long roller lever		standard micro switch	SPDT	**107.00**
CM1704	15A	**N**	short roller lever		standard micro switch	SPDT	**103.00**
CM1705	15A	**P**	long wire lever		standard micro switch	SPDT	**116.00**
CM1743	15A	**O**	short roller *(collapsible)*		standard micro switch	SPDT	**114.00**
CAP-Y					CM switch terminal cover		**13.60**
CZ-7 series - Micro switch	**10A 250 VAC**						
• Rated insulated voltage:	Ui-380V						
• Terminals:	Screw terminals (IP40)						
• Rated thermal current:	10A (Ith IEC94751) 250 VAC						
• Mounting:	Ø4 mm...25.4 mm apart *(horizontal)*						
CZ-7310	10A	**I**	ext. panel mnt plunger		standard micro switch	SPDT	**173.00**
CZ-7311	10A	**J**	ext. panel mnt roller plunger		standard micro switch	SPDT	**208.00**
CZ-7312	10A	**K**	ext. p/mnt roller plunger 90º		standard micro switch	SPDT	**208.00**
CZ-7120	10A	**L**	long plain lever		standard micro switch	SPDT	**153.00**
CZ-7121	10A	**M**	long roller lever		standard micro switch	SPDT	**141.00**
CZ-7141	10A	**N**	short roller lever		standard micro switch	SPDT	**155.00**
CZ-7144	10A	**O**	short roller *(collapsible)*		standard micro switch	SPDT	**164.00**

Actuator - Types

KB A1 S11 KB B2 S11 KB C2 S11

KB E2 S11 KB F2 S11 KB M1 S11

KM E2 S11

KM H1 S11

KG100S11

KG200S11

KR200S11

Limit switches designed to satisfy all requirements comprising quick installation, easy wiring and simple setup. The innovative locking bayonet mechanism permits to remove and reposition the operating head in the required configuration with no tools. The auxiliary contact blocks are removable assuring remarkable wiring ease.

- Replaceable actuator heads, 45° axial rotation of operating heads
- Direct operating operation; safety function according to IEC/EN 60947-5-1
- Ith 10A – IP65 – Ui 690 VAC – M20 cable entry

type	description		contacts	price
KB series - *Plastic body bottom entry*		*(1 x M20)*	**IP65**	
- Body dimensions:	*(H) 69 x (W) 30 x (D) 30 mm*	*fixing hole distance:*	*20 mm*	
KB A1 S11	top plunger	industrial limit switch	1NO + 1NC	**340.00**
KB B2 S11	top roller plunger *(metal)*	industrial limit switch	1NO + 1NC	**408.00**
KB C2 S11	top plunger roller lever *(metal)*	industrial limit switch	1NO + 1NC	**411.00**
KB D2 S11	roller side push level *(metal)*	industrial limit switch	1NO + 1NC	**411.00**
KB E2 S11	rotating roller lever *(metal)*	industrial limit switch	1NO + 1NC	**444.00**
KB F2 S11	rotating roller lever *(adjustable)*	industrial limit switch	1NO + 1NC	**464.00**
KB H1 S11	ceramic rotating rod roller lever	industrial limit switch	1NO + 1NC	**658.00**
KB L2 S11	rotating rod lever *(adjustable)*	industrial limit switch	1NO + 1NC	**454.00**
KB M1 S11	omni-directional wobble stick	industrial limit switch	1NO + 1NC	**446.00**
KB P1 L11	hinge operating *(short cylinder)*	industrial limit switch	1NO + 1NC	**1 270.00**
KB P2 L11	hinge operating *(long cylinder)*	industrial limit switch	1NO + 1NC	**1 330.00**
KM series - *Metallic body bottom entry*		*(1 x M20)*	**IP65**	
- Body dimensions:	*(H) 69 x (W) 30 x (D) 30 mm*	*fixing hole distance:*	*20 mm*	
KM A1 S11	top plunger	industrial limit switch	1NO + 1NC	**467.00**
KM B2 S11	top roller plunger	industrial limit switch	1NO + 1NC	**537.00**
KM C2 S11	top plunger roller lever	industrial limit switch	1NO + 1NC	**543.00**
KM E2 S11	rotating roller lever	industrial limit switch	1NO + 1NC	**576.00**
KM F2 S11	rotating roller lever *(adjustable)*	industrial limit switch	1NO + 1NC	**598.00**
KM H1 S11	ceramic rotating rod roller lever	industrial limit switch	1NO + 1NC	**811.00**
KM L2 S11	rotating rod lever *(adjustable)*	industrial limit switch	1NO + 1NC	**588.00**
KM M1 S11	omni-directional wobble stick	industrial limit switch	1NO + 1NC	**578.00**
Spare – contact blocks *(interchangeable) - excluding **KB Q1 L11***				
KX B S11	contact block	snap action	1NO + 1NC	**294.00**
KX B S02	contact block	snap action	2 NC	**463.00**
KX B A11	contact block	slow break *(make before break)*	1NO + 1NC	**254.00**
KX B L11	contact block	slow break	1NO + 1NC	**254.00**
KX B L21	contact block	slow break	2NO + 1NC	**515.00**

Industrial foot switches thermoplastic and metallic IP54

KG and KR series of foot switches are robust and reliable control devices designed for a wide range of industrial applications. Engineered for durability and ease of use, these foot switches allow for hands-free operation, improving safety and efficiency in the workplace.

The KG series is ideal for general-purpose use, providing a straightforward and effective solution for controlling machinery and equipment. In contrast, the KR series offers enhanced protection with a reinforced housing, making it suitable for more demanding environments where additional durability is required.

- Self-extinguishing double insulation polymer thermoplastic
- Cable entry: M20 x 1.5

KG series - Thermoplastic foot switches

- Self-extinguishing double insulation thermoplastic

KG100S11	open-type industrial foot switch	thermoplastic	1NO + 1NC	**1 430.00**
KG200S11	closed-type industrial foot switch	thermoplastic	1NO + 1NC	**1 710.00**

KR series - Metallic foot switches

- Aluminium zinc alloy body

KR100S11	open-type industrial foot switch	diecast	1NO + 1NC	**2 670.00**
KR200S11	closed-type industrial foot switch	diecast	1NO + 1NC	**3 190.00**

Additional charges

KGX01	kit for adding a second contact block to foot switches	–	**67.00**
KGX02	contact block mounting bracket	–	**137.00**
KX B S11	additional contact block for above foot switches	1NO + 1NC	**294.00**

Above ZAR prices do not include VAT. E&OE

DATASENSING
easing automation challenges

S3N

MINIATURE PHOTOELECTRIC SENSOR

S3N is the new Datasensing miniature photoelectric sensor line with state of art detection features, rugged mechanics, complete optical functions, bright red LED or safe Laser class 1 emission. Available with Teach-in push button and smart IO-Link, offering advanced parametrization and monitoring functionalities, with predictive maintenance for your automation system.

Features

- Compact Dimensions
- Smart and Easy
- Mechanical Roughness
- Logistics Applications
- Automation
- Packaging Applications

The S3N series features IO-Link connectivity, the key to seamless integration and advanced monitoring.

- Easy installation - Plug-and-play functionality
- Adjust parameters, remote diagnostics
- Real-time monitoring: Track sensor status and detection data in real time
- Predictive maintenance: Identify potential problems early

IO-Link

E10100BI

E30100EMRA

E40100AM

E series industrial limit switches are suitable for most environmental conditions due to their solid construction, IP66 certification and proven reliability over decades of fieldwork.

- Protection degree: IP66
- Rated thermal current: 10A (Ith IEC947-5-1)
- Conformity: EN 50047, UNI EN 1088, EN ISO 12100-1, IEC529
- Contact blocks with positive opening of the NC contact according to IEC/EN 60947-5-1, VDE 0660-200

type	actuator type	description	contact	price
E100 series - Industrial limit switches	**IP66**	CENELEC EN50047		
Body dimensions:	*(H) 77.5 x (W) 30.5 x (D) 33 mm*	fixing hole distance: 20/22 mm		
Cable entry:	1 x bottom entry - PG13.8			
Thermoplastic body	(IP66)			
E10000AI	top steel plunger actuator	limit switch	1NO + 1NC	**356.00**
E10000BI	top steel roller plunger actuator	limit switch	1NO + 1NC	**440.00**
E10000CI	roller lever side action	limit switch	1NO + 1NC	**409.00**
E10000DI	roller lever vertical action	limit switch	1NO + 1NC	**425.00**
E10000EI	rotary roller arm lever	limit switch	1NO + 1NC	**435.00**
E10000EI50	rotary Ø50 mm rubber roller arm lever	limit switch	1NO + 1NC	**523.00**
E10000II	offset rotary roller arm lever	limit switch	1NO + 1NC	**435.00**
E10000FI	adjustable length rotary roller arm lever	limit switch	1NO + 1NC	**462.00**
E10000HI	adjustable rotary Ø6 mm rod lever	limit switch	1NO + 1NC	**610.00**
E10000LI	flexible spring rod actuator rod	limit switch	1NO + 1NC	**569.00**
E10001SCI	safety switch for hinges	limit switch	1NO + 1NC	**782.00**
Diecast metal body	(IP66)			
E10000AM	top steel plunger actuator	limit switch	1NO + 1NC	**539.00**
E10000BM	top steel roller plunger actuator	limit switch	1NO + 1NC	**623.00**
E10000CM	roller lever side action	limit switch	1NO + 1NC	**567.00**
E10000DM	roller lever vertical action	limit switch	1NO + 1NC	**597.00**
E10000EMRA	rotary (metal) roller arm lever	limit switch	1NO + 1NC	**762.00**
E10000IMRA	offset rotary (metal) roller arm lever	limit switch	1NO + 1NC	**880.00**
E10000IM50	rotary Ø50 mm rubber roller arm lever	limit switch	1NO + 1NC	**680.00**
E10000FM	adjustable length rotary roller arm lever	limit switch	1NO + 1NC	**610.00**
E10000HM	adjustable rotary Ø6 mm rod lever	limit switch	1NO + 1NC	**807.00**
E10000LM	flexible spring rod actuator rod	limit switch	1NO + 1NC	**763.00**
E300 series - Industrial limit switches	**IP66**	*diecast metal body*		
Body dimensions:	*(H) 89.5 x (W) 52 x (D) 35.5 mm*	fixing hole distance: 40 mm		
Cable entry:	2 side + 1 x bottom entry - PG13.8			
E30000AM	top steel plunger actuator	limit switch	1NO + 1NC	**757.00**
E30000BM	top steel roller plunger actuator	limit switch	1NO + 1NC	**763.00**
E30000CM	roller lever side action	limit switch	1NO + 1NC	**795.00**
E30000EMRA	rotary (metal) roller arm lever	limit switch	1NO + 1NC	**835.00**
E30000FM	adjustable length rotary roller arm lever	limit switch	1NO + 1NC	**876.00**
E30000LM	flexible spring rod actuator rod	limit switch	1NO + 1NC	**918.00**
E400 series - Industrial limit switches	**IP66**	diecast metal body - CENELEC EN50041		
Body dimensions:	*(H) 106.5 x (W) 40 x (D) 36 mm*	fixing hole distance: 2 x 30 mm		
Cable entry:	1 x bottom entry - PG13.8			
E40000AM	top steel plunger actuator	limit switch	1NO + 1NC	**738.00**
E40000BM	top steel roller plunger actuator	limit switch	1NO + 1NC	**762.00**
E40000CM	roller lever side action	limit switch	1NO + 1NC	**787.00**
E40000DM	roller lever vertical action	limit switch	1NO + 1NC	**854.00**
E40000EMRA	rotary (metal) roller arm lever	limit switch	1NO + 1NC	**1 330.00**
E40000IM50	rotary Ø50 mm rubber roller arm lever	limit switch	1NO + 1NC	**858.00**
E40000FM	adjustable length rotary roller arm lever	limit switch	1NO + 1NC	**775.00**
E40000HM	adjustable rotary Ø6 mm rod lever	limit switch	1NO + 1NC	**951.00**
E40000LM	flexible spring rod actuator rod	limit switch	1NO + 1NC	**862.00**
E40000LSM	Cats whisker actuator	limit switch	1NO + 1NC	**868.00**

Above ZAR prices do not include VAT. E&OE

E40108TBM

E10001SCI

ELEM00

Z5

Safety limit switches

- Protection degree: IP66
- Body Material: Plastic or Metal body limit switches
- Rated thermal current: 10A Ithe (IEC947-5-1)
- Mechanical life: 20 million operations

type	actuator type	description	contact	price
Pull wire safety switches				
Pull wire safety switches guarantee the safety of operator who is able to control the immediate stop of machinery at any point in the operating zone.				
1) Tension wire until both contacts are in the closed position 2) When wire is pulled one contact (A) opens and switch is latched *(resettable via front button)* 3) If wire breaks, the other contact (B) opens *Both contacts should be wired in series*				
E10108TBI	latching *(resettable by button)* pull wire	plastic limit switch	1NO + 1NC	**1 330.00**
E40108TBM	latching *(resettable by button)* pull wire	metal limit switch	1NO + 1NC	**1 610.00**
Key actuated switches 5 way key actuated switches are used on gates, sliding doors and other devices to protect access to dangerous parts of machines. The key is applied to the moving protection barrier and has to be removed from the switch on every opening thus operating a positive opening or the NC contact.				
E10101S5I	key actuated safety switch	plastic limit switch	1NO + 1NC	**717.00**
Hinge operated switches used to guarantee operator safety, applied to machinery fitted with protection barriers with application directly to the hinge of the enclosure. The switches hinged socket accepts an 8 mm shaft.				
E10001SCI	safety switch for hinges	plastic limit switch	1NO + 1NC	**782.00**
Spare contact blocks for all limit switches				
ELEM00	standard snap action	contact block	1NO+1NC	**272.00**
ELEM03	slow action	contact block	2NO	**296.00**
Accessories for above limit switches				
Z5	angled key for key actuated safety limit switches			**156.00**
Z52	adjustable key for key actuated safety limit switches			**208.00**
*For pull wire switch accessories (see page **K-43...44**)*				

PDNS11BX10

PDKS11BX10

LK20K13

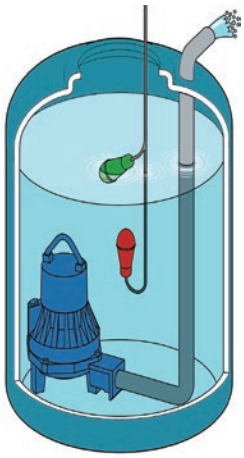
Industrial foot switches — IP65

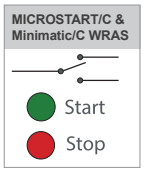
EMAS foot operated switches are ideal for all industrial applications. They are supplied as open type or with plastic or diecast foot protection, preventing inadvertent operation.

Internal cams are provided to accommodate up to 3 x contact blocks, two with simultaneous operation and one with delayed switching.

- Mechanical life: 1.000.000 operations
- Electrical life: 100.000 operations min.
- Operating temperature: -5°C...+60°C
- Rated thermal current: 10A Ithe (IEC 947-51)
- Conformity to standards: EN 60947-5-1, VDE0660, UL508

type	description	protection cover	contact configuration	price
Open type foot switch	**IP65**			
PDNS11BX10	open type industrial foot switch	no	1NO + 1NC	**727.00**
Protected foot switches	**IP65**			
PPKS11BX10	protected type industrial foot switch	thermoplastic	1NO + 1NC	**989.00**
PDKS11BX10	protected type industrial foot switch	diecast	1NO + 1NC	**1 460.00**
Contact blocks for above foot switches				
Up to two additional contact blocks can added to foot switches: 1 x simultaneous operation and 1 x with delayed switching for two speed operations.				
LK20K13	snap action contact block for foot switches		1NO + 1NC	**162.00**





MATIC float switches feature a patented inner chamber filled with Polyurethane foam preventing ingress of humidity and water condensation within the switch.

IMQ, ECC, CENELC, VDE, CE approved.

type	cable length	differential degrees	contact rating	description	dimensions (mm) (H)	(W/Ø)	(D)	price
MICROSTART/C				level regulator for clean water				
• Can be used for emptying and filling *(SPDT contact)*								
• Counterweight:				Supplied complete with cable fixing				
• Protection degree:				IP68				
• Max. water temperature:				55°C				
• Electrical contact:				10 (4) A 250 VAC *(rated voltage)*				
• Max working pressure:				10 Bar				
ACB05P10	5 meter	30°	10 (4) A	float switch for clean water	160	70	52	**432.00**
ACB10P10	10 meter	30°	10 (4) A	float switch for clean water	160	70	52	**679.00**
Minimatic/C WRAS				WRAS approved for drinking water				
• Tested and certified by WRAS								
• Counterweight:				Supplied complete with cable fixing				
AAB05W10	5 meter	30°	10 A	float switch for drinking water	172	80	56	**828.00**
AAB10W10	10 meter	30°	10 A	float switch for drinking water	172	80	56	**1 510.00**
Little Mercury				submerged float switches for sewer water				
For regulation of particularly turbulent industrial waters containing residues of suspended agglomerates or of sewer waters.								
• Internal weight fixing the rotation centre *(gravity centre)* close to the cable connection.								
• Two switches used:				1 for high level and 1 for low level control				
• Protection degree:				IP68				
• Max. water temperature:				55°C				
• Electrical contact:				10 A 250 VAC *(rated voltage)*				
• Max working pressure:				10 Bar				
Little Mercury MC				internal micro switch with self-cleaning contacts				
AEA05P00	5 meter	15°	10 (4) A	float switch for sewer water	138	76	–	**1 680.00**
AEA10P00	10 meter	15°	10 (4) A	float switch for sewer water	138	76	–	**2 090.00**
Little EX ATEX				float switch for use in Diesel oil				
For regulation of particularly diesel oil, water and hydrocarbon mixture, motor oils, tools machine oils, etc.								
• ATEX Certified: Group and category tool II 1G - Ex ia Group of striking IIC								
• Special blue cable for the immersion in hydrocarbons mixture *(3 x 1 NEOPREN)*								
AHA05	5 meter	15°	21.4 mA	float switch for diesel oil	138	76	–	**1 930.00**
AHA10	10 meter	15°	21.4 mA	float switch for diesel oil	138	76	–	**2 600.00**
Matic V MC				level regulator for water up to 130°C				
Outer casing made in 304 AISI stainless steel and electric with outer SILICON sheath resistant to high temperatures.								
• ATEX Certified Group and category tool II 1G - Ex ia Group of striking IIC								
• Protection degree:				IP68				
• Electric contact:				Max 0.25 A - 60 V *(rated voltage)*				
• Max working pressure:				4 Bar				
AFA05S00	5 meter	10°	0.25 A	float switch for clean water	–	75	–	**3 070.00**
AFA10S00	10 meter	10°	0.25 A	float switch for clean water	–	75	–	**3 840.00**
Matic P/MC				float switch for autoclaves and pipings				
Due to its small diameter it can be introduced into a tank through a Ø30 mm hole and disposed either horizontally or vertically *(with counterweight)*.								
• Protection degree:				IP68				
• Electric contact:				Max 0.25 A - 60 V *(rated voltage)*				
• Max working pressure:				8 Bar				
AGD05S00	5 meter	5°	0.25 A	float level switch	182	28.5	–	**2 340.00**
AGD10S00	10 meter	5°	0.25 A	float level switch	182	28.5	–	**3 110.00**
Accessories for float switches								
CNTRWT/100	100g			standard cable fixing counterweight for float switches				**49.00**
CNTRWT/360	360g			stainless steel cable fixing counterweight for float switches				**397.00**

ACB...

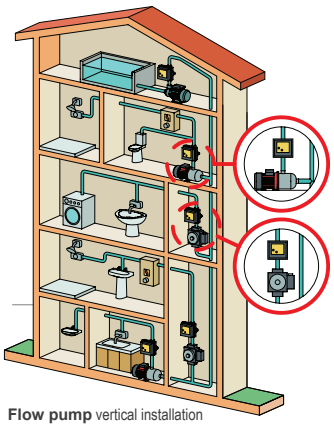
AAB...

AEA...

AFA...

AGD...

Above ZAR prices do not include VAT. E&OE



Flow pump vertical installation

FBA315

EDA

type	supply voltage	max. pressure	max. temp	description	price
FLOW PUMP - Flow switches				for circulation and centrifugal pumps	
FLOW PUMP				*in-line flow switch*	

For the control of electric pumps connected to accumulation tanks to increase flow or pressure. Controls the start-up or switching off of the motor in correspondence to water requirements, assuring a constant flow.

The highly sensitive switch permits control of flow as low as three litres per minute. When a tap is opened and water flows at over three litres per minute, it starts the motor and if flow drops below three litres per minute *(due to closing tap or empty accumulation tank)* it stops the motor.

Manufactured entirely of glass reinforced polyamide with brass threaded input/output joint G1 for vertical in-line connection to liquid piping.

- Incorporated start button
- Minimum flow: 3 litres / min. *(max. 80 litres/min.)*
- Motor load: 10 (4) A 250 VAC
- Start-up delay: 0…10 sec *(adjustable)*

FBA315	220 VAC	8 Bar	85°C	in-line flow switch 1” inch pipe thread	**1 530.00**

FLOW MATIC/H10AR				paddle-type flow switch	

Designed for the control of fluid movement by circulator or centrifugal electric pumps. The high sensitivity switch permits control of flow as low as 20 litres per minute. They incorporate a brass threaded G1 joint for piping from one inch and over.

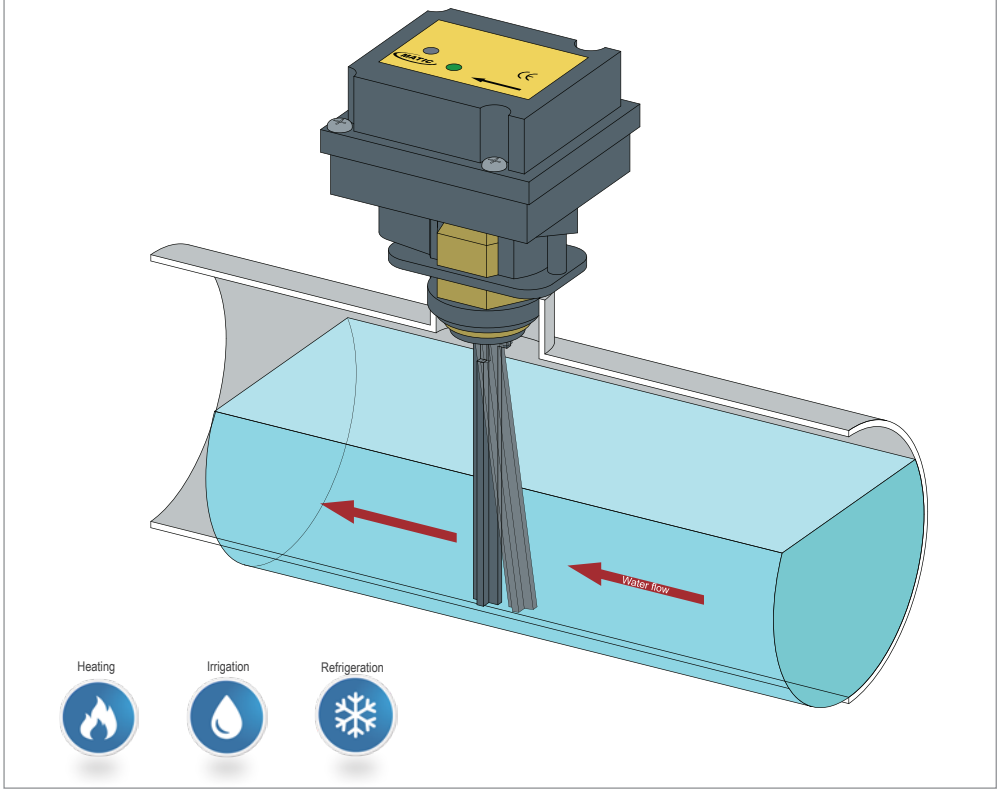
The electric contact is housed externally to the flow switch and is moved by a magnet located on the head of the switch.

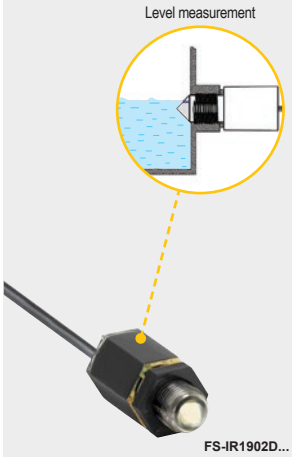
The glass reinforced polyamide paddle can be cut to size in 25 mm segments to the diameter of pipe.

- Incorporated test button
- Minimum flow: 20 litres / min.
- Relay: 10 (4) A 250 VAC NO + NC
- Electric housing: IP54
- Start-up delay: 0…10 sec *(adjustable)*

EDA	250 VAC	10 Bar	100°C	paddle flow switch 1” screw connection	**2 050.00**

Paddle-type flow switch





FS-IR1902D...

Optical level sensors emit an internal infrared light beam within a prism then measure the amount of light returned. In dry conditions the LED projects an infrared light beam which is fully reflected back to the receiver by the prism. Conversely, when the prism comes in contact with liquid, the light is dispersed with less light reaching the receiver, triggering the contacts.

Benefits of Optical level sensors are the absence of moving parts, compact dimensions, very slight switching hysteresis ensuring high reliability and repeatability.

- Developed for monitoring the presence (or) absence of transparent liquids and chemicals.
- Extremely accurate for point level detection in high-stress environments in any sized tank
- Using infrared light and no moving parts whatsoever, Immune to electromagnetic interference
- Simply fit and forget

type	supply voltage	mounting thread	PNP NO	PNP NC	NPN NO	NPN NC	description	price
Optical level sensor		**IP67**						
FS-IR1902D-PNP NO	10 - 30 VDC	M12	•				optical liquid level sensor	**370.00**
FS-IR1902D-PNP NC	10 - 30 VDC	M12		•			optical liquid level sensor	**370.00**
FS-IR1902D-NPN NO	10 - 30 VDC	M12			•		optical liquid level sensor	**370.00**
FS-IR1902D-NPN NC	10 - 30 VDC	M12				•	optical liquid level sensor	**370.00**

- Simple, compact, and robust, detects high/low levels in any sized container
- Features transient over-voltage, short circuit protection,
- LED Status indication
- Dry run detection

Operating temp: -20ºC…+80ºC
Termination: Cable *(2 meter)*
Body Material: PS *(Polysulfone)*

LS-264

Magnetic Float switches *(reed type)*

When the magnetic field (caused by an internal permanent magnet) is moved into the proximity of the sealed reed switch inside the stationary stem, the reed switch contacts close the electrical circuit. The float switches are extremely compact, simple and easy to install and not effected by electrical interference and withstand chemicals.

Safe - Convenient - Low cost *N.O. (reversible by reversing float)*

Electrical connection: 300 mm cable
Switch current/voltage: 70 VA
Max voltage: 250 VAC / 200 VDC
Accuracy: ± 2 mm in water

LS-317 LS-064A LS-318-1

type	mounting	thread size (mm)	pressure withstand	description	price
Plastic (top/bottom mount)					
Float size:		*(H) 24 x (Ø) 20 mm*			
Operating temperature:		-10°C...+70°C			
Short stem - float switch 36 mm		*Internal mounting*			
LS-264	top/bottom	M10	8 Bar	vertical mount float switch	**181.00**
Long stem - float switch 55 mm		*Internal mounting*			
LS-297	top/bottom	M10	8 Bar	vertical mount float switch	**196.00**
Stainless steel - vertically mount float switches					
Float size:		*(H) 28 mm (Ø) 28 mm*			
Operating temperature:		-30°C...+125°C			
Material:		SUS 304 stainless steel			
Short stem - float switch 40 mm		*Internal mounting*			
LS-317	top/bottom	G1/8"	20 Bar	vertical mount float switch	**795.00**
Long stem - float switch 100 mm		*Internal mounting*			
LS-064A	top/bottom	G1/8"	20 Bar	vertical mount float switch	**795.00**
Long stem - float switch 100 mm		*External mounting*			
LS-318-1	top/bottom	NPT 1"	20 Bar	vertical mount float switch	**700.00**
Bent stem (90°) - float switch 75 mm		*Internal mounting*			
LS-052-1	top/bottom	G1/8"	20 Bar	vertical mount float switch	**735.00**

LS-052-1

Continue on the opposite page...

Above ZAR prices do not include VAT. E&OE

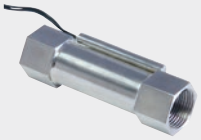
Electrical connection: 300 mm cable
Switch rating: 0.8A max
Switch current: 1.5A
Switch voltage: 250 VAC / 200 VDC

Material: Plastic
Brass
Stainless

Liquid medium: Clean water

FS-100

FS-902


FS-300/402

FS-200/500

type	for domestic use		heavy duty		
Model	**FS-100**	**FS-902**	**FS-300**	**FS-402**	**FS-500**
Fitting	NPT3/4"	1/2"NPT for inlet 1/2" NPT for outlet	NPT3/4"	NPT1/2"	NPT1/2"
Flow switches housing	plastic PPR	plastic PBT	SUS304	SUS304	brass - C37700
Operating pressure	120 PSI max	140 PSI max	250 PSI max	250 PSI max	150 PSI max
Temperature range	-10ºC...80ºC	-10ºC...105ºC	-20ºC...120ºC	-20ºC...120ºC	-10ºC...120ºC
Medium (liquid)	clean water	clean water	clean water	clean water	clean water
Contact form	form A S.P.S.T.	form A S.P.S.T.	form A S.P.S.T.	form A S.P.S.T.	form A S.P.S.T.
Carry current	1.5A	1.0A	1.5A	1.5A	1.5A
Switch current	0.8A max	0.7A max	0.8A max	0.8A max	0.8A max
Switch voltage	220 VAC/DC	220 VAC/DC	220 VAC/DC	220 VAC/DC	220 VAC/DC
Power rating	50VA	50VA	50VA	50VA	50VA
Operating flow rating	1.5L/min	0.75 - 2L/min	1.0 - 8L/min	1.2 - 4L/min	1 - 4L/min
Setting flow value accuracy	±10%	±10%	±10%	±10%	±10%
Maximum flow	15L/min (pressure drop is 10 PIS)	10L/min (pressure drop is 10 PIS)	10L/min (pressure drop is 10 PIS)	10L/min (pressure drop is 10 PIS)	15L/min (pressure drop is 10 PIS)
Mounting shock	30g for 11ms duration	30g for 11m duration	30g for 11ms duration	30g for 11ms duration	30g for 11ms duration
Mounting vibration	35 to 500Hz	35 to 500Hz	35 to 500Hz	35 to 500Hz	35 to 500Hz
Duration of cycle	100.000 cycles	100.000 cycles	100.000 cycles	100.000 cycles	100.000 cycles
Price	**488.00**	**506.00**	**1 190.00**	**1 220.00**	**1 070.00**

LS-147

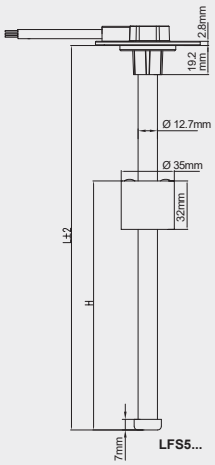
LS-055-1

... *Continued...* **Nylon** *(side mount)* **hinged type**

type	mounting size (mm)	thread withstand	pressure	mounting	description	price
Can be used for "high" or "low" level detection *(by turning float direction "up" or "down").*						
Float size:			*(L) 47 mm (Ø) 17 mm*			
Operating temperature:			-10°C...+75°C			
Material:			Nylon			
LS-147	side mount	M16	8 Bar	internal	horizontal mount float switch	**341.00**
LS-148	side mount	NPT 1/2"	8 Bar	external	horizontal mount float switch	**347.00**

Stainless steel SUS 304 *(side mount)* **hinged type**

Can be used for "high" or "low" level detection *(by turning float direction "up" or "down").*						
Float size:			*(L) 47 mm (Ø) 17 mm*			
Operating temperature:			-30°C...+125°C			
LS-154-1	side mount	M16	10 Bar	internal	horizontal mount float switch	**942.00**
LS-055-1	side mount	NPT 1/2"	10 Bar	external	horizontal mount float switch	**879.00**



LFS5...

Red	Signal (out)
Black	Common (input)
White	Low level alarm output

LFTN-...

LF01-200

LFS5 series - Fuel level sensor *(IP67)*

S5 series level sensors employ a magnetic field principle to sense the fuel level depth and to operate the low level alarm signal. The sensors feature long life, unaffected by vibration and are anti explosive.

- Low level alarm contact: 500 mA
- Output signal: 0 - 190 Ω or 4-20mA
- Accuracy: 12 mm

Material: Main body made of SU304 stainless steel
Mounting: Standard SAE 5 hole mounting flange *(supplied with M5 screws and NBR gasket)*

type	sensor length	output signal	supply	description	price
0 - 190Ω resistance output				-40°C ...+85°C	
LFS5-150	150 mm	0 - 190Ω	–	magnetic fuel level sensor	**1 180.00**
LFS5-200	200 mm	0 - 190Ω	–	magnetic fuel level sensor	**1 250.00**
LFS5-250	250 mm	0 - 190Ω	–	magnetic fuel level sensor	**1 350.00**
LFS5-300	300 mm	0 - 190Ω	–	magnetic fuel level sensor	**1 440.00**
LFS5-350	350 mm	0 - 190Ω	–	magnetic fuel level sensor	**1 690.00**
LFS5-400	400 mm	0 - 190Ω	–	magnetic fuel level sensor	**1 780.00**
LFS5-500	500 mm	0 - 190Ω	–	magnetic fuel level sensor	**2 090.00**
LFS5-600	600 mm	0 - 190Ω	–	magnetic fuel level sensor	**2 430.00**
LFS5-800	800 mm	0 - 190Ω	–	magnetic fuel level sensor	**3 250.00**
LFS5-1000	1000 mm	0 - 190Ω	–	magnetic fuel level sensor	**3 990.00**
LFS5-1200	1200 mm	0 - 190Ω	–	magnetic fuel level sensor	**4 760.00**
LFS5-1400	1400 mm	0 - 190Ω	–	magnetic fuel level sensor	**5 470.00**
LFS5-1600	1600 mm	0 - 190Ω	–	magnetic fuel level sensor	**6 610.00**
LFS5-2000	2000 mm	0 - 190Ω	–	magnetic fuel level sensor	**8 170.00**
4 - 20mA output		supply voltage:	24 - 32V	-40°C...+85°C	
LFS5-150/4-20	150 mm	4 - 20mA	24 VDC	magnetic fuel level sensor	**1 330.00**
LFS5-200/4-20	200 mm	4 - 20mA	24 VDC	magnetic fuel level sensor	**1 400.00**
LFS5-300/4-20	300 mm	4 - 20mA	24 VDC	magnetic fuel level sensor	**1 590.00**
LFS5-400/4-20	400 mm	4 - 20mA	24 VDC	magnetic fuel level sensor	**1 930.00**
LFS5-500/4-20	500 mm	4 - 20mA	24 VDC	magnetic fuel level sensor	**2 240.00**
LFS5-600/4-20	600 mm	4 - 20mA	24 VDC	magnetic fuel level sensor	**2 580.00**
LFS5-800/4-20	800 mm	4 - 20mA	24 VDC	magnetic fuel level sensor	**3 400.00**
LFS5-1000/4-20	1000 mm	4 - 20mA	24 VDC	magnetic fuel level sensor	**4 140.00**
LFS5-1200/4-20	1200 mm	4 - 20mA	24 VDC	magnetic fuel level sensor	**4 910.00**
LFS5-1400/4-20	1400 mm	4 - 20mA	24 VDC	magnetic fuel level sensor	**5 620.00**
LFS5-1600/4-20	1600 mm	4 - 20mA	24 VDC	magnetic fuel level sensor	**6 840.00**
LFS5-2000/4-20	2000 mm	4 - 20mA	24 VDC	magnetic fuel level sensor	**8 700.00**

Other lengths available on request

LFTN series - Fuel tank level sensors IP67

LFTN series sensors employ a magnetic field principle to detect fuel level depth and to operate a low level alarm signal. The sensor also incorporates a suction pipe, return pipe and breather pipe into the same mounting flange as the sensor.

type	sensor length	output signal	fuel pipes *(bulge fitting)* suction	return	breather	description	price
LFTN-150	150 mm	0 - 190Ω	10 mm	10 mm	6 mm	fuel level sensor	**1 490.00**
LFTN-200	200 mm	0 - 190Ω	10 mm	10 mm	6 mm	fuel level sensor	**1 740.00**
LFTN-250	250 mm	0 - 190Ω	10 mm	10 mm	6 mm	fuel level sensor	**1 970.00**
LFTN-300	300 mm	0 - 190Ω	10 mm	10 mm	6 mm	fuel level sensor	**2 150.00**
LFTN-400	400 mm	0 - 190Ω	10 mm	10 mm	6 mm	fuel level sensor	**2 510.00**
LFTN-500	500 mm	0 - 190Ω	10 mm	10 mm	6 mm	fuel level sensor	**2 950.00**
LFTN-600	600 mm	0 - 190Ω	10 mm	10 mm	6 mm	fuel level sensor	**1 400.00**
LFTN-700	700 mm	0 - 190Ω	10 mm	10 mm	6 mm	fuel level sensor	**3 430.00**

LF01 series - Mechanical fuel level gauges *(aluminium alloy)* -40°C...+85°C

LF01 mechanical fuel gauges work on a float connected to a swivel rod which indicates fuel level as the float adjusts to the fuel level.

- Mounting: 6 hole mounting flange *(M45x2 thread to accept gauge)*

LF01-150	150 mm	gauge	mechanical fuel level gauge	**779.00**
LF01-200	200 mm	gauge	mechanical fuel level gauge	**798.00**
LF01-250	250 mm	gauge	mechanical fuel level gauge	**832.00**
LF01-300	300 mm	gauge	mechanical fuel level gauge	**851.00**
LF01-400	400 mm	gauge	mechanical fuel level gauge	**935.00**
LF01-500	500 mm	gauge	mechanical fuel level gauge	**1 010.00**
LF01-600	600 mm	gauge	mechanical fuel level gauge	**1 080.00**
LF01-700	700 mm	gauge	mechanical fuel level gauge	**1 140.00**

Other lengths available on request

Above ZAR prices do not include VAT. E&OE

EE804A

EE805A

EE820

EE860

New

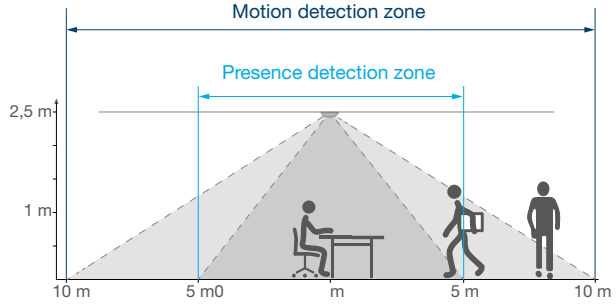
EER503

Occupancy sensors

- Detect movement
- Measure ambient light
- Automatically switch lights “on” *(if ambient is below pre-set level and movement is detected)*
- Automatically switch lights “off” *(if no movement is detected after a pre-set time delay period)*
- Complies with: IEC 60669-1 and IEC 60669-2-1
  - Supply voltage: 230 VAC 50Hz
  - Switch current: 8/10/16A 230V (AC1)
  - Lux adjustment: 5 - 1000 lux

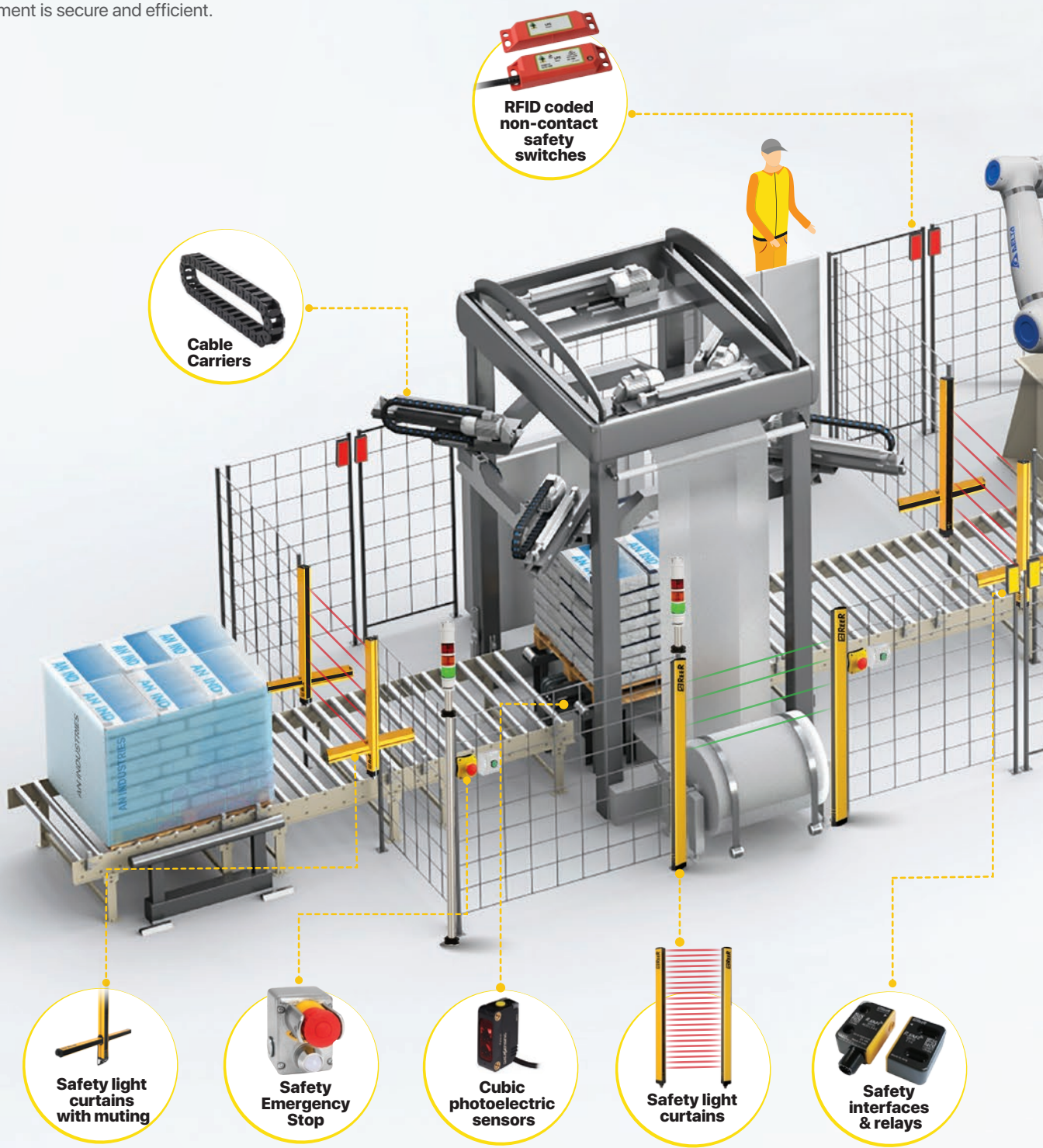
type	mounting		description	rated current	price
EE804A / EE805A series - Motion detectors					
EE804A and EE805A are 360° indoor movement detectors with a built-in light sensitive switching function. Ideal for use in interior circulation areas such as corridors, entrance halls, bathrooms etc.					
- Operating time delay:		5s - 15 min			
- Detection range:		6 meter radius *(at 2.5 meters high)* 360°			
EE804A	surface	105.5 mm dia.	economical motion detector	8A	**742.00**
EE805A	flush	75 mm hole	economical motion detector	8A	**790.00**
EE820 series - Basic motion detectors			**IP55**		
Wall mounting with numerous mounting possibilities for indoor or outdoor applications.					
- Operating time delay:		Pulse, 5s -15 min			
- Detection range:		16 meter frontal /8 meter lateral *(at 2.5 meters high)*			
EE820	surface	140°	wall mnt. basic occupancy sensor	10A	**977.00**
EE860 - Enhanced motion detectors			**IP55**		
Offers vertical and horizontal adjustment and area limitation with shutters suitable for indoor or outdoor applications. Wall, inner/outer corner, ceiling mount. Setting and adjustments made via concealed potentionmeters or remote control.					
- Operating time delay:		5s - 15 min			
- Detection range:		16 meter frontal / 10 meter lateral *(at 2.5 meters high)*			
- Sensitivity adjustment:		20%...100%			
EE860	surface	220°	wall mnt. basic occupancy sensor	16A	**1 560.00**
Accessories					
EE825	corner mount accessory *(inner/outer)*			EE820	**108.00**
EE827	ceiling mount accessory			EE820	**141.00**
EE855	corner mount accessory *(inner/outer)*			EE860	**108.00**
EE806	IR remote control for enhanced series			EE820	**888.00**
High-performance combined presence and motion detector					
High-performance presence detectors combine detection of presence and motion in an area. Ideally suited for offices where human presence detection is utilised to maintain lighting conditions. Motion detection enhances the overall detection range of the sensors.					
Compact flush mount presence detector					
Compact flush device mounts through a 68 mm hole for very neat installation. Settings and adjustments made via concealed potentiometers or remote control.					
- Operating time delay:		5 min - 1 hour			
- Detection range:		Presence 10 meter radius *(at 2.5 meters high)*			
		Motion 20 meter radius *(at 2.5 meters high)*			
EER503	flush	68 mm hole	360° enhanced presence detector	10A	**1 900.00**

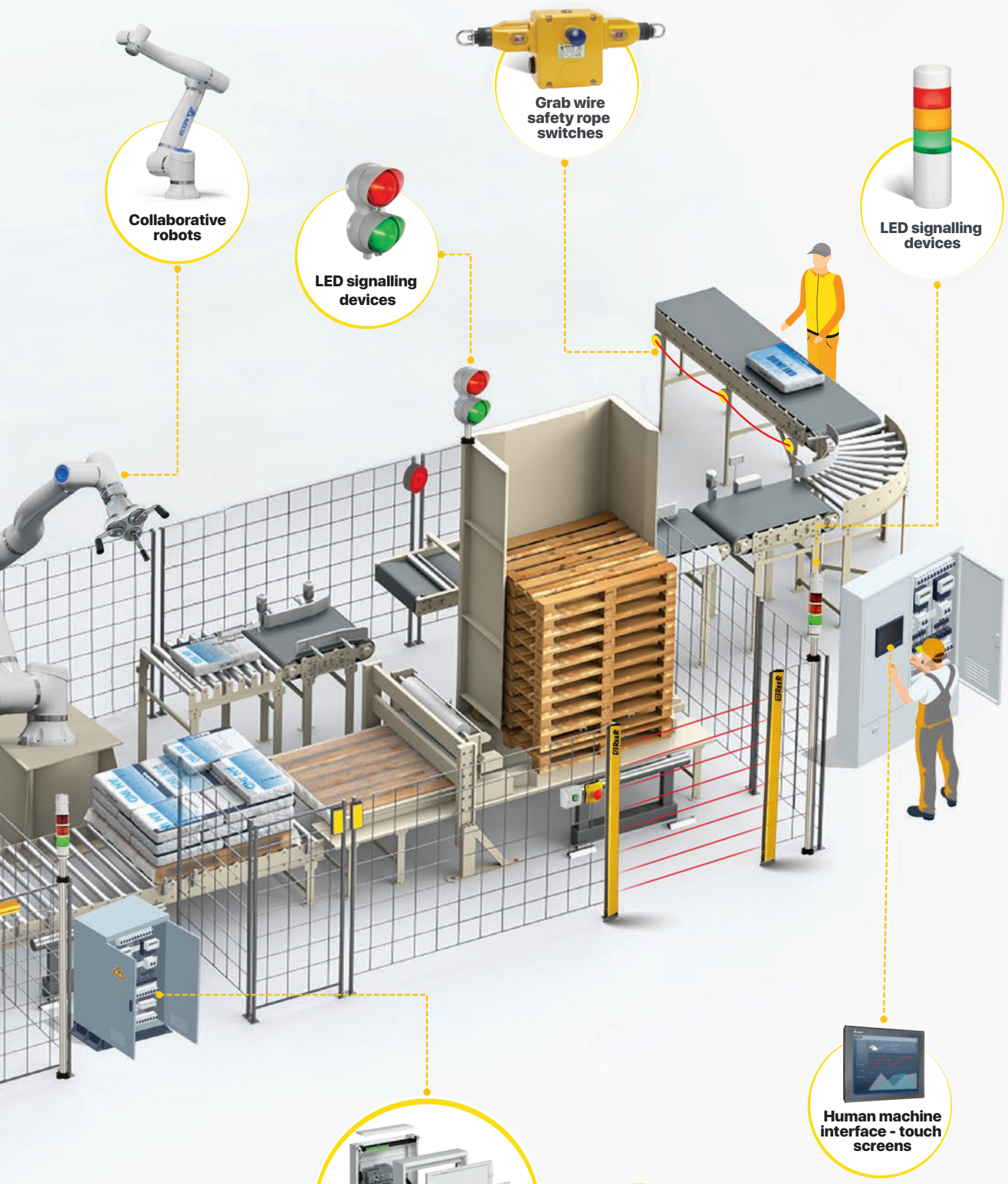
Motion detection / Presence detection



Prioritising Safety in Process Automation

In today's fast-paced industrial environments, ensuring the safety of both people and machinery is paramount. A safe workplace not only protects employees but also enhances productivity and reduces downtime. Our comprehensive range of safety products is designed to meet the rigorous demands of a safety-conscious employer. From advanced sensor technology to reliable emergency systems, our solutions are sourced from globally recognised manufacturers, ensuring your process automation environment is secure and efficient.




Collaborative robots
Grab wire safety rope switches
LED signalling devices
LED signalling devices
Human machine interface - touch screens
Configurable safety controllers
Safety Contactor
Surge protection devices
Earth Leakage Protection

Robustness in harsh environmental conditions

Guardian line series - Safety rope switches

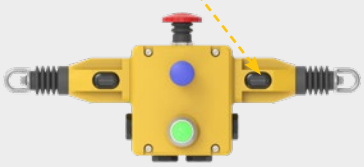
All IDEM safety rope emergency stop switches conform to **ISO13850 (EN418)** and **EN60947-5-5** standards. They provide positive mechanical linkage between switch contacts and the wire rope as per **EN60947-5-1**. Pre-tensioning the rope using a tensioner/gripper device, clamps the rope and hooks onto the switch eyebolt.

Correct tension is observed through the indicator window on the switch, once tensioned, switch contacts can be set to operational condition *(safety contacts closed, auxiliary contacts open)* by pressing the blue reset button on the switch cover.

All Safety rope switches incorporate wire-breakage monitoring, pulling or breakage of the rope, positively opens safety contacts closing auxiliary contacts, mechanically latching the switch which can only be returned to the operational condition by pressing blue reset button as required by ISO13850. ATEX versions available on request.

- Rugged die-cast metal body (painted yellow) or stainless steel 316
- Enclosure protection: IP67, IP69K (stainless steel versions)
- Ambient temperature: -25…+80°C
- Typical operating force: <125N (<300 mm deflection)
- Mechanical life: 1.000 000
- Thermal current (Ith): 10A
- Rated insulation voltage: 500V
- Spare replacement lid: With or without LED (*available on request*)
- Standards: EN60947-5-1/-5-5, EN62061 (*up to SIL3*), UL508, ISO13850, ISO13849-1 *(up to PLe)*

Tension indicator



141029 + 140044

type	contacts		mounting position	max. protection length		LED indication	price
	NC	NO		1 switch	2 switches		
GLH series - Heavy duty safety rope switches							
Heavy duty safety rope pull switch protect long conveyor lengths. Robust housings survive indoor or outdoor use including washdown *(IP67 rating)*. Lengths over 2 km can be achieved with less than 20 switches, shorter rope spans up to 200m can be achieved using just one switch providing a cost effective solution.							
Robust housings survive indoor and outdoor use, including washdown to IP67 and IP69K *(on stainless steel versions only)*.							
• Rope span (per switch): 100m *(single head)* - 200m *(dual head)*							
• Mounting / position: 4 x M5 / any position							
• Cable/conduit entry: 4 x M20 cable entries							
Note: Optional bi-colour LED indicates switch status from a distance Indication of rope status: Steady - Green = machine running Flashing - Red = machine stopped							
GLH - Die-cast housing					**IP67**		
141041	4	2	centre	200m	250m	–	**7 250.00**
141029*	4	2	centre	200m	250m	•	**7 900.00**
141037	4	2	left	100m	125m	–	**4 080.00**
141053*	4	2	left	100m	125m	•	**4 730.00**
141038	4	2	right	100m	125m	–	**4 080.00**
141054*	4	2	right	100m	125m	•	**4 730.00**
GLH-SS - Stainless Steel 316 housing					**IP69K**		
145025	4	2	centre	200m	250m	–	**10 900.00**
145029*	4	2	centre	200m	250m	•	**11 800.00**
145037	4	2	left	100m	125m	–	**8 470.00**
145053*	4	2	left	100m	125m	•	**9 440.00**
145038	4	2	right	100m	125m	–	**8 470.00**
145054*	4	2	right	100m	125m	•	**9 440.00**

141054...

145025

* *LED indication - provide voltage requirement by adding following to end of part number:*
A = *24 VDC* / **B** = *110VAC* / **C** = *230 VAC*

Accessories - For rope operated switches

Accessories - Rope tensioner/gripper *(quick fixing) - for rope operated switches*

type	description	length (mm)	material	price
Tensioning of the rope is achieved using IDEM's patented tensioner/gripper accessory. Traditional turnbuckle/clamp systems are difficult to tension and adjust, requiring frequent re-tensioning or maintenance, making viewing of the switch tension window difficult.				
IDEMs tensioner/gripper accessory offers greater reliability, significantly reducing installation time by offering an eyehook, tensioner thimble and high strength gripper in one assembly, enabling rapid connection to the switch eyebolts with fast accurate tensioning of the rope while in close proximity to the viewing window of the switch.				
140020	rope tensioner/gripper for rope switches	190...248	galvanised	**1 340.00**
140019	rope tensioner/gripper for rope switches	190...248	stainless steel	**2 130.00**
140044	red	emergency-stop mushroom pushbutton	twist release	**568.00**
140140	red	SS emergency-stop mushroom pushbutton	twist release	**1 450.00**

140044

Above ZAR prices do not include VAT. E&OE

Robustness in harsh environmental conditions

GLS series - Standard duty safety rope switches

Guardian Line – General / standard duty safety rope switch is suitable to protect conveyor lengths up to 80m using two switches or 60m using a single switch. An emergency stop button can be fitted on either side, offering a traditional emergency stop function on the switch.

An optional bi-colour LED is also available to indicate the switch status from a distance. Rugged internal sealing and a robust LED lens permits the use of high pressure hosing, suitable for indoor and outdoor use.

- Rope span *(per switch)*: 60m *(single switch)* - 80m *(dual switch)*
- Cable/conduit entry: 3 x M20 cable entries

type	contacts NC	contacts NO	mounting position	max. protection length 1 switch	max. protection length 2 switches	description	LED indication	price
GLS Die-cast housing				*(IP67)*				
142052	2	2	left/right	60m	80m	rope switch	–	**3 500.00**
142058*	2	2	left/right	60m	80m	rope switch	•	**4 150.00**
GLS-SS Stainless steel 316 housing				*(IP69K)*				
144003	2	2	left/right	60m	80m	rope switch	–	**6 960.00**
144009*	2	2	left/right	60m	80m	rope switch	•	**7 920.00**

* *LED indication - provide voltage requirement by adding following to end of part number:*
A = *24 VDC* / **B** = *110VAC* / **C** = *230 VAC*

142052

144009A

GLM series - Mini duty safety rope switches

Compact, robust die-cast safety rope pull switch to protect short conveyor lengths up to 50m using two switches or 30m using a single switch, providing a reliable, cost-effective safety solution for conveyor systems. An emergency stop button can be fitted to the side of the switch to offering a traditional emergency stop function close to the switch.

143001	2	1	left/right	30m	50m	rope switch	–	**2 840.00**

140019

140043

140021

140047-S

140099

Mounting accessories for rope operated switches

type	description	length (mm)	material	price
140020	rope tensioner/gripper for rope operated switches	190...248	galvanised	**1 340.00**
140019	rope tensioner/gripper for rope operated switches	190...248	stainless steel	**2 130.00**
140021	universal pulley for rope operated switches	77 mm	stainless steel	**911.00**
140064	universal pulley for rope operated switches	77 mm	galvanised	**596.00**
140045	standard eyebolt for rope operated switches *(8 pack)*	84 mm	stainless steel	**937.00**
140046	standard eyebolt for rope operated switches *(8 pack)*	84 mm	galvanised	**487.00**
140099	roller eyebolt with nuts *(non adjusting)*	71 mm	die cast metal	**887.00**
140048	roller eyebolt with nuts *(adjustable)*	107-140 mm	die cast metal	**1 140.00**
140047-S	pigtail eyebolt *(short)* M10 46 mm thread *(1 /pack)*	114 mm	stainless steel	**136.00**
140043	safety spring for rope operated switches`	220 mm	stainless steel	**625.00**
140165❖	mounting brackets for rope op. switches *(1 /pack)*	127 mm	stainless steel	**444.00**
140059	anti-tamper screwdriver for rope operated switches	T20	–	**71.00**

❖ **GLM** *and* **GLS** *series can be mounted using one bracket.* ***GLHD*** *needs two.*

Steel cable *(polypropylene covered)* for rope operated switches

4.0 mm outside diameter. steel inner - polypropylene cover

140037	insulated steel cable for rope operated switches	30m	steel/PVC	**1 370.00**
140038	insulated steel cable for rope operated switches	50m	steel/PVC	**1 890.00**
140040	insulated steel cable for rope operated switches	100m	steel/PVC	**3 280.00**
140068	insulated steel cable for rope operated switches	500m	steel/PVC	**11 100.00**

Rope kits for rope operated switches

Rope kits *Rope kits comprise: tensioner/gripper assembly + allen key, quick link (up to 50m), length rope terminated one end and No. eyebolts required for length of rope*

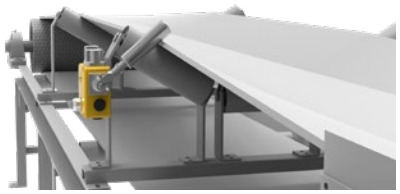
type	length	description	No. of eyebolts	tension/ gripper	price
140004	20m	rope kit for rope operated switches	9	1 + QL	**3 150.00**
140005	30m	rope kit for rope operated switches	12	1 + QL	**3 560.00**
140006	50m	rope kit for rope operated switches	20	1 + QL	**4 240.00**
140007	80m	rope kit for rope operated switches	30	2	**4 730.00**
140008	100m	rope kit for rope operated switches	37	2	**5 140.00**
140009	126m	rope kit for rope operated switches	45	2	**5 690.00**

140004

140057

Contact blocks *(spare) for rope operated switches*

140057	2	1	3 pole	contact block for rope operated switch	end fixing	**512.00**
140061	2	2	4 pole	contact block for rope operated switch	side fixing	**646.00**
140062	3	1	4 pole	contact block for rope operated switch	side fixing	**646.00**
140063	4	–	4 pole	contact block for rope operated switch	side fixing	**646.00**



Belt alignment monitoring

Conveyor belt alignment switches

Conveyor belt alignment switches are mounted on sections of plant conveyors to protect against excessive belt drift due to unintentional movement. Should the belt position drift, the roller arm of the switch will move to a pre-determined position causing activation of a control circuit providing positively opening NC safety contacts (to **EN60947-5-1**) at the point of tripping.

2 internal contact blocks, one to provide a **"WARNING"** signal the other to provide a **"STOP"** signal.

Rugged die-cast metal body *(painted yellow)* or Stainless Steel 316

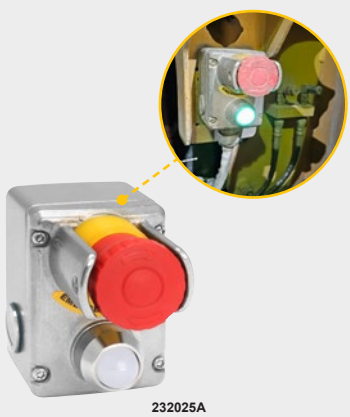
Switching range:	"Warning" signal	10…18º	(factory setting 14º)
	"Stop" signal	15…35º	(factory setting 25º)
Operating torque:	Medium duty	1.8Nm…2.8Nm	*(factory setting 1.8Nm)*
	Heavy duty	3.0Nm…5.0Nm	*(factory setting 3.0Nm)*

- Enclosure protection: IP67 - IP69K *(in stainless steel)*
- Ambient temperature: -25…+80ºC
- Vibration resistance: 10-500Hz 0.35 mm
- Shock resistance: 11ms 15g
- Mechanical life: 150.000 operations
- Thermal current (Ith): 10A
- LED indication: Available on request
- Standards: EN60947-5-1, EN620
- Spare replacement lid: With or without LED (*available on request*)

500001

174401

230001



232025A

type	contacts		roller dimensions		factory settings			duty	price
	NC	NO	Ø	length	torque	warning	stop		
Python line series - Conveyor belt alignment switches									
• Cable/conduit entry: 4 x M20 cable entries									
Die-cast *(painted yellow)* housing									
500001	2	2	35 mm	120 mm	1.8Nm	14º	25º	medium	**8 720.00**
500005	2	2	35 mm	230 mm	3.0Nm	14º	25º	heavy	**10 500.00**
Stainless steel 316 housing									
501001	2	2	35 mm	120 mm	1.8Nm	14º	25º	medium	**13 800.00**
501005	2	2	35 mm	230 mm	3.0Nm	14º	25º	heavy	**15 200.00**
HLM-CBA series - Mini belt alignment switches									
• Heavy duty die cast bodies *(painted red)*									
• High mechanical life over 500.000 cycles									
• Standards: ISO14119, EN60947-5-1, EN60204-1, ISO13849-1, EN62061, UL508									
174401	2	2	22 mm	70 mm	1.10Nm			plastic roller	**4 140.00**
174451	2	2	22 mm	70 mm	1.40Nm			stainless steel roller	**5 080.00**

Emergency stop stations

IDEM's emergency stop switches provide robust emergency stop protection for machines and exposed conveyors. They are suitable for use within all industry sectors.

- Yellow Polyester *(IP67)* or stainless steel 316 body *(IP69K)*
- Safety trip mechanism opens safety contacts if lid removed - extra degree of anti-tamper
- Button protection shroud version with padlock holes to enable "Lock Out"
- 3 and 4 pole contact blocks provide positively operated switch contacts
- ATEX versions available on request

Ambient temperature:	-25…+80ºC
Mechanical life:	1.500.000 operations
Thermal current (Ith):	10A
Cable/conduit entry:	2 x M20 *(3-pole)* / 3 x M20 *(4-pole)*
Standards:	EN60947-5-1, EN60947-5-5, EN62061 UL508, ISO13850, ISO13849-1

Polyester housing			*(IP67)*	
230001	2	1	plastic *(polyester)* emergency stop station	**839.00**
230003	2	1	plastic *(polyester)* emergency stop station with button shroud	**1 010.00**
Stainless steel housing			*(IP69K)*	
231001	2	1	stainless steel E-stop station	**3 820.00**
231005	2	1	SS E-stop station with button shroud	**4 050.00**
232019*	3	1	SS E-stop station with dual colour LED	**5 080.00**
232023*	2	2	SS E-stop station dual colour LED/button shroud	**5 310.00**
232025*	3	1	SS E-stop station dual colour LED/button shroud	**5 310.00**
232023-AS	2	2	SS E-stop station dual colour LED *(steady)*/button shroud	**5 190.00**

* *Please provide voltage requirement by adding following to end of part number:*
A = *24 VDC* / **B** = *110 VAC* / **C** = *230 VAC*

Above ZAR prices do not include VAT. E&OE

140107

200007-SS

208007

140111

202001-SS

205001

140108

140110

Tongue-operated switches *(connects to most safety relays)*

IDEM Tongue-operated safety interlock switches fit to the leading edge of sliding, hinged or lift off machine guards to provide positively operated switching contacts and a tamper resistant *(not easily defeatable)* key mechanism. Used independently to provide positively operated contacts to **EN60947-5-1** or in combination with any dual channel safety monitoring relays to provide up to category **4 PLe ISO13849-1**.

The switch is mounted to the frame of the guard or machine, and the actuator profile is fitted to the moving part *(frame)* of the guard and aligned to match a cam mechanism within the switch entry aperture, providing a positively operated *(not easily defeatable)* interlock switch. Inserting the actuator into the switch closes the safety contacts enabling the machine start circuit. Withdrawing the actuator positively opens the safety contacts.

Positive break contacts to EN60947-5-1 High functional safety to ISO13849-1

- Actuators for switches ordered separately *(see accessories section below)*
- Cable/conduit entry: 3 x M20 cable entries

type	No. entry positions	contacts NC	contacts NO	description	dimensions (mm) (H)	(W)	(D)	price
Type KP - Kobra Tongue-operated switches *(non-locking)*								
KP and K-SS switches provide industry standard fixing points and a rotating head for up to 4 actuator entry positions. The double seal gasket and stainless steel internal screws reduce the likelihood of rust build up inside the switch. IDEMs patented CAM system ensures long term reliability, even under harsh environmental conditions.								
• Enclosure protection: IP67 - rugged polyester body with stainless steel head								
• Ambient temperature: -25…+80ºC								
• Thermal current (Ith): 10A								
• Rated Ins/withstand voltage: 500 VAC/2500 VAC								
• Standards: ISO14119, EN60947-5-1, EN60204-1, ISO13849-1, EN62061, UL508								
200007-SS	4	3	1	Tongue-operated switches	98	58	34.5	**1 610.00**
Type K-SS stainless steel Tongue-operated switches								
• Enclosure protection: IP69K - rugged stainless steel 316 body								
208007	4	3	1	SS Tongue-operated switches	98	58	37.5	**3 680.00**
KLM series - Guard locking switch *(Metal)*								
Solenoid locking interlock safety switch featuring Guard Holding up to 3000N *(300Kg) (F1Max)*								
KLM guard locking safety switches have rugged die cast housings with a high holding force of 3000N to keep medium/large guard doors closed until hazards are removed. The slim profile is designed to fit on 50 mm frame sections or where space is restricted. The head rotates providing up to 8 actuator entry positions. 2 independent contact blocks individually monitor lock and door status.								
Internal switch selectable for power feed to LED or as a voltage free auxiliary circuit to indicate lock status.								
• Enclosure protection: IP67 - Rugged polyester body with stainless steel head								
• Soleniod supply voltage: 24 VAC/DC or 230 VAC *(available in 110 VAC on request)*								
• Ambient temperature: -25…+50ºC								
• Thermal current (Ith): 10A								
• Rated Ins/withstand voltage: 500 VAC/2500 VAC								
• Manual release: 1 manual release								
202001-SS	8	3	1	locking interlock safety switches	24 VDC	176	46	47	**5 940.00**
202007-SS	8	3	1	locking interlock safety switches	230 VAC	176	46	47	**6 050.00**
KL3-SS series - Stainless steel Tongue-operated switches								
In accordance with EHEDG *(European Hygienic Engineering & Design Group)* guidelines for hygienic design, mirror-polished surface to Ra10 designed to cope with direct food splash and cleaning in tough applications of food processing industries.								
IP69K enclosure protection permits high pressure hosing with detergent at high temperature.								
• Enclosure protection: IP69K – Mirror polished 316 stainless steel								
205001	8	3	1	locking interlock safety switches	24 VDC	177	48	47	**11 900.00**
205007	8	3	1	locking interlock safety switches	230 VAC	177	48	47	**12 100.00**

Accessories for above Tongue-operated switches

140123	–	manual release key *(front and side)* for	KLM and KL3-SS	**414.00**
140107	standard	standard actuator only	all tongue switches	**188.00**
140108	flat	flat actuator only	all tongue switches	**188.00**
140110	flexible	die-cast heavy duty flexible actuator only	all tongue switches	**674.00**
140111	flexible	stainless steel heavy duty flexible actuator only	all tongue switches	**1 350.00**

405104

110004

114004

172007

RFID coded non-contact safety switches **24VDC** SIL 3 - SILCL 3 - PLe - Cat. 4

RFID non-contact safety sensors provide highly-reliable, tamper-proof personnel protection for monitoring protective doors, gates and guards, they uniquely identify passive RFID transponders ensuring high coding levels and effective protection.

Master coded: The actuator is free and not specifically assigned to the sensor
Unique coding: Factory programmed and permanently assigned to sensor during set-up

- Output: 2 NC safety outputs and 1 NO auxiliary output
- Connection type: M12 connector - *(Pigtail M12/8-pin - 250 mm), See sensor connectors and cables page*
- High EMC immunity and IP67/IP69K protection ensure excellent reliability in harsh environments.
- Resistant to aggressive media, e.g. cleaning agents used in the food and packaging industry

type	model	detection distance	circuits	description	dimensions (mm) (H)	(W)	(D)	price
RFID safety switches *supplied as sensor/actuator combination*								
SPF - *universal (22 mm fixing centres)*								
405104	SPF	14 mm	2NC/1NO	RFID coded safety switch	50	25	13	**3 650.00**
LPF - *European industry standard fitting (78 mm fixing centres)*								
404104	LPF	14 mm	2NC/1NO	RFID coded safety switch	88	25	13	**3 710.00**
Coded non contact safety switches **24 VDC**								
MPC - *Miniature industry standard (22 mm fixing centres)*								
114104	MPC	14 mm	2 NC	compact coded safety switches	36	26	13	**2 530.00**
LPC - *European industry standard fitting (78 mm fixing centres)*								
110004	LPC	14 mm	2 NC	rectangular coded safety switches	88	25	13	**2 570.00**
Magnetic non-contact switches *(non coded)* Up to: PLe ISO13849-1								
MPR - *Miniature industry standard (22 mm fixing centres)*								
114004	MPR	12 mm	2 NC	compact magnetic switches	36	26	13	**2 260.00**
LPR - *European industry standard fitting (78 mm fixing centres)*								
110012	LPR	12 mm	2 NC	rectangular magnetic switches	88	25	13	**3 010.00**

IDEM coded non contact safety switches, enable conformance to **EN60947-5-3** to be used as directed by I**SO12100, ISO14121** and **EN60204-1**.

They have coded magnetic detection. Providing a wide detection distance and high tolerance to misalignment. Used in combination with most dual channel safety monitoring relays (up to PLe as per **ISO13849-1**).

- Compact and robust high specification polyester housing
- Visual LED switch status indication *(on coded version only)*
- Coded magnetic operation – Tamper resistant.
- Supplied as sensor/actuator combination

IDEM's magnetic non-contact safety interlocks are designed to conform to **IEC 60947-5-3** and be used as directed by **ISO12100, ISO14121** and **ISO14119**. They feature magnet and reed technology, providing a high tolerance to misalignment and extreme temperatures.

Normally closed (NC) circuits are closed when the actuator is present

Safety limit switches *(die-cast metal body)*

type	model	detection distance	circuits	description	dimensions (mm) (H)	(W)	(D)	price
172007	LSMM	12 mm	2NC/1NO	roller plunger limit switch	73	35	16	**1 110.00**

Non contact sensors - Position monitoring

Above ZAR prices do not include VAT. E&OE

PLNU1AT25W

PLN131311

P2L131312

P33032

P33033

P33036

P33034

P33035

KB N1 L11

KX N2

RS11310

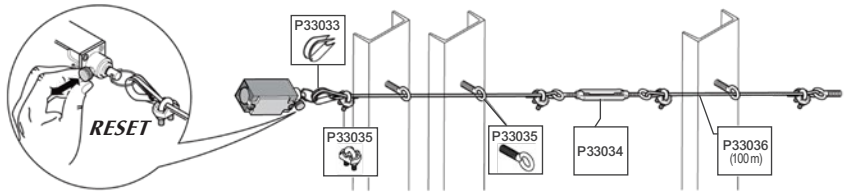
RS131310

Rope-operated pull lever limit switches *(IP65)*

- Heavy-duty metal body
- Supplied with cable gland (PG11)

type	description		operating force (N)	contacts	price
PLNU series - Heavy-duty non-latching rope-operated limit switches					
• Direct *(positive)* opening action - safety function according to IEC/EN 60947-5-1					
• Thermal current:	Ith: 10A Ui: 400 VAC				
• Dimensions:	*(H) 89 x (W) 84 x (D) 40.5 mm*				
PLNU1AT25W	rope operated limit switch	*(non-latching)*	25N	1NO + 1NC	**1 380.00**
P2LU series - Heavy-duty latching rope-operated limit switches					
Latching *(hand reset)* limit switches EN 418 compliant					
• Latching with push button "Reset" facility on switch					
• Thermal current:	Ith: 6A Ui: 400 VAC				
P2LU series	*(H) 175 x (W) 85 x (D) 47 mm*				
P2LU1SAT75AG	rope operated limit switch	*(latching/hand reset)*	7.5 kg	1NO + 1NC	**2 930.00**
P2LU1SAT15AG	rope operated limit switch	*(latching/hand reset)*	15 kg	1NO + 1NC	**2 930.00**
Heavy duty rope-operated limit switches with pre-tensioning facility				EN418 compliant	
• 2 NC contacts *(when pre-tensioned)* 1 opens if rope breaks the other opens when rope is pulled					
• Large field of overlap for easier regulation of pre-tensioning					
• Latching with push button "Reset" facility on switch					
• Thermal current:	Ith: 6A Ui: 400 VAC				
PLN series - 60N	*(H) 82 x (W) 104 x (D) 40.5 mm*			with pre tensioned rope	
PLN131311	rope operated limit switch	*(latching/hand reset)*	60N - 6kg	1NO + 1NC	**1 740.00**
P2L series - 120N	*(H) 161 x (W) 100 x (D) 48.5 mm*				
P2L131312	rope operated limit switch	*(latching/hand reset)*	120N - 12kg	1NO + 1NO	**3 200.00**
Accessories for rope-operated switches					
P33032	adjustable rope terminal clamp Ø 5 mm				**30.50**
P33033	rope eye of Ø 5 mm *(cable end thimble)*				**12.60**
P33034	turn buckle M6 x 60 for rope tensioning				**138.00**
P33035	threaded eye bolt M8 guide for rope				**47.00**
P33036	steel rope 0.5 mm PVC sheathed *(red insulated)*			*(100 meter)*	**6 060.00**
Safety limit switches *(slow break)*					
Quickly and easily detect the position of moving parts and safely install machinery.					
KB Q1 L11	slotted lever actuator		safety limit switch	1 NO + 1 NC	**737.00**
KB N1 L11	key operated *(straight key)*		safety limit switch	1 NO + 1 NC	**745.00**
KB N2 L11	key operated *(angled key)*		safety limit switch	1 NO + 1 NC	**745.00**
Spare keys *for safety limit switches*					
KX N1	straight key		for safety limit switches	–	**113.00**
KX N2	angled key		for safety limit switches	–	**116.00**
KX N3	straight "T" key		for safety limit switches	–	**86.00**
KX N4	angled "T" key		for safety limit switches	–	**86.00**
RS1 series - Rope operated limit switches (H) 104 x (W) 30.5 x (D) 35 mm				**IP65**	
• Double-insulated housing glass fibre-reinforced self extinguishing					
• Self-cleaning silver-alloy contacts, Snap action contacts					
• Thermal current:	Ith:10A Ui: 250 VAC				
Non-latching rope operated limit switches *(snap action)*					
RS11310	rope operated limit switch	*(non latching)*	25N	1NO + 1NC	**1 110.00**
Latching *(hand reset)* limit switches EN 418 compliant					
RS131310	rope operated limit switch	*(latching/hand reset)*	25N	1NO + 1NC	**1 230.00**

RS1 series - Rope operated limit switch



SAFETY LEVEL TYPE 4 SIL 3 - SILCL 3 PL e - Cat. 4

SAFETY LEVEL TYPE 2 SIL 1 - SILCL 1 PL c - Cat. 2

EOS series - Safety light curtains

EOS series is a compact safety light curtain range with competitive performance and innovative features. Includes models with integrated safety functions such as self-monitoring static outputs, control of external contactors (EDM) and selectable automatic or manual restart. 2 safety PNP static outputs. Easy connection and installation thanks to the M12 connectors and the use of unshielded cables up to 100 meters.

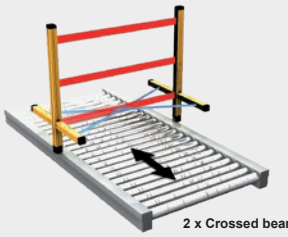
- Power supply: 24 VDC ± 20%
- Dimensions: *(W) 28 x (D) 30 mm*
- Restart: Selectable manual/automatic Start/Restart
- Status display: LEDs for light curtain's status and diagnostic
- Integrated function: Integrated External Device Monitoring (EDM) function
- Mounting: Via back slot with provided standard mounting brackets
- Connection: Emitter: M12 5-pin - Receiver: M12 8-pin *(see pages **K-23...24**)*
- OSSD safety outputs: 2 PNP - 400 mA at 24 VDC with short-circuit, overload, polarity reversal protection

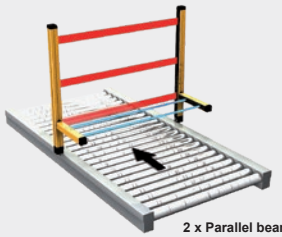
Scan to watch video

type	resolution	protected height	No. beams	description	overall height	connection type	price
For finger and hand detection - *Safety light curtains*						IP65/67	
EOS2 X - Safety light curtain with built-in control functions - Type 2							
• Detection: Hand detection *(30 mm resolution)* • Maximum range: Selectable 4/12 meter • Safety Level: Type 2, SIL 1/SILCL 1, PL c, Cat. 2							
1320211	30 mm	310 mm	16	safety light curtain	363 mm	M12 plug	**12 600.00**
1320212	30 mm	460 mm	23	safety light curtain	513 mm	M12 plug	**14 800.00**
1320213	30 mm	610 mm	31	safety light curtain	663 mm	M12 plug	**17 000.00**
1320214	30 mm	760 mm	38	safety light curtain	813 mm	M12 plug	**19 600.00**
1320215	30 mm	910 mm	46	safety light curtain	963 mm	M12 plug	**22 100.00**
1320217	30 mm	1210 mm	61	safety light curtain	1263 mm	M12 plug	**27 000.00**
1320219	30 mm	1510 mm	76	safety light curtain	1563 mm	M12 plug	**32 300.00**
EOS4 X - Safety light curtain with built-in control functions - Type 4							
• Detection: Finger detection *(14 mm resolution)* • Maximum range: Selectable 3/6 meter • Safety Level: Type 4, SIL 3/SILCL 3, PL e, Cat. 4							
1310010	14 mm	160 mm	15	safety light curtain	213 mm	M12 plug	**18 000.00**
1310011	14 mm	310 mm	30	safety light curtain	363 mm	M12 plug	**23 400.00**
1310012	14 mm	460 mm	45	safety light curtain	513 mm	M12 plug	**28 700.00**
1310013	14 mm	610 mm	60	safety light curtain	663 mm	M12 plug	**33 900.00**
1310014	14 mm	760 mm	75	safety light curtain	813 mm	M12 plug	**39 300.00**
1310015	14 mm	910 mm	90	safety light curtain	963 mm	M12 plug	**44 600.00**
1310016	14 mm	1060 mm	105	safety light curtain	1113 mm	M12 plug	**49 600.00**
1310017	14 mm	1210 mm	120	safety light curtain	1263 mm	M12 plug	**55 200.00**
• Detection: Hand detection (*30 mm resolution)* • Maximum range: Selectable 4/12 meter • Safety Level: Type 4, SIL 3/SILCL 3, PL e, Cat. 4							
1310211	30 mm	310 mm	16	safety light curtain	363 mm	M12 plug	**15 000.00**
1310212	30 mm	460 mm	23	safety light curtain	513 mm	M12 plug	**17 500.00**
1310213	30 mm	610 mm	31	safety light curtain	663 mm	M12 plug	**20 000.00**
1310214	30 mm	760 mm	38	safety light curtain	813 mm	M12 plug	**22 900.00**
1310215	30 mm	910 mm	46	safety light curtain	963 mm	M12 plug	**25 900.00**
1310217	30 mm	1210 mm	61	safety light curtain	1263 mm	M12 plu g	**31 700.00**
1310219	30 mm	1510 mm	76	safety light curtain	1563 mm	M12 plug	**37 500.00**
***Note:** Heights (from 160 to 2200 mm) and extended range up to 20 meters available on request.*							
For access control / body protection - *Safety light curtains*						IP65/67	
EOS2 X - Safety light curtain with built-in control functions - *Type 2 - Max range: 12 meter*							
1320610	–	510 mm	2	safety light curtain	653 mm	M12 plug	**11 800.00**
1320612	–	910 mm	4	safety light curtain	1053 mm	M12 plug	**15 000.00**
EOS4 X - Safety light curtain with built-in control functions - Type 4 - Max range: 12 meter							
1310610	–	510 mm	2	safety light curtain	653 mm	M12 plug	**13 000.00**
1310612	–	910 mm	4	safety light curtain	1053 mm	M12 plug	**17 100.00**
EOS4 XH - Safety light curtain with built-in control functions - Type 4 - Max range: 20 meter							
1310660	–	510 mm	2	safety light curtain	653 mm	M12 plug	**15 300.00**
1310662	–	910 mm	4	safety light curtain	1053 mm	M12 plug	**19 000.00**
Mounting accessories for safety light curtains *(std L-shaped brackets included with light curtains)*							
1310980	SFB E180	brackets		set of (4) x 180° swivel brackets for		EOS2/4	**1 270.00**
1310969	SFB FAST	brackets		set of (4) x FAST coupling brackets for		EOS2/4	**2 390.00**
1310973	SAV 8E	dampers		set of (8) vibration dampers for		EOS2/4	**820.00**
1310976	SFB 4E	brackets		set of (4) x adjustable brackets for		EOS2/4	**477.00**
1310997	FE 4	brackets		set of (4) flat brackets for		EOS2/4	**874.00**

Above ZAR prices do not include VAT. E&OE

SAFETY LEVEL
TYPE 4
SIL 3 - SILCL 3
PL e - Cat. 4





Safegate - Safety light curtains *(with integrated muting functionality)*

Safety light curtains with integrated Muting function for human material differentiation applications. Safegate guarantees the integration of the muting sensors directly to the safety light curtain.

Programmable models (SMPO) functional parameters configuration can be managed via Safegate Configuration Software (SCS).

Hardware configuration: No programming necessary, allows parameterisation and muting logic configuration.

Software configuration: Allows configuration of functional parameters, muting *and additional functions (e.g. Filters, delays, partial muting etc).*

3 Pre-Configured Muting Logic: Exit-Only (*Parallel or Crossed Beams)*, Entry-Exit *(Parallel Beams),* Entry-Exit *(Crossed Beams).*

Muting sensors: MA Muting Arms, MZ Muting Brackets, any dark-on M12 5-pole photocell

General features:

- Power supply: 24 VDC ± 20%
- Dimensions: *(W) 50 x (D) 55 mm*
- Restart: Selectable *(manual/automatic)* Start/Restart
- Status display: LEDs for light curtain status and diagnostics
- Integrated function: External Device Monitoring (EDM) function
- Muting: Integrated muting function
- Mounting: Via back slot with provided standard mounting brackets
- Connection: Emitter: M12 5-pin - Receiver: M12 12-pin *(see pages **K-23...24**)*
- OSSD safety outputs: 2 PNP - 400 mA at 24 VDC with short-circuit, overload, polarity reversal protection

Scan to watch video

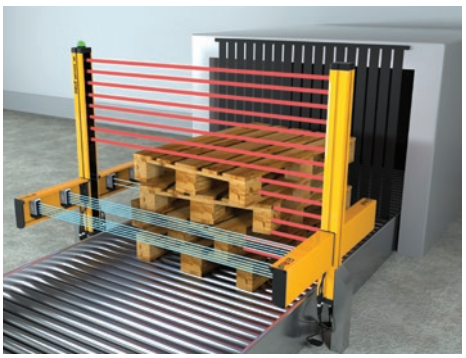
type	protected height	No. beams	description	overall height	connection type	price
For access control - Safety light curtain with integrated muting function					**IP65/67**	
SAFEGATE SMPO - Integrated status lamp and programmable functions – Type 4						
• Maximum range:			12 meter			
1390680	510 mm	2	safety light curtain	710 mm	M12 plug	**26 000.00**
1390682	910 mm	4	safety light curtain	1110 mm	M12 plug	**31 500.00**
Hand detection 30 mm resolution						
1390283	610 mm	31	safety light curtain	720 mm	M12 plug	**33 900.00**
1390285	910 mm	46	safety light curtain	1020 mm	M12 plug	**38 900.00**
1390287	1210 mm	61	safety light curtain	1320 mm	M12 plug	**43 900.00**
1390905	–	–	USB to M12 5 pin cable		*(2 meter)*	**1 220.00**

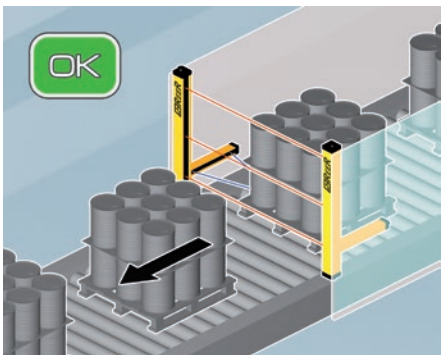
MA muting arms - with integrated photocells

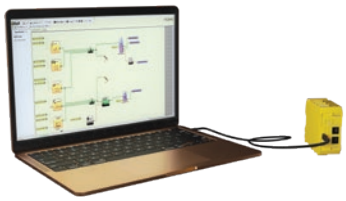
type	muting logic	No. beams	description	maximum range	connection type	price
1390800	exit - only	2	crossed beams photocells	2.5 m	M12 plug	**8 410.00**
1390802	entry - exit	2	crossed beams photocells	2.5 m	M12 plug	**12 700.00**
1390804	exit - only	2	parallel beams photocells	3.5 m	M12 plug	**8 610.00**
1390805	entry - exit	4	parallel beams photocells	3.5 m	M12 plug	**15 900.00**
MZ muting brackets - with integrated M5 5-beam photocells						
1390808	exit - only	2	crossed beams photocells	3.5 m	M12 plug	**9 830.00**
1390809	entry - exit	2	crossed beams photocells	3.5 m	M12 plug	**13 300.00**
1390810	entry - exit	4	parallel beams photocells	3.5 m	M12 plug	**19 300.00**

Human material differentiation

• Restriction of unauthorised access into dangerous zones







FREE DESIGNER SOFTWARE *included with M1\M1S units*

Mosaic - A unique safety controller: Modular, Expandable, Configurable

Mosaic is a modular configurable safety controller capable of managing all safety functions of machinery or plants. Made up of a Master unit which can operate as a stand-alone device or control up to 14 expansion units in a system.

Capable of monitoring several safety sensors and signals such as: light curtains - photocells - laser scanners - emergency stops - electromechanical switches - safety door switches - magnetic switches - safety mats and edges - two-hand controls - hand grip switches - encoders and proximities for safety speed control - load cells - pressure switches - temperature, flow and level measurements *(regardless of brand)*.

- Power supply: 24V DC ± 20%
- Safety level: SIL 3, PL e, SILCL 3, Cat. 4
- Connections: Removable *(screw terminal)* blocks
- Mounting: DIN rail mounting according to EN 50022-35 standard
- Dimensions: *(H) 99 x (W) 22.5 x (D) 114 mm*

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Advantages

– Tamper-proof system configuration
– Reduced control panel dimension, design and construction time
– Logic configured via graphic interface, eliminating laborious wiring as with traditional solutions
– **Simulation function** allows to validate system functionality without connecting to a machine

type	model	digital inputs	Start / Restart inputs	OSSD safety outputs	status outputs	description	price
Mosaic master units							
Master units can operate as stand-alone device or expanded with additional I/O modules.							
M1 - Standard master unit							
- 2 pairs SIL 3 OSSD safety outputs *(PNP 400 mA)*							
- 2 inputs for Start/Restart interlock and external device monitoring *(EDM)*							
- 2 programmable digital status outputs *(PNP 100 mA)*							
- 4 test outputs *(for sensor monitoring)*							
1100000	M1	8	2	2 pairs	2	standard master controller	**9 050.00**
1100005	MZERO	16	4	4 pairs	4	standalone safety controller	**13 300.00**
M1S/M1S COM - Enhanced master unit							
- 4 single SIL 3 OSSD or *(2 pairs)* safety outputs *(PNP 400 mA)*							
- 4 inputs for Start/Restart interlock and external device monitoring *(EDM)*							
- 4 programmable digital status outputs *(PNP 100 mA)*							
- 4 test outputs *(for sensor monitoring)*							
- Remote monitoring and built-in Ethernet IP, Modbus TCP, EtherCAT and Profinet *(M1S COM only)*							
1100003	M1S	8	4	4 or *(2 pairs)*	4	enhanced master controller	**11 400.00**
1100006	M1S COM	8	4	4 or (2 pairs)	4	master controller builtin comms	**17 100.00**
Accessories for M1/M1S/COM master units							
1100060	MCM					memory card to store or duplicate master unit configuration as a backup	**977.00**
1100061	MSC					rear bus connector required to connect to any expansion module	**377.00**
1100039	USB					USB configuration cable for M1S/M1S COM (Type C, length 1.8 m)	**645.00**
1100062	USB					USB configuration cable for M1/MZERO (A–mini B, length 1.8 m)	**445.00**
Mosaic - Expansion modules							
Input/output expansion modules						*provides additional digital inputs and outputs to the master unit*	
1100010	MI8O2					2x pairs SIL 3 OSSD safety outputs, 8x digital inputs, 2x status outputs	**7 470.00**
1100011*	MI8O4					4x single SIL 3 OSSD safety outputs, 8x digital inputs, 4x status outputs	**8 600.00**
1100021	MI16					16x digital inputs and 4x test outputs *(for sensor monitoring)*	**7 170.00**
1100025*	MA4					4x 4-20mA (or 0-10V) analogue inputs *(for analogue sensors)*	**19 700.00**
* *Only compatible with M1S and M1SCOM enhanced Master unit.*							
1100031	MO4					4x pairs SIL 3 OSSD safety outputs, 4x status output	**8 410.00**
1100032	MO4LHC					4x single high current SIL 3 OSSD safety outputs (2A), 8x status output	**9 050.00**
Status outputs						*provides additional non-safety outputs to the master unit*	
1100092	MOS16					16x programmable digital *(non-safety)* signal outputs	**6 340.00**
Safety relays						*provides safety relay outputs with guided contacts*	
1100041	MR4					4x safety relay outputs with guided contacts *(6A 250 VAC)*	**5 150.00**
1100043	MOR4S8					4x configurable safety relay outputs with guided contacts	**9 050.00**
Communication						*for connection to the most common industrial Field-bus systems*	
1100050	MBP	Profibus DP				module for diagnostics and data communication	**10 100.00**
1100051	MBD	DeviceNET				module for diagnostics and data communication	**12 700.00**
1100052	MBC	CANopen				module for diagnostics and data communication	**9 350.00**
1100054	MBEI	EtherNET IP				module for diagnostics and data communication	**7 410.00**
1100082	MBMR	Modbus RTU				module for diagnostics and data communication	**11 700.00**
1100133	MBE COM					Multi-protocol Ethernet IP, Modbus TCP, EtherCAT and Profinet	**5 870.00**

1100000

1100005

1100006

1100043

1100133

Above ZAR prices do not include VAT. E&OE

Safety interfaces and relays

Allows four different operating modes offering the possibility to connect and control different types of safety devices including: Safety Light Curtains, Solid-State-Output Devices *(i.e. RFID safety switch),* Dual-Channel Emergency Stops, Two-Hand Controls and Type 2 Safety Photocells

- Power supply: 24 VDC ± 20%
- Electrical connection: On terminal block
- Dimensions: Relays - *(H) 101 x (W) 35 x (D) 120 mm*
  Interfaces - *(H) 99 x (W) 22.5 (35 mm - ADSRM) x (D) 114 mm*

Multifunction safety relay **1330941**

1330904

1330801

R-Safe RFID sensor
Serial connection - Up to 16 sensors with individual status output

Magnus MG S
1291001

Magnus MG B
1291011

type	model	no. of inputs	safety inputs	safety outputs	status outputs	description	price
Multifunction safety Interface			DIN rail mounting			PL e - Cat. 4	
1330941	SR SELECT	2	2	2NO	1	multifunction	**4 420.00**
Safety interface for emergency stop buttons and safety switches						PL e - Cat. 4	
1330913	ADSRE4	1	2 of 1	3NO+1NC	–	auto / manual start restart	**4 300.00**
1330803	SR E4	1	2	2NO	–	auto/manual start restart	**3 560.00**
Safety interface for safety light curtains						Type 4 - SIL 3 - SILCL 3 - PL e - Cat. 4	
1330801	SR ZERO	–	2	2NO+1NC	1	relay module for EOS X	**2 460.00**
1330802	SR ZERO A	–	2	2NO	1	relay module for EOS X	**1 970.00**
1330900	SR ONE	–	2	2NO	1	relay module for EOS X	**3 500.00**
1330904	SR ONE M	6	4	2NO	2	muting safety light curtain	**4 780.00**
Safety speed monitoring interface	*(H) 108 x (W) 22.5 x (D) 114.5 mm*					SIL 3 - SILCL 3 - PL e - Cat. 4	
1100078	SVMRO	2	2	2NO	2	over/zerospeed detection	**11 000.00**
1100088	SVMROU	2	2	2NO	2	underspeed detection	**11 000.00**
Safety interface for two-hand control						PL e - Cat. 4 Type III C (EN574)	
1330805	SR T	1	2	2NO	–	two hand contol	**3 810.00**
RFID safety switches			**24 VDC**			SIL 3 - SILCL 3 - PL e - Cat. 4	

R-Safe RFID non-contact safety sensors ensure reliable, tamper-proof protection by monitoring protective doors, gates, and guards, uniquely identifying passive RFID transponders for high coding levels and effective anti-manipulation. Offers easy installation and integration into safety systems up to PL e/SIL 3, with sensors capable of being individually coded in two ways.

Scan to watch video

Generic coding: The actuator is free and not specifically assigned to the sensor *(one actuator can work with multiple sensors)*
Teach-in coding: Programmed via teach-in and permanently assigned to sensor during set-up

- Indication: Super bright LED status indicators for immediate diagnostics
- Output: 2 safety inputs and outputs and 1 diagnostic output
- Connection type: M12 Connector, M12 Pigtail, cable
- Mounting: Screw mounting **S** - inter-axis 22 mm
- Can be installed individually or in series with up to 16 units *(accessories required)*
- IP67 and IP69K protection *(cable versions only)* ensure excellent reliability in harsh environments

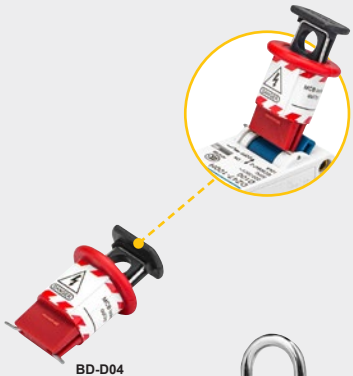
BASIC: Automatic restart / **PLUS:** Selectable Manual/Automatic restart and serial status output

type		switching distance (mm)	description	dimensions (mm) (H)	(W)	(D)	price
R-Safe RFID		*supplied as sensor/actuator combination*					
1295016	BASIC C S G C	12…25	Generic coding, M12 connector	28.5	57	18	**2 560.00**
1295006	PLUS C S G C	12…25	Generic coding, M12 connector	28.5	57	18	**2 810.00**
1295013	BASIC C S G P	12…25	Generic coding, M12 pigtail	28.5	57	18	**2 890.00**
1295003	PLUS C S G P	12…25	Generic coding, M12 pigtail	28.5	57	18	**3 180.00**
1295010	BASIC C S G 5	12…25	Generic coding, 5 m cable	28.5	57	18	**2 800.00**
1295000	PLUS C S G 5	12…25	Generic coding, 5 m cable	28.5	57	18	**3 060.00**
1295007	PLUS C S T C	12…25	Teach-In coding, M12 connector	28.5	57	18	**2 950.00**
1295004	PLUS C S T P	12…25	Teach-In coding, M12 pigtail	28.5	57	18	**3 340.00**
1295001	PLUS C S T 5	12…25	Teach-In coding, 5 m cable	28.5	57	18	**3 200.00**
Magnetic safety switches		**24 VDC**	*(robust thermoplastic enclosure (PBT)*				
1291000	MGS20	3…10	MGS compact mag. safety switches	36	13	26	**1 170.00**
1291001	MGSM	3…10	MGS mag. unit for above switches	36	13	26	**388.00**
1291010	MGB20	4…16	MGB rectangular mag. safety switches	88	25	14	**1 100.00**
1291011	MGBM	4…16	MGB mag. unit for above switches	88	25	14	**316.00**

- Coded magnetic operation – tamper resistant
- Sensor with M8/4pin connector: 2 x NO contacts

BD-K01

BD-K45


BD-D04

BD-G01

BD-P01

(Excluding lockout hasps, tags etc...) BD-B102

Safety lockout hasps

Safety lockout hasps permit multiple padlocks to be used when isolating one energy source. The lockout hasp is placed through the isolating point and closed.

Each person carrying out maintenance or service attaches their unique individually keyed padlock through the lockout hasp, thereby ensuring complete safety during maintenance operations. The hasp can only be removed once all padlocks have been removed.

type	jaw size Ø	colour	accepts padlocks shackle Ø	accepts padlocks number	description	price
Lockout hasp (steel PA coated)						
• Scissor action hasp with Ø25 mm or 38 mm jaw size • Accepts padlocks with a shackle diameter up to 9 mm *(up to 6 padlocks can be attached)* • Manufactured from high tensile steel, electroplated to prevent rust • Padlock section nylon PA coated *(red)* for improved grip and visibility						
BD-K01	25 mm	red	9 mm	6	safety lockout hasp	**52.00**
BD-K02	38 mm	red	9 mm	6	safety lockout hasp	**65.00**
Nylon lockout hasp		*(Ø3 mm shackle)*				
• Made from hard nylon /ABS - highly visible • Recommended for electrical panels MCCBs, motor protection circuit breakers						
BD-K45	*(H)* 48 mm	yellow	9 mm	4	nylon slider hasp	**71.00**
Stainless steel butterfly lockout hasp		*(316 Stainless steel)*				
• Marine grade 316 stainless steel • Fits most switchgear • Sturdy and durable for use in corrosive environments and mines						
BD-K33	*(H)* 48 mm	red	5 mm	7	heavy duty SS hasp	**183.00**
Circuit breaker lockouts						
• Fits most existing types of European and Asian circuit breakers • Recommended for use in combination with a padlock for added safety						
BD-D01	pin-out ≤ 12 mm	red	7 mm	1	std MCB lockout	**23.60**
BD-D04	pin-out ≤ 20 mm	red	7 mm	1	wide MCB lockout	**23.60**
BD-D11	toggle ≤ 16 mm	red	7 mm	1	MCCB clamp-on lockouts	**59.00**
BD-D12	toggle ≤ 41 mm	red	7 mm	1	MCCB clamp-on lockouts	**89.00**
Lockout padlocks *(supplied with two keys per lock)*						
Maximum security lockout padlocks made for tough environmental situations • Contain "DANGER" standard labels front and back • Stainless steel shackle						
BD-G01	38 x 20 mm	red	6.2 mm	medium	shackle safety padlock	**89.00**
BD-G21	76 x 20 mm	red	6.2 mm	long	shackle safety padlock	**107.00**
BD-G22	76 x 20 mm	yellow	6.2 mm	long	shackle safety padlock	**107.00**
BD-G41	150 mm	red	3.2 mm	SS cable	shackle safety padlock	**121.00**
BD-G42	150 mm	yellow	3.2 mm	SS cable	shackle safety padlock	**121.00**
*For other colours replace last digit with: **3**= blue, **4**= green, **5**= black, **6**= white, **7**= orange, **8**= purple*						
Lockout tags *use with padlocks to indicate equipment has been locked and should not be operated*						
• Visible "Danger / Do not operate" warning, also "Name / department / Date" for self marking • Tag resistant to common industrial chemicals, PET coated with 10 mm buttonhole for padlocks						
BD-P01	145 x 75 mm	red/wht	10 mm	1	danger lockout tags	**6.50**
Integrated lockout stations *for storing lockout padlocks, hasps and tags*						
• Made of engineering plastic PC, durable one-piece design						
BD-B101	5 hook positions each accommodate 2 padlocks or 4 hasps and several tags					**795.00**
BD-B102	14 hook positions each accommodate 2 padlocks or 4 hasps and several tags					**1 300.00**

Electric slider / Heavy Duty hasp

SM1P006 + BD-K45

HMW630JR + BD-K33

Above ZAR prices do not include VAT. E&OE

Photoelectric smoke detectors

Q01-4

Q05-4

8011-3

QA31-4

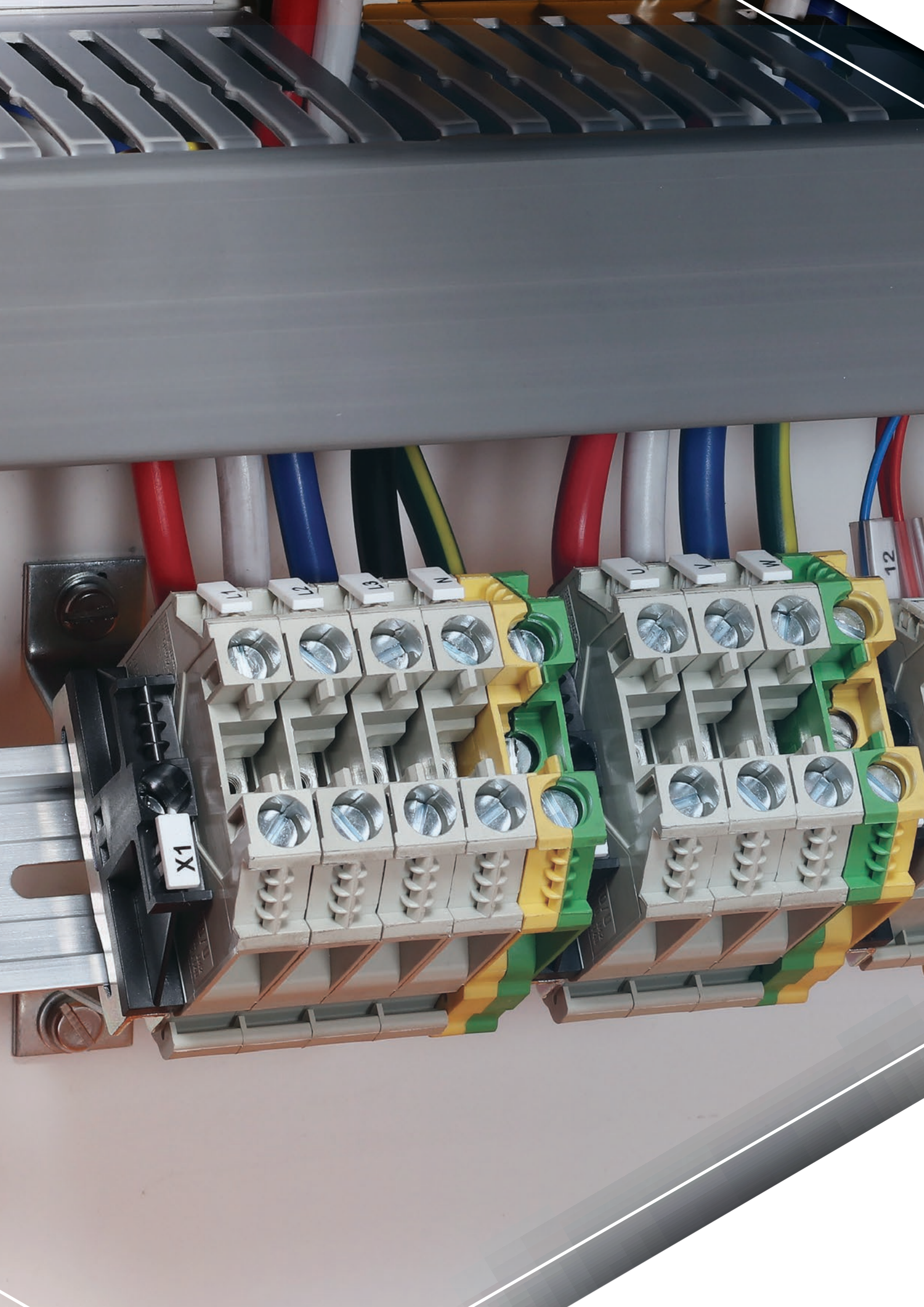
AH-0217

AH-03127-BS

NQ418

type	supply voltage	standby current	alarm	description	price
Q series smoke detectors				**EN54** compliant	
• Dual, bicolour LEDs (green: standby / red: alarm) offer 360º detection • Standard detector *(4 wire)* with relay output 0.8A - 30 VDC / 0.4A - 250 VAC • Made of high endurance, solid and colour-fast fire-proof plastic • Termination base *(with captive screws)* for easy installation • Passed strict EMC tests, illuminating false alarms caused by interference from nearby devices					
Smoke detector				(Ø)102 mm x (H) 48 mm	
Q01-4*	12 - 30 VDC	25 - 75µA	45 mA	photoelectric smoke detector	**655.00**
Combination smoke and heat detector				(Ø)102 mm x (H) 54 mm	
Q05-4*	12 - 30 VDC	55 - 85µA	45 mA	combination smoke + heat detector	**770.00**
8011 series smoke detectors				**EN54** compliant	
• Dual LEDs offer 360º detection • Standard detector 2 wire – available in 4 wire *(relay output)* on request • Made of high endurance, solid and colour-fast fire-proof plastic • Termination base *(with captive screws)* for easy installation					
Smoke detector				(Ø)102 mm x (H) 47 mm	
8011-3*	12 - 30 VDC	25 - 75µA	40 mA	photoelectric smoke detector	**501.00**
Accessories for above smoke detectors					
06MB	Flush mount frame		for sensors	Q01-4, Q05-4, 8011-3	**116.00**
QA31 series single station smoke detector				**EN54** compliant	
• Advanced photoelectric technology for precise detection • Equipped with 9 VDC battery and 220 VAC power plug • Low-battery warning (flashing LED indicates battery replacement) • Built-in manual test button, buzzer (90dB/meter) and flashing LED • Standard detector *(4 wire)* with relay output 0.8A- 30 VDC / 0.4A - 250 VAC • Independent stand-alone device – can be installed without any wiring					
Single station smoke detector				(Ø)105 mm x (H) 40 mm	
QA31-4	100 - 220 VAC and/or 9V battery supply			photoelectric smoke detector	**693.00**
Manual call point "in case of fire" break-glass devices					
• Surface mount with plastic film on glass • Test key inserts from bottom • Suitable for majority of conventional fire alarm systems • Operating contact 6A 250 VAC				*(H) 88 x (W) 88 x (D) 52 mm*	
AH-0217*	emergency "break glass" manual call point enclosure				**316.00**
Audible and visual indicating devices					
Audible sounder and beacon				IP44	
Electronic sounder designed for use with fire alarm, security and industrial signalling systems. • 32 - signal tones selectable by Dip switch • High sound output with low current consumption • Volume control as standard (0 - 20dB adjustable) • Two sets of input and output terminals for easy installation					
AH-03127-S*	24 VDC	14.5mA		surface mount (Ø92.5 mm) electronic sounder	**924.00**
AH-03127-BS*	24 VDC	14.5mA		electronic sounder and illuminated beacon	**1 080.00**
Fire alarm bell					
• Bell with ABS plastic base for easy mounting and total insulation from electricity • Motor energised, low power consumption, long operating life					
NQ418*	24 VDC	28mA		4" (100 mm) bell 90dB @1meter	**324.00**
NQ618*	24 VDC	28mA		6" (152 mm) bell 90dB @1meter	**501.00**

* *Works in conjunction with fire control systems*


L1
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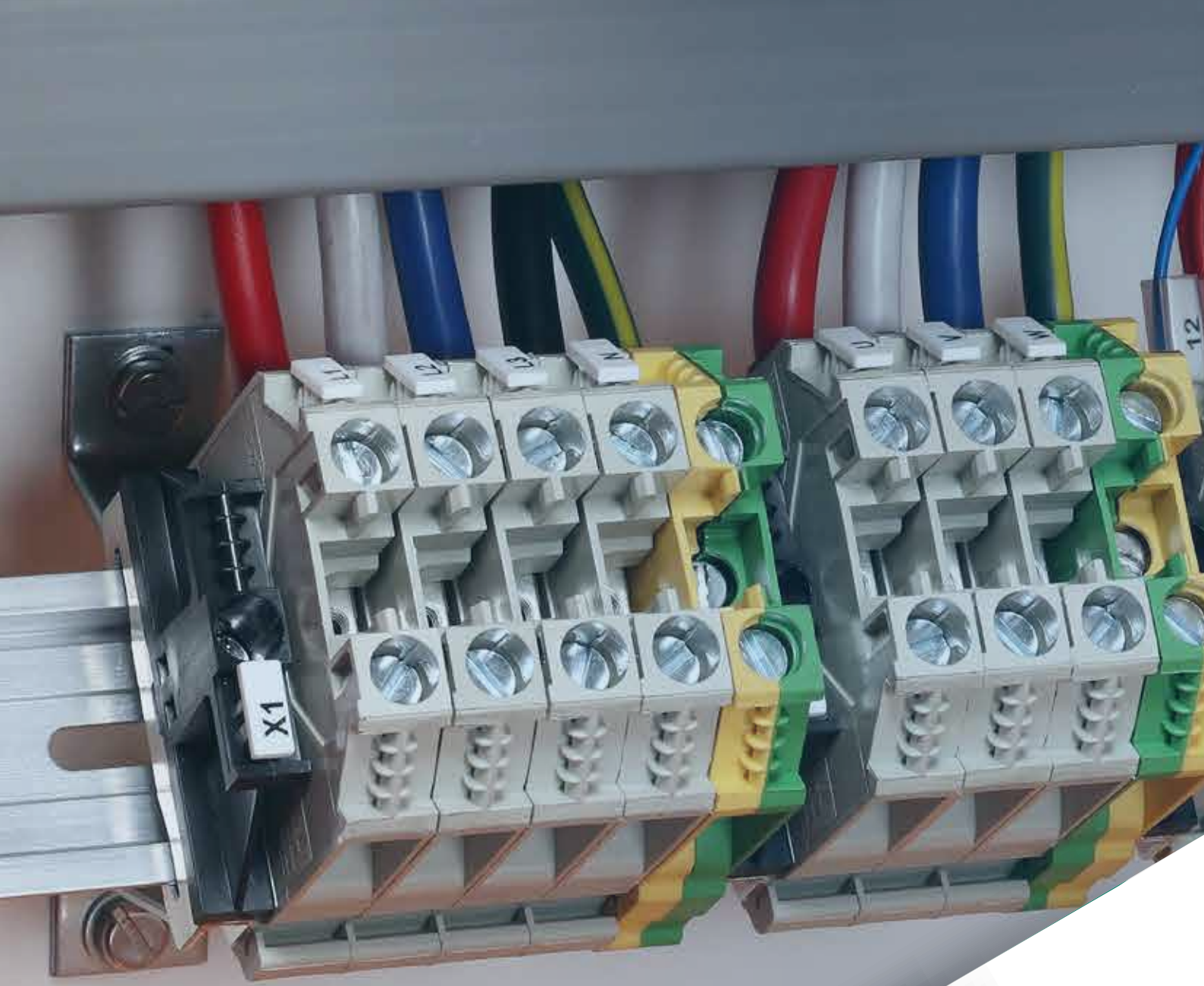

L

Termination & Wiring

Interactive Catalogue

Termination & Wiring

L

Screw connection rail-mount terminals

L-1/3...6

Push-in rail-mount terminals

L-2/7

Terminal accessories

L-8...9

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L-11

Din mounting rail

L-13

Drag-chain cable carriers

L-14

Cable ties

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L-28

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Distribution blocks & Busbar supports

L-33...38/42...46

Flexible copper busbar & Braided links

L-39...41

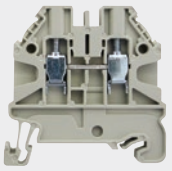
Thermal transfer printers & Cable identification

L-10/48...56

Need help navigating the interactive catalogue?
Scan the QR code for a short tutorial video.

WT series - Terminal blocks - *with screw connection technology*

- Universal screw connection system *(one-piece thread for stress free connection and re-connection)*
- Compact dimensions - uniform design - universal marking system
- Double cross connection row accepts pluggable cross connectors *(plug-in bridge bars)*



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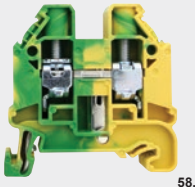
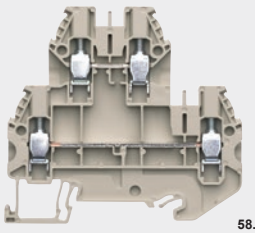
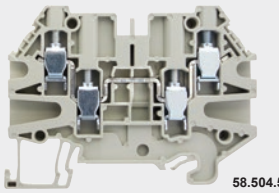


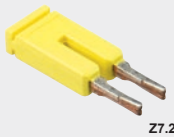
58.506.9055.0



58.504.7055.0



58.504.5155.0



Z7.284.7027.0

type	model	colour	wire size mm²	amperage IEC 947-7-1	term. width	maximum voltage	price
WT through terminals		1000V		*(universal terminal block)*			
58.503.0055.0	WT2.5	grey	0.14...4	24A	5 mm	1000 V	**12.10**
58.504.0055.0	WT4	grey	0.14...6	32A	6 mm	1000 V	**13.20**
58.506.0055.0	WT6	grey	0.2...10	41A	8 mm	1000 V	**27.60**
58.510.0055.0	WT10	grey	0.5...16	57A	10 mm	1000 V	**31.80**
58.503.0055.6	WT2.5BL	blue	0.2...4	24A	5 mm	1000 V	**23.90**
58.504.0055.6	WT4BL	blue	0.5...6	32A	6 mm	1000 V	**25.70**
58.506.0055.6	WT6BL	blue	0.14...10	41A	8 mm	1000 V	**39.20**
58.510.0055.6	WT10BL	blue	0.14...16	57A	10 mm	1000 V	**46.00**
WT earth terminals		*yellow/green screw-less, clip-on earth terminals*					
58.503.9055.0	WT2.5PE	yel/grn	0.14...4	–	5 mm	1000 V	**45.00**
58.504.9055.0	WT4PE	yel/grn	0.14...6	–	6 mm	1000 V	**45.00**
58.506.9055.0	WT6PE	yel/grn	0.2...10	–	8 mm	1000 V	**63.00**
58.510.9055.0	WT10PE	yel/grn	0.5...16	–	10 mm	1000 V	**71.00**
End plates		*for above terminals*					
07.313.2555.0	APWT2.5-10	grey		end plate	for term.	WT2.5/4/6/10	**8.00**
07.313.2655.0	TWWT2.5-10	grey		partition plate	for term.	WT2.5/4/6/10	**11.10**
Multi-tier terminal blocks		500V					
58.504.5055.0	WT4D1/2	grey	0.14...6	32A	6 mm	500 V	**44.00**
58.504.5155.0	WT4D2/2	grey	0.14...6	32A	6 mm	500 V	**51.00**
58.504.7055.0	WT4E	grey	0.14...6	32A	6 mm	800 V	**43.00**
07.313.2955.0	APWT4D1/2	grey		end plate	for term.	WT4D1/2	**11.10**
07.313.3155.0	APWT4D2/2	grey		end plate	for term.	WT4D2/2	**12.30**
07.313.3355.0	APWT4E	grey		end plate for two-tier	for term.	WT4E	**12.30**
07.313.2855.0	TWWT4E	grey		partition for two tier	for term.	WT4E	**14.10**
Disconnect terminal block		*hinged blade type*					
58.503.2055.0	WT2.5TKM	grey	0.14...4	20A	5 mm	500 V	**75.00**
58.504.2055.0	WT4TKM	grey	0.14...6	24A	6 mm	500 V	**79.00**
07.313.2955.0	APWT4D1/2	grey		end plate	for term.	WT2.5/4TKM	**11.10**
07.313.2855.0	TWWT4E	grey		partition plate	for term.	WT2.5/4TKM	**14.10**

Plug-in cross connectors *(bridging bars)* *for WT and WTP terminal blocks*

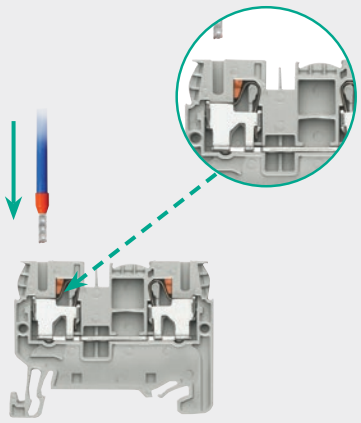
WT series terminals feature a two-row, plug-in jumpering channel, permitting variable potential distribution through use of a chain arrangement, providing a vibration-proof connection.

Any number of plug-in jumpers can be connected in succession as necessary.

- Robust combination of copper current bar and indestructible steel spring individually fabricated

		poles				
Z7.284.7027.0	IVBWTP1.5-2	2-pole	plug-in bridging bar	for term.	WTP1.5	**8.00**
Z7.284.7127.0	IVBWTP1.5-3	3-pole	plug-in bridging bar	for term.	WTP1.5	**14.70**
Z7.284.7227.0	IVBWTP1.5-4	4-pole	plug-in bridging bar	for term.	WTP1.5	**23.30**
Z7.284.7327.0	IVBWTP1.5-5	5-pole	plug-in bridging bar	for term.	WTP1.5	**31.20**
Z7.280.6227.0	IVBWKF2.5-2	2-pole	plug-in bridging bar	for term.	WT2.5/P2.5/4	**9.20**
Z7.280.6327.0	IVBWKF2.5-3	3-pole	plug-in bridging bar	for term.	WT2.5/P2.5/4	**17.80**
Z7.280.6427.0	IVBWKF2.5-4	4-pole	plug-in bridging bar	for term.	WT2.5/P2.5/4	**27.00**
Z7.280.6527.0	IVBWKF2.5-5	5-pole	plug-in bridging bar	for term.	WT2.5/P2.5/4	**36.10**
Z7.280.7027.0	IVBWKF2.5-10	10-pole	plug-in bridging bar	for term.	WT2.5/P2.5/4	**81.00**
Z7.280.8027.0	IVBWKF2.5-20	20 pole	plug-in bridging bar	for term.	WT2.5/P2.5/4	**172.00**
Z7.261.1227.0	IVBWKF4-2	2-pole	plug-in bridging bar	for term.	WT4	**9.80**
Z7.261.1327.0	IVBWKF4-3	3-pole	plug-in bridging bar	for term.	WT4	**19.00**
Z7.261.1427.0	IVBWKF4-4	4-pole	plug-in bridging bar	for term.	WT4	**28.20**
Z7.261.1527.0	IVBWKF4-5	5-pole	plug-in bridging bar	for term.	WT4	**38.00**
Z7.261.2027.0	IVBWKF4-10	10-pole	plug-in bridging bar	for term.	WT4	**86.00**
Z7.282.5227.0	IVBWKF6-2	2-pole	plug-in bridging bar	for term.	WT6/WTP6/10	**19.00**
Z7.282.5327.0	IVBWKF6-3	3-pole	plug-in bridging bar	for term.	WT6/WTP6/10	**29.40**
Z7.282.5427.0	IVBWKF6-4	4-pole	plug-in bridging bar	for term.	WT6/WTP6/10	**45.00**
Z7.282.5527.0	IVBWKF6-5	5-pole	plug-in bridging bar	for term.	WT6/WTP6/10	**57.00**
Z7.283.8227.0	IVBWKF10-2	2-pole	plug-in bridging bar	for term.	WT10	**39.20**

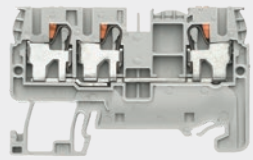
See DIN mounting rail


56.203.0055.0

Fasis WTP series - Terminal blocks - *with push-in connection technology*

- Terminate wires easily, directly and without tools *(wires simply push-in to terminals)*
- Integrated release lever - no contact with live parts - flat or star screwdriver release button
- Compact dimensions - uniform design - universal marking system
- Double cross connection row on all terminals for pluggable cross connectors *(plug-in bridge bars)*
- Designed for use in machinery and plant engineering, as well as power distribution for buildings
- Connects a control cabinet quickly, reducing installation time and keeps inventory costs to a minimum

type	model	wire size mm²	amperage IEC 947-7-1	terminal width	terminal in	terminal out	max. voltage	price
Feed-through terminals with push-in connection								
56.202.0055.0	WTP1.5	0.14...1.5	17.5A	3.5 mm	1	1	500 V	**17.20**
56.203.0055.0	WTP2.5/4	0.2...4	30A	5 mm	1	1	800 V	**14.70**
56.203.5055.0	WTP2.5/4D1/2	0.2...4	32A	5 mm	1	2	800 V	**23.30**
56.203.5155.0	WTP2.5/4D2/2	0.2...4	32A	5 mm	2	2	800 V	**30.60**
56.203.7055.0	WTP2.5/4E	0.2...4	24A	5 mm	2	2	500 V	**47.00**
56.206.0055.0	WTP6/10	0.2...10	57A	8 mm	1	1	1000 V	**39.20**
Feed-through terminals	*blue push-in terminals*							
56.202.0055.6	WTP1.5BL	0.14...1.5	17.5A	3.5 mm	1	1	500 V	**17.20**
56.203.0055.6	WTP2.5/4BL	0.2...4	30A	5 mm	1	1	800 V	**20.20**
56.206.0055.6	WTP6/10BL	0.2...10	57A	8 mm	1	1	1000 V	**36.70**


56.203.5055.0

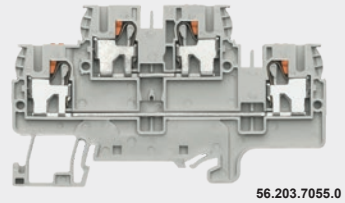
Earth terminals *yellow/green*

- screwless, clip-on earth terminals / plug-in bridging bars

56.202.9055.0	WTP1.5PE	0.14...1.5	17.5A	3.5 mm	1	1	500 V	**59.00**
56.203.9055.0	WTP2.5/4PE	0.2...4	32A	5 mm	1	1	800 V	**46.00**
56.203.9355.0	WTP2.5/4D1/2PE	0.2...4	32A	5 mm	1	2	800 V	**77.00**
56.206.9055.0	WTP6/10PE	0.2...10	57A	8 mm	1	1	1000 V	**92.00**

End plates/partitions - *For above WTP terminals*

07.313.4455.0	APWTP1.5	terminal insulated end plate for	WTP1.5	**8.00**
07.312.6755.0	APFN2.5	terminal insulated end plate for	WTP2.5/4	**9.80**
07.312.6955.0	APFN2.5D1/2	terminal insulated end plate for	WTP2.5/4D1/2	**11.10**
07.312.7155.0	APFN2.5D2/2	terminal insulated end plate for	WTP2,5/4D2/2	**12.30**
07.312.7355.0	APFN2.5E	terminal insulated end plate for	WTP2.5/4 E	**13.50**
07.313.4155.0	APWTP6/10	terminal insulated end plate for	WTP6/10	**12.90**
07.312.6855.0	TWFN2.5	terminal insulated partition plate for	WTP2.5/4	**9.80**
07.312.7055.0	TWFN2.5D1/2	terminal insulated partition plate for	WTP2.5/4D1/2	**11.10**
07.312.7255.0	TWFN2.5D2/2	terminal insulated partition plate for	WTP2.5/4D2/2	**12.30**
07.312.7455.0	TWFN2.5E	terminal insulated partition plate for	WTP2.5/4E	**13.50**
07.313.4255.0	TWWTP6/10	terminal insulated partition plate for	WTP6/10E	**12.90**


56.203.7055.0

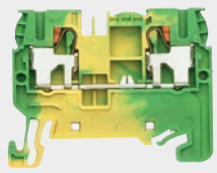
Accessories for all Wieland terminals

End stops for all terminals

Z5.523.9353.0	WEF1/35	"snap-on"	8 mm	terminal end stop	**16.60**
Z5.523.9453.0	WEF2/35	"snap-on"	5 mm	terminal end stop	**16.10**
Z5.522.8553.0	9708/2S35	"screw-on"	8 mm	terminal end stop	**12.30**
Z5.523.5753.0	WE 1/U	"screw-on"	10 mm	terminal end stop	**50.00**

Test terminal

Z1.299.9753.0	PSWKC/F	0.14...4	plug-in test terminal for	WT/WTP 2.5/4	**86.00**
07.312.6053.0	ZP/APPS	–	end plate for above test terminal	PS WKC/F	**41.00**


56.203.9055.0

Terminal markers for all Wieland terminals

- Universal marking system
- Maximum hold to the terminal
- Marking strips ideal for service and maintenance

41490/PS	10 x 5 mm	self marking tag for use with Cembre printer	card of 56 pcs	**106.00**
9704A/*B	numeral marking tags - strip 10 similar markers	*(25 x strips of 10pcs = 250 per pack)*		**10.40**
9704A/*GB	alphabetical marking strips 10 similar markers	*(25 x strips of 10pcs = 250 per pack)*		**10.40**

* *Replace by:* **1/2/3/4/5/6/7/8/9/0/+/-** (example **9704A/5B**)

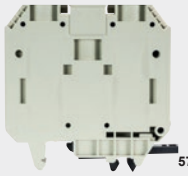
❖ **A/B/C/D/E/F/G/H/I/J/K/L/M/N/O/P/Q/R/S/T/U/V/W/X/Y/Z**

9705A/6	marker adaptor	*(increases marking area to 6 digits)*	all terminals	**5.60**

Bridging bars - *(plug-in cross connectors, see page **L-1**)*
See DIN mounting rail

56.203.9355.0

57.510.0155.0



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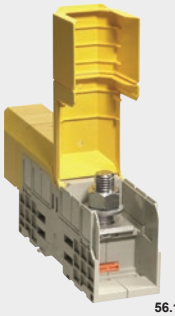


56.135.1055.0 + 07.431.7053.8

57.504.9055.0

57.910.5055.0

57.904.5355.0

Z5.522.8553.0

WK series - Terminal blocks - *with screw connection technology*

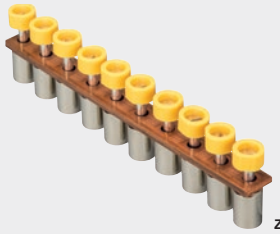
- Universal marking system
- Reliable and maintenance-free
- Multi-tier blocks in two- and three-tier designs
- Approvals: SEV / ASEV / RINA / VDE / UL / CSA
- Conformity: IEC60947-7-1 / IEC60685-2-2 / IEC60685-1 / CEI222223-20/21 / VDE0611/ CSA C22.2 / UL1059

type	model	wire size mm²	amperage IEC 947-7-1	terminal width		maximum voltage	price
Through terminals blocks		*universal EN50022 (DIN 35) and EN50035 (G rail)*					
57.503.0055.0	WK2.5/U	0.5...2.5	26A	5 mm	–	1000 V	**14.10**
57.504.0055.0	WK4/U	0.5...4	35A	6 mm	–	1000 V	**15.30**
57.506.0055.0	WK6/U	0.5...6	46A	8 mm	–	1000 V	**24.50**
57.510.0155.0	WKN10/U	2.5...10	63A	10 mm	–	1000 V	**39.80**
57.516.0155.0	WKN16/U	4...16	85A	12 mm	–	1000 V	**54.00**
57.535.0155.0*	WKN35/U	10...35	125A	16 mm	–	1000 V	**89.00**
57.570.0155.0*	WKN70/U	10...70	192A	24 mm	–	1000 V	**497.00**
Stud terminal blocks		*bolt to bolt through terminal*					
56.135.1055.0	WRT35/M6	2.5…50	125A	27 mm	M6	1000 V	**260.00**
56.170.1055.0	WRT70	2.5...95	192A	32 mm	M8	1000 V	**361.00**
56.197.1055.0	WRT120	6...150	269A	42 mm	M10	1000 V	**443.00**
56.198.1055.0	WRT185	10...240	353A	55 mm	M12	1000 V	**641.00**
56.199.1055.0	WRT300	25…240	520A	55 mm	M16	1000 V	**765.00**
End plates/partitions - *for above terminals*							
07.311.0155.0	AP2.5-4	terminal end plates			for term.	WK2.5/4	**8.60**
07.311.0255.0	AP6	terminal end plates			for term.	WK6	**9.80**
07.311.6655.0	APN10	terminal end plates			for term.	WK10	**11.70**
07.311.6755.0	APN16	terminal end plates			for term.	WK16	**17.20**
07.431.7053.8	ADWRT35	terminal cover *(2 req. per terminal)*			for term.	WRT35	**39.80**
07.431.7153.8	ADWRT70	terminal cover *(2 req. per terminal)*			for term.	WRT70	**46.00**
07.431.7253.8	ADWRT120	terminal cover *(2 req. per terminal)*			for term.	WRT120	**59.00**
07.431.7353.8	ADWRT185/300	terminal cover *(2 req. per terminal)*			for term.	WRT185/300	**81.00**
07.311.1155.0	TW2.5-4	terminal end plate/partition			for term.	WK2.5/4	**12.30**
07.311.1255.0	TW6	terminal end plate/partition			for term.	WK6	**12.30**
07.311.7655.0	TWN10	terminal end plate/partition			for term.	WK10	**13.50**
07.311.7755.0	TWN16	terminal end plate/partition			for term.	WK16	**19.00**
Earth terminal blocks		*yellow/green screw-on earth terminals*					
57.504.9055.0*	WK4SL/U	0.5...4	–	6 mm	–	1000 V	**66.00**
57.506.9055.0*	WK6SL/U	0.5...6	–	8 mm	–	1000 V	**85.00**
57.510.9055.0*	WKN10SL/U	2.5...10	–	10 mm	–	1000 V	**121.00**
57.516.9055.0*	WKN16SL/U	4...16	–	12 mm	–	1000 V	**144.00**
57.535.9055.0*	WKN35SL/U	10...35	–	16 mm	–	1000 V	**262.00**
Multi-tier terminal blocks							
57.403.7055.0	WKN2.5E/U	0.14...2.5	24A	5 mm	2 tier	500 V	**73.00**
07.312.1755.0	APN2.5E	terminal end plate for above			for term.	WK2.5E/U	**15.90**
57.503.8855.0*	WK2.5-3D/U	0.5...2.5	24A	6 mm	3 tier	400 V	**148.00**
57.503.7855.0*	WK2.5-4KI/U	0.5...2.5	24A	6 mm	3 tier *(sensor)*	250 V	**87.00**
Fuse terminal blocks		*accepts 20 x 5 mm fuses (see page **B-45**)*					
57.904.5355.0*	WK4/THSI5/U	0.5...4	6.3A	8 mm		800 V	**89.00**
57.910.5055.0	WK10/SI/U	1...10	10A	12 mm		500 V	**144.00**
07.311.4155.0	AP10/SI	terminal end plate for above			for term.	WK10/Si/U	**12.90**
End stops for all terminals							
Z5.523.9353.0	WEF1/35	screwless	rail mount	8 mm	"snap-on" term. end stop		**16.60**
Z5.523.9453.0	WEF2/35	screwless	rail mount	5 mm	"snap-on" term. end stop		**16.10**
Z5.522.8553.0	9708/2S35	screw mnt	rail mount	8 mm	"screw-on" term. end stop		**12.30**
Z5.523.5753.0	WE1/U	screw mnt	rail mount	10 mm	"screw-on" term. end stop		**50.00**

* *Fully insulated terminal (no end plate required)*

See DIN mounting rail

Above ZAR prices do not include VAT. E&OE

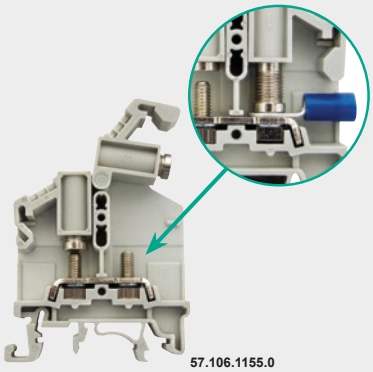

Z7.28...

07.201.3327.6

Bridging bars *screw-in type for WK series terminals*

type	model	wire size mm²	no. ways	description	for terminal	price
Z7.280.0027.0	VBWK2.5M	2.5	80-way	bridging bar for terminal	WK2.5/U	**586.00**
Z7.281.0027.0	VBWK4M	4	70-way	bridging bar for terminal	WK4/U	**521.00**
Z7.282.0027.0	VBWK6M	6	40-way	bridging bar for terminal	WK6/U	**482.00**
Z7.283.6027.0	VBWKN10M	10	40-way	bridging bar for terminal	WKN10/U	**643.00**
Z7.284.2027.0	VBWKN16M	16	30-way	bridging bar for terminal	WKN16/U	**1 070.00**
Z7.285.2027.0	VBWKN35M	35	20-way	bridging bar for terminal	WKN35/U	**939.00**
Jumper bars	*screw-in type for WK series terminals*					
07.201.1227.6	VBWRT35-2	35	2-way	jumper bar for terminal	WRT35	**59.00**
07.201.1327.6	VBWRT35-3	35	3-way	jumper bar for terminal	WRT35	**79.00**
07.201.3227.6	VBWRT70-2	70	2-way	jumper bar for terminal	WRT70	**84.00**
07.201.3327.6	VBWRT70-3	70	3-way	jumper bar for terminal	WRT70	**108.00**
07.201.5227.6	VBWRT120-2	120	2-way	jumper bar for terminal	WRT120	**171.00**
07.201.5327.6	VBWRT120-3	120	3-way	jumper bar for terminal	WRT120	**213.00**
07.201.7227.6	VBWRT185-2	185	2-way	jumper bar for terminal	WRT185	**244.00**
07.201.7327.6	VBWRT185-3	185	3-way	jumper bar for terminal	WRT185	**341.00**
07.201.9227.6	VBWRT300-2	300	2-way	jumper bar for terminal	WRT300	**281.00**
07.201.9327.6	VBWRT300-3	300	3-way	jumper bar for terminal	WRT300	**453.00**

WRT series - Terminal block with screw bolt connection *(accommodates ring lugs)*


57.106.1155.0

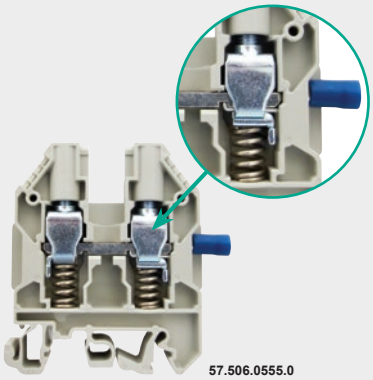
Designed for secure and efficient electrical connections, featuring a standard through terminal with threaded stud termination. The incorporation of a hinged section nut allows for the easy accommodation of ring lugs, providing a secure and safe connection.

This design ensures that cables remain securely connected, even in the event of a loosened screw, thanks to the robust screw bolt system that delivers consistent torque application

- Universal screw bolt - ring lug connection system (M4)
- Hinged terminal screw for easy access of ring lugs
- Universal marking system

type	model	wire size (stranded)	amperage IEC 947-7-1	term. width	max. voltage		price
WRT terminal with stud connection to accept ring lugs							
57.106.1155.0	WRT6	1.5...6	41A	11 mm	1000V		**114.00**
07.300.6955.0	APRT6	end plate for above terminal			for term.	WRT6	**17.20**

WKN spring supported screw connection terminal block

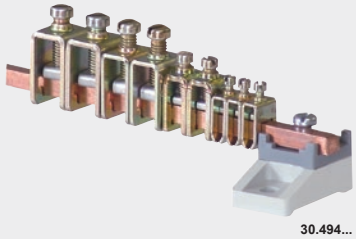

57.506.0555.0

This terminal features a spring-supported screw connection that is optimized for use with hook blade terminals. The innovative spring mechanism not only ensures a stable and safe connection but also prevents the hook blade lug from exiting the terminal, even in the event of a loosened screw.

With a standard through terminal and threaded stud termination, the WKN model also incorporates a hinged section nut for easy integration with ring lugs

57.506.0555.0	WKN6SF	0.5...6	41A	8 mm	800 V		**84.00**
57.510.0555.0	WKN10SF	2.5...10	57A	10 mm	800 V		**93.00**
07.313.2355.0	APN6SF	end plate for above terminal			for term.	WKN 6 SF	**9.80**
07.313.2455.0	APN10SF	end plate for above terminal			for term.	WKN 10 SF	**12.30**

WAK busbar termination *(earth/neutral)*


30.494...

Busbar *(1 meter length)*

GI06006.1	6 x 6 mm		120A	1 meter	busbar for WAK terminals	**339.00**

Busbar support

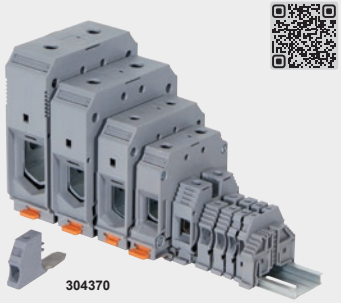
19.230.0040.0	KSO11/1ZKR		support		busbar support for 6 x 6 mm bars	**63.00**

Terminals - slide-on - earth or neutral

- Steel - zinc plated *(galvanised)*

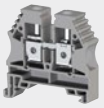
30.494.0010.0	AK4/1	0.5...4	41A	clamp terminal for 6 x 6 mm busbar	**11.70**
30.494.1010.0	AK16/1	1...16	76A	clamp terminal for 6 x 6 mm busbar	**15.90**
30.494.1110.0	AK25/3	2.5...25	41A	clamp terminal for 6 x 6 mm busbar	**33.10**
30.494.2510.0	AK35/3	2.5...35	125A	clamp terminal for 6 x 6 mm busbar	**36.10**

See DIN mounting rail

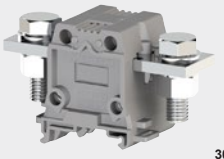

304370

304120

304141


304150

462121


304300

334210

317109

324409

304419

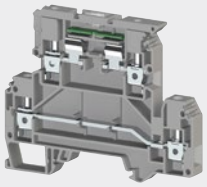
AVK series - Screw clamp terminals

type	wire size (mm^2)	amperage EN60947-7-1	terminal width		description	price
Standard feed through terminals						
304120	2.5 mm	24A	5 mm	grey	rail mount screw clamp terminal	**8.20**
304130	4 mm	32A	6 mm	grey	rail mount screw clamp terminal	**9.80**
304140	6 mm	41A	8 mm	grey	rail mount screw clamp terminal	**14.10**
304150	10 mm	57A	10 mm	grey	rail mount screw clamp terminal	**18.70**
304121	2.5 mm	24A	5 mm	blue	rail mount screw clamp terminal	**9.40**
304131	4 mm	32A	6 mm	blue	rail mount screw clamp terminal	**11.30**
304141	6 mm	41A	8 mm	blue	rail mount screw clamp terminal	**14.10**
304151	10 mm	57A	10 mm	blue	rail mount screw clamp terminal	**18.70**
304240	16 mm	76A	12 mm	grey	rail mount screw clamp terminal	**32.40**
304290	25 mm	101A	12 mm	grey	rail mount screw clamp terminal	**54.00**
304250*	35 mm	125A	16 mm	grey	rail mount screw clamp terminal	**62.00**
304330*	50 mm	150A	20 mm	grey	rail mount screw clamp terminal	**152.00**
304190*	70 mm	192A	22 mm	grey	rail mount screw clamp terminal	**270.00**
304340*	95 mm	232A	25 mm	grey	rail mount screw clamp terminal	**284.00**
304350*	150 mm	309A	31 mm	grey	rail mount screw clamp terminal	**392.00**
304360*	240 mm	415A	36 mm	grey	rail mount screw clamp terminal	**528.00**
* *Fully insulated (no end plate required)*						
304370	6 mm	41A	8 mm		plug-in auxiliary term. for 304 340/50/60	**26.90**
End plates for above terminals						
444120	end plate	2.5 - 10	1.5 mm	grey	for 2.5-4-6-10 mm terminals	**4.70**
444121	end plate	2.5 - 10	1.5 mm	blue	for 2.5-4-6-10 mm terminals	**4.70**
444170	end plate	16 mm	1.5 mm	grey	for 16 mm terminals	**7.40**
450250	end plate	25 mm	1.5 mm	grey	for 25 mm terminals	**8.10**
462120	partition	2.5 - 10	1.5 mm	grey	for 2.5-4-6-10 mm terminals	**5.50**
462121	partition	2.5 - 10	1.5 mm	blue	for 2.5-4-6-10 mm terminals	**5.50**
462170	partition	16 mm	1.5 mm	grey	for 16 mm terminals	**11.40**
Stud terminals *(bolt and nut termination top and bottom)*						
304300	95 mm	232A	40 mm	grey	rail mount stud terminal	**241.00**
304310	150 mm	309A	48 mm	grey	rail mount stud terminal	**374.00**
304320	240 mm	415A	53 mm	grey	rail mount stud terminal	**534.00**
Covers for above stud terminals						
466100	cover	–	hinged isolation cover for stud terminal		304 300	**37.40**
466110	cover	–	hinged isolation cover for stud terminal		304 310	**47.00**
466120	cover	–	hinged isolation cover for stud terminal		304 320	**57.00**
Earth terminals - *(fully insulated no end cover required)*						
334170	2.5 mm	–	5 mm	grn/yell	rail mount earth terminal	**33.40**
334450	4 mm	–	6 mm	grn/yell	rail mount earth terminal	**44.00**
334460	6 mm	–	8 mm	grn/yell	rail mount earth terminal	**44.00**
334470	10 mm	–	10 mm	grn/yell	rail mount earth terminal	**49.00**
334200	16 mm	–	12 mm	grn/yell	rail mount earth terminal	**119.00**
334210	35 mm	–	16 mm	grn/yell	rail mount earth terminal	**94.00**
334190	50 mm	–	20 mm	grn/yell	rail mount earth terminal	**298.00**
Multi-tier terminals *(PIK/PUK)*						
317109	2.5 mm	24A	5 mm	two tier	rail mount terminal	**21.10**
319109	4 mm	32A	6 mm	two tier	rail mount terminal	**28.10**
324109	2.5 mm	24A	6 mm	three tier	rail mount terminal	**43.00**
324409	2.5 mm	24A	6 mm	three tier	sensor terminal	**43.00**
449019	end plate	2.5/4 mm	1.5 mm	for 2.5/4 mm 2 tier terminal	317/9109	**13.20**
450139	end plate	2.5 mm	1.5 mm	for 2.5 mm 3 tier terminal	324109	**6.90**
450169	end plate	2.5 mm	1.5 mm	for 2.5 mm sensor terminal	324409	**9.20**
Disconnect terminals *(AVK)*						
304419*	2.5 mm	16A	5 mm	grey	rail mounting disconnect terminal	**29.70**
304380*	4 mm	20A	6 mm	grey	rail mounting disconnect terminal	**30.60**
450330	end plate	2.5/4 mm	1.5 mm	for above disconnect terminals	304419/380	**7.10**

* *2.5/4 mm terminals accept plug-in bridge pieces 2/3/4/10 way (see page **L-7**)*

*Terminal accessories, see page **L-8...9***
See DIN mounting rail

Above ZAR prices do not include VAT. E&OE



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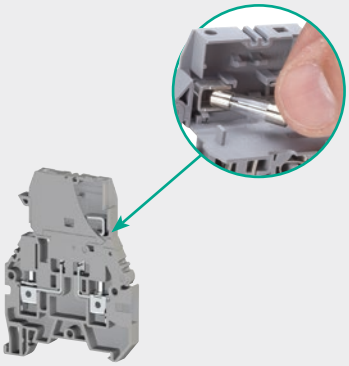

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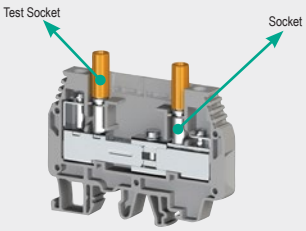
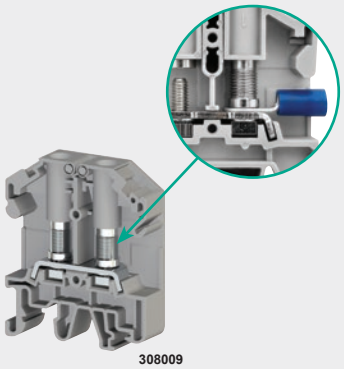
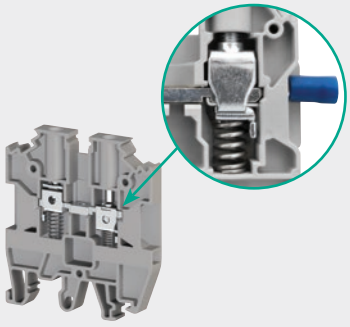


375692

476302



308009



304500

AVK series - Screw clamp terminals

type	wire size (mm^2)	amperage EN60947-7-1	terminal width	description		price
Fuse terminals (AVK) - accept 5 x 20 mm fuses						
Low profile fused terminal - for 5 x 20 mm fuses						
351109	6 mm	6.3A	8 mm	low profile fused terminal	–	**26.10**
351229	6 mm	6.3A	8 mm	fused term. LED indication	24 VDC	**54.00**
351619	6 mm	6.3A	8 mm	fused term. LED indication	220 VAC	**54.00**
450049	end plate	–	1.5 mm	for above 351 ... fused terminals		**9.50**
Fused terminal with pluggable fuse section *(supports spare fuse)*						
355109*	4 mm	10A	6.2 mm	plug-in fuse terminal	–	**47.00**
355229*	4 mm	10A	6.2 mm	fused term. LED indication	24 VDC	**75.00**
355619*	4 mm	10A	6.2 mm	fused term. LED indication	220 VAC	**75.00**
450059	end plate	–	1.5 mm	for above 355 ... fused terminals		**8.70**
Two tier 1 x fused and 1 x through terminal (AVK) *(supports spare fuse)*						
353309*	4 mm	6.3A	8 mm	two tier (*one fused*)		**71.00**
353329*	4 mm	6.3A	8 mm	fused term. LED indication	24 VDC	**118.00**
450209	end plate	–	1.5 mm	for above 353 ... fused terminals		**16.60**

* *355/353--- terminals accept plug-in bridge pieces (2/3/4/10 way)* *(see page **L-8**)*

Comb bridging bars *(cross-connection)* **for above 355/353 series terminals**

type	ref.	poles	for term. width	description		price
476282	TKO6/2	2-pole	8 mm	comb bridge for std screw terminal	304 140	**14.40**
476283	TKO6/3	3-pole	8 mm	comb bridge for std screw terminal	304 140	**17.60**

* *355/353--- terminals accept plug-in bridge pieces (2/3/4/10 way)* for more options, see page **L-8**

Special application terminals

WGO test / disconnect terminals

Used to perform required tests without disconnecting the system. Usually installed on secondary side of current transformers, permitting observation of testing equipment safe exchange of meters by bridging secondary side of transformer during exchange

375690	6 mm	41A	8 mm	terminal without test socket	**76.00**
375691	6 mm	41A	8 mm	terminal with test socket	**89.00**
375692	6 mm	41A	8 mm	terminal with double test socket	**103.00**
476302	2-pole			sliding bridge/cross connector for above test terminals	**8.50**
476303	3-pole			sliding bridge/cross connector for above test terminals	**15.00**
476304	4-pole			sliding bridge/cross connector for above test terminals	**18.20**
450229	end plate	–		for above test terminals 375690/1/2	**8.40**

2PB6/NM - Terminal block with screw bolt connection *(accommodates ring lugs)*

Standard through terminal with threaded stud termination, incorporating a hinged section nut to accommodate a ring lug, provides a secure, safe connection preventing cable from disconnection in the event of loosened screw.

- Universal screw bolt - ring lug connection system (M4)
- Hinged terminal cover for easy access for ring lugs

PB6/NM - Terminal with stud connection to accept ring lugs

308009	0.5...6	41A	11 mm	bolt connection terminal block	**69.00**
451019	end plate	–	for above bolt connection terminal	308009	**5.20**

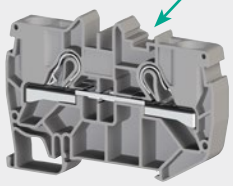
AVK Y series - Spring supported screw connection terminal block

Special application terminal with spring supported screw connection for use with hook blade terminals the spring provides a secure, safe connection, simultaneously preventing hook blade lug from exiting the terminal even in the event of a loosened connection.

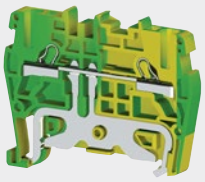
304500	0.2...6	32A	6 mm	spring assisted terminal block	**28.50**
304510	0.5...10	41A	8 mm	spring assisted terminal block	**29.80**
304520	0.5...16	57A	10 mm	spring assisted terminal block	**30.70**
450300	end plate	–	for above spring assisted terminal	304500/10	**5.50**
450260	end plate	–	for above spring assisted terminal	304520	**5.50**

*Terminal accessories, see page **L-8...9***

See DIN mounting rail

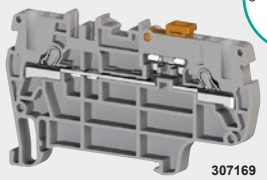


307139

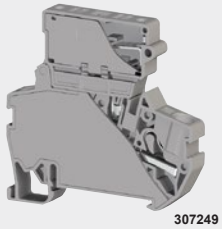


336500

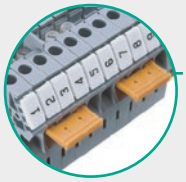
307199



307169



307249



476602

476604

476249

PYK series - "Push-in" spring clamp terminals

Cable connection is made by simply "pushing" the cable into the terminal without the need for tools. Secure connection is guaranteed in all conditions saving time in terminating. If required, cable can easily be removed with the use of a screwdriver. The easy "push-in" termination together with "plug-in" bridging combs combine to speed up connection of terminals, providing a rapid, secure, safe connection over time.

type	wire size (mm^2)	amperage EN60947-7-1	terminal width	description		price
Feed through terminals (PYK)						
307019	1.5 mm	17.5A	4.2 mm	rail mount spring clamp terminal		**12.40**
307109	2.5 mm	24A	5 mm	rail mount spring clamp terminal		**11.60**
307119	4 mm	32A	6 mm	rail mount spring clamp terminal		**14.30**
307129	6 mm	41A	8 mm	rail mount spring clamp terminal		**29.40**
307139	10 mm	57A	10 mm	rail mount spring clamp terminal		**41.00**
446639	end plate	–	1.2 mm	for 1.5 mm terminal	307019	**2.80**
446449	end plate	–	1.2 mm	for 2.5 mm terminal	307109	**5.00**
446459	end plate	–	1.2 mm	for 4.0 mm terminal	307119	**5.40**
446469	end plate	–	1.2 mm	for 6.0 mm terminal	307129	**6.20**
446479	end plate	–	1.2 mm	for 10.0 mm terminal	307139	**7.40**
Earth terminals - *yellow/green screw-less, clip-on earth terminals*						
336500	2.5 mm	24A	5 mm	rail mount spring clamp earth terminal		**35.60**
336510	4 mm	32A	6 mm	rail mount spring clamp earth terminal		**48.00**
336520	6 mm	41A	8 mm	rail mount spring clamp earth terminal		**63.00**
336530	10 mm	57A	10 mm	rail mount spring clamp earth terminal		**103.00**
446442	end plate	–	1.2 mm	for 2.5 mm earth terminal	336500	**5.00**
446452	end plate	–	1.2 mm	for 4.0 mm earth terminal	336510	**5.40**
446462	end plate	–	1.2 mm	for 6.0 mm earth terminal	336520	**6.20**
446472	end plate	–	1.2 mm	for 10.0 mm earth terminal	336530	**7.40**
Multi-tier terminals						
307179	2.5 mm	24A	5 mm	two tier	spring clamp terminal	**38.30**
307199	2.5 mm	24A	5 mm	three tier	spring clamp terminal	**54.00**
446519	end plate	–	1.2 mm	for 2.5 mm 2 tier terminal	307179	**6.30**
446529	end plate	–	1.2 mm	for 2.5 mm 3 tier terminal	307199	**7.20**
Disconnect terminals						
307169	2.5 mm	20A	5 mm	rail mount disconnect terminal		**45.00**
446509	end plate	–	1.2 mm	for disconnect terminal	307169	**15.20**
Fuse terminals - *for 5 x 20 mm fuses*				*fully insulated - no end plate required*		
307249	2.5 mm	10A	8 mm	rail mount fused terminal		**75.00**
307259	2.5 mm	10A	8 mm	fused term. LED indication	24 VDC	**143.00**
307269	2.5 mm	10A	8 mm	fused term. LED indication	220 VAC	**143.00**
PYK test terminal *(plug-in)*				*plugs into standard PYK range terminals*		
498559	1.5 mm	plug-in test terminal		*(provides an additional terminal outlet)*		**46.00**
Cross connectors *(plug-in bridging bars)*						
476602	UK1.5/2	2-pole	4.2 mm	plug-in bridge piece for terminals		**14.90**
476603	UK1.5/3	3-pole	4.2 mm	plug-in bridge piece for terminals		**20.00**
476604	UK1.5/4	4-pole	4.2 mm	plug-in bridge piece for terminals		**24.80**
476609	UK1.5/10	10-pole	4.2 mm	plug-in bridge piece for terminals		**88.00**
476222	UK2.5/2	2-pole	5 mm	plug-in bridge piece for terminals		**15.50**
476223	UK2.5/3	3-pole	5 mm	plug-in bridge piece for terminals		**17.20**
476224	UK2.5/4	4-pole	5 mm	plug-in bridge piece for terminals		**18.30**
476229	UK2.5/10	10-pole	5 mm	plug-in bridge piece for terminals		**33.00**
476232	UK4/2	2-pole	6 mm	plug-in bridge piece for terminals		**16.10**
476233	UK4/3	3-pole	6 mm	plug-in bridge piece for terminals		**18.10**
476234	UK4/4	4-pole	6 mm	plug-in bridge piece for terminals		**19.70**
476239	UK4/10	10-pole	6 mm	plug-in bridge piece for terminals		**36.60**
476242	UK6/2	2-pole	8 mm	plug-in bridge piece for terminals		**17.20**
476243	UK6/3	3-pole	8 mm	plug-in bridge piece for terminals		**20.40**
476244	UK6/4	4-pole	8 mm	plug-in bridge piece for terminals		**22.80**
476249	UK6/10	10-pole	8 mm	plug-in bridge piece for terminals		**42.00**
476252	UK10/2	2-pole	10 mm	plug-in bridge piece for terminals		**23.50**
476253	UK10/3	3-pole	10 mm	plug-in bridge piece for terminals		**29.20**
476254	UK10/4	4-pole	10 mm	plug-in bridge piece for terminals		**34.20**
476259	UK10/10	10-pole	10 mm	plug-in bridge piece for terminals		**73.00**

See DIN mounting rail

Above ZAR prices do not include VAT. E&OE

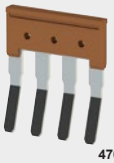
474122

474142

474164

474179

476262


476274

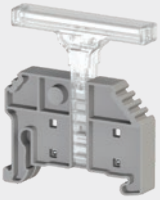
476294

Bridging bars *(cross-connection)* for screw type through terminals

type	ref.	poles	for term. width	description		price
Screw-in bridging bars *(internal)*			*for 2.5 - 240 mm terminals*		*AVK series*	
474122	UK2.5/2	2-pole	5 mm	bridge piece for std + 2 tier terminal	304 120	**15.70**
474123	UK2.5/3	3-pole	5 mm	bridge piece for std + 2 tier terminal	304 120	**21.10**
474124	UK2.5/4	4-pole	5 mm	bridge piece for std + 2 tier terminal	304 120	**26.10**
474129	UK2.5/10	10-pole	5 mm	bridge piece for std + 2 tier terminal	304 120	**92.00**
474210	UK2.5/50	50-pole	5 mm	bridge piece for std + 2 tier terminal	304 120	**244.00**
474132	UK4/2	2-pole	6 mm	bridge piece for std + 2 tier terminal	304 130	**14.60**
474133	UK4/3	3-pole	6 mm	bridge piece for std + 2 tier terminal	304 130	**20.70**
474134	UK4/4	4-pole	6 mm	bridge piece for std + 2 tier terminal	304 130	**26.80**
474139	UK4/10	10-pole	6 mm	bridge piece for std + 2 tier terminal	304 130	**67.00**
474190	UK4/50	50-pole	6 mm	bridge piece for std + 2 tier terminal	304 130	**316.00**
480132	UK2.5/2	2-pole	6 mm	screw-in bridge piece for 3 tier terminal	324 109	**21.60**
480133	UK2.5/3	3-pole	6 mm	screw-in bridge piece for 3 tier terminal	324 109	**33.10**
480134	UK2.5/4	4-pole	6 mm	screw-in bridge piece for 3 tier terminal	324 109	**41.00**
480139	UK2.5/10	10-pole	6 mm	screw-in bridge piece for 3 tier terminal	324 109	**103.00**
474142	UK6/2	2-pole	8 mm	screw-in bridge piece for terminals	304 140	**15.20**
474143	UK6/3	3-pole	8 mm	screw-in bridge piece for terminals	304 140	**21.50**
474144	UK6/4	4-pole	8 mm	screw-in bridge piece for terminals	304 140	**27.90**
474149	UK6/10	10-pole	8 mm	screw-in bridge piece for terminals	304 140	**66.00**
474152	UK10/2	2-pole	10 mm	screw-in bridge piece for terminals	304 150	**15.50**
474153	UK10/3	3-pole	10 mm	screw-in bridge piece for terminals	304 150	**22.00**
474154	UK10/4	4-pole	10 mm	screw-in bridge piece for terminals	304 150	**28.50**
474159	UK10/10	10-pole	10 mm	screw-in bridge piece for terminals	304 150	**68.00**
474162	UK16/2	2-pole	12 mm	screw-in bridge piece for terminals	304 160	**20.10**
474163	UK16/3	3-pole	12 mm	screw-in bridge piece for terminals	304 160	**29.00**
474164	UK16/4	4-pole	12 mm	screw-in bridge piece for terminals	304 160	**37.80**
474169	UK16/10	10-pole	12 mm	screw-in bridge piece for terminals	304 160	**91.00**
474172	UK35/2	2-pole	16 mm	screw-in bridge piece for terminals	304 240	**30.60**
474173	UK35/3	3-pole	16 mm	screw-in bridge piece for terminals	304 240	**45.00**
474174	UK35/4	4-pole	16 mm	screw-in bridge piece for terminals	304 240	**59.00**
474179	UK35/10	10-pole	16 mm	screw-in bridge piece for terminals	304 240	**142.00**
478332	UK50/2	2-pole	20 mm	screw-in bridge piece for terminals	304 330	**37.30**
478333	UK50/3	3-pole	20 mm	screw-in bridge piece for terminals	304 330	**57.00**
478334	UK50/4	4-pole	20 mm	screw-in bridge piece for terminals	304 330	**77.00**
478342	UK95/2	2-pole	25mm	screw-in bridge piece for terminals	304 340	**175.00**
478343	UK95/3	3-pole	25mm	screw-in bridge piece for terminals	304 340	**230.00**
478344	UK95/4	4-pole	25mm	screw-in bridge piece for terminals	304 340	**285.00**
478352	UK150/2	2-pole	31 mm	screw-in bridge piece for terminals	304 350	**256.00**
478353	UK150/3	3-pole	31 mm	screw-in bridge piece for terminals	304 350	**371.00**
478354	UK150/4	4-pole	31 mm	screw-in bridge piece for terminals	304 350	**466.00**
478362	UK240/2	2-pole	36 mm	screw-in bridge piece for terminals	304 360	**388.00**
478363	UK240/3	3-pole	36 mm	screw-in bridge piece for terminals	304 360	**571.00**
478364	UK240/4	4-pole	36 mm	screw-in bridge piece for terminals	304 360	**755.00**
Comb type bridge pieces *(external)*						
476262	TKO2.5/2	2-pole	5 mm	comb bridge for std screw terminal	304 200	**14.30**
476263	TKO2.5/3	3-pole	5 mm	comb bridge for std screw terminal	304 200	**15.20**
476264	TKO2.5/4	4-pole	5 mm	comb bridge for std screw terminal	304 200	**15.70**
476269	TKO2.5/10	10-pole	5 mm	comb bridge for std screw terminal	304 200	**26.80**
476272	TKO4/2	2-pole	6 mm	comb bridge for std screw terminal	304 210	**14.70**
476273	TKO4/3	3-pole	6 mm	comb bridge for std screw terminal	304 210	**15.90**
476274	TKO4/4	4-pole	6 mm	comb bridge for std screw terminal	304 210	**16.80**
476279	TKO4/10	10-pole	6 mm	comb bridge for std screw terminal	304 210	**29.10**
476282	TKO6/2	2-pole	8 mm	comb bridge for std screw terminal	304 140	**14.40**
476283	TKO6/3	3-pole	8 mm	comb bridge for std screw terminal	304 140	**17.60**
476284	TKO6/4	4-pole	8 mm	comb bridge for std screw terminal	304 140	**19.30**
476289	TKO6/10	10-pole	8 mm	comb bridge for std screw terminal	304 140	**35.10**
476292	TKO10/2	2-pole	10 mm	comb bridge for std screw terminal	304 150	**17.70**
476293	TKO10/3	3-pole	10 mm	comb bridge for std screw terminal	304 150	**20.40**
476294	TKO10/4	4-pole	10 mm	comb bridge for std screw terminal	304 150	**22.70**
476299	TKO10/10	10-pole	10 mm	comb bridge for std screw terminal	304 150	**45.00**

495049

495099



49613A + 495059

525362

525372

525382

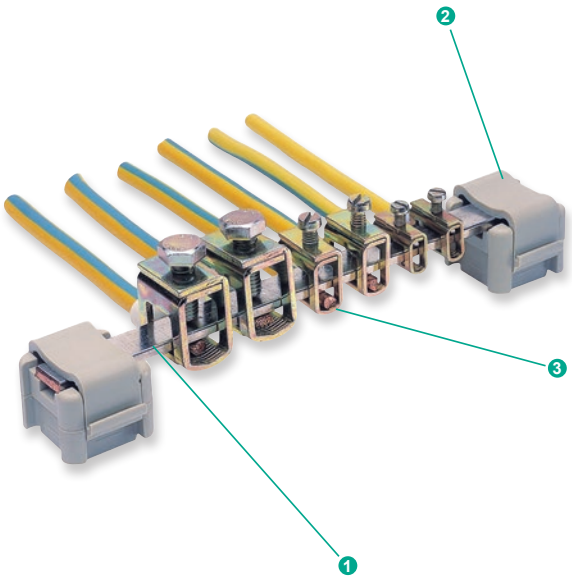
type	wire size (mm²)	amperage EN60947-7-1	term. width	description	price
End stops for all terminals					
495049	end stop	screw type	7.5 mm	economical screw type terminal rail end stop	**5.70**
495059*	end stop	screwless	7.5 mm	clamp-on terminal rail end stop	**8.00**
495219*	end stop	screw type	7.5 mm	heavy duty screw type terminal rail end stop	**15.40**
495099*	end stop	screw type	7.5 mm	large HD 50 - 240 mm terminal rail end stop	**18.10**
* *Accepts group marking support* **49613A** *(below) ratchet type for height adjustment*					
Modular group marking					
• Screw-type end bracket mounted 7.5 mm DIN-rail					
• Can be used together with screw connection feed-through one level terminals					
49613A	support			group marking support for all * terminal end stops (W) 6 mm	**12.70**
496300	support			group marking support for terminal end stop ***495219*** (W) 7 mm	**6.60**
496310	support			DIN rail mounting group marking support (W) 7 mm	**7.30**
Clamping yokes *(slide onto 10 x 3 mm busbar)*					
Clamping yokes can be slid onto a 10 x 3 mm flat busbar to make up any size earth or neutral bar with terminals to accommodate 4/10/35 mm² cables					
• Cross section: 4 ...35 mm²					
• Busbar size: 10 x 3 mm					
• Fixing screw: **M3** (0.5 - 4 mm²) **M4** (2.5 - 10 mm²) **M5** (16 - 35 mm²)					

type	cable size mm²		insulation	description		price
525361	0.5 - 4	clamp	none	bar mount clamping yoke	BK4	**3.30**
525362	2.5 - 10	clamp	none	bar mount clamping yoke	BK10	**5.70**
525363	16 - 35	clamp	none	bar mount clamping yoke	BK35	**15.60**
525371	0.5 - 4	clamp	blue (neut.)	bar mount clamping yoke	IBK4	**3.80**
525372	2.5 - 10	clamp	blue (neut.)	bar mount clamping yoke	IBK10	**7.10**
525373	16 - 35	clamp	blue (neut.)	bar mount clamping yoke	IBK35	**17.20**
525381	0.5 - 4	clamp	grn/yel (E)	bar mount clamping yoke	IBK4	**3.80**
525382	2.5 - 10	clamp	grn/yel (E)	bar mount clamping yoke	IBK10	**7.10**
525383	16 - 35	clamp	grn/yel (E)	bar mount clamping yoke	IBK35	**17.20**
Accessories for above clamping yokes						
GI03010.1	10 x 3 mm			Cu flat copper bar for above clamping yokes	1 meter	**329.00**
528110	screw			universal support for single bars	*(10 x 3/6 x 6/15 x 3 mm)*	**11.70**
495109	rail mnt			DIN universal support for up to three bars	*(10 x 3/6 x 6 mm)*	**22.10**

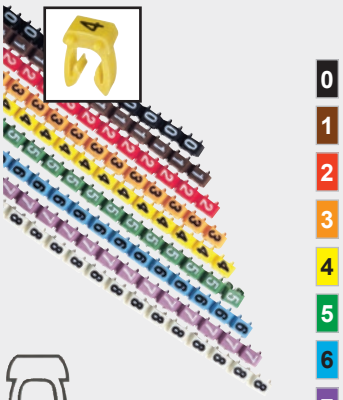
The above clamping yokes can be slid onto the 10 x 3 busbar up to 50 mm² and the entire wiring matched to the installation.

Clamping yokes and accessories

Below example of a complete clamping yoke.
1. GI03010.1
2. 528110
3. 52536...

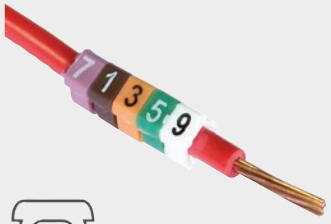


Above ZAR prices do not include VAT. E&OE



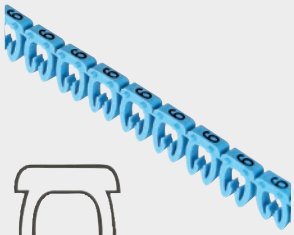
0.75 .....1.5 mm²

All other symbols



WM.....

1.50 .....2.5 mm²



519006

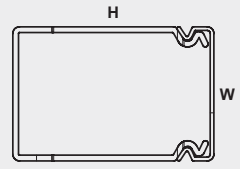
4 .....6 mm²

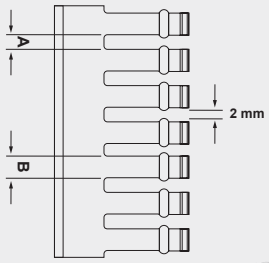
Wire markers (*0.5 mm² - 6 mm²*)

- Clip-on wire markers simply clip directly onto already installed cables *(no need to remove wire from terminals to mark them)*
- Markers incorporate small guide pins, ensuring perfect alignment of markers when mounted on cables
- Mounted markers provide firm secure mounting onto wires *(not easily removable)*
- Made of polymide 6.6 *(ambient temperature -30°C...+70°C)*
- Supplied in packs of all one numerical, alphabetical, symbol : Alphabet 200 pcs per pack
  : Numerical 500 pcs per pack

type	character	colour	wire size mm²	description	qty per pack	price per pack
WM01 marker for cables						
• Cross-section: 0.5 mm² - 1.5 mm²						
517000	"0"	black	0.5 - 1.5	clip-on cable marker	500	**141.00**
517001	"1"	brown	0.5 - 1.5	clip-on cable marker	500	**141.00**
517002	"2"	red	0.5 - 1.5	clip-on cable marker	500	**141.00**
517003	"3"	orange	0.5 - 1.5	clip-on cable marker	500	**141.00**
517004	"4"	yellow	0.5 - 1.5	clip-on cable marker	500	**141.00**
517005	"5"	green	0.5 - 1.5	clip-on cable marker	500	**141.00**
517006	"6"	blue	0.5 - 1.5	clip-on cable marker	500	**141.00**
517007	"7"	purple	0.5 - 1.5	clip-on cable marker	500	**141.00**
517008	"8"	grey	0.5 - 1.5	clip-on cable marker	500	**141.00**
517009	"9"	white	0.5 - 1.5	clip-on cable marker	500	**141.00**
519514/_*	**/_***	yellow	0.5 - 1.5	clip-on cable marker	200	**57.00**
/_ Insert marking requirement A,B,C...Z/+/-/■/•/ or other) Example* **519514/A**						
WM02 marker for cables						
• Cross-section 1.5 mm² - 2.5 mm²						
518000	"0"	black	1.5 - 2.5	clip-on cable marker	500	**165.00**
518001	"1"	brown	1.5 - 2.5	clip-on cable marker	500	**165.00**
518002	"2"	red	1.5 - 2.5	clip-on cable marker	500	**165.00**
518003	"3"	orange	1.5 - 2.5	clip-on cable marker	500	**165.00**
518004	"4"	yellow	1.5 - 2.5	clip-on cable marker	500	**165.00**
518005	"5"	green	1.5 - 2.5	clip-on cable marker	500	**165.00**
518006	"6"	blue	1.5 - 2.5	clip-on cable marker	500	**165.00**
518007	"7"	purple	1.5 - 2.5	clip-on cable marker	500	**165.00**
518008	"8"	grey	1.5 - 2.5	clip-on cable marker	500	**165.00**
518009	"9"	white	1.5 - 2.5	clip-on cable marker	500	**165.00**
519524/_*	**/_***	yellow	1.5 - 2.5	clip-on cable marker	200	**66.00**
/_ Insert marking requirement A,B,C...Z/+/-/■/•/ or other) Example* **519524/Z**						
WM03 marker for cables						
• Cross-section 4 mm² - 6 mm²						
519000	"0"	black	4.0…6.0	clip-on cable marker	500	**186.00**
519001	"1"	brown	4.0…6.0	clip-on cable marker	500	**186.00**
519002	"2"	red	4.0…6.0	clip-on cable marker	500	**186.00**
519003	"3"	orange	4.0…6.0	clip-on cable marker	500	**186.00**
519004	"4"	yellow	4.0…6.0	clip-on cable marker	500	**186.00**
519005	"5"	green	4.0…6.0	clip-on cable marker	500	**186.00**
519006	"6"	blue	4.0…6.0	clip-on cable marker	500	**186.00**
519007	"7"	purple	4.0…6.0	clip-on cable marker	500	**186.00**
519008	"8"	grey	4.0…6.0	clip-on cable marker	500	**186.00**
519009	"9"	white	4.0…6.0	clip-on cable marker	500	**186.00**
519534/_*	**/_***	yellow	4.0…6.0	clip-on cable marker	200	**75.00**
/_ Insert marking requirement A,B,C...Z/+/-/■/•/ or other) Example* **519534/+**						

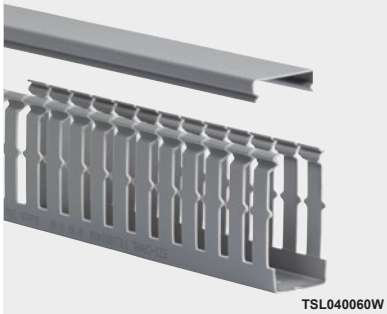
Open Type					
Numbers	WM01	WM02	WM03	Qty.	Colour
0				500	Black
1				500	Brown
2				500	Red
3				500	Orange
4				500	Yellow
5				500	Green
6				500	Blue
7				500	Purple
8				500	Grey
9				500	White





15% OFF CARTON QUANTITIES

TSL025060N


TSL040060W

VTC125

Slotted trunking

Ezi Canal slotted cable ducting features an improved cover design for ease of opening and closing, permitting easy access to wiring in control panels. Meets maximum wire capacity requirements and space constraints *(from small control panels to large integrated systems)* to provide effective support for demanding wire management solutions.

Manufactured from high-impact, self-extinguishing, warp-proof rigid PVC material providing a shock proof insulated protection solution resistant to acids, oils and grease. Used for general purpose control panel wiring to provide improved aesthetics and a neater wire management solution in high density control panels.

- Simple open/close cover design for easy access to wiring in control panel
- Double score-line permits finger/slot or complete sidewall removal
- Coining process for burr-free edges to protect hands and wiring from abrasion
- Restricted slot design retains wire within slot for fast, easy wire installation or removal
- Duct and cover form a flush sidewall to provide increased capacity and improved appearance
- UL94 flammability rating V-0 for excellent flame retardation

Standard colour: Grey - others available on request *(volume dependant)*
Standard length: Supplied in two meter lengths, complete with covers

15% off list price: *For full carton quantities of **TSL** trunking*
*Add **/B** to end of part number (e.g **TSL025040N/B**)*

type	dimensions (mm) (W)	(H)	colour	description	slot A (mm)	finger B (mm)	carton qty (L - 2 m)	price each
Narrow slotted trunking			Finger: 6 mm / Slot - 4 mm		(10 mm pitch)			
• Narrow slot/finger design to closely fit spacing of high density terminal blocks and I/O modules								
KKC1518	15	18	grey	PVC slotted cable trunking	5	7.5	112	**68.00**
TSL025025N	25	25	grey	PVC slotted cable trunking	4	6	48	**85.00**
TSL025040N	25	40	grey	PVC slotted cable trunking	4	6	40	**115.00**
TSL040040N	40	40	grey	PVC slotted cable trunking	4	6	24	**148.00**
TSL060040N	60	40	grey	PVC slotted cable trunking	4	6	24	**190.00**
TSL080040N	80	40	grey	PVC slotted cable trunking	4	6	18	**222.00**
TSL025060N	25	60	grey	PVC slotted cable trunking	4	6	30	**153.00**
TSL040060N	40	60	grey	PVC slotted cable trunking	4	6	28	**177.00**
TSL060060N	60	60	grey	PVC slotted cable trunking	4	6	18	**218.00**
TSL080060N	80	60	grey	PVC slotted cable trunking	4	6	14	**280.00**
TSL100060N	100	60	grey	PVC slotted cable trunking	4	6	12	**327.00**
TSL025080N	25	80	grey	PVC slotted cable trunking	4	6	28	**189.00**
TSL040080N	40	80	grey	PVC slotted cable trunking	4	6	20	**217.00**
TSL060080N	60	80	grey	PVC slotted cable trunking	4	6	12	**271.00**
TSL080080N	80	80	grey	PVC slotted cable trunking	4	6	8	**316.00**
TSL100080N	100	80	grey	PVC slotted cable trunking	4	6	8	**369.00**
TSL040100N	40	100	grey	PVC slotted cable trunking	4	6	16	**307.00**
TSL060100N	60	100	grey	PVC slotted cable trunking	4	6	12	**322.00**
TSL080100N	80	100	grey	PVC slotted cable trunking	4	6	8	**375.00**
TSL100100N	100	100	grey	PVC slotted cable trunking	4	6	8	**414.00**
Wide slotted trunking			Finger: 12 mm / Slot - 8 mm		(20 mm pitch)			
TSL040060W	40	60	grey	PVC slotted cable trunking	8	12	28	**177.00**
TSL060060W	60	60	grey	PVC slotted cable trunking	8	12	18	**218.00**
TSL080060W	80	60	grey	PVC slotted cable trunking	8	12	14	**283.00**
TSL100060W	100	60	grey	PVC slotted cable trunking	8	12	12	**327.00**
TSL040080W	40	80	grey	PVC slotted cable trunking	8	12	20	**216.00**
TSL060080W	60	80	grey	PVC slotted cable trunking	8	12	12	**268.00**
TSL080080W	80	80	grey	PVC slotted cable trunking	8	12	8	**316.00**
TSL100080W	100	80	grey	PVC slotted cable trunking	8	12	8	**369.00**
TSL040100W	40	100	grey	PVC slotted cable trunking	8	12	16	**307.00**
TSL060100W	60	100	grey	PVC slotted cable trunking	8	12	12	**322.00**
TSL080100W	80	100	grey	PVC slotted cable trunking	8	12	8	**375.00**
TSL100100W	100	100	grey	PVC slotted cable trunking	8	12	8	**414.00**
Spare covers for above narrow and wide slotted trunking								
TSM025	25	–	grey	spare PVC trunking covers	–	–	80	**29.50**
TSM040	40	–	grey	spare PVC trunking covers	–	–	80	**35.40**
TSM060	60	–	grey	spare PVC trunking covers	–	–	80	**53.00**
TSM080	80	–	grey	spare PVC trunking covers	–	–	80	**71.00**
TSM100	100	–	grey	spare PVC trunking covers	–	–	68	**92.00**
Trunking accessories								
553415	84	14	grey	sectionable cable retainer clip			*(10 pcs)*	**85.00**

*For **VTC125 - wiring duct cutter**, see **M-Cable & Testing Tools***

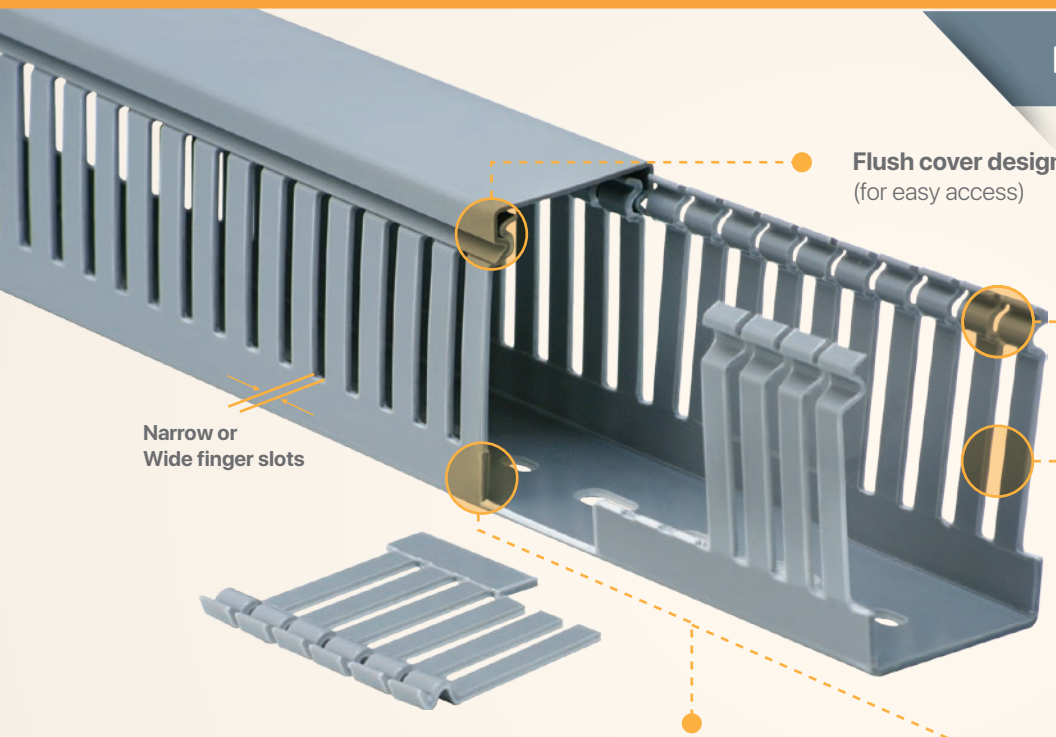
Above ZAR prices do not include VAT. E&OE

EZI CANAL
electrical cable ducting

Narrow & Wide Slotted Trunking

High impact, self-extinguishing, warp-proof rigid PVC

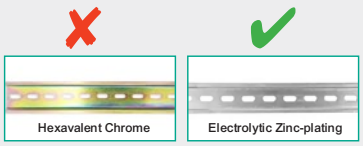
Keep it together the EZI way



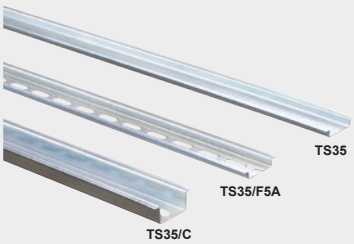
Quick and easy to install	Enhances aesthetics and clarity	Provides complete electrical insulation
Simple open/close design for easy access to wiring.	Duct and cover form a flush sidewall to provide increased capacity.	UL94 flammability rating for excellent flame retardation.

15%
OFF CARTON QUANTITIES

15% off list price for full carton quantities of TSL trunking.
Add /B to end of part number (e.g **TSL025040N/B**).



Other DIN rail | EM DIN rail



DIN mounting rail

Passivation process for Electro DIN rail does not contain hazardous substances and complies fully with RoHS directives 2002/95/EC. New **Electrolytic zinc-plating** treatment is far superior and fully replaces previous **Hexavalent chrome** treatment which contains Lead *(usually a "yellowish" finish)* now banned in most countries.

type	rail	depth	description		length	price
Steel mounting rail	EN 60715					
• High quality, galvanic zinc plating - white passivation			"Cr VI free" fully **RoHS** compliant			
Standard mounting rail			1 mm thick			
TS35	DIN 35	7.5 mm	standard DIN mounting rail	plain	2 meter	**112.00**
TS35/F5A*	DIN 35	7.5 mm	standard DIN mounting rail	perforated	2 meter	**110.00**
TS35/SF6*	DIN 35	10 mm	standard DIN mounting rail	perforated	2 meter	**165.00**
Heavy duty mounting rail			1.5 mm steel			
TS35/C	DIN 35	15 mm	HD standard DIN mounting rail	plain	2 meter	**195.00**
TS35/CF5A*	DIN 35	15 mm	HD standard DIN mounting rail	perforated	2 meter	**190.00**
* *Perforated - slot **F5A** = 18 x 5.2 mm / **F6** = 18 x 6.3 mm (25 mm between centres)*						
Stainless steel mounting rail (INOX)			1 mm thick			
• Perforated slot - 18 x 6.3 mm *(25 mm between centres)*						
TS35/F6 INOX	DIN 35	7.5 mm	stainless steel DIN mounting rail	perforated	2 meter	**502.00**
Aluminium mounting rail			1.1 mm thick			
• Perforated slot - 20 x 4.8 mm *(35 mm between centres)*						
ADR1200/F5A	DIN 35	7.5 mm	aluminium DIN mounting rail	perforated	2 meter	**105.00**
CUT-ADR	DIN 35	7.5 mm	aluminium DIN rail cutter	*(for aluminium rail only)*		**5 130.00**

Accessories for DIN rail

type	rail	high	description	mounting hole	price
TS-S M5	bracket	48 mm	angled stand-off DIN rail support bracket	M5	**12.80**
TST20	bracket	20 mm	steel support brackets for raising DIN rail	M6	**16.70**
TST30	bracket	30 mm	steel support brackets for raising DIN rail	M6	**19.20**
TST40	bracket	40 mm	steel support brackets for raising DIN rail	M6	**22.20**
TST50	bracket	50 mm	steel support brackets for raising DIN rail	M6	**24.30**
TST70	bracket	70 mm	steel support brackets for raising DIN rail	M6	**32.10**
FIX KLIP M4	DIN 35	–	M4 DIN rail mounting clip for components	M4	**14.00**
FIX KLIP M5	DIN 35	–	M5 DIN rail mounting clip for components	M5	**14.00**

Category-M

Made in Germany GLW Crimping Technology

DIN rail cutter *(for steel mounting rail only)*

DIN rail is often cut by saw or angle grinder creating dust, noise, and a considerable risk of injury. **The RC200** is a high quality, professional DIN rail cutter designed for high output, offering "burr-free" precision cut and trim of standard DIN rails.

- Incorporates two cut profiles *(7.5 x 35 and 15 x 35 mm)* DIN rails
- Precision "burr-free" cut and trim of DIN rail to length without waste
- Increased work safety and quiet operation

type	rail	for depth	description		price
RC200 DIN rail cutter		*for DIN 35 rail 7.5 and 15 mm deep*			
008328	cutter	7.5 + 15 mm	DIN rail cutter *(2 profiles)* for 7.5/15 mm high x 35 mm rail		*see **Cat M** for pricing.*
Accessories for above RC200 DIN rail cutter					
009465	scale		metric scale plate and length stop for above DIN rail cutter	RC200	
009102	clamp		table clamp for above DIN rail cutter	RC200	

Wiring duct cutter (professional) *with 1 meter graduated dimension rule + length stop*

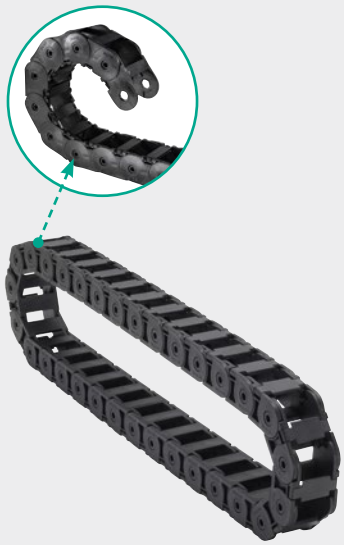
For fast, accurate cutting of wiring ducts to length without burrs and with very little force

VTC 125 wiring duct cutter *(made in Italy)*

- Burr-free cut edges - No noise, no chips or dust
- Quick and easy cutting - ducts cut precisely to the millimetre

VTC125	trunking	125 mm	precision slotted wiring duct *(trunking)* cutter	*all sizes*

Above ZAR prices do not include VAT. E&OE



HKP series - Cable carriers

Also known as *"drag chains, cable carriers, energy chains or cable tracks"*, are designed to surround and guide flexible cables connected to moving automated machinery - keeps cables neatly out of the way.

They reduce wear and stress on cables and hoses, prevent entanglement and improve operator safety. These chains move either in (*linear*): moving in a straight line or circular (*rotary*): moving in circular arcs.

Designed with an ideal bend radius, allows for smooth movement which assists to eliminates excessive wear and tear, reduces the need for cable replacements, and decreases the potential dangers of exposed wiring.

Supplied in **1 meter lengths** which can be connected to one another by internal/external connectors to make up any length requirement i.e. 1 meter can be connected and made longer by joining 2 x 1 meter lengths to make a 2 meters etc

General features:

- Open type
- Low noise
- High load resistance
- Chemical, water and temperature resistant
- Operating temperature: -25 / + 80 °C
- Supplied in 1 meter lengths *(extendable with connectors)*
- Multi-axis movement *(freely rotating between links)*
- Speed and acceleration *(specific speed, acceleration, as the case may be running)*
- Easy assembly and disassembly without threading, to the cable, tubing, pipe, pipe, etc.
- Corrosion resistance, ability or easily form into complex shapes, self-lubrication, and lower cost

Typical applications:

- Port cranes
- Machine tools
- Data centres
- Robotics
- Textile industries
- Green energy systems
- Process and automation equipment
- Vehicle transporters and washing systems

HKP015015R1A

HKP...ZDA

HKP020025R3A

HKP015015ZEA

HKP040060R5A

HKP020025ZEA

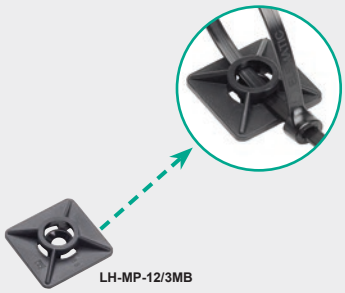
HKP040060ZKA

type	internal dimensions height	width	bending radius	material	description	price
15 x 15 mm cable carrier			*1 meter length (extendable)*			
HKP015015R1A	15 mm	15 mm	25 mm	plastic	open type cable carrier	**708.00**
Mounting accessories (for 15 x 15 cable carrier)						
HKP015015ZDA	15 mm	15 mm	–	plastic	internal connection	**14.60**
HKP015015ZEA	15 mm	15 mm	–	plastic	external connection	**14.60**
HKP015015ZKA	15 mm	15 mm	–	plastic	upper cable retainer/cover	**7.30**
20 x 25 mm cable carrier			*1 meter length (extendable)*			
HKP020025R3A	20 mm	25 mm	40 mm	plastic	open type cable carrier	**571.00**
Mounting accessories (for 20 x 25 cable carrier)						
HKP020025ZDA	20 mm	25 mm	–	plastic	internal connection	**21.00**
HKP020025ZEA	20 mm	25 mm	–	plastic	external connection	**21.00**
HKP020025ZKA	20 mm	25 mm	–	plastic	upper cable retainer/cover	**8.10**
40 x 60 mm cable carrier			*1 meter length (extendable)*			
HKP040060R5A	40 mm	60 mm	100 mm	plastic	open type cable carrier	**848.00**
Mounting accessories (for 40 x 60 cable carrier)						
HKP040060ZDA	40 mm	60 mm	–	plastic	internal connection	**46.00**
HKP040060ZEA	40 mm	60 mm	–	plastic	external connection	**46.00**
HKP040060ZKA	40 mm	60 mm	–	plastic	upper cable retainer/cover	**10.50**
HKP040060Z5A	40 mm	–	–	plastic	internal cable separator	**17.00**

LH-M...

LH-M...

6453XE


LH-MP-12/3MB

LH-SC-M5B

5406C

Cable ties *(standard)*

Standard cable ties are produced exclusively in Polyamide 6.6 (Halogen-free)

Installation temperature: -10°...+85°C Flammability rating: UL 94 class V2

Approvals: UL62275 (E258930), TUV EN62275:2015, Reach, RoHS, PAHs compliance

type	dimensions (mm) length	dimensions (mm) width	colour	bundle Ø max. (mm)	tensile strength	description	pack qty	price *(per pack)*
Standard cable ties *(black)*								
Black cable ties have additional carbon black providing a UV resistance for outdoor applications.								
LH-M-100B	100	2.5	black	21 mm	80 N	standard cable tie	100	**13.20**
LH-M-150B	150	2.5	black	36 mm	80 N	standard cable tie	100	**20.20**
LH-I-150B	150	3.6	black	36 mm	180 N	standard cable tie	100	**31.80**
LH-I-250B	250	3.6	black	68 mm	180 N	standard cable tie	100	**54.00**
LH-I-370B	370	3.6	black	106 mm	180 N	standard cable tie	100	**79.00**
LH-S-200B	200	4.8	black	50 mm	230 N	standard cable tie	100	**55.00**
LH-S-300B	300	4.8	black	81 mm	230 N	standard cable tie	100	**87.00**
LH-S-390B	390	4.8	black	110 mm	230 N	standard cable tie	100	**121.00**
LH-HD-380B	380	7.6	black	108 mm	540 N	standard cable tie	100	**219.00**
LH-HD-550B	550	7.6	black	162 mm	540 N	standard cable tie	100	**350.00**
LH-HSD-530B	530	12.4	black	156 mm	1200 N	standard cable tie	100	**649.00**
Standard cable ties natural colour *(white)*								
LH-M-100N	100	2.5	natural	21 mm	80 N	standard cable tie	100	**13.20**
LH-I-150N	150	3.6	natural	36 mm	180 N	standard cable tie	100	**31.80**
LH-I-250N	250	3.6	natural	80 mm	180 N	standard cable tie	100	**54.00**
LH-S-390N	390	4.8	natural	110 mm	230 N	standard cable tie	100	**121.00**
UV resistant cable ties *made with special additives ensuring extra resistance to UV rays*								
• Excellent resistance to UV rays • Suitable for PV photovoltaic installations								
LH-M-100UV	100	2.5	black	21 mm	80 N	UVE cable tie	100	**15.50**
LH-I-150UV	150	3.6	black	35 mm	180 N	UVE cable tie	100	**38.00**
LH-S-200UV	200	4.8	black	50 mm	230 N	UVE cable tie	100	**68.00**
LH-S-300UV	300	4.8	black	79 mm	230 N	UVE cable tie	100	**107.00**
LH-HD-380UV	380	7.6	black	100 mm	540 N	UVE cable tie	100	**265.00**
Belturing plus heavy duty cable ties Halogen-free Ideal for photovoltaic installations								
• Highly resistant to climatic conditions *(including sea areas)* Excellent resistance to UV rays Produced with special techno-polymer providing exceptional UV resistance according to norm CEI EN 62275 (ISO 4892-2). Recommended for outdoor applications and prolonged UV exposure.								
6450XE	180	6	black	45 mm	280 N	single head lock	100	**237.00**
6454XE	360	6	black	100 mm	280 N	single head lock	100	**630.00**
LH-E-HD-265B	265	9	black	62 mm	540 N	double head lock	100	**347.00**
LH-E-HD-360B	360	9	black	93 mm	540 N	double head lock	100	**447.00**

Cable tie supports

type	max. tie width	hole Ø (mm)	colour	tensile strength	dimensions (mm) (H)	(W)	(D)	pack qty	price *(per pack)*
Adhesive tie mounts *(fixing with self-adhesive backing or screw)*									
LH-MP-12/3MB	3.6 mm	M3	black	88 kg	12.5	12.5	5.0	100	**49.00**
LH-MP-20/3MB	3.6 mm	M4	black	88 kg	19	19	5.0	100	**70.00**
LH-MP-30/3MB	4.8 mm	M4	black	110 kg	28	28	6.5	100	**134.00**
LH-MP-40/3MB	9.0 mm	M5	black	380 kg	40	40	8.5	100	**286.00**
LH-MP-20/3MN	3.6 mm	M4	natural	88 kg	19	19	5.0	100	**70.00**
LH-MP-30/3MN	4.8 mm	M4	natural	110 kg	28	28	6.5	100	**134.00**

***Note:** for correct application of the self-adhesive mount, surfaces must be thoroughly cleaned and degreased with solvent (alcohol or similar cleaning product)*

Cradles *(screw down)* ideal for fixing cables and pipes in civil and industrial applications

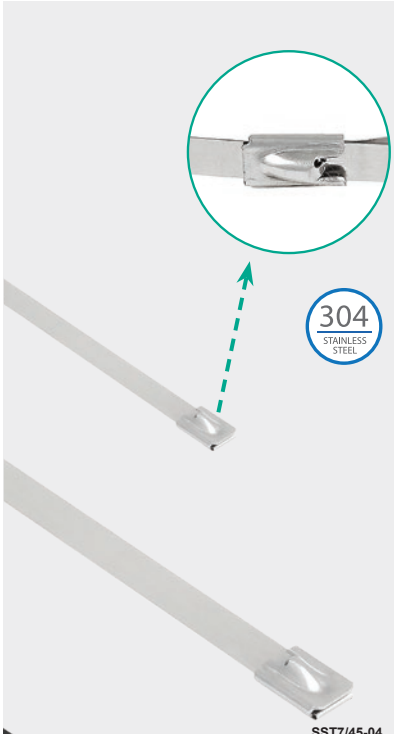
LH-SC-M3SB	3.6 mm	M3	black	88 kg	15	9.6	6.85	100	**52.00**
LH-SC-M3B	4.8 mm	M4	black	110 kg	17.8	12.7	8.15	100	**55.00**
LH-SC-M4B	7.6 mm	M4	black	260 kg	22.3	16	9.65	100	**93.00**
LH-SC-M5B	9.0 mm	M5	black	380 kg	25.4	16	10.8	100	**121.00**

Tensioning tools for cable ties

• Metal tool for tensioning cable ties with incorporated cable tie cutting device.

5406C	3.5 - 12.5	metal tensioning and cutting tool for cable ties	1	**362.00**

Above ZAR prices do not include VAT. E&OE



SST7/45-04

SSTP7/40-16

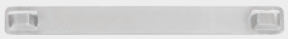
Cable ties *(stainless steel)*

For use in critical applications where strength, corrosion, radiation, vibration and temperature extremes are a factor. Unique ball locking mechanism permits simple, rapid installation and secure locking in any position. High tensile strength, non flammability, UV-resistant, high resistance to acids and corrosion for a strong durable solution to bundling and mechanical fastening in harsh environments.

- Self-locking head design speeds installation and locks at any length along the tie body
- Smooth surface, rounded edges assure cable protection and worker safety

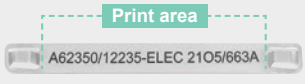
type	length (mm)	wide (mm)	thick (mm)	AISI	bundle Ø max.	description	price per (100)
AISI 304 stainless steel						for general purpose applications	
Working temperature:		-60°C – +550°C					
Metallic band and buckle							
SST4/15-04	150	4.6	0.25	304	37 mm	stainless steel cable ties	**221.00**
SST4/25-04	250	4.6	0.25	304	63 mm	stainless steel cable ties	**242.00**
SST4/35-04	350	4.6	0.25	304	89 mm	stainless steel cable ties	**292.00**
SST4/45-04	450	4.6	0.25	304	115 mm	stainless steel cable ties	**320.00**
SST4/55-04	550	4.6	0.25	304	141 mm	stainless steel cable ties	**391.00**
SST7/25-04	250	7.9	0.25	304	63 mm	stainless steel cable ties	**334.00**
SST7/45-04	450	7.9	0.25	304	115 mm	stainless steel cable ties	**448.00**
SST7/60-04	600	7.9	0.25	304	154 mm	stainless steel cable ties	**569.00**
SST7/80-04	800	7.9	0.25	304	193 mm	stainless steel cable ties	**689.00**
AISI 316 stainless steel - Epoxy coated						for extra corrosive environments	
• Black band with metallic buckle • Coated band with non-toxic, Halogen free polyester coating • Provides additional edge protection, prevents corrosion between dissimilar materials							
SSTP4/20-16	200	4.6	0.36	316	50 mm	stainless steel cable ties	**398.00**
SSTP4/30-16	300	4.6	0.36	316	76 mm	stainless steel cable ties	**483.00**
SSTP4/40-16	400	4.6	0.36	316	102 mm	stainless steel cable ties	**604.00**
SSTP4/50-16	500	4.6	0.36	316	128 mm	stainless steel cable ties	**697.00**
SSTP7/30-16	300	7.9	0.36	316	76 mm	stainless steel cable ties	**626.00**
SSTP7/40-16	400	7.9	0.36	316	102 mm	stainless steel cable ties	**768.00**
SSTP7/60-16	600	7.9	0.36	316	154 mm	stainless steel cable ties	**1 060.00**
SSTP7/80-16	800	7.9	0.36	316	193 mm	stainless steel cable ties	**1 340.00**

Marking tags - Stainless steel *(cable tie max. width 4.6 mm)*



SSM1089-04

SSM1089-16



SSM1089-04/PS

Stainless steel tie-on tags for permanent identification of cables, conduits, pipes in arduous applications where high resistance to aggressive environments is essential. *(per 100)*

AISI 304 stainless steel							
SSM1089-04	89	9.5	0.40	304	–	stainless steel marking tags	**157.00**
SSM1989-04	89	19	0.40	304	–	stainless steel marking tags	**228.00**
AISI 316 stainless steel							
SSM1089-16	89	9.5	0.40	316	–	stainless steel marking tags	**178.00**
SSM1989-16	89	19	0.40	316	–	stainless steel marking tags	**277.00**

Custom laser engraved stainless steel tags

Custom laser marking of tags and cable ties. Upper/lower case characters, detailed marking, text and graphics, high quality, crisp, clean and permanent.

- Once laser engraved the inscription remains with the product for life *(each)*

SSM1089-04/PS*	89	9.5	0.40	304	price per tag	**20.00**
SSM1989-04/PS❖	89	19	0.40	304		**20.00**
SSM1089-16/PS*	89	9.5	0.40	316		**20.00**
SSM1989-16/PS❖	89	19	0.40	316		**20.00**

* ***Print area:*** *L:79 x W:8.5* – ❖***Print area:*** *L:79 x W:18*

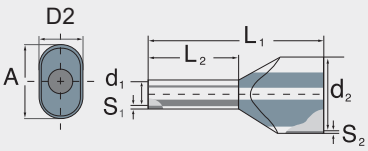
Please provide detailed information on required laser engraving of tags when ordering.

HS-600

Accessories *(cable tie gun)*

- Tensioning tool *(with auto cut)* for all above stainless steel cable ties
- Adjustable tension value - *(4 settings)* *(each)*

HS-600 tensioning and cutting tool for 4.6 and 7.9 mm SS cable ties **3 770.00**



Ferrules / Wire end sleeves *(Insulated)*

- Material: Tin-plated copper *(min.thickness 3µ)* / polypropylene collar
- CSA certified (certificate 2110332)
- DIN 46228 part 4, CSA C22.2 No. 65-93, 188-M1983

Wire end sleeves with insulating collar

Crimped ferrule

- Supplied in mini bags on a strip *(10 x 100 pcs)*. bags can be torn from strip individually

type	wire size mm²	colour	dimensions (mm) L1	L2[1]	D1	S1	D2	D3	S2	pack qty	price per pack
005606	0.50	white	14.0	8.0	1.1	0.15	2.4	–	0.30	100	**25.60**
005644	0.75	blue	14.0	8.0	1.3	0.15	2.7	–	0.30	100	**25.90**
005718*	1.0	red	14.0	8.0	1.5	0.15	3.3	–	0.30	100	**26.30**
005738*	1.0	red	16.0	10.0	1.5	0.15	3.3	–	0.30	100	**37.70**
005765*	1.5	black	14.0	8.0	1.8	0.15	3.7	–	0.30	100	**26.60**
005791*	1.5	black	16.0	10.0	1.8	0.15	3.7	–	0.30	100	**39.40**
005808	2.5	grey	15.0	8.0	2.3	0.15	4.1	–	0.30	100	**37.30**
005829	2.5	grey	17.0	10.0	2.3	0.15	4.1	–	0.30	100	**52.00**
005831*	2.5	grey	18.0	10.0	2.3	0.15	4.7	–	0.30	100	**53.00**
005851	4.0	orange	18.0	10.0	2.9	0.20	4.7	–	0.30	100	**55.00**
007739*	4.0	grey	18.0	10.0	2.9	0.20	6.1	–	0.30	100	**55.00**
005871	6.0	green	20.0	12.0	3.6	0.20	6.1	–	0.30	100	**76.00**
005896	10.0	brown	21.0	12.0	4.6	0.20	7.4	–	0.40	100	**95.00**
005917	16.0	white	23.0	12.0	6.0	0.20	8.6	–	0.50	100	**136.00**
005950	25.0	black	29.0	16.0	7.5	0.20	10.9	–	0.50	50	**140.00**
005968	35.0	red	30.0	16.0	8.5	0.20	12.3	–	0.50	50	**157.00**
005980	50.0	blue	36.0	20.0	10.5	0.30	14.8	–	0.60	50	**349.00**
005988	70.0	yellow	37.0	20.0	12.7	0.40	15.8	–	0.60	25	**250.00**
005990	95.0	red	44.0	25.0	14.7	0.40	17.7	–	0.60	25	**467.00**
005915	120.0	blue	48.0	27.0	16.7	0.50	20.7	–	0.70	25	**570.00**
005916	150.0	yellow	58.0	32.0	18.7	0.50	22.6	–	1.00	25	**667.00**

* *Broader collar to accommodate wires with thicker insulation*

Twin wire end sleeves with insulating collar *(accepts two cables)*

- Accepts two wires into one insulated end sleeve
- Supplied in mini bags on a strip *(10 x 100 pcs)*. bags can be torn from strip individually

type	wire size (mm²)	colour	dimensions (mm) L1	L2[1]	D1	S1	D2	A	S2	pack qty	price per pack
005613	2 x 0.5	white	15.0	8.0	1.5	0.15	2.4	4.6	0.30	100	**45.00**
005653	2 x 0.75	blue	15.0	8.0	1.8	0.15	2.7	5.4	0.30	100	**48.00**
005722	2 x 1.0	red	15.0	8.0	2.1	0.15	3.3	5.3	0.30	100	**58.00**
005740	2 x 1.0	red	17.0	10.0	2.1	0.15	3.3	5.3	0.30	100	**80.00**
005770	2 x 1.5	black	16.0	8.0	2.3	0.15	3.5	6.5	0.30	100	**60.00**
005794	2 x 1.5	black	20.0	12.0	2.3	0.15	3.5	6.5	0.30	100	**78.00**
005816	2 x 2.5	grey	19.0	10.0	2.9	0.20	4.1	7.7	0.40	100	**83.00**
005853	2 x 4.0	orange	23.0	12.0	3.8	0.20	4.9	8.7	0.40	100	**169.00**
005873	2 x 6.0	green	25.0	14.0	4.9	0.20	6.1	9.9	0.40	100	**214.00**
005898	2 x 10.0	brown	26.0	14.0	6.5	0.20	7.1	12.9	0.50	100	**307.00**
005921	2 x 16.0	white	31.0	16.0	8.5	0.20	9.8	16.8	0.60	50	**225.00**

Wire end sleeves with insulating collar supplied in belt strips

MC 25

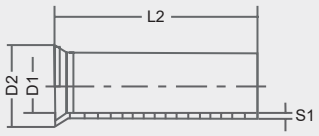
005649

Wire end sleeves in belt form *(K reels)*, for use in automatic cable preparation machines *(see page* **M-4***)*
Reel/cassette simply clips onto machines *(500/1000 terminals per reel)*

- Tape mounted supplied in type K box dispenser (box size = 150 x 150 x 18 mm)
- **MC 25** - Wire stripping and crimping done in one operation using belt strip ferrules in type K box dispensers,controlled by a sophisticated cam mechanism achieving a stable working process.

type	wire size (mm²)	colour	dimensions (mm) L1	L2[1]	D1	S1	D2	centre	S2	reel qty	price per reel
005611	0.50	white	14.5	8.0	1.1	0.15	2.6	3.5	0.25	1000	**475.00**
005649	0.75	blue	14.5	8.0	1.3	0.15	2.7	3.6	0.25	1000	**481.00**
005720	1.0	red	14.5	8.0	1.5	0.15	3.0	3.9	0.30	1000	**484.00**
005767	1.5	black	14.5	8.0	1.8	0.15	3.2	4.2	0.30	1000	**489.00**
005813	2.5	grey	14.5	8.0	2.3	0.15	4.1	5.0	0.30	500	**299.00**

[1] *Other lengths available on request*



Ferrules / Wire end sleeves *(uninsulated)*

Uninsulated ferrule prevents wire strands from fraying and breaking and is extremely cost-effective. Its shorter length and uninsulated body offer advantages when making terminations in printed circuit board terminal blocks and in other terminal blocks with smaller clamps or narrow widths.

General features:

- Material: Tin-plated copper (*min.thickness 3µ*)
- CSA certified (*certificate 2110332*)
- DIN 46228 part 4, CSA C22.2 No. 65-93, 188-M1983
- Supplied in standard bulk pack quantity *(size dependant)*

type	wire size (mm²)		dimensions (mm) L2[1]	D1	D2	S1	description	pack qty	price per pack
Uninsulated wire end sleeve *(cord end / bootlace terminals)*									
006010	0.50	–	10.0	1.0	2.1	0.15	uninsulated ferrules	1000	**205.00**
006015	0.75	–	10.0	1.2	2.3	0.15	uninsulated ferrules	1000	**211.00**
006022	1.0	–	10.0	1.4	2.5	0.15	uninsulated ferrules	1000	**215.00**
006031	1.5	–	10.0	1.7	2.8	0.15	uninsulated ferrules	1000	**233.00**
006045	2.5	–	12.0	2.2	3.4	0.15	uninsulated ferrules	1000	**324.00**
006053	4.0	–	12.0	2.8	4.0	0.2	uninsulated ferrules	1000	**437.00**
006060	6.0	–	12.0	3.5	4.7	0.2	uninsulated ferrules	1000	**427.00**
006068	10.0	–	12.0	4.5	5.8	0.2	uninsulated ferrules	500	**324.00**
006079	16.0	–	12.0	5.8	7.5	0.2	uninsulated ferrules	250	**181.00**
006091	25.0	–	15.0	7.3	9.5	0.2	uninsulated ferrules	100	**142.00**
006098	35.0	–	18.0	8.3	11.0	0.2	uninsulated ferrules	100	**191.00**
006102	50.0	–	18.0	10.3	13.0	0.3	uninsulated ferrules	100	**357.00**
006107	70.0	–	25.0	12.5	15.0	0.4	uninsulated ferrules	100	**780.00**
006109	95.0	–	25.0	14.5	17.0	0.4	uninsulated ferrules	50	**507.00**
006075	120.0	–	32.0	16.5	19.0	0.5	uninsulated ferrules	50	**706.00**

Available in smaller (from 0.25 mm²) and larger wire sizes (up to 240 mm²)

[1] Other lengths available on request

4300-4661

Category-M

made in Sweden pressmaster

Crimping tools for wire end sleeves

type	for terminals	conductor (mm²)	cable entry	description	price
Pressmaster - Professional self-adjusting crimping tool					

- High precision die geometry for a clearly defined square crimp shape of the ferrule
- Automatic self-adjustment to required wire size

4300-4661	ferrules	0.14…10	side	professional self-adjusting crimping tool	

Mobile frame system - with interchangeable dies for various terminals

Lightweight, compact ratchet crimp tool designed for most types of mechanical, electrical and electronic connectors. Easily interchangeable crimp dies are kept together with a special pin to simplify handling.

- Reliable crimping performance consistent and accurate with a parallel action stroke.
- Easy-access release for fast, simple exchange of crimp dies *(no special tools required)*

4300-3149	die dependant		side	MCT frame only for interchangeable dies	

*see **Cat M** for pricing.*

4300-3129

4300-3149

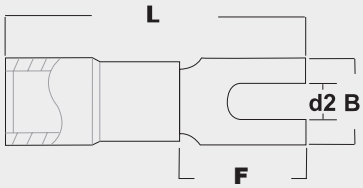
Interchangeable die sets for above tool frame

- A wide range of crimp dies to cover all applications in just one tool frame.
- Dies are kept in pairs and delivered in a modular reusable box.

4300-3129	insulated	0.5 to 4	side	red/blue insulated terminal crimping die set
4300-3128	insulated	4 to 6	side	yellow insulated terminal crimping die set
4300-3137	uninsulated	0.75 to 2.5	side	cable lug crimping die set
4300-3139	uninsulated	4 to 10	side	cable lug crimping die set
4300-3127	end sleeves	0.25 to 10	side	wire end sleeve crimping die set
4300-3153	end sleeves	16 to 25	side	wire end sleeve crimping die set
4300-3154	end sleeves	35 to 50	side	wire end sleeve crimping die set
4300-3146	open barrel	0.5 to 6	side	open barrel connector crimping die set
4300-3136	coaxial	RG58/59/62/71	side	coaxial connector crimping die set

*Consult the category **M-Tools** section of our catalogue for hydraulic crimpers and die sets*

Pre-insulated terminals



R1...

R2...

R5...

S1...

S2...

S5...

PT...

BB...

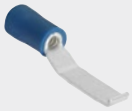
- Maximum electrical rating: 600V
- Operating temperature: 105°C
- Material: Terminal: Copper *(tin plated)*
  Insulation: Vinyl (PVC)

type	colour	wire size mm²	description	dimensions (mm) d2	B	L	pack qty	price
Ring terminals								
R1-3V	red	0.5 - 1.5	insulated ring lug	3.2	5.5	16.7	100	**84.00**
R1-3.5MV	red	0.5 - 1.5	insulated ring lug	3.7	5.5	16.7	100	**98.00**
R1-4SV	red	0.5 - 1.5	insulated ring lug	4.3	6.6	19.6	100	**96.00**
R1-4LV	red	0.5 - 1.5	insulated ring lug	4.3	8.0	21.0	100	**108.00**
R1-5V	red	0.5 - 1.5	insulated ring lug	5.3	8.0	21.0	100	**99.00**
R1-6V	red	0.5 - 1.5	insulated ring lug	6.5	11.6	26.8	100	**152.00**
R1-8V	red	0.5 - 1.5	insulated ring lug	8.4	11.6	26.8	100	**152.00**
R1-10V	red	0.5 - 1.5	insulated ring lug	10.5	13.6	30.7	100	**163.00**
R1-12V	red	0.5 - 1.5	insulated ring lug	13	19.2	35.6	100	**283.00**
R2-3V	blue	1.5 - 2.5	insulated ring lug	3.2	6.4	17.5	100	**102.00**
R2-3.5MV	blue	1.5 - 2.5	insulated ring lug	3.7	6.4	17.5	100	**111.00**
R2-4SV	blue	1.5 - 2.5	insulated ring lug	4.3	6.6	19.5	100	**103.00**
R2-4LV	blue	1.5 - 2.5	insulated ring lug	4.3	8.5	22.0	100	**140.00**
R2-5SV	blue	1.5 - 2.5	insulated ring lug	5.3	8.5	22.0	100	**123.00**
R2-6V	blue	1.5 - 2.5	insulated ring lug	6.5	12.0	27.0	100	**179.00**
R2-8V	blue	1.5 - 2.5	insulated ring lug	8.4	12.0	27.0	100	**177.00**
R2-10V	blue	1.5 - 2.5	insulated ring lug	10.5	13.6	30.7	100	**190.00**
R2-12V	blue	1.5 - 2.5	insulated ring lug	13	19.2	35.6	100	**294.00**
R5-3V	yellow	4.0 - 6.0	insulated ring lug	3.2	7.2	22.0	100	**189.00**
R5-3.5SV	yellow	4.0 - 6.0	insulated ring lug	3.7	7.2	22.0	100	**189.00**
R5-4SV	yellow	4.0 - 6.0	insulated ring lug	4.3	7.2	25.5	100	**183.00**
R5-4LV	yellow	4.0 - 6.0	insulated ring lug	4.3	9.5	25.5	100	**237.00**
R5-5V	yellow	4.0 - 6.0	insulated ring lug	5.3	9.5	25.5	100	**221.00**
R5-6V	yellow	4.0 - 6.0	insulated ring lug	6.5	12.0	29.0	100	**264.00**
R5-8V	yellow	4.0 - 6.0	insulated ring lug	8.4	15.0	33.7	100	**326.00**
R5-10V	yellow	4.0 - 6.0	insulated ring lug	10.5	15.0	33.7	100	**326.00**
R5-12V	yellow	4.0 - 6.0	insulated ring lug	13.0	9.2	38.1	100	**403.00**
Fork / Spade terminals								
S1-3V	red	0.5 - 1.5	insulated fork lug	3.2	5.8	21.0	100	**93.00**
S1-3.5SV	red	0.5 - 1.5	insulated fork lug	3.7	5.8	21.0	100	**91.00**
S1-3.5MV	red	0.5 - 1.5	insulated fork lug	3.7	6.4	20.6	100	**94.00**
S1-4SV	red	0.5 - 1.5	insulated fork lug	4.3	6.4	20.6	100	**91.00**
S1-4MV	red	0.5 - 1.5	insulated fork lug	4.3	7.2	21.0	100	**100.00**
S1-5SV	red	0.5 - 1.5	insulated fork lug	5.3	8.0	21.0	100	**107.00**
S1-6SV	red	0.5 - 1.5	insulated fork lug	6.5	9.5	21.0	100	**112.00**
S2-3V	blue	1.5 - 2.5	insulated fork lug	3.2	5.8	21.0	100	**111.00**
S2-3.5SV	blue	1.5 - 2.5	insulated fork lug	3.7	5.8	21.0	100	**110.00**
S2-3.5MV	blue	1.5 - 2.5	insulated fork lug	3.7	6.4	21.0	100	**111.00**
S2-4SV	blue	1.5 - 2.5	insulated fork lug	4.3	6.4	21.0	100	**108.00**
S2-4LV	blue	1.5 - 2.5	insulated fork lug	4.3	8.5	22.0	100	**132.00**
S2-5SV	blue	1.5 - 2.5	insulated fork lug	5.3	8.5	22.0	100	**127.00**
S2-6SV	blue	1.5 - 2.5	insulated fork lug	6.5	9.5	22.0	100	**131.00**
S5-4SV	yellow	4.0 - 6.0	insulated fork lug	4.3	8.5	25.2	100	**210.00**
S5-5V	yellow	4.0 - 6.0	insulated fork lug	5.3	9.5	25.2	100	**210.00**
S5-6SV	yellow	4.0 - 6.0	insulated fork lug	6.5	9.5	25.2	100	**200.00**
Pin terminals								
PT1-10V	red	0.5 - 1.5	insulated pin lug	1.9	10.5	20.5	100	**106.00**
PT2-10V	blue	1.5 - 2.5	insulated pin lug	1.9	10.5	20.5	100	**119.00**
PT2-12V	blue	1.5 - 2.5	insulated pin lug	1.9	12.5	22.5	100	**133.00**
PT5-13V	yellow	4.0 - 6.0	insulated pin lug	2.8	13.7	26.2	100	**253.00**
Ferrule / butt connector								
BB1V	red	0.5 - 1.5	insulated ferrule	1.7	–	26.0	100	**93.00**
BB2V	blue	1.5 - 2.5	insulated ferrule	2.3	–	26.0	100	**109.00**
BB5V	yellow	4.0 - 6.0	insulated ferrule	2.3	–	26.0	100	**188.00**

Above ZAR prices do not include VAT. E&OE

BT...

LB...



F1-...

F1-6.4VQD

F2-...

F2-6.4VQD

F5-...

F5-6.4VQD

M1...

M2...

M5...

type	colour	wire size mm²	description	dimensions (mm) d2	B	L	pack qty	price
Flat-blade terminal								
BT1-10V	red	0.5 - 1.5	insulated flat blade lug	2.4	10.7	20.7	100	**92.00**
BT1-14V	red	0.5 - 1.5	insulated flat blade lug	3	14	24	100	**105.00**
BT1-18V	red	0.5 - 1.5	insulated flat blade lug	2.4	18	28	100	**107.00**
BT2-10V	blue	1.5 - 2.5	insulated flat blade lug	2.4	10.7	20.7	100	**104.00**
BT2-13V	blue	1.5 - 2.5	insulated flat blade lug	2.4	13	23	100	**108.00**
BT2-18V	blue	1.5 - 2.5	insulated flat blade lug	2.4	18	28	100	**119.00**
BT5-10V	yellow	4.0 - 6.0	insulated flat blade lug	2.8	10	22.5	100	**191.00**
BT5-18V	yellow	4.0 - 6.0	insulated flat blade lug	3	18	30.5	100	**211.00**
Hook-blade terminal								
LB1-3V	red	0.5 - 1.5	insulated hook blade lug	3.0	18.0	28.0	100	**128.00**
LB1-4.6V	red	0.5 - 1.5	insulated hook blade lug	4.6	18.0	28.0	100	**147.00**
LB2-3V	blue	1.5 - 2.5	insulated hook blade lug	3.0	18.0	28.0	100	**145.00**
LB2-4.6V	blue	1.5 - 2.5	insulated hook blade lug	4.6	18.0	28.0	100	**166.00**
LB5-3V	yellow	4.0 - 6.0	insulated hook blade lug	3.0	17.5	30.0	100	**206.00**
LB5-4.6V	yellow	4.0 - 6.0	insulated hook blade lug	4.6	17.5	30.0	100	**232.00**
Female disconnect terminals "push-on"								
F1-2.8V/5	red	0.5 - 1.5	female disconnect	2.8	3.2	18.5	100	**64.00**
F1-2.8VD/5*	red	0.5 - 1.5	female disconnect	2.8	3.2	18.5	100	**120.00**
F1-4.8V/5	red	0.5 - 1.5	female disconnect	4.8	5.0	19.0	100	**77.00**
F1-4.8VD/5*	red	0.5 - 1.5	female disconnect	4.8	5.0	19.0	100	**141.00**
F1-6.4V	red	0.5 - 1.5	female disconnect	6.4	6.6	21.0	100	**100.00**
F1-6.4VF	red	0.5 - 1.5	fully insulated disconnect	6.4	6.6	22.0	100	**116.00**
F1-6.4VD*	red	0.5 - 1.5	female disconnect	6.4	6.6	21.0	100	**154.00**
F1-6.4VQD* ■	red	0.5 - 1.5	fully insulated disconnect	6.4	6.6	21.5	100	**191.00**
F2-2.8VD/5*	blue	1.5 - 2.5	female disconnect	2.8	3.2	18.5	100	**129.00**
F2-4.8V/5	blue	1.5 - 2.5	female disconnect	4.8	5.0	19.0	100	**84.00**
F2-4.8VD/5*	blue	1.5 - 2.5	female disconnect	4.8	5.0	19.0	100	**151.00**
F2-6.4V	blue	1.5 - 2.5	female disconnect	6.4	6.6	21.0	100	**105.00**
F2-6.4VF	blue	1.5 - 2.5	fully insulated disconnect	6.4	6.6	22.0	100	**120.00**
F2-6.4VD*	blue	1.5 - 2.5	female disconnect	6.4	6.6	21.0	100	**163.00**
F2-6.4VQD* ■	blue	1.5 - 2.5	fully insulated disconnect	6.4	6.6	21.5	100	**202.00**
F2-8V	blue	1.5 - 2.5	female disconnect	8.0	8.4	24.0	100	**150.00**
F2-8VD*	blue	1.5 - 2.5	female disconnect	8.0	8.4	24.0	100	**216.00**
F5-6.4V	yellow	4.0 - 6.0	female disconnect	6.4	6.6	23.5	100	**118.00**
F5-6.4VD*	yellow	4.0 - 6.0	female disconnect	6.4	6.6	23.5	100	**231.00**
F5-6.4VQD* ■	yellow	4.0 - 6.0	fully insulated disconnect	6.4	6.6	24.5	100	**280.00**
F5-9.5V	yellow	4.0 - 6.0	female disconnect	9.5	9.9	28.5	100	**236.00**
F5-9.5VD*	yellow	4.0 - 6.0	female disconnect	9.5	9.9	28.5	100	**376.00**
Male disconnect terminals "push-on"								
M1-2.8V/5	red	0.5 - 1.5	male disconnect	–	2.8	19.2	100	**79.00**
M1-2.8VD/5*	red	0.5 - 1.5	male disconnect	–	2.8	19.2	100	**138.00**
M1-4.8V/5	red	0.5 - 1.5	male disconnect	–	4.8	19.2	100	**79.00**
M1-4.8VD/5*	red	0.5 - 1.5	male disconnect	–	4.8	19.2	100	**141.00**
M1-6.4V	red	0.5 - 1.5	male disconnect	–	6.4	21.2	100	**88.00**
M1-6.4VD*	red	0.5 - 1.5	male disconnect	–	6.4	21.2	100	**141.00**
M2-2.8V/5	blue	1.5 - 2.5	male disconnect	–	2.8	19.2	100	**83.00**
M2-2.8VD/5*	blue	1.5 - 2.5	male disconnect	–	2.8	19.2	100	**162.00**
M2-4.8V/5	blue	1.5 - 2.5	male disconnect	–	4.8	19.2	100	**84.00**
M2-4.8VD/5*	blue	1.5 - 2.5	male disconnect	–	4.8	19.2	100	**167.00**
M2-6.4V	blue	1.5 - 2.5	male disconnect	–	4.8	21.2	100	**92.00**
M2-6.4VD*	blue	1.5 - 2.5	male disconnect	–	4.8	21.2	100	**162.00**
M5-6.4V	yellow	4.0 - 6.0	male disconnect	–	6.4	23.2	100	**107.00**
M5-6.4VD*	yellow	4.0 - 6.0	male disconnect	–	6.4	23.7	100	**237.00**

* Twin-grip crimp

■ Square entry / twin-grip / fully insulated

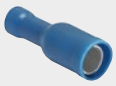
* *Twin-grip crimp*

PB1...

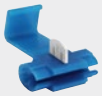
PB2...

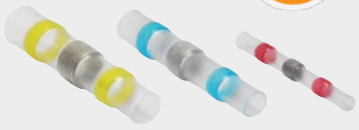
BD1...

BD5...


RE2...

RE3...


SP...


HP-SST...

JSL 1305-1

type	colour	wire size mm²	description	dimensions (mm) d2	B	L	pack qty	price
Piggy back disconnect terminals "push-on"								
PB1-6.4V	red	0.5 - 1.5	piggy-back disconnect	6.4	6.6	21.0	100	**168.00**
PB1-6.4VD*	red	0.5 - 1.5	piggy-back disconnect	6.4	6.6	21.0	100	**220.00**
PB2-6.4V	blue	1.5 - 2.5	piggy-back disconnect	6.4	6.6	21.0	100	**172.00**
PB2-6.4VD*	blue	1.5 - 2.5	piggy-back disconnect	6.4	6.6	21.0	100	**229.00**
PB5-6.4V	yellow	4.0 - 6.0	piggy-back disconnect	6.4	6.6	23.5	100	**185.00**
PB5-6.4VD*	yellow	4.0 - 6.0	piggy-back disconnect	6.4	6.6	23.5	100	**298.00**
* *Twin-grip crimp*								
Male bullet disconnector								
BD1-4V	red	0.5 - 1.5	male bullet disconnect	–	4.0	21.0	100	**92.00**
BD1-4VD*	red	0.5 - 1.5	male bullet disconnect	–	4.0	21.0	100	**160.00**
BD2-5V	blue	1.5 - 2.5	male bullet disconnect	–	5.0	21.0	100	**106.00**
BD2-5VD*	blue	1.5 - 2.5	male bullet disconnect	–	5.0	21.0	100	**185.00**
BD5-5V	yellow	4.0 - 6.0	male bullet disconnect	–	5.0	23.0	100	**131.00**
BD5-5VD*	yellow	4.0 - 6.0	male bullet disconnect	–	5.0	23.0	100	**271.00**
* *Twin-grip crimp*								
Female bullet disconnector								
RE1-4VF	red	0.5 - 1.5	female bullet disconnect	–	4.0	22.0	100	**113.00**
RE1-4VFD*	red	0.5 - 1.5	female bullet disconnect	–	4.0	22.5	100	**186.00**
RE2-5VF	blue	1.5 - 2.5	female bullet disconnect	–	5.0	23.5	100	**138.00**
RE2-5VFD*	blue	1.5 - 2.5	female bullet disconnect	–	5.0	23.5	100	**213.00**
RE5-5VF	yellow	4.0 - 6.0	female bullet disconnect	–	5.0	25.5	100	**148.00**
RE5-5VFD*	yellow	4.0 - 6.0	female bullet disconnect	–	5.0	25.0	100	**291.00**
* *Twin-grip crimp*								
Quick-splice connectors								
SP1	red	0.5 - 1.5	quick-splice connector	–	20.0	26.8	100	**117.00**
SP2	blue	1.5 - 2.5	quick-splice connector	–	20.0	26.8	100	**106.00**
SP5	yellow	4.0 - 6.0	quick-splice connector	–	20.0	35.0	100	**205.00**
Insulated cord-end (boot lace) terminals								
CE007508F	blue	0.75	cord-end terminal	1.2	14.0	8.0	500	**162.00**
CE010010F	red	1.0	cord-end terminal	1.4	16.0	10.0	500	**182.00**
CE015010F	black	1.5	cord-end terminal	1.7	16.0	10.0	500	**182.00**
CE025012F	grey	2.5	cord-end terminal	2.2	18.0	12.0	500	**240.00**
CE040012F	orange	4.0	cord-end terminal	2.8	20.0	12.0	500	**369.00**
CE060012F	green	6.0	cord-end terminal	3.5	20.0	12.0	500	**424.00**
CE100012F	brown	10.0	cord-end terminal	4.5	22.0	12.0	500	**521.00**
CE160012F	ivory	16.0	cord-end terminal	5.8	24.0	12.0	500	**733.00**
CE250016F	black	25.0	cord-end terminal	7.3	30.0	16.0	500	**1 180.00**

Shrink solder seal sleeves — IP67

Transparent heat shrinkable insulation sleeve provides encapsulation, inspection, strain relief and insulation. One piece design, consists of transparent heat shrinkable sleeve with coloured hot-melt glue on either side of tube with internal fast melting fluxed solder providing a insulated very convenient connection of wires.

- Waterproof, heat shrinkable, transparent sleeve provides precise inspection
- Colored hot-melt adhesive for easy Identification and improved strain relief
- Polyolefin heat shrink butt connectors - shrink ratio 2:1

Operating temperature: -55°C ~ +125°C *(Min. shrink temp. 60°C)*
Voltage resistant: >600V
Volume Resistivity (Ω cm): ≥10 15
Dielectric Strength (KV/mm): ≥25

type	colour	wire size mm²	description	dimensions (mm) L	Ø max.	Ø min.	price per (100)
HP-SST-200-02	red	0.5...1	shrink seal solder sleeve	40	2.7	1.3	**653.00**
HP-SST-200-03	blue	1.5...2.5	shrink seal solder sleeve	40	4.5	1.8	**746.00**
HP-SST-200-04	yellow	4.4-6.0	shrink seal solder sleeve	40	6.0	2.8	**954.00**

Crimping tools for pre-insulated terminals

- Crimping profiles for different wire cross-sections *(red/blue/yellow)*

JSL 1305-1 universal crimping tool for: red / blue / yellow pre-insulated terminals

*see **Cat M** for pricing.*

Above ZAR prices do not include VAT. E&OE

Insulated crimping lugs for copper conductors

ANE-M series lugs manufactured from electrolytic copper tube annealed and tin plated, designed to obtain the most efficient electrical conductivity and mechanical strength to resist vibration and pull out.

- Material: Electrolytic Copper - Insulated sleeve: PA6.6 (-20 to 115°C)
- Conformity: UNI EN 13600:2003

General features

- ANE-M lugs are annealed to guarantee optimum ductility which is an absolute necessity for connectors which will have to withstand the severe deformation arising when compressed and any bending of the palm during installation.
- The interior of the PA6.6 insulation sleeve is funnel shaped so as to ensure complete and easy introduction of the conductor strands.
- The PA6.6 insulated sleeve eliminates the need to insulate the terminal by either taping or using heat shrinkable tubes. Furthermore the PA6.6 sleeve avoids the possibility of conductor breakage at the barrel entrance.

ANE3-M8

ANE3-U5

ANE7-P20

type	cable (mm²)	Ø stud (mm)	palm width (mm)	description	std pack qty	price per pack
ANE-M series - Insulated crimping lugs						
ANE2-M4	10	4.3	10	heavy duty ins. ring lug	100	**1 710.00**
ANE2-M5	10	5.3	10	heavy duty ins. ring lug	100	**1 660.00**
ANE2-M6	10	6.4	11	heavy duty ins. ring lug	100	**320.00**
ANE2-M8	10	8.4	15	heavy duty ins. ring lug	100	**337.50**
ANE3-M4	16	4.3	11.5	heavy duty ins. ring lug	100	**1 800.00**
ANE3-M5	16	5.3	11.5	heavy duty ins. ring lug	100	**1 800.00**
ANE3-M6	16	6.4	11.5	heavy duty ins. ring lug	100	**337.50**
ANE3-M8	16	8.4	15	heavy duty ins. ring lug	100	**1 830.00**
ANE5-M5	25	5.3	14	heavy duty ins. ring lug	100	**2 480.00**
ANE5-M6	25	6.4	14	heavy duty ins. ring lug	100	**2 480.00**
ANE5-M8	25	8.4	15	heavy duty ins. ring lug	100	**2 520.00**
ANE5-M10	25	10.5	18	heavy duty ins. ring lug	100	**2 650.00**
ANE7-M6	35	6.4	17	heavy duty ins. ring lug	50	**1 700.00**
ANE7-M8	35	8.4	17	heavy duty ins. ring lug	50	**1 710.00**
ANE7-M10	35	10.5	19	heavy duty ins. ring lug	50	**1 830.00**
ANE7-M12	35	13.2	21	heavy duty ins. ring lug	50	**2 280.00**
ANE10-M6	50	6.4	19	heavy duty ins. ring lug	50	**2 180.00**
ANE10-M8	50	8.4	19	heavy duty ins. ring lug	50	**2 290.00**
ANE10-M10	50	10.5	20	heavy duty ins. ring lug	50	**2 420.00**
ANE10-M12	50	13.2	21	heavy duty ins. ring lug	50	**2 440.00**
ANE-U series - Insulated fork lugs						
ANE2-U4	10	4.3	9.8	heavy ins. duty fork lug	100	**1 660.00**
ANE2-U5	10	5.3	11.5	heavy ins. duty fork lug	100	**1 710.00**
ANE3-U4	16	4.3	10.0	heavy ins. duty fork lug	100	**1 830.00**
ANE3-U5	16	5.3	11.5	heavy ins. duty fork lug	100	**1 830.00**
ANE-P series - Insulated pin lugs						
ANE2-P12	10	L-14.5	4.3	heavy duty pin lug	100	**1 710.00**
ANE3-P14	16	L-18.0	5.5	heavy duty pin lug	100	**1 350.00**
ANE5-P16	25	L-20.3	7.0	heavy duty pin lug	100	**2 900.00**
ANE7-P20	35	L-25.3	8.0	heavy duty pin lug	50	**2 170.00**

Category-M

Cembre - Crimpstar range - Ratchet crimping tools

HNN ratchet controlled tools in the Crimpstar range, are compact, lightweight and easy to use.

General features:

- High precision investment cast jaws
- Toggle action leverage to reduce operator effort
- Ergonomically designed non-slip moulded plastic grips
- Ratchet controlled to ensure precise and consistent crimping
- Emergency release lever (releases jaws before completion of crimp)
- Factory-set ratchet for crimping control (automatic release on completion of crimping operation)

*see **Cat M** for pricing.*

HNN4

type	for terminals	conductor (mm²)	cable entry	description	price
HNN3	insulated	1.5 to 10	side	manual indent ratchet crimping tool	
HNN4	insulated	10 to 16	side	manual indent ratchet crimping tool	

Crimping lugs for copper conductors

The copper lugs in the A-M range are crafted from high-purity electrolytic copper, ensuring superior electrical conductivity and mechanical strength.

Designed to withstand rigorous conditions, including vibration and pull-out resistance, these lugs are annealed to optimize ductility, which is crucial during crimping and installation.

The lugs are also tin-plated to prevent oxidation, further enhancing their durability in various applications

- Material: Electrolytic Copper - annealed and Tin plated

Cu

c UL us File no. E125401

ANNEALED

A06-M8

New

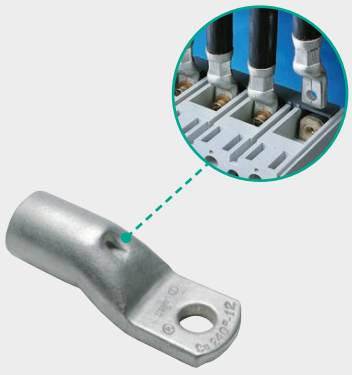
A5-M12

A24-M16

type	cable (mm^2)	Ø stud (mm)	palm width (mm)	description	std pack qty	price per pack
A03-M4	1.5	4.3	6.5	heavy duty crimping lug	100	**225.00**
A03-M5	1.5	5.3	7.5	heavy duty crimping lug	100	**225.00**
A03-M6	1.5	6.4	9.0	heavy duty crimping lug	100	**225.00**
A06-M4	2.5	4.3	7.5	heavy duty crimping lug	100	**245.00**
A06-M5	2.5	5.3	8.5	heavy duty crimping lug	100	**245.00**
A06-M6	2.5	6.4	9.0	heavy duty crimping lug	100	**245.00**
A06-M8	2.5	6.4	9.0	heavy duty crimping lug	100	**257.00**
A1-M4	4-6	4.3	8.0	heavy duty crimping lug	100	**303.00**
A1-M5	4-6	5.3	9.0	heavy duty crimping lug	100	**328.00**
A1-M6	4-6	6.4	11.0	heavy duty crimping lug	100	**322.00**
A1-M8	4-6	6.4	11.0	heavy duty crimping lug	100	**354.00**
A1-M10	4-6	6.4	11.0	heavy duty crimping lug	100	**392.00**
A2-M4	10	4.3	10	heavy duty crimping lug	100	**450.00**
A2-M5	10	5.3	10	heavy duty crimping lug	100	**450.00**
A2-M6	10	6.4	11	heavy duty crimping lug	100	**450.00**
A2-M8	10	8.4	15	heavy duty crimping lug	100	**553.00**
A2-M10	10	8.4	15	heavy duty crimping lug	100	**591.00**
A3-M4	16	4.3	11.5	heavy duty crimping lug	100	**546.00**
A3-M5	16	5.3	11.5	heavy duty crimping lug	100	**546.00**
A3-M6	16	6.4	11.5	heavy duty crimping lug	100	**546.00**
A3-M8	16	8.4	15	heavy duty crimping lug	100	**598.00**
A3-M10	16	8.4	15	heavy duty crimping lug	100	**630.00**
A3-M12	16	8.4	15	heavy duty crimping lug	100	**771.00**
A5-M6	25	6.4	14	heavy duty crimping lug	100	**919.00**
A5-M8	25	8.4	15	heavy duty crimping lug	100	**919.00**
A5-M10	25	10.5	18	heavy duty crimping lug	100	**964.00**
A5-M12	25	13.2	21	heavy duty crimping lug	100	**1 150.00**
A7-M6	35	6.4	17	heavy duty crimping lug	100	**1 350.00**
A7-M8	35	8.4	17	heavy duty crimping lug	100	**1 350.00**
A7-M10	35	10.5	19	heavy duty crimping lug	100	**1 350.00**
A7-M12	35	13.2	21	heavy duty crimping lug	50	**768.00**
A10-M6	50	6.4	19	heavy duty crimping lug	50	**893.00**
A10-M8	50	8.4	19	heavy duty crimping lug	50	**893.00**
A10-M10	50	10.5	20	heavy duty crimping lug	50	**893.00**
A10-M12	50	13.2	21	heavy duty crimping lug	50	**1 040.00**
A10-M16	50	13.2	21	heavy duty crimping lug	50	**1 130.00**
A14-M8	70	8.4	21	heavy duty crimping lug	50	**1 470.00**
A14-M10	70	10.5	21	heavy duty crimping lug	50	**1 470.00**
A14-M12	70	13.2	22	heavy duty crimping lug	50	**1 470.00**
A14-M16	70	17.0	26	heavy duty crimping lug	50	**1 740.00**
A19-M10	95	10.5	25	heavy duty crimping lug	25	**1 060.00**
A19-M12	95	13.2	25	heavy duty crimping lug	25	**1 060.00**
A19-M16	95	17.0	27	heavy duty crimping lug	25	**1 210.00**
A24-M8	120	10.5	28.5	heavy duty crimping lug	25	**1 390.00**
A24-M10	120	10.5	28.5	heavy duty crimping lug	25	**1 390.00**
A24-M12	120	13.2	28.5	heavy duty crimping lug	25	**1 390.00**
A24-M16	120	17.0	28.5	heavy duty crimping lug	25	**1 630.00**
A30-M10	150	10.5	31.5	heavy duty crimping lug	25	**2 090.00**
A30-M12	150	13.2	31.5	heavy duty crimping lug	25	**1 930.00**
A30-M16	150	17.0	31.5	heavy duty crimping lug	25	**2 090.00**
A37-M10	185	10.5	35.5	heavy duty crimping lug	15	**1 590.00**
A37-M12	185	13.2	35.5	heavy duty crimping lug	15	**1 690.00**
A37-M16	185	17.0	35.5	heavy duty crimping lug	15	**1 790.00**
A48-M12	240	13.2	39	heavy duty crimping lug	10	**1 510.00**
A48-M16	240	17.0	39	heavy duty crimping lug	10	**1 930.00**
A48-M20	240	21.0	39	heavy duty crimping lug	10	**1 800.00**

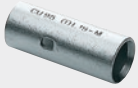
*For contained palm lugs see page **L-24***

Above ZAR prices do not include VAT. E&OE



A48-M10/31

L10-M



L14-M

L19-M

HT45-E

KITHT51-1

Contained palm crimping lugs

These crimping lugs feature a contained palm width, specifically designed for LV circuit breakers with reduced space termination. The contained palm permits immediate and easier installation.

type	cable (mm²)	Ø stud (mm)	palm width (mm)	description	std pack qty	price per lug
A19B-M8/15.5	95	M8	15.5	contained palm cable lug	25	**89.00**
A24B-M8/19	120	M8	19.0	contained palm cable lug	25	**180.00**
A30B-M8/19	150	M8	19.0	contained palm cable lug	25	**222.00**
A37B-M10/24.5	185	M10	24.5	contained palm cable lug	15	**246.00**
A48-M10/31	240	M10	31.0	contained palm cable lug	10	**322.00**

L-M series - Uninsulated through connectors (ferrules)

L-M range of connectors are designed for jointing low voltage conductors. Are electrolytically tin plated with a minimum thickness of 3µm to avoid oxidation

These connectors are annealed to guarantee optimum ductility which is an absolute necessity for connectors which will have to withstand the severe deformation arising when compressed and any bending of the palm during installation.

They feature an internal taper at both ends to ease the introduction of the conductor and a central stop to ensure correct positioning.

Manufactured from electrolytic copper tube Cu-OF CW008A conform to UNI EN 13600:2013

type	cable (mm²)	length (mm)	description	pack qty	price per pack
L03-M	1.5	L-15	heavy duty uninsulated crimp ferrules	100	**335.00**
L06-M	2.5	L-15	heavy duty uninsulated crimp ferrules	100	**385.00**
L1-M	4 - 6	L-22	heavy duty uninsulated crimp ferrules	100	**553.00**
L2-M	10	L-25	heavy duty uninsulated crimp ferrules	100	**1 080.00**
L3-M	16	L-27	heavy duty uninsulated crimp ferrules	100	**1 140.00**
L5-M	25	L-29	heavy duty uninsulated crimp ferrules	100	**1 550.00**
L7-M	35	L-33	heavy duty uninsulated crimp ferrules	100	**2 460.00**
L10-M	50	L-37	heavy duty uninsulated crimp ferrules	50	**1 610.00**
L14-M	70	L-39	heavy duty uninsulated crimp ferrules	50	**2 010.00**
L19-M	95	L-43	heavy duty uninsulated crimp ferrules	25	**1 580.00**
L24-M	120	L-47	heavy duty uninsulated crimp ferrules	25	**2 350.00**
L30-M	150	L-58	heavy duty uninsulated crimp ferrules	25	**3 230.00**
L37-M	185	L-64	heavy duty uninsulated crimp ferrules	15	**2 650.00**
L48-M	240	L-75	heavy duty uninsulated crimp ferrules	10	**2 590.00**

Category-M

Hydraulic crimping / cutting tools

type	for terminals	conductor (mm²)	crimping force (kN)	description	price

- Spring loaded handles, dies can be advanced using only one hand
- Supplied with sturdy plastic carrying case for tool with compartments for die sets

HT45 - Compact hydraulic crimping tool

Lightweight and compact, this tool is ideal for the compression of connectors on over head lines and other general applications.

HT45-E	die dependant	max. 150	50 kN	hydraulic crimping tool	

HT51 - Two speed hydraulic crimping tool

- **Supplied with:**
  Sturdy plastic carrying case for tool and *(included)* die sets:
  ME 5-50, 7-50, 10-50, 14-50, 19-50, 24-50, 30-50, 37-50

KITHT51-1	die dependant	max. 240	50 kN	hydraulic crimping tool	

*see **Cat M** for pricing.*

HT131 - Hydraulic crimping tool for semi-circular slotted dies

Self contained, robust and sturdy, will accept all semicircular slotted dies, common to most 130 kN tools. The tool features a double speed action: a fast advancing speed for rapid approach of the dies to the connector and a slower more powerful speed for crimping.

For ease of operation and comfort of the operator the tool head can be fully rotated through 180 degrees.

- **Supplied with:**
  Sturdy plastic carrying case for tool and *(included)* die sets:
  ME 10-C, 14-C, 19-C, 24-C, 30-C, 37-C, 48-C

KITHT131-C-1	die dependant	max. 400	130 kN	hydraulic crimping tool	

Cable glands *(compression)*

Thread: Metric
Protection degree: IP68-10
Material: body: Nylon PA66 UL approved *(Flammability UL94V-2)*
seal: EPDM
Ambient temperature: -40°C…+100°C *(instantaneous heat resistance up to 120°C)*

PMGB12-5

PMGB16-7B

PMGB25-18

PMGB40-32

MGM32-22

SSM16-08

type	thread size	thread length	compress area (mm)	colour	description	price
M - Metric thread cable glands			*(supplied with locknut)*			
PMGB12-5	M12	8.5 mm	3-5.5	light grey	Metric compression gland	**2.20**
PMGB16-7	M16	10 mm	3-7	light grey	Metric compression gland	**2.90**
PMGB18-10	M18	10 mm	6-10	light grey	Metric compression gland	**3.60**
PMGB20-13.5	M20	10 mm	9-14	light grey	Metric compression gland	**5.80**
PMGB25-18	M25	12 mm	13-18	light grey	Metric compression gland	**7.90**
PMGB32-25	M32	12 mm	18-25	light grey	Metric compression gland	**14.90**
PMGB40-32	M40	15 mm	24-32	light grey	Metric compression gland	**22.10**
PMGB50-41	M50	15 mm	31-41	light grey	Metric compression gland	**28.60**
PMGB63-45	M63	18 mm	35-45	light grey	Metric compression gland	**34.10**
PMGB12-5B	M12	8.5 mm	3-6.5	black	Metric compression gland	**2.20**
PMGB16-7B	M16	10 mm	4-8	black	Metric compression gland	**2.90**
PMGB18-10B	M18	10 mm	6-10	black	Metric compression gland	**3.60**
PMGB20-13.5B	M20	10 mm	9-14	black	Metric compression gland	**5.80**
PMGB25-18B	M25	12 mm	13-18	black	Metric compression gland	**7.90**
PMGB32-25B	M32	12 mm	18-25	black	Metric compression gland	**14.90**
PMGB40-32B	M40	15 mm	26-31	black	Metric compression gland	**22.10**
PMGB50-41B	M50	15 mm	26-31	black	Metric compression gland	**28.60**
PMGB63-45B	M63	18 mm	35-45	black	Metric compression gland	**34.10**
PG - thread cable glands			*(supplied with locknut)*			
PPGB7-5B	12.5	8 mm	3-5.5	black	PG compression gland	**1.50**
PPGB9-8B	15.2	8 mm	4-8	black	PG compression gland	**2.20**
PPGB11-10B	18.6	10 mm	6-10	black	PG compression gland	**2.90**
PPGB13.5-12B	20.4	10 mm	7-12.5	black	PG compression gland	**2.90**
PPGB16-11B	22.5	11 mm	6-11	black	PG compression gland	**4.30**
PPGB19-14B	24	11 mm	8.5-14	black	PG compression gland	**5.70**
PPGB21-18B	28.3	12 mm	12-18	black	PG compression gland	**7.20**

Metal cable glands *(supplied with locknut)*

Thread: Metric
Protection degree: IP68-10
Material: body: Nickel plated brass
seal: Nylon PA66, EPDM rubber
Ambient temperature: -40°C…+100°C (instantaneous heat resistance up to 120°C)

MGM8-4.5	M8	4 mm	3-4.5	nickel	metal compression gland	**16.10**
MGM12-6.5	M12	6.5 mm	3-6.5	nickel	metal compression gland	**16.30**
MGM16-8	M16	8 mm	4-8	nickel	metal compression gland	**23.00**
MGM18-10	M18	8 mm	5-10	nickel	metal compression gland	**27.00**
MGM20-12	M20	8 mm	6-12	nickel	metal compression gland	**30.40**
MGM20-12L	M20	11 mm	6-12	nickel	metal compression gland	**32.00**
MGM22-14	M22	8 mm	10-14	nickel	metal compression gland	**36.60**
MGM25-16	M25	9 mm	10-16	nickel	metal compression gland	**57.00**
MGM25-16L	M25	11 mm	10-16	nickel	metal compression gland	**57.00**
MGM32-22	M32	10 mm	15-22	nickel	metal compression gland	**82.00**
MGM40-30	M40	11 mm	22-30	nickel	metal compression gland	**138.00**
MGM50-38	M50	13 mm	32-38	nickel	metal compression gland	**256.00**
MGM63-44	M63	14 mm	37-44	nickel	metal compression gland	**425.00**

Stainless steel 316 *(supplied with locknut)*

Thread: Metric
Protection degree : IP68-10
Material: body: Stainless steel 316
seal: Nylon PA66, EPDM rubber
Ambient temperature: -50°C…+180°C

SSM12-6.5	M12	6.5 mm	3-6.5	S/S	stainless steel gland	**78.00**
SSM16-08	M16	8 mm	4-8	S/S	stainless steel gland	**110.00**
SSM20-12	M20	8 mm	6-12	S/S	stainless steel gland	**135.00**
SSM25-16	M25	9 mm	10-16	S/S	stainless steel gland	**236.00**
SSM32-22	M32	10 mm	15-22	S/S	stainless steel gland	**372.00**

Above ZAR prices do not include VAT. E&OE

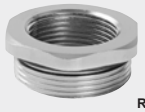
PSRM16-P-10B

PPGA20-E-14B

WLCM20S-7B

PLNM16B

EAM16/M20H

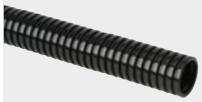

RAM32/M25H

PHPM20B

type	thread size	thread length	compress area (mm)	colour	description	price
Strain relief cable glands		*(supplied with locknut)*			**IP68-10**	
Material:		Nylon PA66 UL approved *(Flammability UL94V-2)*				
PSRM12-P-7B	M12	8.5 mm	4-7	black	nylon strain relief gland	**19.90**
PSRM16-P-10B	M16	10 mm	6-10	black	nylon strain relief gland	**23.50**
PSRM20S-P-12B	M20	10 mm	6-12.5	black	nylon strain relief gland	**29.20**
90° Degree cable glands		*(supplied with locknut)*				
Material:		Nylon PA66 UL approved *(Flammability UL94V-2)*				
PPGA16-E-08B	M16	10 mm	4-7	black	90° compression gland	**37.00**
PPGA20-E-14B	M20	15 mm	9-14	black	90° compression gland	**51.00**
PPGA25-E-18B	M25	15 mm	13-18	black	90° compression gland	**78.00**
PPGA32-E-25B	M32	15 mm	18-25	black	90° compression gland	**92.00**
Waterproof in-line connector					**IP68-10**	
Material:		Nylon PA66 UL approved *(Flammability UL94V-2)*		seal:	EPDM	
Ambient temperature:		-40°C…+100°C *(instantaneous heat resistance up to 120°C)*				
WLCM20S-7B	M20	3-pole	4-7	black	waterproof connector	**82.00**
WLCM20S-11B	M20	3-pole	6-11	black	waterproof connector	**89.00**
WLCM25-16B	M25	4-pole	10-16	black	waterproof connector	**133.00**
WLCM25-18B	M25	4-pole	13-19	black	waterproof connector	**133.00**
Cable glands accessories						
Plastic locknuts *(metric)*			*(spares)*			
PLNM12B	M12	locknut	–	black	nylon metric locknut only	**0.80**
PLNM16B	M16	locknut	–	black	nylon metric locknut only	**1.50**
PLNM20B	M20	locknut	–	black	nylon metric locknut only	**2.20**
PLNM22B	M22	locknut	–	black	nylon metric locknut only	**2.20**
PLNM25B	M25	locknut	–	black	nylon metric locknut only	**2.90**
PLNM32B	M32	locknut	–	black	nylon metric locknut only	**5.00**
PLNM40B	M40	locknut	–	black	nylon metric locknut only	**7.90**
PLNM50B	M50	locknut	–	black	nylon metric locknut only	**11.40**
PLNM63B	M63	locknut	–	black	nylon metric locknut only	**14.30**

Adaptors *(metallic)*			**enlargers / reducers**			
type	from male	to female	thread length	colour	description	price
Nickel plate						
EAM12/M16H	M12	M16	6 mm	nickel	M enlargement adaptors	**37.00**
EAM16/M20H	M16	M20	6 mm	nickel	M enlargement adaptors	**44.00**
EAM20/M25H	M20	M25	6.5 mm	nickel	M enlargement adaptors	**59.00**
EAM25/M32H	M25	M32	7.5 mm	nickel	M enlargement adaptors	**99.00**
EAM32/M40H	M32	M40	8 mm	nickel	M enlargement adaptors	**149.00**
EAM40/M50H	M40	M50	9 mm	nickel	M enlargement adaptors	**186.00**
RAM16/M12H	M16	M12	6 mm	nickel	M reduction adaptors	**15.00**
RAM20/M16H	M20	M16	6 mm	nickel	M reduction adaptors	**24.90**
RAM25/M20H	M25	M20	6.5 mm	nickel	M reduction adaptors	**41.00**
RAM32/M25H	M32	M25	7.5 mm	nickel	M reduction adaptors	**74.00**
RAM40/M32H	M40	M32	8 mm	nickel	M reduction adaptors	**102.00**
RAM50/M40H	M50	M40	9 mm	nickel	M reduction adaptors	**183.00**

Nylon blanking plugs		*(supplied with locknut)*			**IP68**	
Material:		Nylon PA66 UL approved (Flammability UL94V-2)				
type	thread size	thread length	compress area (mm)	colour	description	price
PHPM12B	M12	9.5 mm	–	black	screw-in blanking plugs	**3.60**
PHPM16B	M16	10 mm	–	black	screw-in blanking plugs	**5.00**
PHPM20B	M20	11 mm	–	black	screw-in blanking plugs	**7.20**
PHPM22B	M22	11 mm	–	black	screw-in blanking plugs	**8.60**
PHPM25B	M25	11 mm	–	black	screw-in blanking plugs	**10.70**
PHPM32B	M32	11 mm	–	black	screw-in blanking plugs	**17.10**
PHPM40B	M40	12 mm	–	black	screw-in blanking plugs	**29.90**
PHPM50B	M50	12 mm	–	black	screw-in blanking plugs	**39.80**
PHPM63B	M63	12 mm	–	black	screw-in blanking plugs	**50.00**


AD-13.0

PJ-VH-13.0

QCM12-AD13

EQCM16-AD13

WCTM16-AD13

EWCM16-AD13

PJ-SWB-06

Corrugated Conduit *(flexible)*

Product material: Polypropylene
Ambient temperature: -40°C…+120°C *(instantaneous heat resistance up to 140°C)*
Features: High flexibility, twist resistance, good bending performance, can withstand heavy loads; acid resistant, lubricants, coolant, etc.,
Applications: Machinery manufacturing, insulation protection, lighting, automobile manufacturing, aviation equipment, subway, train, automation control and other industries.

type	IDØ (mm)	colour	ODØ (mm)	description	meters *(per roll)*	price *(per roll)*
AD13.0	10	black	13.0	plastic convoluted tubing	25	**162.00**
AD15.8	12	black	15.8	plastic convoluted tubing	25	**192.00**
AD21.2	17	black	21.2	plastic convoluted tubing	25	**257.00**
AD25.0	20	black	25.0	plastic convoluted tubing	25	**325.00**
AD34.5	29	black	34.5	plastic convoluted tubing	25	**488.00**
AD42.5	36	black	42.5	plastic convoluted tubing	25	**782.00**
AD54.5	48	black	54.5	plastic convoluted tubing	25	**1 360.00**

Mounting accessories - for above corrugated conduit

Support bracket - *for corrugated conduit* *PA (Polyamide)*

					for conduit	
PJ-VH-13.0	–	black	holder	support bracket for conduit	AD-13	**12.10**
PJ-VH-15.8	–	black	holder	support bracket for conduit	AD15.8	**13.50**
PJ-VH-21.2	–	black	holder	support bracket for conduit	AD21.2	**17.10**
PJ-VH-25.0	–	black	holder	support bracket for conduit	AD25	**20.60**
PJ-VH-34.5	–	black	holder	support bracket for conduit	AD34.5	**32.70**
PJ-VH-42.5	–	black	holder	support bracket for conduit	AD42.5	**37.70**
PJ-VH-54.5	–	black	holder	support bracket for conduit	AD54.5	**48.00**

Quick connectors - *through hole mounting* *PA66*

QCM12-AD13	M12	black	straight	quick connect connector	AD-13	**8.60**
QCM16-AD15.8	M16	black	straight	quick connect connector	AD15.8	**10.00**
QCM20-AD15.8	M20	black	straight	quick connect connector	AD15.8	**10.00**
QCM20-AD21.2	M20	black	straight	quick connect connector	AD21.2	**12.10**
QCM25-AD25	M25	black	straight	quick connect connector	AD25	**12.80**
QCM32-AD34.5	M32	black	straight	quick connect connector	AD34.5	**19.20**
QCM40-AD42.5	M40	black	straight	quick connect connector	AD42.5	**26.30**
QCM50-AD54.5	M50	black	straight	quick connect connector	AD54.5	**46.00**
QCM63-AD54.5	M63	black	straight	quick connect connector	AD54.5	**50.00**
EQCM16-AD13	M16	black	90º	elbow quick connector	AD-13	**21.40**
EQCM20-AD21.2	M20	black	90º	elbow quick connector	AD-21.2	**29.90**
EQCM25-AD28.5	M25	black	90º	elbow quick connector	AD28.5	**39.00**
EQCM32-AD34.5	M32	black	90º	elbow quick connector	AD34.5	**51.00**
EQCM40-AD42.5	M40	black	90º	elbow quick connector	AD42.5	**75.00**
EQCM50-AD54.5	M50	black	90º	elbow quick connector	AD54.5	**109.00**

Weatherproof connectors - *through hole mounting* **IP68** *PA66*

WCTM16-AD13	M16	black	straight	weatherproof connector	AD-13	**13.50**
WCTM20-AD15.8	M20	black	straight	weatherproof connector	AD15.8	**18.50**
WCTM20-AD21.2	M20	black	straight	weatherproof connector	AD21.2	**22.80**
WCTM25-AD25	M25	black	straight	weatherproof connector	AD25	**27.00**
WCTM32-AD34.5	M32	black	straight	weatherproof connector	AD34.5	**37.70**
WCTM40-AD42.5	M40	black	straight	weatherproof connector	AD42.5	**63.00**
WCTM50-AD54.5	M50	black	straight	weatherproof connector	AD54.5	**100.00**
WCTM63-AD54.5	M63	black	straight	weatherproof connector	AD54.5	**114.00**
EWCM16-AD13	M16	black	90º	weatherproof connector	AD-13	**52.00**
EWCM20-AD15.8	M20	black	90º	weatherproof connector	AD15.8	**74.00**
EWCM20-AD21.2	M20	black	90º	weatherproof connector	AD21.2	**102.00**
EWCM25-AD25	M25	black	90º	weatherproof connector	AD25	**107.00**
EWCM32-AD34.5	M32	black	90º	weatherproof connector	AD34.5	**124.00**
EWCM40-AD42.5	M40	black	90º	weatherproof connector	AD42.5	**151.00**

Spiral wrapping band *(HDPE (Heavy-Duty Polyethylene)*

Ambient temperature: -50°C…+80°C
Features: Easy installation, no tools required, provides safe protection for cables, wires, hoses, & tubing, protects against abrasion, chafing, cuts, prevents tangling.

type	IDØ (mm)	colour	ODØ (mm)	bundle Ø max. (mm)	description	meters *(per roll)*	price *(per roll)*
PJ-SWB-06	4	black	6	4...20	spiral binding	10	**20.60**
PJ-SWB-12	9	black	12	9…65	spiral binding	10	**53.00**
PJ-SWB-19	15	black	19	15…120	spiral binding	10	**149.00**

Above ZAR prices do not include VAT. E&OE

RoHS VDE COMBI

Halogen Free IP66/67

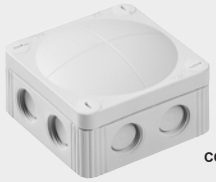
Junction boxes *IP66/67*

Wiska COMBI junction boxes provide ultimate protection from environmental conditions in a compact, very attractive format, suitable for extreme outdoor and indoor installations.

- **High-quality material** of the COMBI junction boxes is UV- and Ozone resistant, therefore suitable for inside as well as outside installation
- **Bellied cover** allows 10% more installation space
- Captive and rust-free **quick-release** lid screws
- Self-sealing **membranes on the rear** enable a clean assembly for cable outputs from the wall

COMBI 206

- **Weather proof - ultravoilet resistant - shatterproof - impact resistant - flame retardant - halogen free**
- Protection: IP66 / IP67
- Material: Polypropylene, reinforced glass fibre, sealing: thermoplastic elastomer
- Temperature: -30ºC…+100ºC
- Glow wire test: 750ºC
- Patented combination: a) - Integrated thread for Metric cable gland entry without locknuts
  b) - Elastic self-sealing puncture-membrane for cable entry on the sides and rear
- Mounting: Mounting holes located outside the sealing area but within the lid
- Colour: RAL 7035 *(light grey)* or RAL 9005 *(black)*


COMBI 308

COMBI 407

COMBI 304

COMBI 116

type	cable entry sides	cable entry rear	thread Ø	colour	description	dimensions (mm) (H)	(W)	(D)	price
Screw-on lid/cover			**IP66 - IP67** *(when used with cable gland)*						
• Captive rust free quick release (1/4 turn) lid screws of plastic									
• Combined threaded M20/membrane entries (407 and 1210 also have M25 knockouts)									
COMBI 206			IP66/67		*(captive - quick release lid screws)*				
10109569	6	2	M20	grey	weatherproof junction box	85	49	51	**72.00**
10109571	6	2	M20	black	weatherproof junction box	85	49	51	**72.00**
COMBI 308			IP66/67		*(captive - quick release lid screws)*				
10060400	8	–	M20	grey	weatherproof junction box	85	85	51	**75.00**
10060581	8	–	M20	black	weatherproof junction box	85	85	51	**75.00**
COMBI 407			IP66/67		1 x M20 cable entry can be knocked-out for M25 entry				
10105595	7	2	M20/25	grey	weatherproof junction box	95	95	60	**116.00**
10105601	7	2	M20/25	black	weatherproof junction box	95	95	60	**116.00**
COMBI 607			IP66/67		1 x M25 cable entry can be knocked-out for M20 entry				
10060531	7	3	M25	grey	weatherproof junction box	110	110	66	**144.00**
10060648	7	3	M25	black	weatherproof junction box	110	110	66	**229.00**
COMBI 1210			IP66/67		all M20 cable entries can be knocked-out for M25 entry				
10101459	10	4	M20	grey	round w/proof junction box	160	140	81	**238.00**
10101460	10	4	M20	black	round w/proof junction box	160	140	81	**361.00**
COMBI 304 round housing - Ø 82 mm									
• Flat lid - bayonet cap *(quarter turn screw fixing)*									
• Unique hook closing mechanism preventing unauthorised access. *(tool required to gain access)*									
• Mounting via external lugs									
10110629	4	–	M20	grey	weatherproof junction box	Ø	82	57	**116.00**
10110630	4	–	M20	black	weatherproof junction box	Ø	82	57	**116.00**
Push-on lid/cover			IP66		*Push-on lid/cover - for easy access to internal wiring*				
• Cable entry: Elastic self-sealing puncture-membranes for cable entry on sides and in the base									
COMBI 108			IP66		*(push-on lid/cover)*				
10060522	10	2	–	grey	weatherproof junction box	76	76	51	**61.00**
COMBI 116			IP66		*(push-on lid/cover)*				
10109563	18	4	–	grey	weatherproof junction box	152	76	51	**96.00**
Accessories for above junction boxes									
10108836					external mounting feet for COMBI	308/407/607/1210			**59.00**
22001132	SP-HKT 11/5	5-pole			internal terminal for COMBI 108/116/206/304/308/407				**120.00**
22000407	SP-HKT607	5-pole			internal mounting terminal for COMBI 607				**122.00**
10109800	ZER 4-12	Ø 4-11			strain relief ring for securing cable internally *(10 pcs)*				**52.00**
10110766	ZER 11-18	Ø 11-18			strain relief ring for securing cable internally *(10 pcs)*				**56.00**

Wiska **SPRINT** cable glands provide ultimate protection from environmental conditions.

Suitable for extreme outdoor installations. -40°C...+100°C

- Protection: **IP68** to EN 60520 / **IP69K** to DIN 40 050-T9
- UV resistant: Type A, ISO 4892-2, UL-file QCRV2.E179850
- Flame protection: Glow wire test 750° acc.to EN60695-2-11
- Self-locking cap nut thread offering vibration protection
- Increased wall thickness for greater stability
- Smooth internal channel preventing cable jam on insertion
- Claw shape provides large sealing area and excellent adaptation to irregular cable profiles
- Material: Gland - Polyamide
  Gasket - EPDM *(highly resistant to chemicals, environment and ultraviolet)*

10066413

10060773

10066123

10061783

10065003

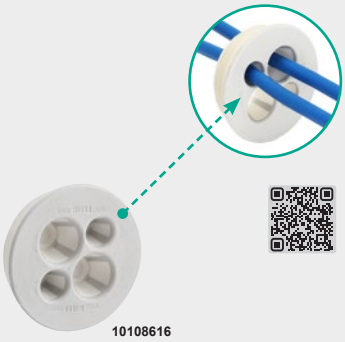
10063144

Metric cable glands *grey (or) black*

type	thread diameter	compress area (mm)	description	dimensions (mm) (TL)	(L)	(SW)	price
ESKV light grey RAL 7035			• *Locknut to be ordered separately*				
10066410	M12 X 1.5	3 - 7	compression gland *(grey)*	29 - 43	9	16	**8.40**
10066411	M16 X 1.5	4.5 - 10	compression gland *(grey)*	31 - 37	9	20	**8.40**
10066412	M20 X 1.5	6 - 13	compression gland *(grey)*	36 - 45	10	24	**8.40**
10066413	M25 X 1.5	9 - 17	compression gland *(grey)*	38 - 47	10	29	**12.90**
10066414	M32 X 1.5	13 - 21	compression gland *(grey)*	42 - 51	12	36	**25.00**
10066415	M40 X 1.5	16 - 28	compression gland *(grey)*	52 - 65	12	46	**61.00**
10066416	M50 X 1.5	21 - 35	compression gland *(grey)*	59 - 72	14	55	**91.00**
10066417	M63 X 1.5	34 - 48	compression gland *(grey)*	64 - 78	15	68	**148.00**
EMUG locknuts for above			Material: *Light grey Polyamide/glassfibre reinforced*				
10060770	M12 x 1.5	–	gland locknut *(grey)*	–	–	18	**1.30**
10060771	M16 x 1.5	–	gland locknut *(grey)*	–	–	22	**2.00**
10060772	M20 x 1.5	–	gland locknut *(grey)*	–	–	27	**2.00**
10060773	M25 x 1.5	–	gland locknut *(grey)*	–	–	32	**2.60**
10060774	M32 x 1.5	–	gland locknut *(grey)*	–	–	40	**3.30**
10060775	M40 x 1.5	–	gland locknut *(grey)*	–	–	50	**7.70**
10060776	M50 x 1.5	–	gland locknut *(grey)*	–	–	60	**10.30**
10060777	M63 x 1.5	–	gland locknut *(grey)*	–	–	75	**17.30**
ESKV black RAL 9005			• *Locknut to be ordered separately*				
10066120	M12 x 1.5	3 - 7	compression gland *(black)*	29 - 43	9	16	**8.40**
10066121	M16 x 1.5	4.5 - 10	compression gland *(black)*	31 - 37	9	20	**8.40**
10066122	M20 x 1.5	6 - 13	compression gland *(black)*	36 - 45	10	24	**8.40**
10066123	M25 x 1.5	9 - 17	compression gland *(black)*	38 - 47	10	29	**12.90**
10066124	M32 x 1.5	13 - 21	compression gland *(black)*	42 - 51	12	36	**25.00**
10066125	M40 x 1.5	16 - 28	compression gland *(black)*	52 - 65	12	46	**86.00**
10066126	M50 x 1.5	21 - 35	compression gland *(black)*	59 - 72	14	55	**91.00**
10066127	M63 x 1.5	34 - 48	compression gland *(black)*	64 - 78	15	68	**204.00**
EMUG locknuts for above			Material: *Black polyamide/glassfibre reinforced*				
10061780	M12 x 1.5	–	gland locknut *(black)*	–	–	18	**1.30**
10061781	M16 x 1.5	–	gland locknut *(black)*	–	–	22	**2.00**
10061782	M20 x 1.5	–	gland locknut *(black)*	–	–	27	**2.00**
10061783	M25 x 1.5	–	gland locknut *(black)*	–	–	32	**2.60**
10061784	M32 x 1.5	–	gland locknut *(black)*	–	–	40	**3.30**
10061785	M40 x 1.5	–	gland locknut *(black)*	–	–	50	**16.70**
10061786	M50 x 1.5	–	gland locknut *(black)*	–	–	60	**28.90**
10061787	M63 x 1.5	–	gland locknut *(black)*	–	–	75	**37.20**
EMSKV Metal cable glands			• *Locknut to be ordered separately*				
• Material:			Cable gland: Nickle-plated brass polyamide				
10065000	M12 x 1.5	3 - 7	metal compression gland	23 - 30	5	16	**52.00**
10065001	M16 x 1.5	4.5 - 10	metal compression gland	26 - 34	5	20	**66.00**
10065002	M20 x 1.5	6 - 13	metal compression gland	29 - 37	6	24	**80.00**
10065003	M25 x 1.5	9 - 17	metal compression gland	33 - 42	7	29	**124.00**
10065004	M32 x 1.5	13 - 21	metal compression gland	36 - 44	8	36	**205.00**
10065005	M40 x 1.5	16 - 28	metal compression gland	44 - 55	8	46	**384.00**
10065006	M50 x 1.5	21 - 35	metal compression gland	51 - 62	9	55	**548.00**
10065007	M63 x 1.5	34 - 48	metal compression gland	56 - 67	10	68	**1 160.00**
EMMU locknuts for above			Material: *Nickle-plated brass*				
10063141	M12 x 1.5	–	metal gland locknut	–	–	15	**3.90**
10063142	M16 x 1.5	–	metal gland locknut	–	–	19	**5.80**
10063143	M20 x 1.5	–	metal gland locknut	–	–	24	**7.10**
10063144	M25 x 1.5	–	metal gland locknut	–	–	30	**10.90**
10063145	M32 x 1.5	–	metal gland locknut	–	–	36	**17.30**
10063146	M40 x 1.5	–	metal gland locknut	–	–	46	**28.20**
10063147	M50 x 1.5	–	metal gland locknut	–	–	60	**61.00**
10063148	M63 x 1.5	–	metal gland locknut	–	–	70	**91.00**

Above ZAR prices do not include VAT. E&OE

10101862


10108616

10062...

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Cable gland accessories

SPRINT cable glands can be further enhanced to be applied for diverse applications by the introduction of various special inserts for blind, reduced cable diameters, multiple cable sealing.

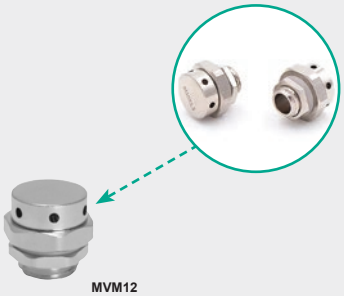
type	model	for gland	compress area (mm)	colour	description	price
Grommets		*membrane cable entry with strain relief*			*-40°C...65°C*	
CLIXX	push-in grommet enabling the simplest cable entry through a membrane with cable strain relief built-in.					
• Reliable sealing:	IP66 and IP67 to EN 60 529 weather proof, UV resistant					
• Space-saving:	Flat design, minimal space requirement					
• Easiest assembly:	Ext. mounting from one side - no thread, no tools, no locknuts					
• Incorporated:	Strain relief to EN 50 262 Type A					
• Time-saving:	Simple one-hand-only assembly reduce installation time by 80%					
• For wall thickness:	0.8 - 3.5 mm					
• Material:	Polypropylene / Thermoplastic elastomere					
10101861	CLIXX 16	M16	4.5...10	grey	membrane cable entry	**9.00**
10101359	CLIXX 20	M20	6...13	grey	membrane cable entry	**7.70**
10101862	CLIXX 25	M25	9...17	grey	membrane cable entry	**12.20**
MultiCLIXX	Multiple membrane cable entry with strain relief					
• Multiple cable entries	2 x Ø 4...8 mm + 2 x Ø 7...12 mm					
• Fast installation:	Push in - insert cable - done *(for maximum time saving)*					
• Strain relief:	EN 62444, Type A - for up to four cables at the same time					
10108616	EMTZ	M32	2 x 4-8 / 7-12	grey	multiple membrane entry	**49.00**
Reduction sealing inserts		*for reduced cable diameters with existing gland*			*IP68*	
• Material:	EPDM					
• Operating temperature:	-40°C...100°C					
10062183	RDE 12	M12	1...3		gland reduction sealing inserts	**5.20**
10062184	RDE 16	M16	2...6		gland reduction sealing inserts	**6.50**
10062185	RDE 20	M20	4...8		gland reduction sealing inserts	**6.50**
10060768	RDE 25	M25	7...12		gland reduction sealing inserts	**8.40**
10062186	RDE 32	M32	9...14		gland reduction sealing inserts	**18.60**
10062187	RDE 40	M40	12...20		gland reduction sealing inserts	**43.00**

Adaptors *(plastic)*

- Temperature range: -40°C to 100°C
- Material: Polyamide, reinforced glass fibre
- Colour RAL 7035 • Glow wire test 650 °C

type	model	from male	to female	description		TL (mm)	price
Enlargement adaptors		**metric to metric**					
10063570	KEM 12/16	M12	M16	enlarging	adaptor	27	**11.60**
10063571	KEM 16/20	M16	M20	enlarging	adaptor	27	**11.60**
10063572	KEM 20/25	M20	M25	enlarging	adaptor	27	**14.80**
10063573	KEM 25/32	M25	M32	enlarging	adaptor	28	**46.00**
10063574	KEM 32/40	M32	M40	enlarging	adaptor	30	**69.00**
10063575	KEM 40/50	M40	M50	enlarging	adaptor	30	**119.00**
Reduction adaptors		**metric to metric**					
10063577	KRM 16/12	M16	M12	reduction	adaptor	16	**9.70**
10063579	KRM 20/16	M20	M16	reduction	adaptor	17	**9.70**
10063582	KRM 25/20	M25	M20	reduction	adaptor	17	**18.00**
10063584	KRM 32/20	M32	M20	reduction	adaptor	19	**34.00**
10063585	KRM 32/25	M32	M25	reduction	adaptor	19	**34.00**
10063588	KRM 40/32	M40	M32	reduction	adaptor	19	**66.00**
10063591	KRM 50/40	M50	M40	reduction	adaptor	21	**90.00**
PG to Metric adaptors		**PG to metric**					
10063650	APM 7/12	PG 7	M12	metric to PG	adaptor	27	**12.90**
10063653	APM 9/16	PG 9	M16	metric to PG	adaptor	27	**14.10**
10063655	APM 11/16	PG 11	M16	metric to PG	adaptor	27	**15.40**
10063659	APM 13.5/20	PG 13.5	M20	metric to PG	adaptor	28	**16.70**
10063661	APM 16/20	PG 16	M20	metric to PG	adaptor	28	**17.30**
10063662	APM 16/25	PG 16	M25	metric to PG	adaptor	28	**17.30**
10063664	APM 21/25	PG 21	M25	metric to PG	adaptor	30	**20.60**
10063667	APM 29/32	PG 29	M32	metric to PG	adaptor	19	**28.20**
10063670	APM 36/40	PG 36	M40	metric to PG	adaptor	21	**76.00**
10063673	APM 42/40	PG 42	M40	metric to PG	adaptor	21	**140.00**

PVM8



MVM12

Vent pressure equalisation devices

Vent plugs/glands incorporate an internal membrane, designed to balance internal enclosure temperature and release pressure caused by differing internal temperatures to the outside ambient avoiding internal condensation without compromising the IP rating of the enclosure.

- Long service life in extreme environments
- Reduces fogging and internal condensation, improves heat emission efficiency in sealed enclosures

Vent plugs *(pressure equalisation for sealed enclosures)* **IP68**

type	thread size	colour	influent pressure	mi/min P;7kpa	description	price
Nylon PA66 - UL approved *(Flammability UL94V-2)*						
PVM8	M8	grey	>5 bar	>1200	screw-in vent plugs	**16.50**
PVM12	M12	grey	>5 bar	>2200	screw-in vent plugs	**16.50**
PVM16	M16	grey	>5 bar	>4600	screw-in vent plugs	**38.30**
10106591	M20	grey	>5 bar	>5230	screw-in vent plugs	**150.00**
10106593	M40	grey	>5 bar	>6820	screw-in vent plugs	**339.00**
PVM8B	M8	black	>5 bar	>1200	screw-in vent plugs	**16.50**
PVM12B	M12	black	>5 bar	>2200	screw-in vent plugs	**16.50**
PVM16B	M16	black	>5 bar	>4600	screw-in vent plugs	**38.30**
Nickel plated brass						
MVM8	M8	nickel	>5 bar	>1000	screw-in vent plugs	**56.00**
MVM12	M12	nickel	>5 bar	>2000	screw-in vent plugs	**56.00**
MVM16	M16	nickel	>5 bar	>3800	screw-in vent plugs	**84.00**

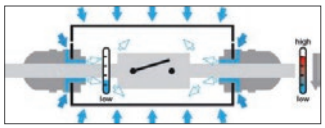
Ventilating gland *(pressure equalization for sealed enclosures)* **IP67**

BCGM20G

BCGM20B

Vent glands are essential components used in various applications to equalize pressure and prevent moisture ingress in sealed enclosures, ensuring that the internal components are protected from environmental factors. Normally:

1. The enclosure becomes warm during use, and a temperature difference can develop between the inside and outside.
2. This difference creates a vacuum, drawing air in from outside.
3. If the air cools and pressure does not equalise, condensation may form, potentially causing electrical breakdowns or short circuits. Therefore:
4. Using the breathable cable gland balances the enclosure's internal pressure with the surrounding pressure, fully maintaining its verified protection class.



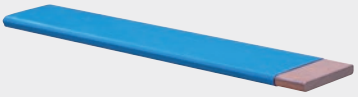
type	thread Ø	colour	compress area (mm)	air flow rate		description	price
Breathable gland *(compression gland and pressure equalisation element in one)*							
BCGM12G	M12	grey	4 - 8	14 l/h	PA66	ventilating gland	**20.60**
BCGM16G	M16	grey	5 - 10	22 l/h	PA66	ventilating gland	**22.80**
BCGM20G	M20	grey	6 - 12	42 l/h	PA66	ventilating gland	**24.20**
10100666	M25	grey	9 - 17	65 l/h	PA66	ventilating gland	**412.38**
10100801	M32	grey	13 - 21	115 l/h	PA66	ventilating gland	**574.32**
BCGM12B	M12	black	4 - 8	14 l/h	PA66	ventilating gland	**20.60**
BCGM16B	M16	black	5 - 10	22 l/h	PA66	ventilating gland	**22.80**
BCGM20B	M20	black	6 - 12	42 l/h	PA66	ventilating gland	**24.20**
10100667	M25	black	9 - 17	65 l/h	PA66	ventilating gland	**412.38**
10100802	M32	black	13 - 21	115 l/h	PA66	ventilating gland	**574.32**

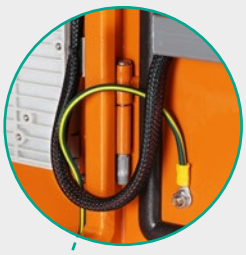
Blind plugs for glands for tight sealing of unused cable inlet

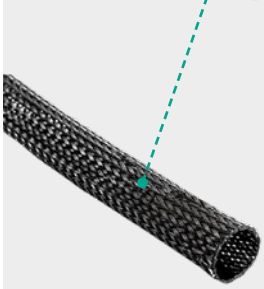
type	Ø dia	colour	material		description	price
• Operating temperature:	-40°C ...100°C					
SPR-024-B	2.4 mm	black	EPDM	blind plugs	for unused glands	**1.00**
SPR-034-B	3.4 mm	black	EPDM	blind plugs	for unused glands	**1.00**
SPR-060-B	6.0 mm	black	EPDM	blind plugs	for unused glands	**2.90**
SPR-071-B	7.0 mm	black	EPDM	blind plugs	for unused glands	**3.60**
SPR-100-B	10 mm	black	EPDM	blind plugs	for unused glands	**3.60**
SPR-120-B	12 mm	black	EPDM	blind plugs	for unused glands	**5.00**
SPR-140-B	14 mm	black	EPDM	blind plugs	for unused glands	**5.00**
SPR-158-B	15.8 mm	black	EPDM	blind plugs	for unused glands	**9.30**
SPR-178-B	17.8 mm	black	EPDM	blind plugs	for unused glands	**9.30**
SPR-215-B	21.5 mm	black	EPDM	blind plugs	for unused glands	**10.70**
SPR-245-B	24.5 mm	black	EPDM	blind plugs	for unused glands	**12.10**
SPR-306-B	30.6 mm	black	EPDM	blind plugs	for unused glands	**19.20**

SPR...

Above ZAR prices do not include VAT. E&OE







HFR-0...BK

Heat shrink tubing

Provides an effective halogen-free, flexible, flame retardant, abrasion resistant insulation protection for cables and busbars in electrical and electronics applications.

JD-HFT - Halogen free heat-shrinkable tubing

General purpose heat shrink tubing for use in enclosed areas where a flame retardant, halogen-free environment is required.

- Material: Polyolefin
- Colour: Black *(other colours available on request)*
- Shrink temperature: 90°C
- Operating temperature: -55°C...125°C

type	inside dia Ø	shrink ratio	after recovery dia Ø	after recovery wall thickness	description	roll length (meters)	price per roll
JD-HFT015-0	1.5 mm	3:1	0.5	≤ 0.40 mm	heat shrink tubing	200 m	**878.00**
JD-HFT030-0	3 mm	3:1	1.0	≤ 0.55 mm	heat shrink tubing	200 m	**1 050.00**
JD-HFT060-0	6 mm	3:1	2.0	≤ 0.60 mm	heat shrink tubing	100 m	**1 040.00**
JD-HFT090-0	9 mm	3:1	3.0	≤ 0.70 mm	heat shrink tubing	50 m	**789.00**
JD-HFT120-0	12 mm	3:1	4.0	≤ 0.70 mm	heat shrink tubing	50 m	**966.00**
JD-HFT180-0	18 mm	3:1	6.0	≤ 0.80 mm	heat shrink tubing	50 m	**1 760.00**
JD-HFT240-0	24 mm	3:1	8.0	≤ 1.00 mm	heat shrink tubing	25 m	**1 540.00**
JD-HFT390-0	39 mm	3:1	13.0	≤ 1.25 mm	heat shrink tubing	25 m	**2 830.00**
*Other colours (replace last digit **"0"** with: **"R"** (red) **"B"** (blue) **"W"** (white)*							**+ 10%**

JDD-BT-1KV *heat-shrinkable bus bar insulation protection (medium wall)*

Track resistant polyolefin heat-shrinkable bus bar tubing used to protect and insulate rectangular, square or round bus bars – halogen free, low smoke.

Busbar tubing calculation: *add four sides and divide by 3.4+10%*

- Material: Polyolefin
- Colour: Black *(other colours available on request)*
- Shrink ratio: 2:1
- Shrink temperature: 110°C
- Operating temperature: -55°C...125°C
- Tensile strength: ≥ 10.4MPa
- Elongation at break: ≥ 500%
- Dielectric strength: ≥ 25kV/mm

JDDBT020-0	20.0	2:1	8	1.10 mm	heat shrink tubing	100 m	**2 800.00**
JDDBT030-0	30.0	2:1	12	1.10 mm	heat shrink tubing	50 m	**2 210.00**
JDDBT040-0	40.0	2:1	16	1.10 mm	heat shrink tubing	50 m	**2 550.00**
JDDBT050-0	50.0	2:1	20	1.10 mm	heat shrink tubing	25 m	**1 550.00**
JDDBT060-0	60.0	2:1	24	1.10 mm	heat shrink tubing	25 m	**2 050.00**
JDDBT080-0	80.0	2:1	28	1.20 mm	heat shrink tubing	25 m	**2 870.00**
JDDBT100-0	100.0	2:1	50	1.20 mm	heat shrink tubing	25 m	**4 100.00**
*Other colours (replace last digit **"0"** with: **"R"** (red) **"B"** (blue) **"W"** (white)*							**+ 10%**

HFR - Expandable braided sleeving

Braided expandable sleeving provides excellent protection, durable abrasion resistance with excellent flame-retardant properties for the protection of wires, cables, wire harnesses, pipes and industrial hoses.

- Material: Polyester monofilament
- Standard colour: Black
- Operating temperature: -50°C...+150°C (melt point 230°C)
- Flammability: Flame retardant UL94 V-O
- Certified: RoHS, UL, CSA

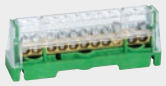
type	nominal size *	expanded range Ø min.	expanded range Ø max.	description	carton length	price
HFR-008BK	8 mm	5 mm	16 mm	expandable braided sleeving	100 m	**778.00**
HFR-010BK	10 mm	7 mm	19 mm	expandable braided sleeving	100 m	**1 110.00**
HFR-012BK	12 mm	8 mm	24 mm	expandable braided sleeving	50 m	**612.00**
HFR-015BK	15 mm	10 mm	27 mm	expandable braided sleeving	50 m	**855.00**
HFR-020BK	20 mm	14 mm	30 mm	expandable braided sleeving	50 m	**1 020.00**
HFR-030BK	30 mm	20 mm	50 mm	expandable braided sleeving	50 m	**1 740.00**
HFR-040BK	40 mm	30 mm	60 mm	expandable braided sleeving	50 m	**2 540.00**
HFR-050BK	50 mm	40 mm	80 mm	expandable braided sleeving	50 m	**3 280.00**

* *Nominal size indicates flat width*

Application tools for above products

KD-8-3	handheld hot knife to cut and seal braided sleeving *(to prevent fraying)*	**2 040.00**
CS-800	hot gun 100-590°C digital temperature control for heatshrink tubing	**1 480.00**

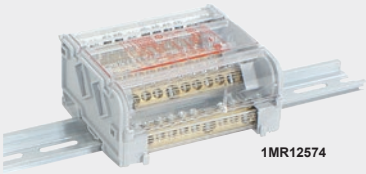
M1011B


M1011V

M107G

1MR6372

1MR12572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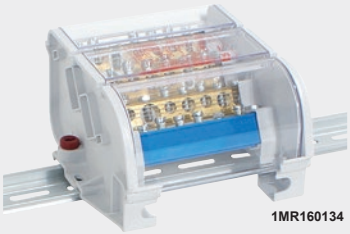
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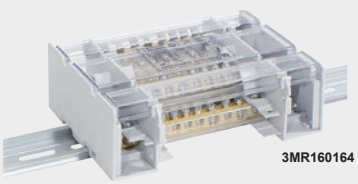

3MR160164

Distribution terminals *- (7,11,15 way)*

General features:

Maximum operating temperature:	-5ºC...+85ºC (heat resistance to +130ºC)
Insert material:	Brass with zinc plated screws
Insulating body material:	Support material polyamide – cover polycarbonate
Mounting:	DIN rail mounting (EN50022) or screw down
Standards:	EN 60998-1, EN 60998-2-1

Multi way terminal posts *(DIN rail mountable) 750V*

type	No. ways	description	max. wire size (mm²) input	10	16	25	35	dimensions (mm) (H)	(W)	(D)	price
M107V	7	green (earth) bar	2x16	5x	–	–	–	59	19	34	**53.00**
M1011V	11	green (earth) bar	2x16	9x	–	–	–	88	19	34	**75.00**
M1015V	15	green (earth) bar	2x16	13x	–	–	–	114	19	34	**98.00**
M107B	7	blue (neutral) bar	2x16	5x	–	–	–	59	19	34	**53.00**
M1011B	11	blue (neutral) bar	2x16	9x	–	–	–	88	19	34	**75.00**
M1015B	15	blue (neutral) bar	2x16	13x	–	–	–	114	19	34	**98.00**
M107G	7	grey (phase) bar	2x16	5x	–	–	–	59	19	34	**53.00**
M1011G	11	grey (phase) bar	2x16	9x	–	–	–	88	19	34	**75.00**
M1015G	15	grey (phase) bar	2x16	13x	–	–	–	114	19	34	**98.00**

Multi-pole protected distribution terminals *(DIN rail mountable) 750V*

1MR series - Distribution terminals

- DIN rail or chassis mounting
- Low profile 45 mm deep *(height of standard MCBs)*
- Supplied with insulated DIN rail cover
- Rated voltage: 750V

type	No. ways	amps	no. bars	max. wire size (mm²) input	10	16	25	35	dimensions (mm) (H)	(W)	(D)	price
2-pole - (1Ph+N)												
Ipk 12kA - Icc rms 6kA - Icw rms (1s) 1.9kA												
1MR6372	7	63A	2	2x16	5x	–	–	–	68	59	45	**131.00**
1MR63112	11	63A	2	2x16	9x	–	–	–	68	88	45	**162.00**
Ipk 22kA - Icc rms 11kA - Icw rms (1s) 6kA												
1MR12572	7	125A	2	35 mm²	5x	–	1x	–	47	68	45	**215.00**
1MR125112	11	125A	2	35 mm²	6x	2x	2x	–	47	105	45	**308.00**
1MR125152	15	125A	2	35 mm²	10x	2x	2x	–	47	134	45	**358.00**
4-pole - (3ph+N)												
Ipk 22kA - Icc rms 11kA - Icw rms (1s) 6kA												
1MR12574	7	125A	4	35 mm²	5x	–	1x	–	98	72	45	**332.00**
1MR125114	11	125A	4	35 mm²	6x	2x	2x	–	98	109	45	**477.00**
1MR125154	15	125A	4	35 mm²	10x	2x	2x	–	98	138	45	**571.00**

*Additional terminal bars **M107/1011/1015** can easily be clipped onto above distribution terminals*

160A stepped distribution block 70 mm deep profile

Ipk 24kA - Icc rms 12kA - Icw rms (1s) 8kA												
1MR160134	13	160A	4	50 mm²	–	8x	2x	2x	136	186	70	**1 080.00**

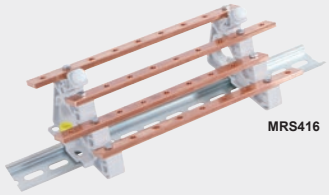
3MR series - Distribution terminal

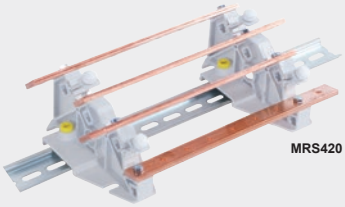
Separated incoming terminals *(two extra large incoming phase terminals on either side)*

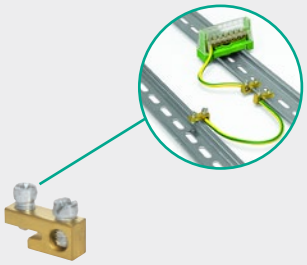
Ipk 22kA - Icc rms 11kA - Icw rms (1s) 6kA												
3MR125164	16	125A	4	35 mm²	11x	2x	2x	–	107	202	45	**761.00**
Ipk 24kA - Icc rms 12kA - Icw rms (1s) 8kA												
3MR160164	16	160A	4	50 mm²	11x	–	2x	2x	107	233	45	**1 560.00**

Above ZAR prices do not include VAT. E&OE

MRS122


MRS416


MRS420


MTB

Busbar supports

The MRS range of busbar supports are four pole (3Ph+N) with stepped phases for easy access and termination. Ideally combined with drilled and threaded copper busbars to make up distribution terminals of any size.

Insulating protection covers are available *(in one-meter lengths)* to provide protection against accidental touch of the bars. Ipk ratings are influenced by bar dimensions and the distance between supports.

General features:

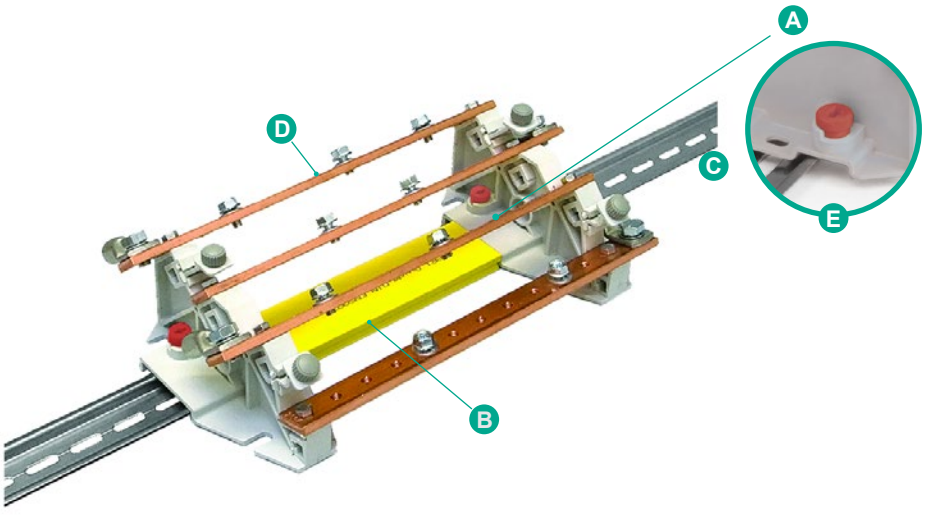
Maximum operating temperature:	+85ºC
Heat resistance:	+130ºC
Insulating body material:	Polyamide
Mounting:	DIN rail or chassis mount
Standards:	CEI EN 17-13/1 EN 60439

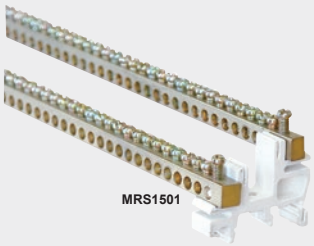
type	amps	no. bars	max bar width	description	dimensions (mm) (H)	(W)	(D)	price
Multi-pole busbar supports								
• DIN rail or chassis mount • With mounting accessories for *(optional)* protection cover and busbar mounting								
2-pole supports (1Ph+N)				*supplied in pairs (2pcs)*				
MRS122	65A	2	12 mm	1P+N busbar supports (2 pcs)	47	14	18	**271.00**
4-pole stepped supports (3Ph+N)				*supplied in 4 pcs (2 pair per set)*				
160A - 4-pole busbar support								
MRS416*	160A	4	16 mm	3P+N busbar supports *(4 pcs)*	90	25	57	**992.00**
250A - 4-pole busbar support								
MRS420*	250A	4	20 mm	3P+N busbar supports *(4 pcs)*	132	67	59	**1 380.00**
* With eccentric pivot for safe mounting on DIN rail								
Terminal protection covers *(for above supports)*								
MRC2150	screen			protection cover for busbar support **MRS416** *(1 meter length)*				**359.00**
MRC2250	screen			protection cover for busbar support **MRS420** *(1 meter length)*				**456.00**
MTB	DIN rail earthing terminal			*(for connecting earth wire to DIN rail)*				**23.10**

Busbar - System

Example of a complete MRS busbar system:

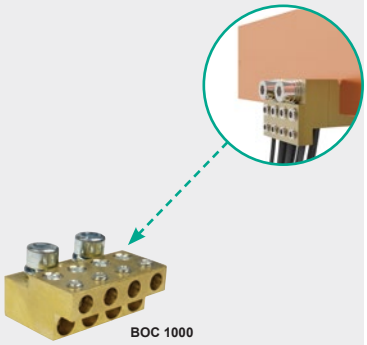
A - MRS420 - 4-pole busbar support
B - DIN rail protection screen cover *(on request)*
C - Perforated DIN rail, see page **L-13**
D - Thread copper bar, see page **L-36**
E - Eccentric pin for fixing the terminal block on the DIN rail guarantees maximum safety and reliability

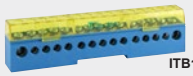



MRS1501

MRS3005

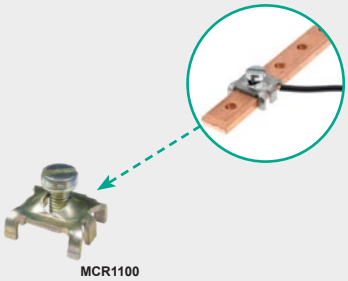
MRS3500


BOC 1000


ITB1025

ITB1035

ITB1000


MCR1100

Brass earthing and neutral terminals

- Brass bars with galvanised steel screws *(with cross head)*

type	wire sizes mm² 1.5...4	2.5...6	4...16	16...35	No. of ways	screw Ø	dimensions (mm) (H)	(W)	(L)	price
Single connection per hole										
MRS1501	–	113	–	–	113	M4	9	6	1 meter	**466.00**
MRS1506	–	–	116	–	116	M5	12	8	1 meter	**627.00**
1300110	rail or base mount double support for brass rod									**11.60**
Double connection per hole	M4 mounting holes									
MRS3000	–	2 x 6	–	–	12	M5	9	19	102	**162.00**
MRS3005	–	2 x 12	–	–	24	M5	9	19	144	**220.00**
MRS3010	–	2 x 24	–	–	48	M5	9	19	230	**370.00**

Chassis mounting earthing terminals

- Universal fixing: chassis mount or direct copper bar mount
- M6 mounting screws and input termination supplied with nuts, spacers and washers

MRS2000	8	8	3	1	20	M5	6	13	215	**374.00**
MRS5000	19	24	6	1	50	M5	6	13	462	**558.00**

Double connection per hole

- Universal fixing: chassis mount or direct copper bar mount
- M8 bolt to accommodate cable lug up to 95 mm²
- M6 mounting screws supplied with nuts, spacers and washers

MRS3500	2 x 14	2 x 19	2 x 7	2 x 1	82	M5	13	20	462	**1 190.00**

Brass tap-off distribution block - direct busbar mounted *(drilled or clamp-on)*

- For direct connection onto Busbar, to tap off cables *(4 x 2.5...25 mm² + 4 x 4...35 mm²)*

BOC 1000	brass bolt-on busbar mounting terminal	*(8 x outputs)*	**434.00**
BOC 1005	brass clamp-on busbar mounting terminal	*(for 5 mm bars)*	**692.00**
BOC 1010	brass clamp-on busbar mounting terminal	*(for 10 mm bars)*	**872.00**

Distribution terminals

Single pole distribution terminals *DIN rail mountable - 7, 11, 15 way*

Insulating body:	PA 66 UL94-V0
Insert material:	Brass, screws galvanised steel
Mounting:	DIN rail mounting
Base colours:	Green, Blue, Grey
Protection cover:	PC UL94-V0, transparent yellow
Standards:	EN 60947-7-1

type	no. ways	base colour	wire size mm² **In** (2x)	No.	**Out**	description	length (mm)	price
Unipolar terminal blocks								
ITB1030	7	green	2.5 - 16	5 x	1.5 - 6	earth distribution block	63	**46.00**
ITB1035	11	green	2.5 - 16	9 x	1.5 - 6	earth distribution block	95	**65.00**
ITB1040	15	green	2.5 - 16	13 x	1.5 - 6	earth distribution block	125	**82.00**
ITB1015	7	blue	2.5 - 16	5 x	1.5 - 6	neutral distribution block	63	**46.00**
ITB1020	11	blue	2.5 - 16	9 x	1.5 - 6	neutral distribution block	95	**65.00**
ITB1025	15	blue	2.5 - 16	13 x	1.5 - 6	neutral distribution block	125	**82.00**
ITB1000	7	grey	2.5 - 16	5 x	1.5 - 6	phase distribution block	63	**46.00**
ITB1005	11	grey	2.5 - 16	9 x	1.5 - 6	phase distribution block	95	**65.00**
ITB1010	15	grey	2.5 - 16	13 x	1.5 - 6	phase distribution block	125	**82.00**
ITB2000	DIN rail mount support for horizontal mounting of up to 4 of above terminals							**18.40**

Spider connector for threaded bars 12 mm wide

- Material: Passivated galvanised steel
- Connections: 1 or 2 cables 1.5…10 mm²
- Complete with: M5 x 12 screws

MCR1100	spider connector to connect cables to 12 mm threaded bar	1.5…10 mm²	**13.50**

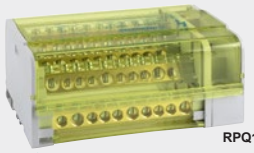
Above ZAR prices do not include VAT. E&OE

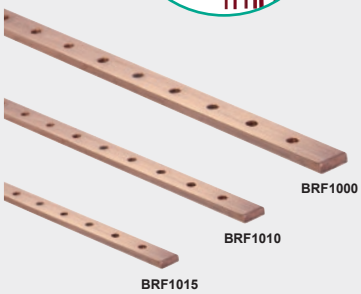
Distribution blocks & threaded copper bars

Distribution blocks permit simple termination from one main incomer supply (up to 500A) to be distributed to many other lower current outputs downstream. Equipped with an opening transparent protection screen for easy inspection of terminations.

RPU2995

RPQ1010


RPQ1018


BRF1000
BRF1010
BRF1015

PSP1002 PSP1005

type	rated current (A)	feed-in terminals max. cable (mm²)	feed-in terminals busbar W (mm)	max. output terminals (mm²) –	6	10	16	35	Icw (kA)	Ipk (kA)	dimensions (mm) (H)	(W)	(D)	price
RP series - Power distribution blocks														
• Insulating body: PA 66 UL 94-V0, Cover: PC, transparent yellow.														
• Conduction block: Tinned copper														
• Index protection: IP20														
• Compliant with standard EN 60947-7-1														
Single pole power distribution blocks - *can receive Cable or Flexible/rigid bars (in some cases)*														
RPU2995	80A	6…16	–	–	4x	–	2x	–	3	22	66	30	46	**210.00**
RPU3000	125A	10…35	9	–	–	–	9x	–	4.4	30	75	40	48	**440.00**
RPU3005	160A	10…70	13	–	–	–	9x	–	11	30	75	40	48	**620.00**
RPU3010	250A	35…120	15.5	–	–	4x	5x	2x	21	51	96	47	50	**850.00**
RPU3015	400A	95…185	20	–	–	4x	5x	2x	21	51	96	47	50	**950.00**
RPU3020	500A	–	24	–	–	4x	5x	2x	21	51	96	47	50	**1 030.00**
Three pole power distribution blocks - *can receive Cable or Flexible/rigid bars (in some cases)*														
RPT3000	125A	10…35	9	–	–	–	6x	–	4.4	30	75	85	48	**1 060.00**
RPT3005	160A	10…70	13	–	–	–	6x	–	11	30	75	85	48	**1 250.00**
Multi-pole distribution blocks DIN rail mountable EN 60947-7-1														
Mounting: DIN rail or chassis mounting														
Insulating structure: Self-extinguishing to UL94-V0 - Insulation between phases														
Conductor material: Brass conductors - galvanised steel screws														
Protection cover: PC UL94-VO, transparent yellow - front removal														
4-pole (3ph+N) distribution blocks *DIN rail mounting*														
Low profile version *50 mm deep (fits into same space as standard MCBs)*														
RPQ1000	125A	10...35	–	–	5	–	1	–	4.2	20	84	66	50	**350.00**
RPQ1005	125A	10...35	–	–	7	–	2	1	4.2	20	84	100	50	**450.00**
RPQ1010	125A	10...35	–	–	11	–	2	1	4.2	20	84	132	50	**610.00**
Separated input terminals														
Front entry input terminals - *(2 phases on each side)*														
RPQ1015	160A	10...50	–	–	–	–	8	3	9	22	85	168	70	**1 210.00**
Side entry input terminals - *(all inputs from left side)*														
RPQ1018	160A	10...50	–	–	–	–	8	3	9	22	95	154	67	**1 330.00**

Threaded copper bars *(bolts/screws, washers not supplied)*

- Pre-punched and threaded copper bars *(ready for use)*
- Electrolytic copper Cu-ETP 99.90% *(rounded corners)*
- Current (A) based on ΔT temperature rise as per DIN 43671 *(reference room temperature of 35°C)*

type	In (A) ΔT 30°C	In (A) ΔT 50°C	screw Ø	hole centers	description	dimensions (mm) (H)	(W)	(L)	price (ea)
BRF1000	160A	212A	M5	18 mm	threaded copper busbar	12	4	1 meter	**650.00**
BRF1005	183A	241A	M5	18 mm	threaded copper busbar	12	5	1 meter	**800.00**
BRF1010	218A	289A	M6	25 mm	threaded copper busbar	15	5	1 meter	**940.00**
BRF1015	274A	363A	M6	25 mm	threaded copper busbar	20	5	1 meter	**1 140.00**
BRF1020	400A	530A	M6	25 mm	threaded copper busbar	32	5	1 meter	**1 830.00**
BRF1045	573A	756A	M8	25 mm	threaded copper busbar	30	10	1 meter	**3 500.00**

Busbar supports

4-pole (3ph+N) insulated busbar supports

- Polyamide 66 reinforced with 30% fiberglass
- Self-extinguishing UL 94-V0 - Halogen free
- Working temperature: -40°C ...+130°C
- Glow wire test: 960°C
- Supplied with screws and nuts for mounting on panels

250A - DIN rail or chassis mount busbar support *(1 piece per pack)*						
PSP1002	250A	busbar support for 15/20 mm x 5 mm bars	190	20	105	**320.00**
400A - panel mount busbar support *(2 piece per pack)*						
PSP1005	400A	Busbar support for 15/20/30 mm x 5/10 mm bars	216	34	117	**1 320.00**

ISO...

CLN...

SM...

SM...

SM...

SM...

ISO3005

Busbar standoff insulators

The "stand off" insulator is used as an insulating support for active conductors to guarantee excellent electrical insulation capability; it can be used as a support for electrical devices, giving high mechanical resistance values, as well as a spacing and/or stiffening element of a system made of conductor bars *(copper and/or aluminium)*.

General features:

- Insulation: Polyamide 66 fibreglass reinforced (30%) (Halogen free)
- Self extinguishing: VO-UL94
- Glow wire test: 960°C
- Threaded inserts: Galvanized steel
- Rated voltage: 1000 VAC / 1500 VDC
- Working temperature: -40°C...130°C
- Colour: Black
- Conformity: IEC/EN60004-1 and IEC/EN 61439-1

type	height (H)	Ø width socket	threaded	torque (Nm)	description	price
ISO - Insulators		*injection moulded*			*UL approved (file No. 300607)*	
ISO2010	20 mm	15 mm	M6	8	busbar standoff insulators	**43.00**
ISO2020	25 mm	15 mm	M6	10	busbar standoff insulators	**48.00**
ISO2030	30 mm	26 mm	M8	25	busbar standoff insulators	**85.00**
ISO2040	35 mm	28 mm	M8	25	busbar standoff insulators	**91.00**
ISO2055	40 mm	28 mm	M8	25	busbar standoff insulators	**119.00**
ISO2070	45 mm	33 mm	M8	25	busbar standoff insulators	**132.00**
ISO2085	50 mm	29 mm	M8	25	busbar standoff insulators	**161.00**
ISO2100	60 mm	42 mm	M10	50	busbar standoff insulators	**202.00**
CLN - Spacer columns		*Injection moulded*			*UL approved (file No. 300607)*	
ISO2140	20 mm	20 mm	M6	8	spacing columns	**50.00**
ISO2155	25 mm	20 mm	M6	8	spacing columns	**52.00**
ISO2170	30 mm	20 mm	M6	8	spacing columns	**52.00**
ISO2185	35 mm	20 mm	M6	10	spacing columns	**57.00**
ISO2200	40 mm	20 mm	M6	10	spacing columns	**63.00**
ISO2270	55 mm	30 mm	M6	10	spacing columns	**185.00**
ISO2280	65 mm	30 mm	M6	10	spacing columns	**207.00**
ISO2245	30 mm	30 mm	M8	25	spacing columns	**128.00**
ISO2257	40 mm	30 mm	M8	25	spacing columns	**131.00**
ISO2267	50 mm	30 mm	M8	25	spacing columns	**172.00**
ISO2295	70 mm	30 mm	M8	25	spacing columns	**225.00**

SM - Econo busbar insulators

General features:

- Insulation: Polyester, fibreglass reinforced (20%)
- Self extinguishing: VO-UL94
- Threaded inserts: Galvanized steel
- Rated voltage: 1000 VAC / 1500 VDC
- Working temperature: -20°C...120°C
- Colour: Red RAL 3031

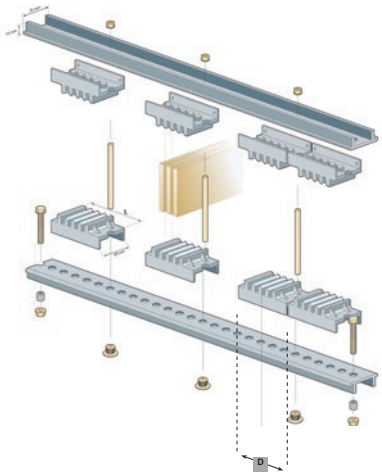
SM20	20 mm	15 mm	M6	6	busbar standoff insulators	**25.20**
SM25	25 mm	23 mm	M6	8	busbar standoff insulators	**26.70**
SM30	30 mm	26 mm	M8	10	busbar standoff insulators	**33.00**
SM35	35 mm	28 mm	M8	13	busbar standoff insulators	**35.90**
SM40	40 mm	34 mm	M8	13	busbar standoff insulators	**48.00**
SM45	45 mm	28 mm	M8	13	busbar standoff insulators	**51.00**
SM51	51 mm	29 mm	M8	27	busbar standoff insulators	**53.00**
SM60	60 mm	34 mm	M10	27	busbar standoff insulators	**97.00**
SM76	76 mm	36 mm	M10	54	busbar standoff insulators	**107.00**

Threaded stud kits for insulators

- Galvanized steel class 8.8 *(complete with threaded stud, nut, flat washer and spring lock washer)*

type	length (mm)	Ø	description	price
ISO3005	30 mm	M6	threaded stud kit for insulators	**46.00**
ISO3015	35 mm	M8	threaded stud kit for insulators	**60.00**
ISO3020	40 mm	M10	threaded stud kit for insulators	**69.00**

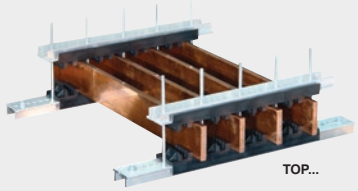
Above ZAR prices do not include VAT. E&OE



TOP - Universal busbar support – up to 4500A (IEC 60439-1)

- Universal busbar support system
- Adjustable distance between phases
- High short-circuit strength up to 100kA *(see **Annex-11** for ratings)*
- Non-magnetic aluminium alloy profile (EN AW-6060) prepunched *(12.5 mm pitch)*
- Quick and simplified universal fitting - cost effective
- For bars 30-120 mm wide / 5 or 10 mm thick
- Type tested according to IEC 60439-1 certification: ACAE LOVAG (65 / 75 / 100kA eff 1 sec)

type	for busbar thickness	no. bars		description	price
Ω TOP - Universal busbar support – up to 4500A (IEC 60439-1)					
Three pole system kits *(3Ph)*					
Supplied with:	Insulated supports (6) and all screws, nuts, washers				
TOP1005	5 mm	1 - 2	TOP2/5T	universal busbar support kit	**466.00**
TOP1025	10 mm	1	TOP1/10T	universal busbar support kit	**462.00**
TOP1035	10 mm	1 - 2	TOP2/10T	universal busbar support kit	**542.00**
TOP1045	10 mm	1 - 3	TOP3/10T	universal busbar support kit	**710.00**
Four pole system kits *(3Ph+N)*					
Supplied with:	Insulated supports (8) and all screws, nuts, washers				
TOP1010	5 mm	1 - 2	TOP2/5TN	universal busbar support kit	**589.00**
TOP1030	10 mm	1	TOP1/10TN	universal busbar support kit	**600.00**
TOP1040	10 mm	1 - 2	TOP2/10TN	universal busbar support kit	**695.00**
TOP1050	10 mm	1 - 3	TOP3/10TN	universal busbar support kit	**910.00**
Accessories					
TOP1000				pre-punched aluminium profile *(12.5 mm pitch)* *(2 metre length)*	**632.00**
TOP1100				bracket for horizontal mounting of busbar system profiles	**180.00**
TOP1105				bracket for vertical mounting of busbar system profiles	**123.00**
TOP1055				rislan tube to insulate tie rods *(only required for minimum distance)*	**18.40**

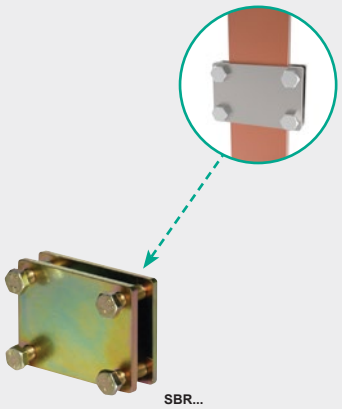


TOP Junior - Fixed busbar support – up to 1600A (IEC 61439-2)

- Universal busbar support system
- Distance between phases 70 mm
- High short-circuit strength up to 60kA *(see **Annex-11** for ratings)*
- Polyamide 6/6 reinforced with 30% fibreglass - self-extinguishing UL 94-V0
- Single reference for use with 5 or 10 mm thick bars
- For bars 30-80 mm wide / 5 or 10 mm thick
- Type tested according to IEC 61439-2 certification: ACAE LOVAG (65kA eff 1 sec)

Four pole system kit *(3Ph+N)*					
Supplied with:	Insulated supports (2) and all screws, nuts, washers				
TOP2000	5/10 mm	2/1	TOP J 5 - 10	universal busbar support kit	**1 490.00**

Busbar clamps *(galvanized steel 5 mm thick)*



- Permits direct connection of flexible and solid bars, from main bar *(without drilling)*

type	max. bar width	flexi bar width	plate dimensions	description	price
Rectangular busbar clamps					
SBR1000	50 mm	20/24 mm	77 x 51 mm	busbar connection clamps	**273.00**
SBR1005	50 mm	32 mm	77 x 59 mm	busbar connection clamps	**274.00**
SBR1010	50 mm	40 mm	77 x 67 mm	busbar connection clamps	**278.00**
SBR1020	80 mm	32 mm	107 x 59 mm	busbar connection clamps	**296.00**
SBR1025	80 mm	50 mm	107 x 77 mm	busbar connection clamps	**304.00**
Square busbar clamps					
SBQ1000	30 mm	30 mm	53 x 53 mm	busbar connection clamps	**299.00**
SBQ1005	40 mm	40 mm	63 x 63 mm	busbar connection clamps	**315.00**
SBQ1015	63 mm	63 mm	90 x 90 mm	busbar connection clamps	**402.00**
SBQ1020	80 mm	80 mm	115 x 115 mm	busbar connection clamps	**495.00**
SBQ1025	100 mm	100 mm	135 x 135 mm	busbar connection clamps	**588.00**

Please note: *Prices of copper products are based on the London Metal Exchange and will vary from time to time. Consult our sales department for the latest pricing before placing orders.*

Made in Italy TEKNOMEGA

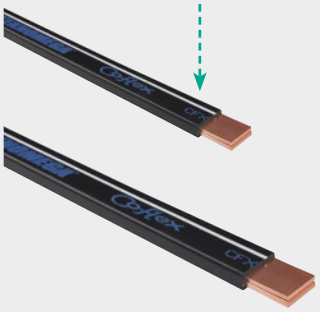
Flexible copper busbar

Coflex series - Insulated flexible busbars

COFLEX is designed with high conductivity electrolytic copper laminates (CuETP), protected within a durable highly resistant self extinguishing PVC insulation, guaranteeing excellent electrical insulation in aggressive high temperature environments.

- Conductor: Electrolytic copper Cu-ETP 99.90% *(laminate thickness 0.8 - 1.0 mm)*
- Insulation: Self-extinguishing PVC UL 94-V0 *(thickness 2 mm)*
- Dielectric rigidity: 20 kV / mm
- Max. elongation: 365%
- Rated voltage: 1000 VAC / 1500 VDC
- Working temperature: -40°C...+105°C
- Standard length: 2 meters

Saving of time | Footprint Reduced | Saving of copper



type	conductor size (mm)						ΔT (°K) see ***Annex-13*** max. current capacity (A) at ΔT (°K) as per IEC 439-1					price
	width	No. Laminations	thick	total thickness	cross section (mm²)	length (metre)	65°C	**50°C**	40°C	30°C	20°C	
Insulated flexible busbars *(2 metre lengths)*												
CFX 1005	9	3	0.8	2.4	21.6	2	160	**140**	125	108	89	**560.00**
CFX 1020	9	6	0.8	4.8	43.2	2	285	**250**	224	194	158	**1 030.00**
CFX 1023	13	6	0.5	3	39	2	285	**250**	224	194	158	**900.00**
CFX 1035	15.5	4	0.8	3.2	49.6	2	365	**320**	286	248	202	**1 160.00**
CFX 1045	15.5	6	0.8	4.8	74.4	2	456	**400**	358	310	253	**1 710.00**
CFX 1060	20	3	1.0	3	60	2	399	**350**	313	271	221	**1 380.00**
CFX 1070	20	5	1.0	5	100	2	490	**430**	385	333	272	**2 200.00**
CFX 1076	20	8	1.0	8	160	2	638	**560**	501	434	354	**3 410.00**
CFX 1090	24	3	1.0	3	72	2	456	**400**	358	310	253	**1 620.00**
CFX 1100	24	5	1.0	5	120	2	581	**510**	456	395	323	**2 610.00**
CFX 1115	24	10	1.0	10	192	2	912	**800**	716	620	506	**4 980.00**
CFX 1135	32	5	1.0	5	160	2	741	**650**	581	503	411	**3 410.00**
CFX 1145	32	8	1.0	8	256	2	992	**870**	778	674	550	**5 430.00**
CFX 1150	32	10	1.0	10	320	2	1163	**1020**	912	790	645	**7 150.00**
CFX 1170	40	5	1.0	5	200	2	884	**775**	693	600	490	**4 390.00**
CFX 1180	40	8	1.0	8	320	2	1180	**1035**	926	802	655	**6 920.00**
CFX 1185	40	10	1.0	10	400	2	1343	**1178**	1054	912	745	**8 710.00**
CFX 1200	50	5	1.0	5	250	2	1055	**925**	827	717	585	**5 580.00**
CFX 1210	50	8	1.0	8	400	2	1357	**1190**	1064	922	753	**8 840.00**
CFX 1215	50	10	1.0	10	500	2	1573	**1380**	1234	1069	873	**11 220.00**
CFX 1230	63	5	1.0	5	315	2	1209	**1060**	948	821	670	**7 180.00**
CFX 1240	63	8	1.0	8	504	2	1596	**1400**	1252	1084	885	**11 220.00**
CFX 1245	63	10	1.0	10	630	2	1391	**1615**	1444	1251	1021	**13 970.00**
CFX 1260	80	5	1.0	5	400	2	1459	**1280**	1145	991	810	**7 490.00**
CFX 1270	80	8	1.0	8	640	2	1833	**1608**	1438	1246	1017	**12 650.00**
CFX 1275	80	10	1.0	10	800	2	2028	**1779**	1591	1378	1125	**15 290.00**
CFX 1285	100	5	1.0	5	500	2	1750	**1535**	1373	1189	971	**11 330.00**
CFX 1300	100	10	1.0	10	1000	2	2394	**2100**	1878	1627	1328	**22 220.00**

Derating coefficient for bars in parallel			
Number of bars	2 bars	3 bars	4 bars
Coefficient to use x	1.8	2.5	3.2

Accessories

Simple support with spacer

- For use with insulated flexible bars up to 32 x 10 mm
- Possibility to fit up to 4 flexible bars
- Mounts into panel board by means of screw *(not supplied)* inserted at the base of spacer
- Excellent heat dissipation due to the spacing between bars

DZP3000 panel mount spacer and overlapping support for flexible bars up to 32 x 10 mm **60.00**

Above ZAR prices do not include VAT. E&OE

Please note: *Prices of copper products are based on the London Metal Exchange and will vary from time to time. Consult our sales department for the latest pricing before placing orders.*

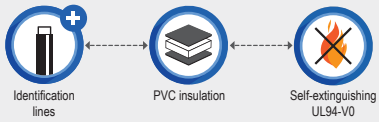
Flexible copper braided links

Insulated copper braided links *highly flexible braided copper link with PVC insulation*

No cutting - no stripping - no lug - no crimping

J-LINK is a ready-to-use flexible prefabricated shunt made of tinned copper braid, coated with PVC insulation. for the quickest, most convenient solution to create electrical connections from 125 to 630 A.

- Conductor: Tinned electrolytic copper braid Cu-ETP 99.90% *(wire strand 0.20 mm)*
- Insulation: Self-extinguishing PVC UL94V0 *(thickness 1.8 - 2 mm)*
- Dielectric rigidity: 20 kV / mm
- Rated voltage: 1000 VAC / 1500 VDC
- Working temperature: -40°C ... +105°C
- Standard length: 330 ... 1030 mm lengths



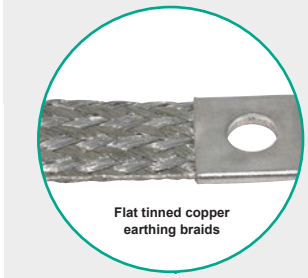
type	conductor size (mm) width	thickness	length	cross sec. (mm²)	ΔT (°K) see ***Annex-13*** max. current capacity (A) at ΔT (°K) as per IEC 439-1 **45°C**	35°C	25°C	description	price
25 mm² insulated braided links								*mounting holes: Ø d1=8.5 / Ø d2=10.5 mm*	
JLK1005	20	4.3	330	25	**185**	175	145	insulated braided shunt	**270.00**
JLK1010	20	4.3	430	25	**185**	175	145	insulated braided shunt	**320.00**
JLK1015	20	4.3	530	25	**185**	175	145	insulated braided shunt	**360.00**
JLK1020	20	4.3	630	25	**185**	175	145	insulated braided shunt	**410.00**
JLK1021	20	4.3	730	25	**185**	175	145	insulated braided shunt	**470.00**
JLK1023	20	4.3	930	25	**185**	175	145	insulated braided shunt	**570.00**
35 mm² insulated braided links								*mounting holes: Ø d1=8.5 / Ø d2=10.5mm*	
JLK1030	20	4.9	330	35	**225**	205	170	insulated braided shunt	**340.00**
JLK1035	20	4.9	430	35	**225**	205	170	insulated braided shunt	**410.00**
JLK1040	20	4.9	530	35	**225**	205	170	insulated braided shunt	**480.00**
JLK1045	20	4.9	630	35	**225**	205	170	insulated braided shunt	**540.00**
JLK1046	20	4.9	730	35	**225**	205	170	insulated braided shunt	**630.00**
JLK1048	20	4.9	930	35	**225**	205	170	insulated braided shunt	**770.00**
JLK1049	20	4.9	1030	35	**225**	205	170	insulated braided shunt	**840.00**
50 mm² insulated braided links								*mounting holes: Ø d1=8.5 / Ø d2=10.5 mm*	
JLK1055	20	5	330	50	**280**	250	220	insulated braided shunt	**420.00**
JLK1060	20	5	430	50	**280**	250	220	insulated braided shunt	**520.00**
JLK1065	20	5	530	50	**280**	250	220	insulated braided shunt	**620.00**
JLK1070	20	5	630	50	**280**	250	220	insulated braided shunt	**690.00**
JLK1071	20	5	730	50	**280**	250	220	insulated braided shunt	**790.00**
JLK1073	20	5	930	50	**280**	250	220	insulated braided shunt	**970.00**
JLK1074	20	5	1030	50	**280**	250	220	insulated braided shunt	**1 060.00**
85 mm² insulated braided links								*mounting holes: A=8.5 / B=10.5 mm*	
JLK1145	24	6.5	330	85	**350**	320	270	insulated braided shunt	**680.00**
JLK1150	24	6.5	430	85	**350**	320	270	insulated braided shunt	**840.00**
JLK1155	24	6.5	530	85	**350**	320	270	insulated braided shunt	**1 000.00**
JLK1160	24	6.5	630	85	**350**	320	270	insulated braided shunt	**1 160.00**
JLK1165	24	6.5	730	85	**350**	320	270	insulated braided shunt	**1 350.00**
JLK1175	24	6.5	930	85	**350**	320	270	insulated braided shunt	**1 720.00**
JLK1180	24	6.5	1030	85	**350**	320	270	insulated braided shunt	**1 880.00**
120 mm² insulated braided links								*mounting holes: Ø d1=10.5 / Ø d2=10.5 mm*	
JLK1075	30	7.5	330	120	**440**	400	335	insulated braided shunt	**1 060.00**
JLK1080	30	7.5	430	120	**440**	400	335	insulated braided shunt	**1 240.00**
JLK1085	30	7.5	530	120	**440**	400	335	insulated braided shunt	**1 470.00**
JLK1090	30	7.5	630	120	**440**	400	335	insulated braided shunt	**1 710.00**
JLK1095	30	7.5	730	120	**440**	400	335	insulated braided shunt	**1 880.00**
JLK1097	30	7.5	930	120	**440**	400	335	insulated braided shunt	**2 330.00**
JLK1098	30	7.5	1030	120	**440**	400	335	insulated braided shunt	**2 490.00**
240 mm² insulated braided links								*mounting holes: Ø d1=12.5 / Ø d2=10.5 mm*	
JLK1100	32	12.5	330	240	**730**	680	565	insulated braided shunt	**2 100.00**
JLK1105	32	12.5	430	240	**730**	680	565	insulated braided shunt	**2 450.00**
JLK1110	32	12.5	530	240	**730**	680	565	insulated braided shunt	**2 840.00**
JLK1115	32	12.5	630	240	**730**	680	565	insulated braided shunt	**3 270.00**
JLK1120	32	12.5	730	240	**730**	680	565	insulated braided shunt	**3 590.00**
JLK1130	32	12.5	930	240	**730**	680	565	insulated braided shunt	**4 620.00**
JLK1135	32	12.5	1030	240	**730**	680	565	insulated braided shunt	**4 970.00**

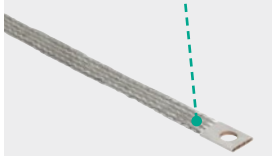
Phase colours: *Besides standard white (above), colours red and blue can be ordered on request by adding **.../R** (red) or **.../B** (blue) to above (white) part numbers.* **+ 20%**

Derating coefficient for bars in parallel		
Number of bars	2 bars	3 bars
Coefficient to use	x 1.6	x 2

Please note: *Prices of copper products are based on the London Metal Exchange and will vary from time to time. Consult our sales department for the latest pricing before placing orders.*

Flexible copper earthing braids





Flat tinned copper earthing braids *highly flexible braided copper earthing link*

No cutting - no stripping - no lug - no crimping

Copper braid used as a super flexible conductor for all electric connection requirements, including power, earthing and equipotential connections.

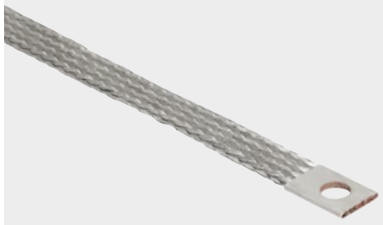
Accommodates higher current density than cables and copper bars with the same cross-section. Tinned copper flat braid, used as a ground strap, provides an excellent, low resistance ground path. Supplied cut with terminated ends punched hole, ready for connection.

General features:

- Conductor: Tinned electrolytic copper braid Cu-ETP 99.90%
- Resistivity: 0.0172 Ω mm²/m
- Mechanical resistance: Min. 200 MPa
- Standard length: 150 ... 300 mm lengths
- Mounting: Punched hole, ready for connection

Typically application:

Switchgears, Connectors, ground electric connection, the energy industry for wind turbines, generators, substations, transformers, hydro turbines, circuit breakers and rectifiers.



type	conductor size (mm) width	thickness	length	cross sec. (mm²)	current rating (A)	terminal holes Ø (mm)	description	price
10 mm² earthing braided links								
TMS1010	17	2.8	150	10	**85**	8.5	copper earthing braids	**70.00**
TMS1015	17	2.8	200	10	**85**	8.5	copper earthing braids	**70.00**
TMS1020	17	2.8	250	10	**85**	8.5	copper earthing braids	**100.00**
TMS1025	17	2.8	300	10	**85**	8.5	copper earthing braids	**100.00**
16 mm² earthing braided links								
TMS1035	17	3.1	150	16	**120**	8.5	copper earthing braids	**90.00**
TMS1040	17	3.1	200	16	**120**	8.5	copper earthing braids	**110.00**
TMS1045	17	3.1	250	16	**120**	8.5	copper earthing braids	**110.00**
TMS1050	17	3.1	300	16	**120**	8.5	copper earthing braids	**130.00**
25 mm² earthing braided links								
TMS1055	25	2.8	150	25	**150**	10.5	copper earthing braids	**110.00**
TMS1060	25	2.8	200	25	**150**	10.5	copper earthing braids	**130.00**
TMS1065	25	2.8	250	25	**150**	10.5	copper earthing braids	**140.00**
TMS1070	25	2.8	300	25	**150**	10.5	copper earthing braids	**170.00**
35 mm² earthing braided links								
TMS1075	21	3.6	150	35	**195**	10.5	copper earthing braids	**140.00**
TMS1080	21	3.6	200	35	**195**	10.5	copper earthing braids	**170.00**
TMS1085	21	3.6	250	35	**195**	10.5	copper earthing braids	**190.00**
TMS1090	21	3.6	300	35	**195**	10.5	copper earthing braids	**210.00**
50 mm² earthing braided links								
TMS1100	25	4.8	150	50	**250**	10.5	copper earthing braids	**210.00**
TMS1105	25	4.8	200	50	**250**	10.5	copper earthing braids	**240.00**
TMS1110	25	4.8	250	50	**250**	10.5	copper earthing braids	**280.00**
TMS1115	25	4.8	300	50	**250**	10.5	copper earthing braids	**320.00**
75 mm² earthing braided links								
TMS1120	30	5.5	200	75	**330**	10.5	copper earthing braids	**420.00**
TMS1125	30	5.5	250	75	**330**	10.5	copper earthing braids	**490.00**
TMS1130	30	5.5	300	75	**330**	10.5	copper earthing braids	**480.00**
100 mm² earthing braided links								
TMS1135	30	6.5	200	100	**370**	12.5	copper earthing braids	**580.00**
TMS1140	30	6.5	250	100	**370**	12.5	copper earthing braids	**670.00**
TMS1145	30	6.5	300	100	**370**	12.5	copper earthing braids	**770.00**

Above ZAR prices do not include VAT. E&OE

080210-0-4

080210-1-4

080210-2-4

080010-0-4
080010-1-4

082060-0-3

086105-0-4

086105-9-2

084551-1-4

Distribution blocks

- 1 pole *(stackable horizontally)* clips together to add additional poles
- Rapid horizontal installation on 35 mm DIN rail
- Extremely compact, all side finger-safe DIN EN 50274
- Terminal body: Brass (CuZn39Pb2) Housing: Self-extinguishing, halogen free
- 1000V AC/DC - DIN/EN 60947-7-1

type	max. current rating	feed-in terminals max. cable (mm²)	feed-in terminals busbar (mm)	output terminals mm² 10	16	25	50	description	designation	price
HLAK - Main line/branch terminals										
080110-0-4	152A	25 mm²	–		2x			rail mount terminals	Line	**79.00**
	152A	25 mm²	–		2x			rail mount terminals	Neutral	**79.00**
080110-2-4	152A	25 mm²	–		2x			rail mount terminals	Earth	**79.00**
080210-0-4	202A	35 mm²	–			2x		rail mount terminals	Line	**106.00**
080210-1-4	202A	35 mm²	–			2x		rail mount terminals	Neutral	**107.00**
080210-2-4	202A	35 mm²	–			2x		rail mount terminals	Earth	**107.00**
080310-0-4	300A	70 mm²	–				2x	rail mount terminals	Line	**332.00**
080310-1-4	300A	70 mm²	–				2x	rail mount terminals	Neutral	**334.00**
080310-2-4	300A	70 mm²	–				2x	rail mount terminals	Earth	**334.00**

type	rated current	feed-in terminals max. cable (mm²)	feed-in terminals busbar (mm)	output terminals mm² 10	16	25	35	description	designation	price
UVB - Sub-distribution blocks			for copper conductors							
080010-0-4	100A	2x 25	–	6x				distribution block	Line	**184.00**
080010-1-4	100A	2x 25	–	6x				distribution block	Neutral	**188.00**
080010-2-4	100A	2x 25	–	6x				distribution block	Earth	**188.00**
080030-0-4	200A	70	–		6x		1x	distribution block	Line	**345.00**
080030-1-4	200A	70	–		6x		1x	distribution block	Neutral	**349.00**
080030-2-4	200A	70	–		6x		1x	distribution block	Earth	**349.00**

PDB - Power distribution blocks Al/Cu

- Suitable for Copper or Aluminium conductors *(current ratings for copper conductors)*
- DIN rail mounting or direct chassis plate mount *(horizontal or vertical)*
- Hexagon head screws for high torque connections *(captive screws)*
- Transparent cover for easy inspection of termination

082040-0-3	164A	2.5...25	–	3x	3x			distribution block	grey	**289.00**
082050-0-3	214A	4...35	–		4x	2x		distribution block	grey	**349.00**
082060-0-3	215A	10…70	15.5 x 5		3x	2x		distribution block	grey	**660.00**
082070-0-3	270A	16...95	–			8x	2x	distribution block	grey	**500.00**
082080-0-3	400A	35...120	24 x 10		4x	3x	2x	distribution block	grey	**849.00**
082090-0-3	490A	95...185	24 x 10		4x	3x	2x	distribution block	grey	**1 180.00**

SSAK - Busbar connection terminals 690V IEC 60947-7-1

Fastens directly onto busbars *(3-10 mm thick)* and provides 2 x outgoing 16 mm² cable terminals

- For direct cable connection to copper bars 3-10 mm thickness

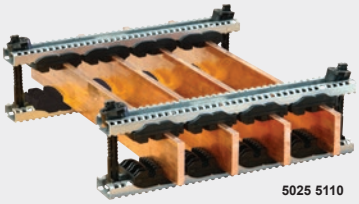
type	rated current	feed-in terminals busbar *(thickness)*	branch terminal 1-16 mm²	description	designation	price
Insulated conductor connection terminals			*(H) 47.8 x (W) 15.2 x (D) 55.2 mm*			
• All insulated, finger-safe PA6 *(self extinguishing, halogen free)*						
086105-0-4	114A	3...10 mm thick	2x 1...16 mm²	busbar connect terminal	Line	**163.00**
086105-1-4	114A			busbar connect terminal	Neutral	**163.00**
086105-2-4	114A			busbar connect terminal	Earth	**163.00**
086105-3-4	114A			busbar connect terminal	Line	**163.00**
Uninsulated conductor connection terminals						
086105-9-2	114A	3...10 mm thick	2x 1...16 mm²	busbar connect terminal	– –	**100.00**

Feed in Terminals *(H) 27.1 x (W) 17.3 x (D) 24.7 mm (without pin)*

Designed for ease of feed-in to common bridging busbars used with MCB's in distribution boards

- Universal, configurable for front or *(either)* side power feed
- Screw clamp termination ensuring touch safety

084551-1-4	–	50 mm²	insulated feed-in terminal short pin *(15 mm)*	grey	**269.00**
084553-1-4	–	50 mm²	insulated feed-in terminal long pin *(29.5 mm)*	grey	**200.00**


5025 5110

SBC ER – Compact adjustable busbar support - IEC 61439-1 4000A

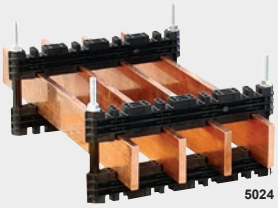
Multipolar busbar support to carry high currents with high short circuit withstand in almost every low voltage system enclosure on the market

- Easy to install – cost effective
- Adjustable distance between phases (5 mm increments) minimum = 70 mm
- Up to 75kA rms Isc - 165kA peak Isc (distance between supports dependant)
- For bars 30...125 mm wide x 5/10 mm thick (1…3 bars per phase)
- High dielectrical resistance
- High mechanical strength Vertical bars
- High short circuit strength *(see **Annex-12**)*
- Universal multipole *(edgewise mounting)* busbar support system.

Vertical bars

type	for busbar thickness	No. bars per phase	insulation voltage	interphase distance	description	pcs per pack	price (per pack)
5025 5110	10 mm	1-2	1000V	adjustable	busbar support inserts	*(8 pcs)*	**1 020.00**
5025 5105	5 mm	1-3	1000V	adjustable	busbar support inserts	*(8 pcs)*	**948.00**
5025 5100	universal clamping stud kit for bars 25 to 200 mm (H)				*per pack*	*(4 pcs)*	**1 260.00**
5025 5101	metal clamping stud kit for bars 25 to 100 mm (H)				*per pack*	*(2 pcs)*	**1 370.00**
5025 5124	profile	perforated support profile for inserts			*length 380 mm*	*(4 pcs)*	**1 940.00**
5025 5125	profile	perforated support profile for inserts			*length 480 mm*	*(4 pcs)*	**2 090.00**
5025 5126	profile	perforated support profile for inserts			*length 580 mm*	*(4 pcs)*	**2 360.00**
5025 5128	profile	perforated support profile for inserts			*length 780 mm*	*(4 pcs)*	**2 670.00**

One complete busbar support systems:
2 x support inserts (per phase) (3P = 6 / 4P = 8)
2 x clamping studs
2 x support profiles (1 x top, 1 x bottom)


5024 6400

SBC 10 – Compact busbar support – *IEC 60439-1* *2500A*

Multipole *(edgewise mounting)* busbar support system - fixed interphase distance.

High current carrying capacities:

SB C 10 multipolar edgewise busbar supports are suitable for main switchboard applications where high current carrying capacity is required.

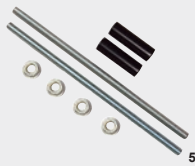
Easy installation:

Edgewise mounted, the SB C 10 can be installed in low voltage switchboards for main and/or distribution busbar use in a horizontal and vertical position. Its installation standard dimensions mean it can be integrated in almost all LV systems on the market.

- For bars 30...120 mm wide x 10 mm thick *(one or two bars per phase)*
- Up to 50 kA rms Isc - 110kA peak Isc *(distance between supports dependant)*
- Reverse support to accommodates busbar offset *(for joining bars)*

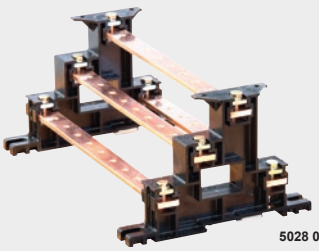
5024 6400	10 mm	1/2	800V	75/90 mm	3-pole busbar support	*(ea)*	**516.00**
5024 6700	10 mm	1/2	1000V	90 mm	4-pole busbar support	*(ea)*	**523.00**

For complete system, order: 2 x supports + 1 x mounting accessory kit (below)


5020 2030

Mounting accessory kits - *(2 x M8 threaded studs/insulation spacers/nuts)*

5020 2030	mounting accessory kit	*(rods/spacers/nuts)*	for 30 mm busbars	**387.00**
5020 2040	mounting accessory kit	*(rods/spacers/nuts)*	for 40 mm busbars	**408.00**
5020 2050	mounting accessory kit	*(rods/spacers/nuts)*	for 50 mm busbars	**409.00**
5020 2060	mounting accessory kit	*(rods/spacers/nuts)*	for 60 mm busbars	**433.00**
5020 2080	mounting accessory kit	*(rods/spacers/nuts)*	for 80 mm busbars	**464.00**
5020 2100	mounting accessory kit	*(rods/spacers/nuts)*	for 100 mm busbars	**520.00**


5028 0410

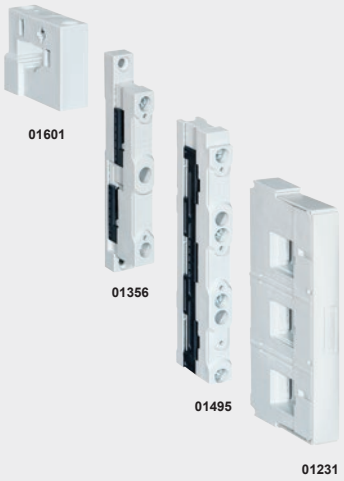
SB E 44 – Four-pole stair type busbar support system *300A*

Four-pole stair type busbar support system. *(H) 180 x (W) 25 x (D)126 mm*

- For flat bars 15/20/30 mm wide x 5 mm thick *(solid or perforated)*
- Up to 22 kA rms Isc - 50kA peak Isc *(distance between supports dependent)*
- DIN rail mountable or bolt down
- Thermoplastic
- Self-extinguishing UL94VO

5028 0410	5 mm	1	1000V	35.5 mm	4-pole stair type support	*(ea)*	**380.00**

Above ZAR prices do not include VAT. E&OE



60 mm - System classic

The 60 mm system is an extremely compact busbar system with 60 mm spacing between busbars arranged in horizontal format, permitting simple attachable "clip-on" accessories such as connections for various cable and/or flexible or solid busbars, fuse holders and switches as well as easy connectors which accommodate circuit breakers, contactors etc.

Busbar supports *up to 630A*

- Horizontal mounting of busbars *(15 - 20 - 25 - 30 mm wide)*
- Permits direct mounting of accessories: various termination, fuse/circuit breaker protection

type	for busbar size (mm) width	thick	no. poles	description	amps	price
01601	15 - 30 mm	5/10 mm	1	universal busbar support	630A	**214.00**
01356	15 - 30 mm	5/10 mm	2	universal busbar support	630A	**352.00**
01495	15 - 30 mm	5/10 mm	3	universal busbar support	630A	**321.00**
01484*	15 - 30 mm	5/10 mm	3	busbar support *(with control terminals)*	630A	**541.00**
01485	15 - 30 mm	5/10 mm	4	universal busbar support	630A	**539.00**

* *With integrated 16mm termination for control wiring/connection*

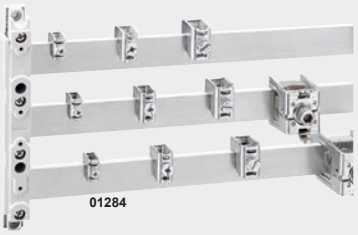
"H" profile busbar supports *up to 1600A*

- Horizontal mounting of **"H"** profile busbars 30 mm wide
- Permits direct mounting of accessories: various termination, fuse/circuit breaker protection

01116	30 mm	"H" profile	1	"H" profile busbar support	1600A	**495.00**
01231	30 mm	"H" profile	3	"H" profile busbar support	1600A	**1 270.00**

01116 *(1 pole) attaches to* ***01231*** *(3-pole) to make a 4-pole support*

End covers for busbar supports *(provides insulated protection of busbar ends)*



01573	end cover for	3	01495 / 01484 busbar supports	**107.00**
01131	end cover for	4	01485 busbar supports	**298.00**
01373	end cover for	1	01116 busbar supports	**91.00**
01234	end cover for	3	01231 busbar supports	**134.00**

Busbar termination *(for connecting cables directly onto busbars)*

For cable conductors

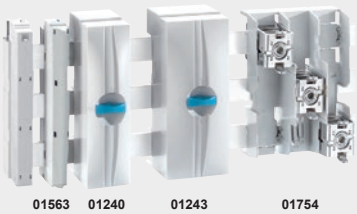
- "Clip-on" terminals for cable conductors
- Direct clamping onto busbars no drilling required

type	for busbar size (mm) width	thick	no. poles	cable size mm^2 min	max	description	amps	price
01284	15 - 30 mm	5 mm	1	1.5	16	conductor terminal	180A	**25.70**
01285	15 - 30 mm	5 mm	1	4	35	conductor terminal	270A	**38.50**
01287	15 - 30 mm	5 mm	1	16	70	conductor terminal	400A	**51.00**
01289	15 - 30 mm	10 mm	1	1.5	16	conductor terminal	180A	**42.00**
01290	15 - 30 mm	10 mm	1	4	35	conductor terminal	270A	**63.00**
01292	15 - 30 mm	10 mm	1	16	70	conductor terminal	400A	**70.00**
01203	15 - 30 mm	10 mm	1	16	120	conductor terminal	440A	**132.00**

CRITO® ProfiClip brace terminals for cable conductors *(for standard and "H" profile bars)*

01318	20 - 30 mm	5/10 mm	1	95	185	conductor terminal	500A	**493.00**
01760	20 - 30 mm	5/10 mm	1	120	300	conductor terminal	600A	**704.00**

3 phase clamp-on terminals *(fully insulated, internally partitioned)*



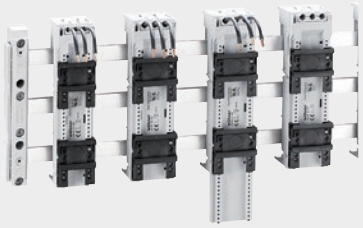
01563	15 - 30 mm	5/10 mm	3	1.5	16	conductor terminal	80A	**582.00**
01240	15 - 30 mm	5/10 mm	3	6	50	conductor terminal	300A	**687.00**
01243	15 - 30 mm	5/10 mm	3	35	120	conductor terminal	440A	**1 240.00**
01199	20 - 30 mm	5/10 mm	3	95	185	conductor terminal	460A	**1 990.00**
01754	20 - 30 mm	5/10 mm	3	120	300	conductor terminal	560A	**2 600.00**
01537*	20 - 30 mm	5/10 mm	3	120	300	conductor terminal	560A	**2 500.00**

* *Adjustable phase separation distance to align with connected component (supplied without cover)*

CRITO® brace terminals *for flat and flexible copper busbars*

				max. bar size wide	thick			
01319	30 mm	10 mm	1	30	20	busbar connection	750A	**487.00**
01069	30 mm	10 mm	1	55	28	busbar connection	1600A	**2 070.00**
01070	30 mm	10 mm	1	68	28	busbar connection	1600A	**2 540.00**
01071	30 mm	10 mm	1	105	28	busbar connection	1600A	**3 870.00**
01538*	20 - 30 mm	5/10 mm	3	32	20	busbar connection	800A	**2 430.00**

* *Adjustable phase separation distance (to align with connected component) supplied without cover*



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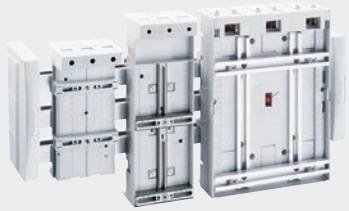
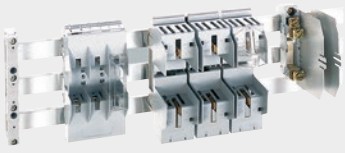


32215 32168 32004



03656 03301

31570

31572

33216

33603

EQUES series - Easy connectors

Direct busbar mountable "clip-on" adaptors accept various devices such as MCB's, circuit breakers, fuse holders, contactors etc. without drilling busbars.

type	for busbars (mm) width	thick	no. rails	wires mm²	dimensions (mm) W	H	description	amps	price
Easy connectors 25 - 32 - 63A									
• Direct busbar mounting adaptors for busbars 15 - 20 - 25 - 30 mm wide and "H" profile									
• With integrated DIN rail and pre-wired power leads from connected busbars									
32430	15 - 30	5/10/"H"	1	4	45	200	easy connector	25A	**682.00**
32431	15 - 30	5/10/"H"	2	4	45	200	easy connector	25A	**723.00**
32441	15 - 30	5/10/"H"	1	6	54	200	easy connector	32A	**824.00**
32442	15 - 30	5/10/"H"	2	6	54	200	easy connector	32A	**735.00**
32454	15 - 30	5/10/"H"	1	10	54	200	easy connector	63A	**952.00**
32455	15 - 30	5/10/"H"	2	10	54	200	easy connector	63A	**1 010.00**
32459	15 - 30	5/10/"H"	2	10	81	200	easy connector	63A	**1 010.00**
Universal power connectors *(to accommodate MCCB's and switchgear)*									
• For commercially available switchgear *(M4 fixing screws)*									
• For top connection to busbar system *(bottom connection available on request)*									
32214	15 - 30	5/10/"H"	top connection		108	222	busbar adaptor	200A	**1 960.00**
32215	15 - 30	5/10/"H"	bottom connection		108	222	busbar adaptor	200A	**2 010.00**
32168	15 - 30	5/10/"H"	top connection		110	320	busbar adaptor	250A	**2 280.00**
32004*	15 - 30	5/10/"H"	top/bottom		184	320	busbar adaptor	630A	**4 600.00**
* *With top or bottom connection*									

Busbar mounted fuse bases

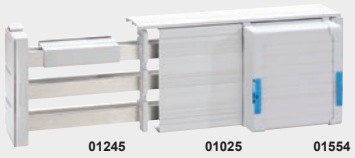
type	for busbars (mm) width	thick	no. rails	fuse size	description	amps	price
• Clamps directly onto busbar *(no drilling required)*							
NH DIN fuse holders *(blade type fuses)*							
03370	15 - 30	5/10/"H"	1 pole	"00"	busbar mounted NH fuse base	160A	**398.00**
03656	15 - 30	5/10/"H"	3-pole	"00"	busbar mounted NH fuse base	160A	**1 320.00**
03301	15 - 30	5/10/"H"	3-pole	"1"	busbar mounted NH fuse base	250A	**6 700.00**
03693	15 - 30	5/10/"H"	3-pole	"2"	busbar mounted NH fuse base	400A	**8 780.00**
NH fuse protection covers							
79448			1 pole	"00"	grip lug cover for NH fuses	–	**61.00**
79449			1 pole	1-2-3	grip lug cover for NH fuses	–	**81.00**
Cylindrical fuse holders 10 x 38 mm							
1 pole busbar mounted fuse holder for 10 x 38 cylindrical fuses							
31570	30 mm	5/10	1 pole	10 x 38	1000 VDC busbar mount f/holder	30A	**115.00**
31572	20 mm	5/10	1 pole	10 x 38	1000 VDC busbar mount f/holder	30A	**113.00**
3-pole busbar mounted fuse holder for 10 x 38 cylindrical fuses							
• Vertical mount compact *(27 mm wide)* 3-pole in-line fuse holder							
31954	15-30	5/10/"H"	3-pole	10 x 38	busbar mount fuse base	160A	**1 420.00**
Bus-mounted fuse switch disconnectors *(top or bottom connection)*							
• Bus-mounting fuse switch disconnector, top/bottom connection							
Horizontal mount							
33216	15 - 30	5/10/"H"	3-pole	"000"	busbar mounted NH fuse base	125A	**2 310.00**
33398	15 - 30	5/10/"H"	3-pole	"00"	busbar mounted NH fuse base	160A	**2 350.00**
33601	15 - 30	5/10/"H"	3-pole	"1"	busbar mounted NH fuse base	250A	**6 280.00**
33602	15 - 30	5/10/"H"	3-pole	"2"	busbar mounted NH fuse base	400A	**9 710.00**
33603	15 - 30	5/10/"H"	3-pole	"3"	busbar mounted NH fuse base	630A	**14 700.00**
Vertical mount *(in-line)*							
33234	15 - 30	5/10/"H"	3-pole	"00"	in-line bus mounted NH fuse base	160A	**4 020.00**

Above ZAR prices do not include VAT. E&OE

100 mm - Universal busbar support system

The 100 mm system is a compact busbar system with 100 mm spacing between busbar centres. Busbars are arranged in a horizontal format, permitting simple attachable “clip-on” accessories such as connections for various cable and/or flexible or solid busbars, fuse holders and switches as well as easy connectors which accommodates circuit breakers, contactors etc.

type	for busbar size (mm) width	thick	no. poles	description	rated current	price
Busbar supports 100 mm 1250A (3-pole)						
• Horizontal mounting of undrilled busbars 30 - 40 - 50 - 60 mm wide • Permits direct mounting of accessories: various termination, fuse/circuit breaker protection						
01479	30 - 60 mm	10 mm	3	universal 100 mm busbar support	1250A	**974.00**
End covers for above busbar supports				*provides insulated protection of busbar ends*		
01254	end cover		3	for above **01479** busbar supports		**240.00**
Busbar supports 185 mm 2500A (3-pole)						
The 185 mm busbar support system accepts busbars from 30 to 120 mm wide mounted horizontally with 185 mm spacing between busbar centres. The wide spacing of busbars offers short-circuit ratings in excess of 100 kA.						
01230	30 - 120 mm	10 mm	3	universal 185 mm busbar support	2500A	**1 130.00**
End covers for above busbar supports				*provides insulated protection of busbar ends*		
33341	end cover		3	for above **01230** busbar supports		**1 150.00**



Accessories for busbar systems

Busbar covers

01245	30	10	single busbar cover *(clips directly onto busbar)*	1 m	**466.00**
01252	30	“H” profile	single busbar cover *(clips directly onto busbar)*	2 m	**780.00**
01025	3-pole reserve section cover *(requires **01026** support for cover)*			0.7 m	**744.00**
01026	support for reserve section cover 32 mm high *(clips directly onto busbars)*				**179.00**
01320	support for reserve section cover 107 mm high *(clips directly onto busbars)*				**232.00**

System cover *(can be used to make up any sized cover for busbars, terminals etc.)*

01136	(left + right) support for cover section	*(clips directly onto busbars)*		**548.00**
01554	front cover section	*(requires **01136** supports)*	1.1 m	**1 060.00**
01555	top/bottom cover section	*(requires **01136** supports)*	1.1 m	**683.00**

Surface/rail mount fuse holders and switch disconnectors

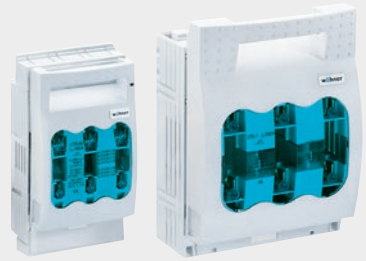
type	no. poles	fuse size	description	rated current	price
Cylindrical fuse holders					
• Modular DIN rail mounting, shock protection to DIN VDE 0660, IEC/EN 60947-3 • Silicone and chlorine free, self extinguishing to UL94 • Creepage resistance CTI 200					
31110 DIN rail mounting	1	10 x 38	cylindrical fuse holder	32A	**79.00**
31113 DIN rail mounting	3	10 x 38	cylindrical fuse holder	32A	**249.00**
31115 DIN rail mounting	1	14 x 51	cylindrical fuse holder	50A	**578.00**
31118 DIN rail mounting	3	14 x 51	cylindrical fuse holder	50A	**653.00**
31120 DIN rail mounting	1	22 x 58	cylindrical fuse holder	125A	**819.00**
31123 DIN rail mounting	3	22 x 58	cylindrical fuse holder	125A	**2 460.00**

NH fuse switch disconnectors

3-pole switching DIN VDE 0660, IEC/EN 60947-3

- Shock protection with integrated positive action closure and arc chambers
- Mechanical fuse retention in disconnector lid
- IP30 front degree of protection
- Silicone and chlorine free, self extinguishing to UL94
- See product datasheet for DC application rating

33217	fuse switch/holder	3	C00	fuse switch disconnector	125A	**1 630.00**
33222	fuse switch/holder	3	00	fuse switch disconnector	165A	**1 380.00**
33201	fuse switch/holder	3	1	fuse switch disconnector	250A	**4 420.00**
33202	fuse switch/holder	3	2	fuse switch disconnector	400A	**7 120.00**
33203	fuse switch/holder	3	3	fuse switch disconnector	630A	**9 130.00**
33204	fuse switch/holder	3	4	fuse switch disconnector	1600A	**35 900.00**



Cable & Component Identification

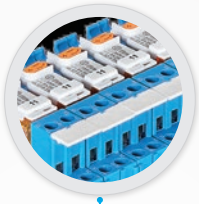
MG4 is CEMBRE's newest solution for identification & labelling requirements, designed to offer a high quality and long-lasting print for text, logos, electrical symbols, QR codes and all kinds of vector images.

Single Cables

- Cable tags for holders
- Slide / clip on tags
- Wraparound cable markers
- Push in markers
- Cable & conduit tags

Modular Components

- Legends & labels
- Mounting rails



Plates and Labels

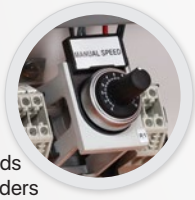
- Panel plates & covers
- Panel legends
- Security labels
- Warning labels

Components & Equipment

- Pre-cut legend

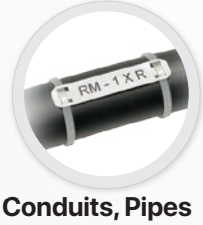
Terminal Block Markers

- Compatible with a wide range of brands



Components & Equipment

- PLC legends
- Rail mount legends
- Legends and holders
- Pushbutton holders & legends



Conduits, Pipes & Multi-Core

- Cable and conduit tags

- Legend holder

Panel Marking Overview

Scan the QR code to watch **tutorial videos on how to mark** various media types using Cembre's identification media

Scan to watch

MG4 FREEDOM TO PRINT EVERYWHERE

Scan to Watch

ALWAYS CONNECTED!

Share · Touch Display · USB · APP · Status Monitor · LAN · Wi-Fi Direct · Battery Rechargeable · Wi-Fi

Thermal Transfer Sheet Printer Markingenius

With MG4, Cembre offers innovative solutions in order to improve the quality of work of its users by exploiting the technology and experience in industrial marking gained from 20 years within this business sector.

MARKINGENIUS MG4 - Exclusively designed for the identification of conductors and electrical components.

Plug & Play Thermal Transfer Printer: For tags, markers, legends, and labels on cables, pipes, tubes, terminal blocks, panels, components, and equipment .

Large on-Board Touch Screen: Allows easy management of print projects. The MG4's reliability and robustness make it ideal for intensive use in various applications

Versatile Power Options: MG4 operates on mains power or optional CEMBRE rechargeable batteries. Use it in the office, production, or on-site. The interchangeable battery, compatible with all CEMBRE tools, ensures full portability.

Efficient Ribbon Save System: Each monochrome ribbon prints over 300,000 MG-TPMF 4x10 mm labels. Pigment dries instantly, making printed sheets immediately ready for use.

MG4

MG4 + CB1852L

CB1852L

ASC55-EU

MARKINGENIUS MG4 printer

(H) 236 x (W) 240 x (D) 409 mm / 6.1 kg

- **Speed:** Prints 112 MG-TPMF (4 x 10 mm) cable tags in less than 12 seconds
- **Convenience:** Software provides quick and easy upload of data to be printed
- **Economy:** Prints up to 300 000 MG-TPMF 4 x 10 cable tags with a single ribbon
- **Quality:** Printer resolution 300 x 600 dpi
- **Connectivity:** Via USB, LAN, WIFI or WIFI direct *(in the absent of a network)*
- **Training:** Continuous support service and free training post purchase via trained specialist

Following supplied with MG4 printer:

- MG2-PWC **(991000)** support template for tags **(MG-TPM)**
- MG2-PLT **(991002)** support template for legends, labels and signs and all serieFLAT media
- MG2-QTB **(991011)** support template for terminal block markers **(MG-CPM-01,02,03,04,07)**
- Mains/USB cable, protective cover, Black ribbon and take up core, installation/operating docs
- GENIUSPRO *(software - 5 multiple licences and manual)*

type	description
MG4	MARKINGENIUS MG4 thermal transfer printer for marking tags and legends

*see **Cat M** for pricing.*

Accessories and spares for MG4 Printers

MG2-ETR ribbons for MARKINGENIUS MG4 *thermal transfer printer ribbon*

type	width (mm)	length *(meters)*	colour	description	Pantone ref.	price
991600	120	200	black	thermal transfer printer ribbon	Black C	**3 100.00**
991601	120	200	blue	thermal transfer printer ribbon	2935C	**5 510.00**
991602	120	200	red	thermal transfer printer ribbon	186C	**5 510.00**
991606	120	200	white	thermal transfer printer ribbon	–	**5 510.00**
CVB-039	canvas bag			transportation bag	–	**2 000.00**
CB1852L	battery			18V - 5.2 Ah Li-Ion rechargeable battery	–	**3 020.00**
ASC55-EU	charger			220 - 240 V battery charger **CB1852L**	–	**1 320.00**

Support templates for MG4 printer

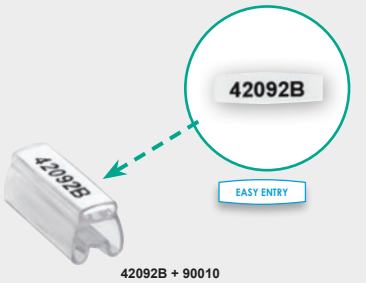
991000*	MG2-PWC	support template for cable tags **MG-TPM**	**4 110.00**
991002*	MG2-PLT	support template for legends, labels, signs and all **serieFLAT**	**4 110.00**
991011*	MG2-QTB	support template for terminal markers **MG-CPM-01/02/03/04/07/11**	**4 110.00**
991008	MG2-QTB	support template for terminal markers **MG-CPM-01**	**4 110.00**
991004	MG2-WTB	support template for terminal markers **MG-CPM-05/12**	**4 110.00**
991010	MG2-PTM	support template for cable tags **MG-TDMO & MG-TDM** *(4 - 16 mm)*	**4 110.00**

* *Usually supplied with MG4 printer*

991670	MG2-CKP	print head cleaning kit *(template, pad & cleaning fluid)*	**4 940.00**
992150	MG2-CNP	replacement pads for above cleaning kit **MG2-CKP** *(5 pcs)*	**4 910.00**
991671	MG2-CHS	replacement cleaning fluid for above cleaning kit **MG2-CKP**	**1 720.00**

Cable tags precut 4 mm push-in marker tags for PMF holders - new "easy-entry" profile

SeriesFLAT MG-TPMF tags are used for marking cables, conduit, tubes, conductors and components.
Presented in stem format, tags are simply snapped off their stems and inserted into appropriate holders for perfect protection against degradation by chemical and environmental agents over time.
Tag stems can also be labelled to indicate specific job or application notes.



42092B + 90010

type	size (mm)	for cable (mm^2)	SW code	colour	description	tags per sheet	tags per box	price per box
MG-TPMF	slide-in marking tags for **PMF** transparent holders - *"easy entry"*							
• Material:	Rigid PVC, self extinguishing class VO: UL 94							
• Operating temperature:	-30°C...+60°C							
• Support template:	**991002** **MG2-PLT** *(usually supplied with MG4 printer)*							
42091B	4 x 12	–	**505**	white	slide-in tags for PMF holders	80	4000	**4 710.00**
42092B	4 x 15	–	**503**	white	slide-in tags for PMF holders	80	4000	**4 710.00**
42093B	4 x 20	–	**504**	white	slide-in tags for PMF holders	64	1600	**2 540.00**
42096B	4 x 30	–	**509**	white	slide-in tags for PMF holders	48	1200	**2 950.00**
42097B	4 x 40	–	**508**	white	slide-in tags for PMF holders	32	800	**2 600.00**
42041B	4 x 12	–	**505**	yellow	slide-in tags for PMF holders	80	4000	**5 670.00**
42042B	4 x 15	–	**503**	yellow	slide-in tags for PMF holders	80	4000	**5 670.00**
42043B	4 x 20	–	**504**	yellow	slide-in tags for PMF holders	64	1600	**3 080.00**
42046B	4 x 30	–	**509**	yellow	slide-in tags for PMF holders	48	1200	**3 340.00**
42047B	4 x 40	–	**508**	yellow	slide-in tags for PMF holders	32	800	**2 950.00**

Other colours available on request

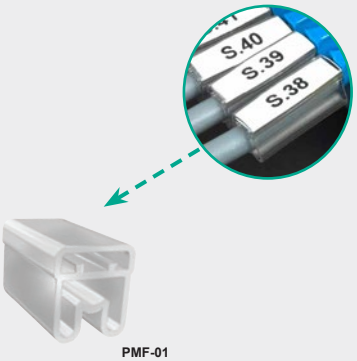
PMF-00

PMF transparent tag holders for MG-TPMF seriesFLAT pre-printed 4 mm cable tags

PMF holders are specifically designed to accommodate appropriately sized cables.
They slide on to cables to receive a pre-printed marking tag into a protected sleeve on the holder.

type	for tag (mm)	for cable (mm^2)	colour	description	std pack qty	price per pack
• Material:	Plasticised PVC, self extinguishing to class VO: UL 94					
• Operating temperature:	-40°C...+80°C					
• Free of Cadmium, Lead, Silicon, Teflon. Resistant to alkali, alcohol, acids and solvents						
PMF-00	*for cable ext. Ø diameter*	*1.3 - 2.2 mm*				
90010	4 x 12	0.25-0.5	t/parent	slide-on transparent tag holder	7000	**2 680.00**
90020	4 x 15	0.25-0.5	t/parent	slide-on transparent tag holder	6000	**3 170.00**
90040	4 x 20	0.25-0.5	t/parent	slide-on transparent tag holder	4000	**2 450.00**
90070	4 x 30	0.25-0.5	t/parent	slide-on transparent tag holder	2000	**2 190.00**
90090	4 x 40	0.25-0.5	t/parent	slide-on transparent tag holder	2500	**3 250.00**
PMF-01	*for cable ext. Ø diameter*	*2 - 3.7 mm*				
90110	4 x 12	0.5 - 2.5	t/parent	slide-on transparent tag holder	5000	**2 430.00**
90120	4 x 15	0.5 - 2.5	t/parent	slide-on transparent tag holder	4000	**2 210.00**
90140	4 x 20	0.5 - 2.5	t/parent	slide-on transparent tag holder	3000	**2 000.00**
90170N	4 x 30	0.5 - 2.5	t/parent	slide-on transparent tag holder	1500	**1 890.00**
90190N	4 x 40	0.5 - 2.5	t/parent	slide-on transparent tag holder	500	**670.00**
PMF-02	*for cable ext. Ø diameter*	*3.4 - 4.3 mm*				
90210	4 x 12	2.5 - 4	t/parent	slide-on transparent tag holder	4000	**2 310.00**
90220	4 x 15	2.5 - 4	t/parent	slide-on transparent tag holder	3000	**1 890.00**
90240	4 x 20	2.5 - 4	t/parent	slide-on transparent tag holder	2000	**1 420.00**
90270N	4 x 30	2.5 - 4	t/parent	slide-on transparent tag holder	500	**670.00**
90290N	4 x 40	2.5 - 4	t/parent	slide-on transparent tag holder	500	**730.00**
PMF-03	*for cable ext. Ø diameter*	*4 - 6.3 mm*				
90310	4 x 12	4 - 10	t/parent	slide-on transparent tag holder	2000	**1 260.00**
90320	4 x 15	4 - 10	t/parent	slide-on transparent tag holder	2000	**1 370.00**
90340	4 x 20	4 - 10	t/parent	slide-on transparent tag holder	1000	**903.00**
90370N	4 x 30	4 - 10	t/parent	slide-on transparent tag holder	500	**730.00**
90390N	4 x 40	4 - 10	t/parent	slide-on transparent tag holder	500	**845.00**
PMF-04	*for cable ext. Ø diameter*	*6 - 10 mm*				
90420	4 x 15	10 - 25	t/parent	slide-on transparent tag holder	1000	**903.00**
90440N	4 x 20	10 - 25	t/parent	slide-on transparent tag holder	1000	**1 160.00**
90470	4 x 30	10 - 25	t/parent	slide-on transparent tag holder	500	**933.00**
90490N	4 x 40	10 - 25	t/parent	slide-on transparent tag holder	250	**608.00**
PMF-05	*for cable ext. Ø diameter*	*9 - 15 mm*				
90520N	4 x 15	25 - 70	t/parent	slide-on transparent tag holder	500	**785.00**
90540	4 x 20	25 - 70	t/parent	slide-on transparent tag holder	250	**499.00**
90570N	4 x 30	25 - 70	t/parent	slide-on transparent tag holder	250	**758.00**
90590	4 x 40	25 - 70	t/parent	slide-on transparent tag holder	100	**407.00**

Larger sizes up to 240 mm^2 available on request

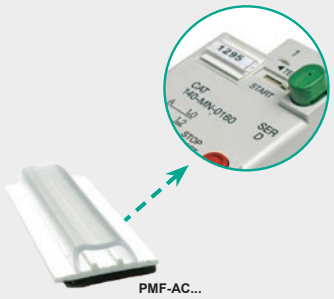


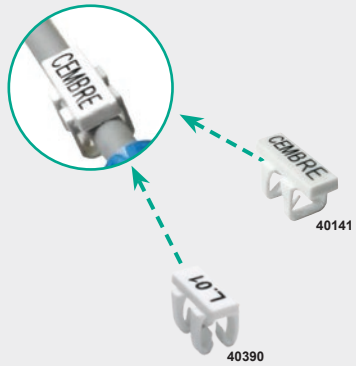
PMF-01

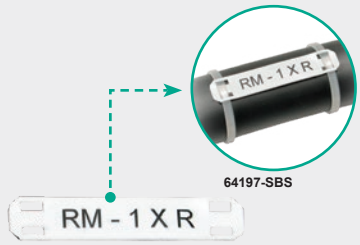
PMF-03

Above ZAR prices do not include VAT. E&OE

PC HF SF -40°C +130°C







New

MG-KMP - Wraparound cable markers

Transparent tag holders to receive 4 mm pre-printed tags

PMT holders are specifically designed to receive a pre-printed marking tag into a protected sleeve on the holder.

type	for tag (mm)	mounting		colour	description	std pack	price per pack
PMF	transparent holders for **MG-TPMF seriesFLAT** cable tags 4 mm						
• Material:	Plasticised PVC, self extinguishing to class VO: UL 94						
• Free of Cadmium, Lead, Silicon, Teflon. Resistant to alkali, alcohol, acids and solvents							
PMF-AC	*self adhesive tag holders for surface mounting of 4 mm tags*						
66010N	4 x 12	adhesive		t/parent	self adhesive 4 mm tag holder	4000	**8 190.00**
66020N	4 x 15	adhesive		t/parent	self adhesive 4 mm tag holder	4000	**10 900.00**
66040N	4 x 20	adhesive		t/parent	self adhesive 4 mm tag holder	3000	**11 500.00**
66070N	4 x 30	adhesive		t/parent	self adhesive 4 mm tag holder	2000	**10 600.00**
66090N	4 x 40	adhesive		t/parent	self adhesive 4 mm tag holder	1000	**7 420.00**
PMF-ET	*tie-on tag holders for mounting on cables, hoses, tubes, conduits with cable ties*						
• Tie on holder *(max cable tie width 6 mm)*	longitudinal mounting of cables, tubes, conduit						
63020	4 x 15	tie mount	1 tie	t/parent	tie-on transparent tag holder	2000	**3 800.00**
63040N	4 x 20	tie mount	1 tie	t/parent	tie-on transparent tag holder	2000	**4 390.00**
63070	4 x 30	tie mount	1 tie	t/parent	tie-on transparent tag holder	1000	**3 180.00**
63090	4 x 40	tie mount	2 ties	t/parent	tie-on transparent tag holder	500	**1 800.00**

MG series — one piece cable marking tags *(without holder - directly mounts onto cable)*

MG one piece tags require no holders and can be directly mounted onto cable without tools
A sheet of tags takes 10 seconds to print. Partially printed sheets may be re-used to avoid wastage.
MG - one piece marking tags mount onto cables via the two range-taking apertures

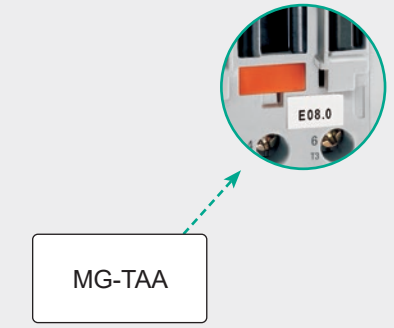
• Material: Polycarbonate, Halogen Free, self extinguishing to class VO: UL 94

991010 Use support template **MG2-PTM** for all MG series markers — **4 110.00**

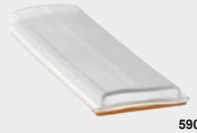
type	size (mm)	for cable (mm^2)	SW code	colour	description	tags per sheet	tags per box	price per per box
MG-TDM	slide-on one piece marking tags *(pre - termination)*							
MG-TDM-01	for cable external Ø diameter	*1.6 - 3.25 mm*						
40141	4 x 16	0.5-1.5	**123**	yellow	slide-on cable marker tags	40	800	**1 900.00**
MG-TDM-02	for cable external Ø diameter	*2 - 4.4 mm*						
40241	4 x 16	1 - 6	**124**	yellow	slide-on cable marker tags	40	640	**1 520.00**
MG2-TDMO	clip-on one piece marking tags *(post termination)*							
MG2-TDMO-01	for cable external Ø diameter	*2 - 2.9 mm*						
40390	4 x 12	0.5 - 1.5	**125**	white	slide-on cable marker tags	40	880	**1 910.00**
40391	4 x 16	0.5 - 1.5	**128**	white	slide-on cable marker tags	40	880	**2 140.00**
MG2-TDMO-02	for cable external Ø diameter	*2.9 - 3.5 mm*						
40490	4 x 12	1.5 - 2.5	**126**	white	slide-on cable marker tags	40	640	**1 330.00**
40491	4 x 16	1.5 -2.5	**129**	white	slide-on cable marker tags	40	640	**1 520.00**
MG2-TDMO-03	for cable external Ø diameter	*4 - 4.6 mm*						
40590	4 x 12	4 - 6	**127**	white	slide-on cable marker tags	40	560	**1 220.00**
40591	4 x 16	4 - 6	**130**	white	slide-on cable marker tags	40	560	**1 370.00**
MG-ETF	cable and conduit tags *(cable tie mounting)*							
• For marking large diameter cables, hoses, tubes and conduit								
• Max. cable tie width:	4.8 mm							
• Support template:	**991002**	**MG2-PLT** *(usually supplied with MG4 printer)*						
64193-SBS	13 x 57	–	**581**	white	11 x 35 mm tie mount cable tags	14	800	**6 340.00**
64143-SBS	13 x 57	–	**581**	yellow	11 x 35 mm tie mount cable tags	14	800	**7 650.00**
64293-SBS	15 x 95	–	**584**	white	13 x 73 mm tie mount cable tags	5	250	**4 950.00**
64197-SBS	28 x 57	–	**591**	white	26 x 35 mm tie mount cable tags	6	300	**4 160.00**
64147-SBS	28 x 57	–	**591**	yellow	26 x 35 mm tie mount cable tags	6	300	**4 850.00**
Other colours, halogen free options, available on request.								
MG-KMP	Wraparound cable markers (self adhesive, precut, halogen free)							
Suitable for identifying large diameter cables, tubes and conduit. Printing is exceptionally clear and legible and is protected from chemical and atmospheric agents.								
49950-015	10 x 15	4.3 - 7	381	white	tie mount cable tags	18	900	**9 940.00**
49951-023	15 x 23	6 -10	385	white	tie mount cable tags	8	400	**6 410.00**

9 mm marking tags and holders

type	size (mm)	SW code	colour	description	tags per sheet	tags per box	price per box
MG-TAPW	9 mm push-in precut marking legends for **PMT** series legend holders *(below)*						
• Presented in stem format • Tags are simply snapped off their stems and inserted into the appropriate holders • Support template: **991002 MG2-PLT** *(usually supplied with MG4 printer)* Material: Rigid PVC, self extinguishing to class VO: UL 94 Operating temperature: -30°C...+60°C							
49090N	9 x 20	**362**	white	push-in legends for PMT holders	55	2750	**10 100.00**
49091N	9 x 35	**364**	white	push-in legends for PMT holders	33	1650	**9 500.00**
49095N	9 x 70	**378**	white	push-in legends for PMT holders	11	550	**11 100.00**
49040N	9 x 20	**362**	yellow	push-in legends for PMT holders	55	2750	**12 300.00**
49041N	9 x 35	**364**	yellow	push-in legends for PMT holders	33	1650	**11 500.00**
49045N	9 x 70	**378**	yellow	push-in legends for PMT holders	11	550	**9 980.00**



type	size (mm)	SW code	colour	description	tags per sheet	tags per box	price per box
MG-TAA	9 mm self adhesive, precut legends supplied on a sheet						
• Self adhesive, can be applied to panels, components and equipment • Support template: **991002 MG2-PLT** *(usually supplied with MG4 printer)* Material: Rigid PVC, self extinguishing to class VO: UL 94 Operating temperature: -30°C...+60°C							
49290N	9 x 12	**960**	white	precut self adhesive blank legends	88	2200	**8 360.00**
49397N	9 x 15	**961**	white	precut self adhesive blank legends	77	1925	**11 100.00**
49190N	9 x 20	**962**	white	precut self adhesive blank legends	55	1375	**8 600.00**
49191N	9 x 35	**964**	white	precut self adhesive blank legends	33	825	**10 100.00**
49240N	9 x 12	**960**	yellow	precut self adhesive blank legends	88	2200	**8 900.00**
49347N	9 x 15	**961**	yellow	precut self adhesive blank legends	77	1925	**10 600.00**
49140N	9 x 20	**962**	yellow	precut self adhesive blank legends	55	1375	**9 490.00**
49141N	9 x 35	**964**	yellow	precut self adhesive blank legends	33	825	**9 340.00**



type	for tags (mm)	mounting	colour	description	std pack qty	price per pack
PMT	transparent legend holders to receive **MG-TAPW** 9 mm pre-printed tags *(above)*					
Material: Plasticised PVC, self extinguishing to class VO: UL 94 Operating temperature: -40°C...+80°C Free of Cadmium, Lead, Silicon and Teflon. Resistant to alkali, alcohol, acid and many other solvents						
	self adhesive tag holder for surface mounting of 9 mm marking tags					
59042N	9 x 20	adhesive	t/parent	self adhesive tag holder	500	**3 250.00**
59050N	9 x 35	adhesive	t/parent	self adhesive tag holder	500	**6 510.00**
PMF-ET	tie-on tag holders for mounting on cables, hoses, tubes, conduits with cable ties					
• Tie on holder (max cable tie width 6 mm) longitudinal mounting of cables, tubes, conduit						
64040	9 x 20	1 tie	t/parent	tie-on transparent tag holder	1000	**2 430.00**
64050	9 x 35	2 tie	t/parent	tie-on transparent tag holder	500	**1 760.00**
PMT-CT	tie-on tag holders for mounting on cables, hoses, tubes, conduits with cable ties					
54013	9 x 55	2 tie	t/parent	55 mm t/parent tie-on tag holder	500	**2 060.00**
54014	9 x 90	2 tie	t/parent	90 mm t/parent tie-on tag holder	250	**1 650.00**

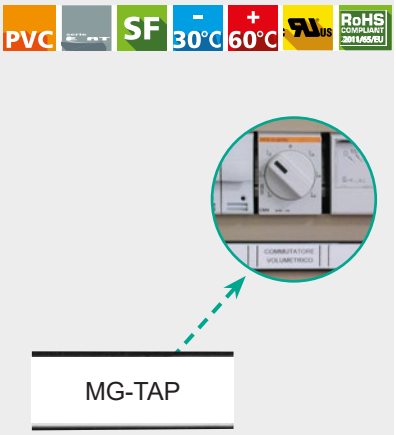
Rail holder and protective covers for 9 mm legends *(above)*

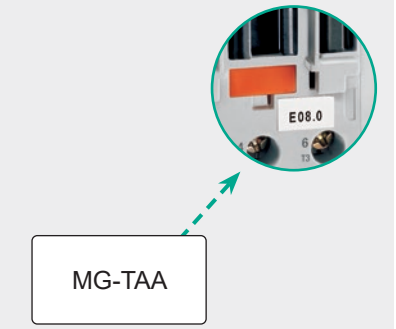
Legend rails provide an alternative to direct marking on components. 15 mm legends simply slide into rail and can be protected by using optional RT-CCP transparent protective strip.

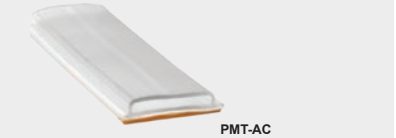
- Legend rail for 9 mm labels
- Non-deformable up to 90°C
- Rigid dielectric high impact PVC. Lead-free, self extinguishing to class VO: UL 94

RTA-TAPW	*self adhesive rail, accepts 9 mm legends*					
990506N	1 meter	adhesive	grey	adhesive rail holder for 9 mm legend	25	**4 950.00**
RT-CCWS	*transparent protective strip for above rail*					
990734	1 meter	RT-CCWS	t/parent	protective strip for above 9 mm rails	25	**2 070.00**

Above ZAR prices do not include VAT. E&OE







15 mm marking tags and holders

- Operating temperature: -30°C...+60°C
- Material: Rigid PVC, self extinguishing to class VO: UL 94
- Support template: **991002** **MG2-PLT** *(usually supplied with MG4 printer)*

type	size (mm)	SW code	colour	description	tags per sheet	tags per box	price per box
MG-TAP	slide-in marking legends for **PMT-AC/ET/DT, PLR, PTPR** legend holders *(below)*						
• Presented in stem format • Tags are simply snapped off their stems and inserted into the appropriate holders							
47090N	15 x 17	**165**	white	slide-in markers for 15 mm holders	42	1050	**2 730.00**
47091N	15 x 27	**166**	white	slide-in markers for 15 mm holders	28	1400	**4 360.00**
47092N	15 x 49	**167**	white	slide-in markers for 15 mm holders	14	700	**4 970.00**
47093	15 x 67	**188**	white	slide-in markers for 15 mm holders	14	350	**4 620.00**
MG-17.5-R	marking legends for **RTR/RTA-TAP** rail *(overleaf)*						
• For use with RTR/RTA-TAP 15 mm legend rails • Modular legends to suit standard MCBs for distribution boards							
990768N	15 x 17.5	**321**	white	1 module legend for rail holders	42	1050	**3 550.00**
990766N	15 x 35	**322**	white	2 module legend for rail holders	21	1050	**5 570.00**
990764N	15 x 52.5	**323**	white	3 module legend for rail holders	14	700	**7 160.00**
990762	15 x 70	**324**	white	4 module legend for rail holders	6	300	**7 020.00**
990798N	15 x 107.5	**329**	white	6 module legend for rail holders	7	350	**5 500.00**
990883	15 x 140	**331**	white	8 module legend for rail holders	7	350	**7 160.00**
MG-TAA	self adhesive precut legends						
• Self adhesive - can be applied to panels, components and equipment • Material: Rigid PVC - self extinguishing to class VO: UL 94 • Support template: **991002** **MG2-PLT** *(usually supplied with MG4 printer)*							
49192N	15 x 17	**965**	white	precut self adhesive blank legends	42	1050	**10 300.00**
49193N	15 x 27	**966**	white	precut self adhesive blank legends	28	700	**7 050.00**
49194N	15 x 49	**967**	white	precut self adhesive blank legends	14	350	**6 690.00**
49195	15 x 67	**977**	white	precut self adhesive blank legends	14	350	**13 500.00**
MG-17.5-A	self adhesive modular legends *(for modular MCBs)*						
990824	15 x 107.5	**929**	white	6 module self adhesive legends	7	175	**6 090.00**
990880	15 x 140	**931**	white	8 module self adhesive legends	7	175	**6 180.00**

PMT transparent legend holders for **MG-TAP** 15 mm pre-printed legends *(above)*

PMT holders are specifically designed to receive a pre-printed marking tag into a protected sleeve on the holder.

type	for tags (mm)	mounting	colour	description	std pack qty	price per pack
• Material: Plasticised PVC, self extinguishing to class VO: UL 94 • Operating temperature: -40°C...+80°C • Free of Cadmium, Lead, Silicon and Teflon. Resistant to alkali, alcohol, acids and solvents						
PMT-AC	self adhesive legend holders for surface mounting of 15 mm marking legends					
59002N	15 x 17	adhesive	t/parent	self adhesive 15 mm tag holder	500	**4 040.00**
59010N	15 x 27	adhesive	t/parent	self adhesive 15 mm tag holder	1000	**10 100.00**
59020N	15 x 49	adhesive	t/parent	self adhesive 15 mm tag holder	500	**9 080.00**
59030N	15 x 67	adhesive	t/parent	self adhesive 15 mm tag holder	250	**6 590.00**
PMF-ET	*tie-on legend holders for mounting on cables, hoses, tubes and conduits with cable ties*					
• Tie on holder *(max cable tie width 6 mm)* longitudinal mounting of cables, tubes, conduit						
65000	15 x 17	1 tie	t/parent	tie-on transparent tag holder	500	**1 180.00**
65010	15 x 27	1 tie	t/parent	tie-on transparent tag holder	500	**1 660.00**
65020	15 x 49	2 tie	t/parent	tie-on transparent tag holder	250	**1 130.00**
65030	15 x 67	2 tie	t/parent	tie-on transparent tag holder	250	**1 560.00**

Media - Types

Sheet | Roll | Conduit | Legend | Terminal | Panel

PC -40°C +115°C RoHS COMPLIANT 2011/65/EU

Legend holders/base to receive MG-TAP 15 mm pre-printed legends

PMT holders are specifically designed to receive a pre-printed marking legends into a protected sleeve.

type	for tags (mm)	mount	colour	size (mm)	description	tags per sheet	tags per box	price per box
Holder/base to receive **MG-TAP** 15 mm pre-printed legends								
PLR	*rectangular legend support/base - rivet fixing*							
34202	15 x 17	rivet	black	17 x 20	legend holder/base		100	**1 690.00**
34302	15 x 27	rivet	black	17 x 30	legend holder/base		100	**1 820.00**
34402	15 x 49	rivet	black	17 x 52	legend holder/base		100	**2 250.00**
34502	15 x 67	rivet	black	17 x 70	legend holder/base		100	**2 510.00**
PTPR-22	*legend holder for standard Ø 22.5 mm pushbuttons*							
34102	15 x 27	Ø 22.5	black	48 X 30	rivet p/button legend		100	**1 690.00**
34702	15 x 27	Ø 22.5	black	48 x 30	adhesive p/button legend		100	**2 310.00**
MG-TAP-CCS transparent protective covers for above legend supports								
990508N	15 x 17	165	t/parent		covers for legend supports	42	1050	**4 400.00**
990510N	15 x 27	166	t/parent		covers for legend supports	28	1400	**8 570.00**
990513N	15 x 49	167	t/parent		covers for legend supports	14	700	**8 190.00**
990514N	15 x 67	168	t/parent		covers for legend supports	14	350	**7 880.00**

New

Rail holder and protective covers for MG-17.5 15 mm legends

Legend rails provide an alternative to direct marking on components. 15 mm legends simply slide into rail and can be protected by using optional RT-CCP transparent protective strip.

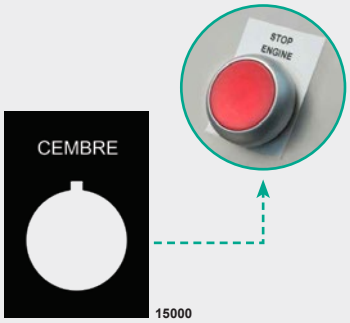
- Legend rail for 15 mm labels
- Rigid dielectric high impact PVC. Lead-free, self extinguishing to class VO: UL 94
- Non-deformable up to 90°C

type						price per 25
RTR-TAP	*pre-drilled rail, accepts MG-17.5-R 15 mm legends*					
990454	430 mm	rivet	black	rail holder for 15 mm legend	25	**1 880.00**
990664	650 mm	rivet	black	rail holder for 15 mm legend	25	**2 710.00**
RTA-TAP	*self adhesive rail, accepts MG-17.5-R 15 mm legends*					
990525N	1 meter	adhesive	black	adhesive rail holder for 15 mm legend	25	**3 960.00**
RT-CCPS	*transparent protective strip for above rail*					
990735	1 meter	RT-CCPS	t/parent	protective strip for above rails	25	**2 070.00**

PC HF SF -40°C +130°C RoHS COMPLIANT 2011/65/EU

Push button legends Ø 22.5 mm precut

- Operating temperature: -30°C...+60°C
- Material: Rigid PVC, self extinguishing to class VO: UL 94
- Support template: **991002** **MG2-PLT** *(usually supplied with MG4 printer)*



type	size (mm)	SW code	colour	description	tags per sheet	tags per box	price per box
MG-PTS	Ø22.5 mm precut legends for pushbuttons						
15090	40 x 30	**1000**	white	Ø 22.5 mm pushbutton legend	6	300	**6 240.00**
15040	40 x 30	**1000**	yellow	Ø 22.5 mm pushbutton legend	6	300	**7 520.00**
15000	40 x 30	**1000**	black	Ø 22.5 mm pushbutton legend	6	300	**9 330.00**
15091	50 x 30	**1001**	white	Ø 22.5 mm pushbutton legend	6	300	**6 240.00**
15041	50 x	**1001**	yellow	Ø 22.5 mm pushbutton legend	6	300	**7 520.00**

PVC SF -30°C +60°C RoHS COMPLIANT 2011/65/EU

MG-VRT-A Panel plates self adhesive, customisable

Rigid PVC self adhesive panel plates used to create name plates, rating plates, data plates using company logos, technical data, serial numbers, certification, etc.

- Material: Rigid PVC - self extinguishing to class VO: UL 94
- Support template: **991002** **MG2-PLT** *(usually supplied with **MG4 printer**)*

88916	25 x 50	**853**	white	precut self adhesive blank labels	8	200	**4 950.00**
88900N	32 x 58	**200**	white	precut self adhesive blank labels	6	150	**5 070.00**
88945	35 x 75	**825**	white	precut self adhesive blank labels	3	75	**4 920.00**
88918	50 x 50	**858**	white	precut self adhesive blank labels	4	100	**4 900.00**
88901	42 x 78	**202**	white	precut self adhesive blank labels	2	50	**4 510.00**
88902	62 x 88	**203**	white	precut self adhesive blank labels	1	25	**5 030.00**
88903	52 x 107	**204**	white	precut self adhesive blank labels	2	50	**4 510.00**
88913	92 x 118	**813**	white	precut self adhesive blank labels	1	25	**5 030.00**
88904	105 x 110	**812**	white	precut self adhesive blank labels	1	25	**5 030.00**

Above ZAR prices do not include VAT. E&OE

Self adhesive precut legends for marking

- Self adhesive - can be applied to panels, components and equipment
- Material: Rigid PVC - self extinguishing to class VO: UL 94
- Support template: **991002 MG2-PLT** *(usually supplied with **MG4 printer**)*

MG-TAA

type	size (mm)	SW code	colour	description	tags per sheet	tags per box	price per box
MG-TAA	self adhesive, precut legends						
49196	7 x 20	**179**	white	precut self adhesive blank legends	60	1500	**6 960.00**
49597	7 x 44	**795**	white	precut self adhesive blank legends	28	700	**10 100.00**
49498	8.5 x 30	**720**	white	precut self adhesive blank legends	33	825	**10 100.00**
49290N	9 x 12	**960**	white	precut self adhesive blank legends	88	2200	**8 360.00**
49397N	9 x 15	**961**	white	precut self adhesive blank legends	77	1925	**11 100.00**
49190N	9 x 20	**962**	white	precut self adhesive blank legends	55	1375	**8 600.00**
49191N	9 x 35	**964**	white	precut self adhesive blank legends	33	825	**10 100.00**
49193N	15 x 27	**966**	white	precut self adhesive blank legends	28	700	**7 050.00**
49194N	15 x 49	**967**	white	precut self adhesive blank legends	14	350	**6 690.00**
49195	15 x 67	**977**	white	precut self adhesive blank legends	14	350	**13 500.00**
49293	20 x 48	**850**	white	precut self adhesive blank legends	10	250	**6 680.00**
49294	20 x 72	**851**	white	precut self adhesive blank legends	5	125	**7 690.00**

MG-VYT self adhesive precut labels

- Dielectric PVC film labels used for internal and external marking
- Support template: **991002 MG2-PLT** *(usually supplied with MG4 printer)*

MG-VYT

46915	6 x 15	**181**	white	precut self adhesive blank labels	105	5250	**4 740.00**
44891	7 x 10	**191**	white	precut self adhesive blank labels	120	6000	**4 910.00**
46928	7 x 15	**182**	white	precut self adhesive blank labels	60	3000	**4 710.00**
46935	7 x 20	**190**	white	precut self adhesive blank labels	60	3000	**4 710.00**
46914	9 x 12	**160**	white	precut self adhesive blank labels	80	4000	**4 750.00**
44895	9 x 15	**161**	white	precut self adhesive blank labels	70	3500	**4 580.00**
44896N	9 x 20	**162**	white	precut self adhesive blank labels	55	2750	**4 890.00**
46910N	9 x 35	**164**	white	precut self adhesive blank labels	33	1650	**4 860.00**
46921N	15 x 27	**186**	white	precut self adhesive blank labels	28	1400	**5 120.00**
46933N	15 x 49	**187**	white	precut self adhesive blank labels	14	700	**4 750.00**
46925	25 x 50	**612**	white	precut self adhesive blank labels	8	400	**4 680.00**
46926	25 x 80	**613**	white	precut self adhesive blank labels	4	200	**4 680.00**

Other sizes available on request.

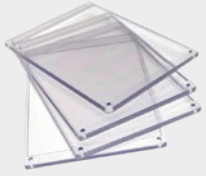
MG-VRT-R customisable panel plates

48900N + 47590

Rigid PVC panel plates used to create name plates, rating plates, data plates using company logos, technical data, serial numbers, certification, etc. CPT transparent polycarbonate covers can be used for increased durability

- Material: Rigid PVC - self extinguishing to class VO: UL 94
- Support template: **991002 MG2-PLT** *(usually supplied with MG4 printer)*

48900N	32 x 58	**200**	white	precut customisable panel plates	6	300	**6 240.00**
48901	42 x 78	**202**	white	precut customisable panel plates	2	100	**5 850.00**
48902	62 x 88	**203**	white	precut customisable panel plates	1	50	**6 060.00**
48903	52 x 107	**204**	white	precut customisable panel plates	2	100	**5 850.00**
48913	92 x 118	**813**	white	precut customisable panel plates	1	50	**6 060.00**



CPT

CPT transparent rivet fixing protection covers for panel plates *(above)*

Polycarbonate covers can be used to increase durability *(Ø 3 mm mounting holes)*

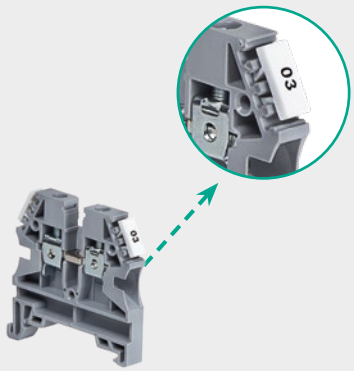
							pack qty	per pack
47590	37 x 79	–	t/parent	covers for	32 x 58	panel plates	10	**931.00**
47591	47 x 98	–	t/parent	covers for	42 x 78	panel plates	10	**974.00**
47594	67 x 109	–	t/parent	covers for	62 x 88	panel plates	10	**1 090.00**
47592	57 x 127	–	t/parent	covers for	52 x 107	panel plates	10	**993.00**
47593	97 x 140	–	t/parent	covers for	92 x 118	panel plates	10	**1 950.00**

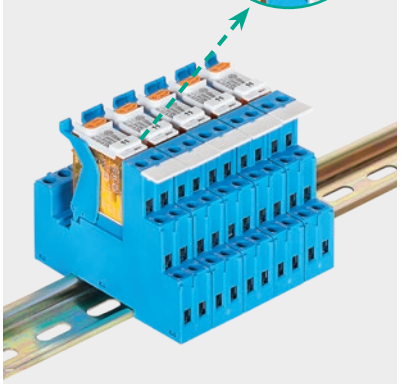
Metal Detectable - Media

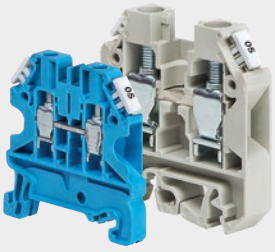
In food & beverage, pharmaceuticals, and cosmetics, maintaining top product quality is vital for end-user safety. **Cembre's new MD (Metal Detectable)** media ensure reliable detection with a special additive that is easily detected by metal detectors and X-rays.

Scan to Learn

PC HF SF -40°C +130°C EN 45545-2 RoHS COMPLIANT 2011/65/EU







990701

New

990740

MG-CPM terminal block markers

Terminal block markers are available in versions to suit the particular clip formats of the most widely used terminals, they provide an elevated mechanical robustness, high dimensional stability and are Halogen free. To optomise application time, additional data such as job details, location, etc - can be printed on the stems.

type	size (mm)	SW code	colour	description	tags per sheet	tags per box	price per box
MG-CPM terminal block markers							
• Material:				Polycarbonate, Halogen free self extinguishing to class VO: UL 94			
• Support template:				**991011** **MG2-QTB** *(usually supplied with **MG4 printer**)*			
MG-CPM-01							
For terminals - **Klemsan,** Weidmuller, ABB Entrelec, Wago, Allen Bradley, ContaClip, Connectwell							
41094*	5 x 7	**13**	white	terminal block marking tag	56	1960	**3 850.00**
41090N	5 x 10	**14**	white	terminal block marking tag	56	1960	**3 400.00**
41190N	5 x 10	**22**	white	terminal block marking tag	48	1680	**3 300.00**
41091N	5 x 15	**16**	white	offset terminal block marking tag	48	1680	**3 740.00**
41095	6 x 10	**17**	white	modular terminal block marking tag	48	1680	**3 300.00**
41096	8 x 10	**18**	white	modular terminal block marking tag	32	1120	**3 420.00**
* *Use support template* **991008**							
MG-CPM-04							
For terminals - Phoenix Contact UK/UT/ST, ABB Entrelec, Wago, Cabur, Connectwell							
41390N	5 x 10	**42**	white	terminal block marking tag	48	1680	**3 300.00**
41391	6 x 10	**45**	white	modular terminal block marking tag	48	1344	**2 640.00**
41396	8 x 10	**48**	white	modular terminal block marking tag	32	1120	**3 420.00**
MG-CPM-05							
For terminals - **Wieland,** Telemechanique, Legrand							
• Support template:				**991004** **MG2-WTB** support template for **MG-CPM-05**			
41490	5 x 10	**51**	white	terminal block marking tag	56	1960	**3 850.00**
41494	5 x 10	**51**	white	modular terminal marking tag	56	1960	**3 850.00**
MG-CPM-07							
For terminals - Phoenix Contact ST/STU/STS/STI/STN/STTB, Siemens 8WH, Schlegel							
41691	5 x 10	**71**	white	terminal block marking tag	48	1680	**3 300.00**
MG-CPM-11							
For terminals - **Finder, Klemsan,** Allen Bradley, Weidmuller WDU, Conta Clip RK, Omron							
46392	6 x 12	**106**	white	terminal block marking tag	48	1344	**2 640.00**
MG-CPM-13							
For terminals - **Finder, Klemsan,** Allen Bradley, Weidmuller WDU, Conta Clip RK, Omron							
41790	5 x 12	**113**	white	terminal block marking tag	56	1960	**3 850.00**
MG-CPM-15							
For terminals - **Klemsan,** WAllen Bradley, Weidmuller, Conta Clip RK, Wago Top Job							
42908	5 x 5	402	white	terminal block marking tag	48	1680	**3 740.00**
MG-SIGNS-VY self adhesive **panel labels**, warning, hazard, prohibition							
• Material:			PVC film				
991104	50	**260**	yellow	self adhesive triangle warning sign	4	200	**5 210.00**
991105	100	**242**	yellow	self adhesive triangle warning sign	1	50	**5 030.00**
991109	34 x 74	**246**	yellow	self adhesive rectangular label	2	100	**5 130.00**
991110	52 x 105	**247**	yellow	self adhesive rectangular label	2	100	**5 130.00**
991106	Ø 62	**232**	yellow	round label for 22.5 mm hole	1	50	**5 030.00**
991107	Ø 90	**233**	yellow	round label for 22.5 mm hole	1	50	**5 030.00**

Above ZAR prices do not include VAT. E&OE

Rolly3000

Thermal transfer printer for customised marking of tags on rolls

ROLLY3000 is designed for volume printing of all Cembre flat material on rolls, eg. Cable tags for holders, tie-on, wraparound cable markers, legend strips and labels.

Carriage loading and unloading operations are rapid and support templates are easily interchangeable.
As pigment deposited from the ribbon dries instantaneously, printed sheets are immediately ready for use.

ROLLY3000 package comprises: *(H) 288 x (W) 252 x (D) 460 mm*

- ROLLY3000 printer
- Mains and USB cable, Black printer ribbon, installation/operating documentation, GENIUSPRO - software

type	description	price
ROLLY3000 printer	Thermal transfer printer for marking of tags and legends	
• **Speed**	Prints 1000 TPM-ROLL 4 x 10 cable tags in less than 2 minutes	
• **Convenience**	Software provides quick and easy upload of data to be printed	
• **Economy**	Prints up to 140.000 TPM-ROLL 4 x 10 cable tags with a single ribbon	
• **Quality**	Printer resolution 300 dpi	
ROLLY3000	Thermal transfer printer for marking tags and legends on rolls	**129 000.00**

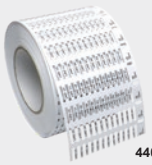
Accessories for ROLLY3000 printer

type	width (mm)	length (met.)	colour	description	Pantone ref.	price
842112	112	200	black	TPS-060 thermal t/fer printer ribbon	Black C	**3 750.00**

TPM-ROLL push-in 4 mm marking tags on a roll for **PMF, PMT-AC** tag holders

- Presented on a roll for ROLLY3000 printers
- Tags are simply inserted into appropriate holders and snapped off their branches

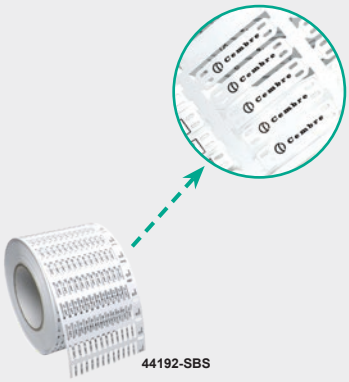
Material: Rigid PVC, self extinguishing to class VO: UL 94
Operating temperature: -30°C...+60°C


44091B

type	size (mm)	**SW code**	colour	description	tags per roll	price per roll
44091B	4 x 12	**4022**	white	push-in tags for PMF 4 mm holders	12552	**15 600.00**
44092B	4 x 15	**4023**	white	push-in tags for PMF 4 mm holders	12552	**15 600.00**
44093B	4 x 20	**4005**	white	push-in tags for PMF 4 mm holders	10200	**17 000.00**
44096B	4 x 30	**4026**	white	push-in tags for PMF 4 mm holders	6270	**15 400.00**
44097B	4 x 40	**4007**	white	push-in tags for PMF 4 mm holders	5005	**14 700.00**
44041B	4 x 12	**4022**	yellow	push-in tags for PMF 4 mm holders	12552	**21 900.00**
44042B	4 x 15	**4023**	yellow	push-in tags for PMF 4 mm holders	12552	**21 900.00**
44043B	4 x 20	**4005**	yellow	push-in tags for PMF 4 mm holders	10200	**23 700.00**
44046B	4 x 30	**4026**	yellow	push-in tags for PMF 4 mm holders	6270	**22 200.00**
44047B	4 x 40	**4007**	yellow	push-in tags for PMF 4 mm holders	5005	**21 600.00**

TAR-ROLL push-in 9 mm marking tags for **PMT and RT-TAPW** tag holders

75098	9 x 20	**4301**	white	push-in tags for PMT 9 mm holders	5800	**21 400.00**
75099	9 x 70	**4300**	white	push-in tags for PMT 9 mm holders	1450	**24 400.00**
75049	9 x 70	**4300**	yellow	push-in tags for PMT 9 mm holders	1450	**28 700.00**


44192-SBS

ETF-ROLL tie-on, precut one piece 13 mm markers *(max cable tie width 4.8 mm)*

44192-SBS	13 x 57	**4400**	white	tie-on cable and conduit tags	1775	**14 400.00**
44142-SBS	13 x 57	**4400**	yellow	tie-on cable and conduit tags	1775	**17 900.00**

STRIP-ROLL-R modular component legend strips on a roll

- For use with RTA-TAP rail legend holder *(page **L-53**)*
- **SW code - 5002** - 430 mm / **SW 5102** - 630 mm / **SW 502** - 1000 mm

13160	15 mm	–	white	modular component legend strip	25 meter	**8 790.00**

TTL self-adhesive thermal transfer labels on a roll *(Polyester film)*

84...WPYG

8400008WPYG	7 x 15	**4102**	white	self adhesive labels on a roll	32000	**14 000.00**
8401010WPYG	7 x 20	**4101**	white	self adhesive labels on a roll	24000	**11 800.00**
8400092WPYG	9 x 15	**4107**	white	self adhesive labels on a roll	26660	**13 000.00**
8400017WPYG	9 x 20	**4106**	white	self adhesive labels on a roll	19995	**11 200.00**
8400094WPYG	9 x 38	**4108**	white	self adhesive labels on a roll	13330	**13 900.00**
8401008WPYG	15 x 27	**4120**	white	self adhesive labels on a roll	13320	**15 100.00**
8400038WPYG	22 x 40	**4164**	white	self adhesive labels on a roll	4800	**8 960.00**
8400073WPYG	25 x 45	**4168**	white	self adhesive labels on a roll	5710	**14 200.00**
8400042WPYG	30 x 50	**4175**	white	self adhesive labels on a roll	2420	**7 920.00**
8400072WPYG	30 x 80	**4176**	white	self adhesive labels on a roll	2420	**12 100.00**
8400051WPYG	40 x 80	**4188**	white	self adhesive labels on a roll	2800	**17 600.00**
8400083WPYG	40 x 90	**4121**	white	self adhesive labels on a roll	1860	**13 800.00**

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600V CAT IV
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M

Tools

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100% MADE IN GERMANY made by JOKARI

Jokari a market leader in stripping technology for all types of wires, cables and conductors. Producing professional tools for most application areas in which wires must be processed easily, quickly and safely.

- Highest standards of workmanship and material
- Durable, reliable performance guaranteed

type	tool name	description	wire size	price
Allrounder		*for stripping of standard round and flat cables up to 15 mm*		

PV

New

30199

For removing of the coating, longitudinal sections, stripping of solid or flexible wires for exposing of wire lengths for specific connections, and a broad working range.

- Round cables Ø 4...15 mm, Flat cables max. 15 mm wide and flexible wire 1.5...50 mm²
- Extra blade for longitudinal cut. 2 stripping notches with length stop for stripping conductors
- Removable length stop, suitable for left and right hand use, can be stored in the tool handle.

30900	**Allrounder**	universal stripper for round and flat cables	4 - 15 mm²	**383.00**
PV Strip Pro		*for stripping of solar / photovoltaic cables up to 15 mm*		

The Jokari PV-Strip Pro is a versatile tool designed for stripping solar and photovoltaic cables from 1.5 to 16 mm². Ideal for professionals, it ensures fast, efficient, and reliable cable stripping in various PV installations.

- Additional blade for making a longitudinal cut
- Precise alignment of the blades to standard solar cables
- Light weight because of body made of high-quality, wear-resistant polyamide,

30199	PV Strip Pro	universal stripper for solar cables	1.5 - 16 mm²	**648.00**
Secura 2K		*soft grip (professional wire stripper)*		

20100

Automatic wire stripper for single, multiple and fine stranded cables 0.2...6.0 mm² with std insulation.

- No adjustment necessary for different cross-sections
- Integrated safety wire cutter for wires up to 2.5 mm²
- Strip length stopper adjustable 6 to 18 mm
- Ergonomic security soft grip handle *(non-tiring long operation)*

20100	**Secura 2K**	soft-grip wire stripper *(incorporating cutter)*	0.2 - 6 mm²	**791.00**
29100		spare blade set for above soft-grip stripper		**329.00**
Super 4 plus		*wire stripper (econo version)*		

20050

- Automatic wire stripper for solid and standard wires 0.2 - 6 mm²
- Integrated safety cutter for wires up to max. 2.5 mm²
- Strip length stopper adjustable: 6 to 15 mm
- No adjustment necessary for different cross-sections

20050	**Super 4 plus**	econo wire stripper *(incorporating wire cutter)*	0.2 - 6 mm²	**442.00**
No. 6-16		*stripper for larger wire sizes 6 - 16 mm²*		

Suitable for solid and stranded conductors 6...16 mm² for removing the outer sheath from PVC-Flex.

- Automatic wire stripper suitable for wires 6 - 16 mm² *(no adjustments required)*
- Special cut permits removal of outer sheath of 3 core-flex 3 x 0.75 mm and solar cables
- Adjustable strip length:15 - 18 - 20 mm

20090	**No.6-16**	wire stripper for larger cross-section wires	6 - 16 mm²	**1 320.00**
Universal No.12 - Cable stripper				

20090

For quick, precise cable stripping of all common round and multicore cables Ø 8...13 mm.

- No adjustment of cutting depth necessary
- Ideal for cable stripping confined spaces such as in junction boxes
- Blades with special Titanium-Nitride coating (TIN) to achieve longer life, faster cutting and less wear

30120	**Universal No.12**	universal for all round cables *(no adjustment)*	Ø 8 - 13 mm	**294.00**
Secura No.15 - Super stripper				

- No cutting depth adjustments required
- Integrated, multi-functional slide-out blade
- Locking mechanism prevents unwanted opening of the tool
- Absolutely straight-forward longitudinal cuts - with innovative internal cable duct
- Special outlined blades for effortless stripping of wires of diameters 0.2 - 0.3 - 0.8 - 1.5 - 2.5 - 4.0 mm²

30155	**Secura No.15**	same as No.12 + wire stripper 0.2...4 mm² and blade	Ø 8 - 13 mm	**638.00**
Flat cable stripper				

30120

For PVC insulated and sheated cables e.g. Twin Flat Cable 2 x 1/1.5/2.5 mm²

Twin and Earth Cable 3 x 1.0 mm², 3 x 1.5 mm², 3 x 2.5 mm²

- Removes outer sheath and inner conductor insulation *(no adjustment necessary)*
- Adjustable strip length:15 - 18 - 20 mm

20030	**EM-Set FKZ**	for flat twin and twin + earth cables	0.75...2.5 mm²	**1 210.00**

Above ZAR prices do not include VAT. E&OE

100% MADE IN GERMANY made by JOKARI

10281

10350

70000

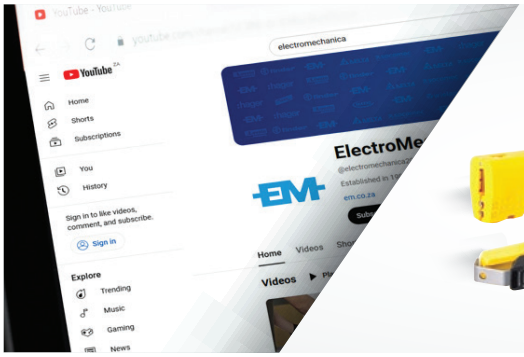
30161

62000

Specialised wire strippers

- Highest standards of workmanship and material - durable, reliable performance guaranteed
- Blades with special Titanium-Nitride coating (TIN) to achieve longer life, faster cutting and less wear

type	tool name	description	wire Ø	price
Cable knives		*cable knife*	*contains spare blade (inside handle)*	
		• For stripping outer sheath from all standard round cables • Automatic swivel blade *(screw adjustable for cutting depth)*		
10160	**Secura No.16**	cable knife *(adjustable blade depth)*	4 - 16 mm	**277.00**
10280	**Secura No.28H**	cable knife with additional hooked blade	8 - 28 mm	**306.00**
10281	**Secura No.28G**	cable knife with additional straight blade	8 - 28 mm	**306.00**
19000	–	spare blade for above cable knives	*(3 pc set)*	**270.00**
Cable knife system 4-70		*with newly developed hook blade protection mechanism*		
		• Bracket change system permits stripping of cables from Ø 4...70 mm diameter with just one tool • Perfect ergonomic design ensures easy, comfortable handling		
70000	**System 4-70**	knife with protected hook blade with bracket No. 28	8 - 28 mm	**906.00**
79016	**Bracket No. 16**	bracket for system 4 - 70 for cables with diameter	4 - 16 mm	**258.00**
79035	**Bracket No. 35**	bracket for system 4 - 70 for cables with diameter	27 - 35 mm	**292.00**
79050	**Bracket No. 50**	bracket for system 4 - 70 for cables with diameter	35 - 50 mm	**292.00**
79070	**Bracket No. 70**	bracket for system 4 - 70 for cables with diameter	50 - 70 mm	**292.00**
19000	–	spare blade for above cable knives	*(3 pc set)*	**270.00**
Coax cable strippers		*for coaxial cables*		
		Secura Coaxi No.1, strips coaxial cables in two easy and quick motions, striping the outer sheathing and inner dielectric coat precisely without any damage to the wires or essential shielding. • Quick, easy stripping of coaxial cable types - TV antenna cables, RG58/59, PVC-Flex 3 x 0.75 mm² • No adjustment necessary, without damaging the inner metal shield		
30600	**Coaxi No. 1**	Coax/RG59/59, CAT and PVC cables 3 x 0.75 mm²	Ø 4.8 - 7.5 mm	**320.00**
PC-Strip		*for PVC-insulated data communications and control cables*		
		Special sheathing and insulation stripping tool for PVC-insulated data communications and control cables. • No adjustment of cutting depth necessary *(wire stripping range 0.2 - 4.0 mm²)*		
30160	**PC-Strip**	data/network/printer/control cables 0.2...4 mm²	Ø 5 - 15 mm	**709.00**
PC-CAT		*for CAT5, CAT6, CAT7, Twisted-Pair-Cable*		
		For PVC-insulated data communications and control cables Cat5, Cat6, Cat7, twisted-pair, network and thinly insulated cables. Also for stripping individual wires *(0.2…0.8 mm²)* • No adjustment of cutting depth necessary *(wire stripping range: 0.2…0.8 mm²)* • Integrated, multi-functional slide-out blade		
30161	**PC-CAT**	CAT5 / 6 / 7 cable or twisted pair 0.2...4 mm²	Ø 4.5 - 10 mm	**565.00**
Quadro Plus		*4 functions in one* - **cutting - twisting - stripping - crimping**		
		Ergonomic, automatic wire stripper and crimping pliers for wires from 0.5...2.5 mm² wire stopper for perfect length, for quick precise stripping and crimping on insulated sleeves. • Self adjusting blades cause no damage to conductors • Integrated twisting device prevents splaying of wire strands • Trapezium crimping to VDE 0609 • Cartridge accepts insulated ferrules *(in strips)* 0.5...2.5 mm² • Incorporated side cutter for wires up to 2.5 mm²		
62000	**Quadro**	insulated carrying case with 2 spare cartridges	0.5 - 2.5 mm²	**4 570.00**
60100	**–**	spare quick-change cartridges for Quadro tool	–	**193.00**



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HNKE50

Manual crimping tools for wire ferrules *(bootlace terminals)*

Proteus 10S - Professional self-adjusting crimping tool providing a square crimp cross section suitable for wire ferrules 0.14...10 mm². Ergonomically shaped handles with selected surface textures for comfortable, frequent use.

- Professional self-adjusting crimping tool providing a square crimp profile on wire ferrules
- Full cycle ratchet mechanism ensuring consistent, reliable crimp *(release on completion of crimping operation)*
- Ergonomic handles, light weight, low handle force and optimum opening for comfortable crimping
- Release lever to clear miscrimps and obstructions *(releases jaws before completion of crimp)*
- Non-slip rubber grip pad for applying pressure against a surface

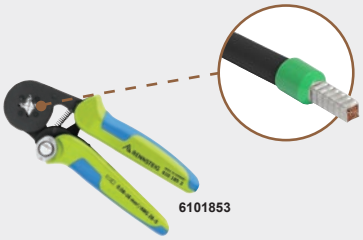
type	for terminals	conductor (mm^2)	cable entry	description	price
Pressmaster - Professional self-adjusting crimping tool					
• High precision die geometry for a clearly defined square crimp shape of the ferrule • Automatic self-adjustment to required wire size					
4300-4661	ferrules	0.14…10	side	professional self-adjusting crimping tool	**2 310.00**
Mobile frame system - with interchangeable dies for various terminals					
Lightweight, compact ratchet crimp tool designed for most types of mechanical, electrical and electronic connectors. Easily interchangeable crimp dies are kept together with a special pin to simplify handling. • Reliable crimping performance consistent and accurate with a parallel action stroke. • Easy-access release for fast, simple exchange of crimp dies *(no special tools required)*					
4300-3149	die dependant		side	MCT frame only for interchangeable dies	**601.00**
Interchangeable die sets for above tool frame • A wide range of crimp dies to cover all applications in just one tool frame. • Dies are kept in pairs and delivered in a modular reusable box.					
4300-3129	insulated	0.5 to 2.4	side	red/blue insulated terminal crimping die set	**430.00**
4300-3128	insulated	4 to 6	side	yellow insulated terminal crimping die set	**368.00**
4300-3137	uninsulated	0.75 to 2.5	side	cable lug crimping die set	**368.00**
4300-3139	uninsulated	4 to 10	side	cable lug crimping die set	**368.00**
4300-3127	end sleeves	0.25 to 10	side	wire end sleeve crimping die set	**368.00**
4300-3153	end sleeves	16 to 25	side	wire end sleeve crimping die set	**368.00**
4300-3154	end sleeves	35 to 50	side	wire end sleeve crimping die set	**368.00**
4300-3146	open barrel	0.5 to 6	side	open barrel connector crimping die set	**601.00**
4300-3136	coaxial	RG58/59/62/71	side	coaxial connector crimping die set	**429.00**
Z&F - Crimping tools *(for insulated and uninsulated ferrules)*					
Crimpit 2.4	end sleeves	0.5 to 2.4		economic crimping tool *(front and side entry)*	**899.00**
Crimping tool with ratchet closing control					
Crimpit F6L	end sleeves	0.5 to 6	side	crimping tool for wire end ferrules *(5 profiles)*	**1 440.00**
Crimpit F16L	end sleeves	6 to 16	side	crimping tool for wire end ferrules *(3 profiles)*	**1 440.00**
Crimpit F25L	end sleeves	6 to 25	side	crimping tool for wire end ferrules *(4 profiles)*	**1 530.00**
Crimpit IT6L *(for pre-insulated cable lugs)* • Crimping tool for PVC, PC and DPA insulated lugs, with ratchet closing control • Crimping profiles for different wire cross-sections *(red/blue/yellow)*					
Crimpit IT6L	insulated	0.5 to 6	side	crimping tool for pre-insulated lugs *(3 profiles)*	**1 420.00**
Jeesoon - Crimping tool for pre-insulated terminals					
• With ratchet closing control • Crimping profiles for different wire cross-sections *(red/blue/yellow)*					
JSL 1305-1	insulated	0.5 to 6	side	crimping tool for pre-insulated terminals	**657.00**
Cembre - Crimpstar range - Ratchet crimping tools					
• Ergonomically designed non-slip moulded plastic grips • Factory-set ratchet for crimping control *(automatic release on completion of crimping operation)* • Emergency release lever *(releases jaws before completion of crimp)*					
HP3	insulated	0.25 to 6	side	red/blue/yellow ratchet crimping tool	**1 690.00**
HNN3	insulated	1.5 to 10	side	manual indent ratchet crimping tool	**1 900.00**
HNN4	insulated	10 to 16	side	manual indent ratchet crimping tool	**1 810.00**
HN-A25	uninsulated	10 to 25	side	manual hexagona ratchet crimping tool	**3 050.00**
HNKE4	end sleeves	0.5 to 4	side	wire end sleeve crimping tool	**1 940.00**
HNKE16	end sleeves	4 to 16	side	wire end sleeve crimping tool	**2 180.00**
HNKE50	end sleeves	25 to 50	side	wire end sleeve crimping tool	**2 010.00**

Above ZAR prices do not include VAT. E&OE

700 015 36

SC5X

610 001 0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Professional hand tools for cable preparation

type	wire sizes mm²	tool length	description	dimensions (mm) H	W	D	price
Cable shears *(cutters)*							
• For cutting single/multi-strand and fine wire aluminium and copper cables • Easy, clean cut with one hand operation - no crushing or deformation of cables							
700 015 36	Cu 70	170 mm	cable shears for stranded conductors up to 70 mm²				**711.00**
Professional scissors	*supplied with carry case and swivel belt hook*						
Robust-A professional scissors with special steel frame for high resistance and a long life • Safe and easy operation even when wearing work gloves • Dual compound material - soft rubber inserts to maximise grip • Extremely lightweight and robust for safe, easy handling and comfort • Easy cutting of conductors up to 50 mm² using the shaped grooves in each blade							
SC5X	scissors		professional workmans scissors	162	77	18	**550.00**
Crimping tools for insulated and uninsulated ferrules *(bootlace terminals)*							
Entry-level crimping tool for 0.25 – 2.5 mm² ferrules PE 7.1 • Forged body - milled trapezoidal crimp profile							
610 001 0	0.25...2.5	150 mm	entry-level crimping tool for ferrules 0.25...2.5 mm²				**549.00**
Professional crimping tool for 0.08 - 16 mm² ferrules PEW 8.185 / PEW8.87 • The established, patented tool further improved • High-precision die geometry leads to a clearly defined square crimp shape of the ferrule • Automatic self-adjustment to requested wire size							
610 185 3	0.08-16	side entry	professional crimping tool for ferrules 0.08 - 16 mm²				**3 660.00**
610 087 3	0.08-10	front entry	professional crimping tool for ferrules 0.08 - 10 mm²				**3 720.00**

LC 100

Automatic machines for cable preparation

type	wire sizes (mm²)	measuring length (mm)	description	dimensions (mm) H	W	D	price
Cable cutting machine *supply voltage 100...240 VAC 50/60Hz* **LC 100** offers significant potential savings. Measuring and transport rollers automatically adjust to wire diameter on insertion. Enter the desired length and quantity on the control panel and the production can begin. Included software enables recurring cutting jobs to be saved as projects. • Easy to use, faster material change • Cable cross-section is automatically detected • Simple and fast data entry via clear graphical display and control panel • High measuring accuracy through separate measuring and transporting roller							
LC 100	0.8..10	2 mm...1000 meter	automatic wire cutter	194	228	301	**78 500.00**

CS 60

CS 60 - Stripping machine *supply voltage - 230 VAC 50Hz*							
CS 60 settings are made by large user-friendly dials. A graphic display indicates values entered within seconds, the cross section settings and stripping length are performed. Insulation of cables not fully stripped to prevent fanning of the wire strands. • Mobile use by carrying handle • Fast setting of length and cross section • Large graphic display facilitates adjustment • The automatic clamping force adjustment protects sensitive insulations							
CS 60	0.8...6	2...20 mm	automatic wire stripper	221	141	363	**74 900.00**

MC 25

Stripping and crimping machines *(combined)*

type	wire sizes mm²	crimping length (mm)	description	dimensions (mm) H	W	D	price
Electric stripping and crimping machine *supply voltage - 230 VAC 50Hz* Wire stripping and crimping done in one operation using belt strip ferrules in type K box dispensers Controlled by a sophisticated cam mechanism achieving a stable working process. • Cycle time: 1.5s • Easy to use, silent operation • Cross-sectional change in a few simple steps.							
MC 25	0.25...2.5	8 mm	automatic stripper/crimper	270	165	320	**156 000.00**

HT45-E

KITHT51-1

RHC131

HT-TC026

TC050

PO7000

Hydraulic crimping / cutting tools

type	for terminals	conductor (mm^2)	crimping force (kN)	description	price
HT and TC series - Hydraulic tools				*lightweight and compact*	
• Spring loaded handles, dies can be advanced using only one hand • Pressure release system can easily be operated at any stage of compression • For ease of operation and comfort of operator, tool head can be fully rotated 180° • Supplied with sturdy plastic carrying case for tool with compartments. (*see dies sets)*					
HT45 compact hydraulic crimping tool					
HT45-E	die dependant	max. 150	50 kN	hydraulic crimping tool	**17 900.00**
HT51 -2 speed hydraulic crimping tool					
• Supplied with sturdy plastic carrying case for tool and *(included)* die sets: ME 5-50, 7-50, 10-50, 14-50, 19-50, 24-50, 30-50, 37-50					
KITHT51-1	die dependant	max. 240	50 kN	hydraulic crimping tool	**29 300.00**
HT131 hydraulic crimping tool for semi-circular slotted dies					
• Supplied with sturdy plastic carrying case for tool and *(included)* die sets: ME 10-C, 14-C, 19-C, 24-C, 30-C, 37-C, 48-C					
KITHT131-C-1	die dependant	max. 400	130 kN	hydraulic crimping tool	**41 000.00**
RH series - Hydraulic presshead					
Hydraulic presshead complete with quick automatic coupler for connection to a hydraulic pump with a working pressure of 700 bar max.					
RHC131	die dependant	max. 400	130 kN	hydraulic presshead only	**16 000.00**

TC series - Hydraulic cutting tool

Hand operated hydraulic tool specifically designed to cut Copper, Aluminium-Steel cables. Double speed action: a fast advancing speed for rapid approach of blades to cable and a slower more powerful speed for cutting.

- **HT-TC...** can cut copper, aldrey, aluminium, aluminium-steel cables and steel ropes and steel rods

type	max. cutting diameter Ø	length	width	description	price
TC026 compact hydraulic cutting tool				*supplied with canvas carrying bag for tool*	
HT-TC026	Ø 25 mm	382 mm	129 mm	hydraulic cutting tool	**29 300.00**
TC series -2 speed hydraulic cutting tool				*supplied with plastic carrying case for tool*	
HT-TC041N	Ø 45 mm	550 mm	144 mm	hydraulic cutting tool	**39 400.00**
TC series hydraulic cutting head				*supplied with canvas carrying bag for tool*	
Hydraulic cutting head complete with quick automatic coupler for connection to a hydraulic pump with a working pressure of 700 bar max.					
TC050	Ø 50 mm	325 mm	112 mm	hydraulic cutting head	**26 500.00**
Larger sizes available on request.					

Hydraulic foot operated pump

- Pressure release can easily be operated at any stage of compression
- Supplied with 3 meter long high pressure flexible hose with self-lock quick coupler

PO - Foot operated double speed pump *develops a maximum pressure of 700 bar*

- Supplied with solid shaped stand providing stability during operation
- Supplied with sturdy plastic carrying case for tool

PO7000	700 BAR	680 mm	200 mm	hydraulic foot operated pump	**36 400.00**

Manual crimping tool

- Heat treated steel crimp jaws
- Handles of anti-slip plastic with hilt

TN series *(indent crimp)* *adjustable for different conductor sizes*

- Easily adjustable die positioning by knurled screw and reference vernier scale

TN70SE	uninsulated	6 to 70	indent	adjustable manual crimping tool	**5 590.00**
TN120SE	uninsulated	10 to 120	indent	adjustable manual crimping tool	**6 560.00**

Above ZAR prices do not include VAT. E&OE

KIT-BX500ND-1

Cordless hydraulic crimping tools *(18.0 V Li-Ion high power batteries)*

- Pressure release button
- Extremely quiet, minimal vibration
- One hand operation, improved balance for better handling
- Tool head rotates 180° for ease of operation in confined spaces
- Durable moulded body with high resistance to wear and damage in all operating conditions

type	for terminals	conductor (mm^2)	crimping force (kN)	description	price
BX500 series - "Inline" type crimping tool					
KIT-BX500ND-1 is a one-handed, inline cordless crimping tool designed for crimping electrical connectors on conductor cross sections up to 300 mm^2. Compatible with all CEMBRE 50kN die sets, it offers balanced control. • Wide opening head, ideal for derivations from running conductors • One Li-Ion 18.0V 2.0Ah batteries and charger included • **Supplied with:** A durable plastic carry case, 1 battery, charger, and die set for Cu lugs from 25 to 185 sqmm (ME5-50 to ME37-50)					
KIT-BX500ND-1	die dependant	max. 300	60 kN	battery operated crimping tool	**42 600.00**
TC320 series - "inline" type cutting tool					
B-TC320NDF is a cordless tool designed for cutting copper, aluminium, and telecommunication cables up to 32 mm. It features high-strength steel blades and a 180° rotating head for versatile operation, suitable for temperatures from -15 to +50°C. • LED light illuminating working area • Li-Ion 18.0V 2.0Ah high power battery • Battery is equipped with led indicators that indicate the remaining battery life • Specifically designed to cut Copper, Aluminium and Telecommunications cables **Supplied with:** • Plastic carrying case for tool, 2 x battery, charger and *(included)* die sets:					
B-TC320NDF	die dependant	max Ø 32 mm		battery operated cutting tool	**51 500.00**
FL750 series - "Pistol" portable punching tool					
KIT-B-FL750-1 is a versatile cordless punching tool powered by an 18.0V lithium-ion battery. It features a 360° rotating and 180° pivoting head for easy access in tight spaces and can punch materials up to 3.5 mm thick. **Supplied with:** • Plastic carrying case for tool, battery, charger • Kit includes round punch - KIT-RD 18.8, 20.5, 22.6, 28.5SS					
KIT-B-FL750-1	die dependant	max 140 mm		battery operated punching tool	**56 800.00**
B1300 series - Portable crimping tool					
• LED light illuminating working area • Li-Ion 18.0V 5.2Ah high power battery • Crimping cycle data stored *(up to 200.000 events)* in memory for later transfer to PC • Digital display indicating: crimp pressure, available battery life, service/maintenance information • **Supplied with:** Plastic carrying case for tool, 2 x battery, charger and *(included)* die sets: ME 10-C, 14-C, 19-C, 24-C, 30-C, 37-C, 48-C					
KITB1300-C-1	die dependant	max. 400	132 kN	battery operated crimping tool	**91 200.00**
See dies sets					

KIT-B-FL750-1

B-TC320NDF

MARKINGENIUS MG4 *(thermal transfer printer)* *(H) 236 x (W) 240 x (D) 409 mm / 6.1 kg*

Exclusively designed for the identification of conductors and electrical components.

Plug & Play Thermal Transfer Printer: For tags, markers, legends, and labels on cables, pipes, tubes, terminal blocks, panels, components, and equipment

Large on-Board Touch Screen: Allows easy management of print projects. The MG4's reliability and robustness make it ideal for intensive use in various applications

Versatile Power Options: MG4 operates on mains power or optional CEMBRE rechargeable batteries. Use it in the office, production, or on-site. The interchangeable battery, compatible with all CEMBRE tools, ensures full portability

Efficient Ribbon Save System: Each monochrome ribbon prints over 300,000 MG-TPMF 4x10 mm labels. Pigment dries instantly, making printed sheets immediately ready for use

MG4

type	description	price
MG4	MARKINGENIUS MG4 thermal transfer printer for marking tags and legends	**68 000.00**

ME1

ME7

MA1-50

MA19-50

MA7-C

MN2RF-50

MN10RF-50

Die sets for hydraulic and battery operated crimping tools

type	for terminals	conductor (mm^2)	crimping type	for crimping tool	price
Die sets for uninsulated terminals					
ME1	cable lugs	4...6	hexagonal	HT45-E	**920.00**
ME2	cable lugs	10	hexagonal	HT45-E	**723.00**
ME3	cable lugs	16	hexagonal	HT45-E	**723.00**
ME5	cable lugs	25	hexagonal	HT45-E	**723.00**
ME7	cable lugs	35	hexagonal	HT45-E	**723.00**
ME10	cable lugs	50	hexagonal	HT45-E	**723.00**
ME14	cable lugs	70	hexagonal	HT45-E	**723.00**
ME19	cable lugs	95	hexagonal	HT45-E	**723.00**
ME24	cable lugs	120	hexagonal	HT45-E	**723.00**
ME30	cable lugs	150	hexagonal	HT45-E	**723.00**
ME1-50	cable lugs	4...6	hexagonal	HT51/BX500ND	**1 010.00**
ME2-50	cable lugs	10	hexagonal	HT51/BX500ND	**723.00**
ME3-50	cable lugs	16	hexagonal	HT51/BX500ND	**723.00**
ME5-50	cable lugs	25	hexagonal	HT51/BX500ND	**723.00**
ME7-50	cable lugs	35	hexagonal	HT51/BX500ND	**723.00**
ME10-50	cable lugs	50	hexagonal	HT51/BX500ND	**723.00**
ME14-50	cable lugs	70	hexagonal	HT51/BX500ND	**723.00**
ME19-50	cable lugs	95	hexagonal	HT51/BX500ND	**723.00**
ME24L-50	cable lugs	120	hexagonal	BX500ND	**871.00**
ME30L-50	cable lugs	150	hexagonal	BX500ND	**871.00**
ME24-50	cable lugs	120	hexagonal	HT51/BX500ND	**871.00**
ME30-50	cable lugs	150	hexagonal	HT51/BX500ND	**871.00**
ME37-50	cable lugs	185	hexagonal	HT51/BX500ND	**871.00**
ME48-50	cable lugs	240	hexagonal	HT51/BX500ND	**2 720.00**
MA1-50	nest	4...6	indent	HT51/BX500ND	**657.00**
MA2.3-50	nest	10	indent	HT51/BX500ND	**657.00**
MA5-50	nest	25	indent	HT51/BX500ND	**657.00**
PA5-50	indentor	4…25	indent	HT51/BX500ND	**1 960.00**
MA7-50	nest	35	indent	HT51/BX500ND	**640.00**
MA10-50	nest	50	indent	HT51/BX500ND	**640.00**
PA10-50	indentor	35…50	indent	HT51/BX500ND	**1 960.00**
MA14-50	nest	70	indent	HT51/BX500ND	**683.00**
MA19-50	nest	95	indent	HT51/BX500ND	**683.00**
PA19-50	indentor	70…95	indent	HT51/BX500ND	**1 960.00**
MA24-50	nest	120	indent	HT51/BX500ND	**640.00**
PA24-50	indentor	120	indent	HT51/BX500ND	**1 960.00**
ME7-C	cable lugs	35	hexagonal	HT/RHC131/B1300	**1 670.00**
ME10-C	cable lugs	50	hexagonal	HT/RHC131/B1300	**1 670.00**
ME14-C	cable lugs	70	hexagonal	HT/RHC131/B1300	**1 670.00**
ME19-C	cable lugs	95	hexagonal	HT/RHC131/B1300	**1 670.00**
ME24-C	cable lugs	120	hexagonal	HT/RHC131/B1300	**1 670.00**
ME30-C	cable lugs	150	hexagonal	HT/RHC131/B1300	**1 670.00**
ME37-C	cable lugs	185	hexagonal	HT/RHC131/B1300	**1 670.00**
ME48-C	cable lugs	240	hexagonal	HT/RHC131/B1300	**1 670.00**
ME60-C	cable lugs	300	hexagonal	HT/RHC131/B1300	**1 670.00**
ME80-C	cable lugs	400	hexagonal	HT/RHC131/B1300	**1 670.00**
MA7-C	nest	35	indent	HT/RHC131/B1300	**904.00**
MA10-C	nest	50	indent	HT/RHC131/B1300	**904.00**
PA10-C	indentor	10…50	indent	HT/RHC131/B1300	**2 000.00**
MA14-C	nest	70	indent	HT/RHC131/B1300	**904.00**
MA19-C	nest	95	indent	HT/RHC131/B1300	**904.00**
MA24-C	nest	120	indent	HT/RHC131/B1300	**904.00**
PA24-C	indentor	70…120	indent	HT/RHC131/B1300	**2 000.00**
MA30-C	nest	150	indent	HT/RHC131/B1300	**904.00**
MA37-C	nest	185	indent	HT/RHC131/B1300	**904.00**
MA48-C	nest	240	indent	HT/RHC131/B1300	**904.00**
PA48-C	indentor	150…240	indent	HT/RHC131/B1300	**2 000.00**
MA60-C	nest	300	indent	HT/RHC131/B1300	**1 560.00**
PA60-C	indentor	300	indent	HT/RHC131/B1300	**2 000.00**
Die sets for insulated terminals					
MN2RF-50	cable lugs	10	radial	HT51/BX500ND	**985.00**
MN3RF-50	cable lugs	16	radial	HT51/BX500ND	**985.00**
MN5RF-50	cable lugs	25	radial	HT51/BX500ND	**985.00**
MN7RF-50	cable lugs	35	radial	HT51/BX500ND	**985.00**
MN10RF-50	cable lugs	50	radial	HT51/BX500ND	**985.00**

Above ZAR prices do not include VAT. E&OE

008328

DIN rail cutter (professional)

DIN rail cutter *(for steel mounting rail only)*

DIN rail is often cut by saw or angle grinder creating dust, noise and a considerable risk of injury. The **RC200** is a high quality, professional DIN rail cutter designed for high output, offering "burr-free" precision cutting and trimming of standard DIN rails.

- Increased work safety and quiet operation
- Quick and professional burr-free processing
- Metric scale plate and table clamp *(optional)*
- Incorporates two cut profiles *(7.5 x 35 and 15 x 35 mm)* DIN rails.
- Precision "burr-free" cut and trim of DIN rail to length without waste

type	rail cutter	for rail depth (mm)	description	price
DIN rail cutter *(professional)*				
RC200 DIN rail cutter			*for DIN 35 rail 7.5 and 15 mm deep*	
008328	cutter	7.5 + 15	DIN rail cutter *(2 profiles)* for 7.5/15 mm high x 35 mm rail	**15 600.00**
Accessories for above RC200 DIN rail cutter				
009465	scale		metric scale plate and length stop for above DIN rail cutter RC200	**2 720.00**
009102	clamp		table clamp for above DIN rail cutter RC200	**1 140.00**

Made in Italy MICOEL

VTC125

Wiring duct cutter *(professional)*

type	duct cutter	max. cut width	max. length stop	description	price
Bench mounting wiring duct *(slotted trunking)* **cutter**					
VTC125	cutter	125 mm	1000 mm	precision slotted wiring duct cutter	**18 800.00**

VTC125 provides fast, precise and burr-free cutting of wiring ducts, without leaving chips behind. It enables low-noise and emission-free working. The scale with length stop ensures the wiring ducts are cut to length quickly and with millimetre precision

For fast, accurate cutting of wiring ducts to lengths, without burrs and with very little force

- Blade guard guarantees secure operation
- Burr-free cut edges - No noise, no chips or dust
- Quick and easy cutting - ducts cut precisely to the millimetre
- Supplied with a 1 meter graduated dimension rule with length stop
- Hardened *(replaceable)* cutting blade - max. cutting width 125 mm

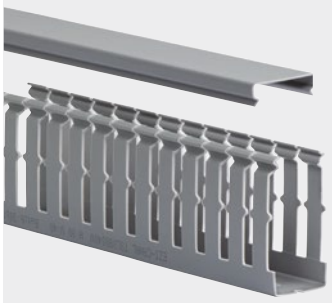
L-Termination and wiring

EZI CANAL electrical cable ducting

Ezi Canal slotted cable ducting features an improved cover design for ease of opening and closing, permitting easy access to wiring in control panels.

- Simple open/close cover design for easy access to wiring in control panel
- Double score-line permits finger/slot or complete sidewall removal
- Coining process for burr-free edges to protect hands and wiring from abrasion

Standard colour: Grey - others available on request *(volume dependant)*
Standard length: Supplied in two meter lengths, complete with covers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type	dimensions (mm) (W)	(H)	colour	description	slot A (mm)	finger B (mm)	carton qty (L - 2 m)	price each
Narrow slotted trunking			Finger: 6 mm / Slot - 4 mm	*(10 mm pitch)*				
• Narrow slot/finger design to closely fit spacing of high density terminal blocks and I/O modules								
KKC1518	15	18	grey	PVC slotted cable trunking	5	7.5	112	*see Cat L for pricing.*
TSL025025N	25	25	grey	PVC slotted cable trunking	4	6	48	
TSL025040N	25	40	grey	PVC slotted cable trunking	4	6	40	
TSL040040N	40	40	grey	PVC slotted cable trunking	4	6	24	
TSL060040N	60	40	grey	PVC slotted cable trunking	4	6	24	
TSL080040N	80	40	grey	PVC slotted cable trunking	4	6	18	

P01191773

Voltage Absence Tester (VAT) CAT IV 1000 V

Installations connected to an electricity distribution network, require measurements to be performed with power off to avoid electrical hazards (EN 50110-1 standard, DIN VDE 0682-401, NF C 18-510, etc.)
Securing the installation to ensure that it is non-current-carrying, requires the use of a Voltage Absence Tester.

- **Comprehensive integrated autotest** - indication of type of fault also displays a text message for information.
- **IP65 protection** for indoor and outdoor use, significantly higher than the IP54 rating required by the standard.
- **Audible and visual continuity** indication up to 100 Ω, in compliance with standards recommendations.
- **Removable test probes** to meet specific requirements in certain applications *(various models available)*

AC and DC voltage testing Voltage detection takes priority, is automatic and indicated by distinct visual *(bargraph)* and intermittent beep. Stray voltages can be detected by pressing two buttons simultaneously to switch to low impedance mode.

2-wire phase rotation with microprocessor Simple and quick, the 2-wire phase rotation function with microprocessor is useful in all circumstances, including installations powered by an electrical generator set or behind an isolating transformer.

Continuity and resistance testing Checks that conductors are correctly connected. Continuity (R < 100 Ω) is indicated by a continuous audio signal whilst the resistance value is displayed directly.

Residual Current Device (RCD) trip test up to 30 mA By simultaneously pressing the double command, you can cause a fault current sufficient to trip the RCD to flow through a low-impedance load.

Ergonomics specially designed for use in the field Digital display, removable test probes ensure excellent handling. A built-in torch illuminates the point of measurement.

type	model	description	price
Voltage Absence Tester		**IP65** *enclosure* *228 x 60 x 39 mm*	

Display:	LEDs + backlit digital display
Voltage:	12 VAC - 1.000 VAC / 12 VDC - 1.400 VDC
Impedance:	> 500 kΩ / Polarity indication
Android application:	Not applicable
RCD tripping:	By low-impedance load switching *(approx.30 mA at 230 V)*
Continuity & Resistance:	Buzzer trigger threshold 100 Ω typical *(150 Ω max.)*
Extended continuity test:	0.5 Ω to 2.999 kΩ
Phase rotation:	2-wire type with microprocessor - Ph/Ph voltage 50 V - 1 000 VAC
Buzzer:	Intermittent for Voltage Detection - Continuous for continuity
Standards and elec safety:	IEC 61243-3:2009, EN 61243-3:2010, IEC 61010 1.000 V CAT I

Delivered with: *manual, set removable test probes, 2x 1.5 V LR03/AAA batteries, Velcro strap.*

P01191773	C.A 773	CAT IV 1.000 V Voltage Absence Tester (VAT)	**4 550.00**

P01196773

Digital multimeter (CAT IV 600 V) **IP54**

General-purpose professional measuring instrument with TRMS measurements *(sinusoidal, distorted and DC signals)* measurement accuracy, rugged design, reliability of an on-site instrument.

- Double backlit display
- Min/Max memorization
- Large 6000-count display
- Temperature and capacitance measurements

Display:	2 x 6000 counts, backlit
Bargraph:	*(63 elements)* Bi-mode *(full scale / central zero)*
Acquisition:	TRMS AC / DC
Measurement rate:	5 measurements per second
Automatic / manual ranges:	Yes / Yes
AC/DC voltage:	600 mV / 6 / 60 / 600 / 1.000 V - accuracy 0.2% - 40Hz to 3kHz
LowZ AC voltage:	Low-impedance setting with Low-pass Filter
AC/DC current:	6.000 A / 10.00 A (20 A/30s)
Resistance measurement:	600 / 6.000 Ω / 60 / 600 kΩ / 6 / 60 MΩ, Audible continuity, Diode test
Frequency:	600 Hz / 6 kHz / 50 kHz
Capacitance:	8 cal.: 6.000 nF to 60.00 mF
Temperature:	-59.6 to +1.200°C / -4 to +2.192°F
Hold facility:	Yes Min / MAX (100 ms)
Min / MAX (100 ms):	Yes
Automatic power-off:	Yes *(can be deactivated)*
Safety:	IEC 61010-1, IEC 61010-2-033 CAT IV 600 V / CAT III 1000V
Power supply:	1x 9 V 6LR61 battery
Dimensions / weight:	90 x 190 x 45 / 400 g

Delivered with: *Set leads, set test probes, 1x 9V 6LR61 battery, K thermocouple temp sensor*

P01196773	***C.A5273***	digital multimeter hand held for all applications	**6 260.00**

Accessories *for above C.A5273 multimeter*

P01298076	carrying bag with MultiFix multi-position mounting accessory	**1 040.00**

P01298076

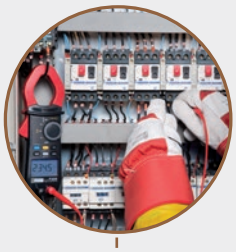
Above ZAR prices do not include VAT. E&OE

1000V CAT IV | IP 54

Digital Power and harmonics clamp multimeter

Scan to watch video

General-purpose professional clamp-on measuring instrument with True RMS measurement accuracy, reliable and particularly resistant to falls.



P01120925

Clamping diameter:		**Ø34 mm**
Display:		Large 6000-count, backlit LCD screen
Amp (RMS)	AC	600 A
	DC, AC+DC	900 A
Volt AC (RMS)	AC	1000 V - 1%
Volt DC	DC, AC+DC	1400 V - 1%
Automatic AC/DC detection:		Yes (V and A)
Frequency for V/I:		Yes / Yes
Resistance measurement:		60 kΩ
Audible continuity:		Yes *(< 1 Ω…599Ω)*
Diode test:		*(semi-conductor junction)*
Temperature (type K):		-60.0 to +1000 °C
Power:	W, var, VA, PF	Yes - single-phase and total three-phase
Harmonic analysis:		THDf / THDr
Phase rotation:		*(2-wire method)*
Motor-inrush function:		Yes
True-inrush function"		Yes
"Min / Max" / Peak function:		Yes / Yes
Auto Power off / "Hold" function:		Yes
Low battery indication:		Yes
Electrical safety as per:		IEC 61010 CAT IV 600V, CAT III 1000 V
Dimensions / weight:		78 x 222 x 42 / 340g

Delivered with: *1 set of PVC leads (black/red) with insulated elbowed male banana plug / insulated straight male banana plug, 2 test probes / insulated female plug (black/red) 1 safety crocodile clip (black) 1 x 9 V 6LR61 battery, 1 Multifix shoulder bag, mini-CD containing the User Manual.*

type	model	description	price
P01120925	***F205***	digital clamp multimeter/tong tester for all applications	**8 070.00**

Power and harmonics clamp multimeter IP54

Current 1000 A, Voltage 1000 V, power, harmonics and recorder

P01120947

Clamping diameter:		**Ø48 mm**
Display:		Large triple 10 000 count, backlit screen
Amp (RMS)	AC	150mA to 1000 A - 1%
	DC, AC+DC	150mA to 1500 A - 1%
Volt AC (RMS)	AC	100 mV to 1000 V - 1%
Volt DC	DC, AC+DC	100 mV to 1000 V - 1%
Automatic AC/DC detection:		Yes (V and A)
Resistance measurement:		100 kΩ *(continuity buzzer)*
Audible continuity:		Yes (< 40 Ω)
Frequency:		15Hz to 20kHz
Power:	W, VA, var	Yes - single-phase and total three-phase
PF and cos φ (DPF):		Yes
Total Harmonic Distortion:		THDf % / THDr %
Harmonic decomposition:		Yes - up to 25th order
Crest factor (CF) / Motor InRush:		Yes
Current surge *(True InRush)*:		Yes
"Min Max" / Peak function:		Yes / Yes
Auto power off / "Hold" function:		Yes
REC storage function:		Yes - *(up to 3000 measurements)*
Data logging:		Yes
PC / Bluetooth interface:		Yes
Electrical safety as per:		IEC 61010 CAT IV 1000V, CAT III 1000 V

Delivered with: *Multifix shoulder bag, Power Analyser Transfer (PAT) software, 2 voltage leads (red/black), 2 test probes (red/black), 2 crocodile clips (red/black), 4x 1.5 V AA alkaline batteries, operating manual.*

P01120947	***F407***	digital clamp multimeter/tong tester for all applications	**12 500.00**

Accessories for above F205\F407 multimeters

P01102100Z	mounting	hands free mounting clip	**455.00**

P01157151

Chauvin Arnoux - PEL103 Power & Energy Loggers IP54 *casing*

Portable, advanced yet simple to use Power and Energy logger, designed for energy audits (ISO 50001 standard) or one-off measurements of the Power and Energy values in low-voltage electrical networks (1000 V CAT III)

PEL100 series Power and Energy loggers provide a complete solution to measuring and identifying energy consumption in any industry, they can be used handsfree, remotely without interruption to the mains power.

The logger tracks even the slightest consumption in an electrical network, providing all Power and Energy measurement recording on the internal 2GB SD card, while simultaneously permitting real-time monitoring on its backlit 4 line LCD display.

Recordings are time/date stamped for ease of comparing measured gains achieved before and after installation modification. Easily transfer recorded data to a PC via the free PEL data transfer software and SD card with USB adaptor *(included)*.

Designed to fit inside most electrical cabinets thanks to its magnetic base or hook for easy mounting.

Key Features of the PEL103 include:

Measurements and display of:

- RMS frequency, voltage and current measurements
- Voltage measurement ranges 10 to 1000V AC/DC +/- 0.2 % + 0.5 V
- Current measurement ranges 5 mA to 10 kA AC / 50 mA to 1.4 kA DC ±0.5 %
- VA, W and var power values
- Power Factor (PF), cos φ, tan ϕ and crest factor
- Total Harmonic Distortion (THD) for currents and voltages
- DC, 50 Hz, 60 Hz and 400 Hz measurements
- Phase rotation indication and MIN/MAX indication of all parameters
- VAh, Wh *(source, load)* and varh *(4 quadrant)* energy values, total energy
- Harmonics: up to the 50th order for currents and voltages *(an essential feature to help identify problems)*

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- **Network types include:** Three phase *(with or without neutral)*, split phase, single phase
- **Automatic recognition:** Of the type of sensor connected
- **Communication / Data transfer:** USB, Ethernet and Bluetooth / PEL transfer PC software *(included)*
- **Records:** Measurements and calculatiown results on SD card *(included)*
- **Acquisition rate:** 128s/period

P01157151 + P01102204

PEL 103 Power and Energy logger (KIT) *(created as a complete kit with following accessories)*

1 x PEL103 Power and Energy Logger:	Analyser with backlit LCD screen
3 x MA193 (450 mm) flexible current clamps:	MINIFLEX MA193 flexible current sensors - 200mA to 10 kA
4 x Measurement leads and crocodile clips:	Robust high quality test leads for frequent use/built to last
1 x Set of coloured rings and Inserts:	For easy identification of connections and leads
1 x 2GB SD card *(internal):*	SD card to USB adaptor

SD card to USB adapter, USB cable, mains cable, MultiFIX mounting system, operating manual (on CD)
PEL transfer PC software enabling data to be transferred to PC, all in a convenient canvas carrying bag.

type	model	description	dimensions (mm) (H)	(W)	(D)	price (ea)
PEL 103 Power and Energy logger (KIT)						
P01157151	PEL103 **(KIT)**	portable power and energy logger/analyser	256	125	37	**60 700.00**
Accessories for PEL103 Power and Energy logger						
P01120434B	MN 93A	compact tong clamps for PEL102/3	Ø20 mm	0.005 - 100A		**6 260.00**
P01120323B	C193	compact tong clamps for PEL102/3	Ø52 mm	1 - 1000A		**8 980.00**
P01120580	MA193-250	Ampflex 250 mm flexible current sensor	Ø70 mm	200mA - 10kA		**5 540.00**
P01120526B*	A193-450	Ampflex 450 mm flexible current sensor	Ø140 mm	100mA - 10kA		**5 540.00**
P01101959	CA833X-F	for reading from 5A secondary CT's		5A adaptor		**29 900.00**
P01102204	self-power	mains adaptor for self powering PEL from supply		mains adaptor		**6 430.00**
P01295174*	mains lead	mains power cable - (2P EUR)				**319.00**
P01295476*	test leads	spare measurement leads (3m) with crocodile clips		KIT *(black)*		**2 960.00**
P01102080*	set	ID rings and inserts *(for ends of leads and sensors)*		diff. colours		**867.00**
P01298078*	bag no.23	canvas carrying bag for PEL analyser and access				**1 720.00**

* *Items supplied with standard **PEL KIT**.*

P01120580

Data processing software *power quality & installation supervision*

Automatically recognizes the instrument connected to the PC and opens the corresponding menu, providing direct access to the configuration and saved data. Includes many predefined report templates for quick generation in compliance with applicable standards.
Users can create personalised models to fit their requirements and add comments directly.

- Configuration of all the functions of instruments connected to a PC or via Bluetooth
- Recovery of the recorded measurement data and backup of measurement files
- Opening of saved files / processing and creation of reports (EN50160)
- Export into an Excel spreadsheet or PDF format / Database management

P01102095	DataView	powerful configuration/transfer/measurement data processing software	**13 700.00**

Above ZAR prices do not include VAT. E&OE

1000V CAT IV

IP 54

DIACAM 2 series - Thermal Camera

DIACAM 2 is a high performance thermal camera making it simple to perform thermal inspections for energy audits, ensuring trouble-free industrial, electrical or mechanical maintenance.

The wide 2.8-inch screen with auto brightness adjustment provides comfortable reading with a field of view of 38° x 28° and the camera is focus-free. A built-in sliding cover protects the highly sensitive lens.
Contextual help guides users step-by-step, limiting the risk of errors. Particularly rugged, with IP54 ingress protection, the camera can withstand falls from 2 metres.

Industrial maintenance For electrical maintenance, can detect electrical equipment malfunctions, particularly abnormal overheating before a fault occurs, avoiding the considerable cost of halting production to carrying out repairs.

Report creation The supplied CAmReport® software, used to create automatic reports can be exported in Word or PDF format, simplifying printing and archiving.

Features:

- Flexible use thanks to its Laser pointer and focus-free capability with 38° x 28° field of view
- Exceptional 9-hour continuous use
- Recovery of data from other measuring instruments *(current, humidity, dew point, etc.)*
- Recording and storage in memory of the configurations for each application
- Allows you to record voice comments directly on the image
- Comfortable grip, perfect balance with direct access to all functions with just one hand
- Wide 2.8-inch screen with automatic or manual brightness control
- Slide-down protective lens cover
- Quick start-up

P01651904

Detector:

Type:	UFPA microbolometer, 8 ~14 µm
Frequency:	9 Hz
Sensitivity (N.E.T.D):	80 mK @ 30°C (0.08 °C @ 30 °C)

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Temperature Measurement:

Temperature range:	-20 °C to +250 °C
Accuracy:	±2 °C or ±2 % of reading

Image Performance:

Thermal image:	-20 °C to +250 °C
Field of view:	38° x 28°
IFOV *(spatial resolution):*	4.1 mrad
Focus:	Fixed
Minimum focal distance:	30 cm
Real image:	Yes *(320 x 240 pixels)*
Display mode:	Thermal image, real image with automatic parallax compensation *(merging of both images possible with PC software)*

Analytical Functions:

Measuring Tools:	Manual cursor + automatic detection + Min Max Avg on adjustable area + temperature profile + isotherm
Parameter settings:	Emissivity, environmental temperature, distance, relative humidity
Vocal comments:	Yes via Bluetooth *(earphones provided)*
Data storage:	On 2 GB micro SD card *(approx. 4.000 images)* replaceable up to 32 GB
Image format:	PNG - thermal and real images recorded simultaneously
Laser pointer:	Yes

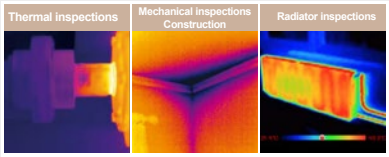
Image Display:

Settings:	Automatic or manual adjustment of the min max for the palette
Freezing of image:	Animated or fixed image
Display of image:	Multi-palette
Screen:	2.8 inch

Power Supply:

Type:	NiMH rechargeable batteries with low self-discharge
Recharging method:	External charger *(supplied)*
Battery life:	9 hrs *(typical)* / 50% brightness and Bluetooth deactivated
Dimensions / weight:	*225 x 125 x 83 / 700 g*

Delivered with: *C.A 1954 thermal camera in a site-proof case with 4 NiMH batteries and battery charger, micro SD HC card, USB cable, Bluetooth earpiece, specimen measurement report, CAm Report® software on CD-Rom and user's manual.*



Thermal Camera - DIACAM 2 **IP54**

type	model	description	price
P01651904	***C.A 1954***	high performance thermal camera	**41 300.00**

1000V CAT IV | IP 54

Electrical installation tester

Designed for checking safety on electrical installations, the **C.A 6133** tester can be used to test new before powering up, installations check existing installations whether in operation or not, and troubleshoot malfunctions. For certification organizations, these portable instruments are simple, effective and, above all, compliant with applicable standards.

The C.A 6133 is designed to be exceptionally simple to use. All measurements and functions are accessible directly on the front panel of these compact, lightweight instruments. Explicit markings on terminals prevent any risk of connection errors.

- Earth measurement by stake and loop methods
- Continuity measurement at 0.2A
- Insulation testing
- RCD testing: Current and trip time
- Automatic test sequences
- Storage of test results
- ANDROID application for report generation
- Power supply by mains-rechargeable batteries, USB socket or vehicle cigarette lighter

The C.A 6133 is equipped with a cable compensation function to ensure reliable measurements and can be used for Voltage, Continuity, Resistance, Insulation and Loop measurements. Current can be measured with *(optional)* MN73A external clamp. The tester also checks the phase rotation and can test type A & AC RCDs in ramp or pulse mode. To save time the C.A6133 can automatically run test sequences and store the results.
For example, it is possible to store a sequence such as AUTO LOOP - RCD - MΩ to speed up work in the field.

Ergonomics:

- Stand for positioning on a bench or table
- Magnetized casing for magnetic mounting
- 4-point strap for effortless hands-free use
- Backlit screen for easy reading, even in low light conditions
- Terminals with explicit markings *(L, N, PE, H, S, E , +, com connections)* prevent connection errors
- Remote-control probe for starting tests remotely
- A three-pole cable for direct measurements on 2P + E sockets

The "IT Report" dedicated to electrical installation testing enables users to download test results via Bluetooth and to generate and view the measurement report.

Voltage measurement:		550 VAC / 800 VDC
Continuity:		At 200mA,
Resistance:		From 1 to 99.99 kΩ
Insulation:	test voltage	250V, 500V or 1.000 V (0.01 - 999.9 MΩ / 10 kΩ or 100 kΩ / ± (3% R + 3 cts)
Type AC & A RCDs:		30mA, 100mA, 300 mA, 500 mA, 650 mA
RCD in pulse mode:		Tripping time
RCD in ramp mode (30 mA):		Tripping current
Phase rotation:		45 to 550V; 45 to 65 Hz
Frequency measurement:		30 Hz to 999.9 Hz
Insulation:		Additional 1.000 V test voltage
3P earth (stakes):		Up to 2.000 Ω
Automatic RCD test sequence:		No trip - pulse - ramp
Automatic test sequence:		Loop - RCD - MΩ
Data storage:		30 sites with 99 tests each
Power supply:		By rechargeable batteries with built-in charger
Bluetooth communication:		Yes

Recharging possible via the mains, USB socket or vehicle cigarette lighter socket
Automatic recognition of the optional MN73A external clamp

Delivered with: *Carrying bag containing: 1 neck strap, 1 three-pole EURO mains cable, 3 safety cables with crocodile clips, 1 test probe, USB 2A power supply + USB cable, 6 Ni MH rechargeable batteries, test report with measurement report*

P01146013

type	model	description	price
P01146013	***C.A 6133***	electrical installation tester for all applications	**17 600.00**

Accessories for above C.A 6133 Installation tester

P01120439	MN73A	current clamp for above electrical installation tester	**8 570.00**
P01102157		remote-control probe for electrical installation tester	**1 330.00**

Above ZAR prices do not include VAT. E&OE

Take Your **Automation Skills** to the Next Level

Delta training kit *(Practical tools for industrial automation training and simulation)*

The Delta PLC starter kit and EMPower rig offers the ultimate training solutions for advancing your skills in industrial automation.

Designed for both professionals and students, these kits provide a comprehensive, real-world experience that bridges the gap between theory and application.

Whether you're just starting or looking to deepen your expertise, the Delta PLC starter kit and EMPower rig ensure you are fully equipped to tackle the challenges of modern industrial automation.

Register now and start your journey towards mastering industrial automation.

Scan here

Sign up for our comprehensive training program today!

Delta PLC starter kit offers:

- **Simplified entry into automation:** Whether you're a beginner or an expert, this kit simplifies your entry into Delta PLCs and HMIs, providing the tools needed to build a solid foundation in automation technology.
- **Hands-on experience:** Work with real hardware to gain the practical skills necessary for success in manufacturing, process control, building automation, material handling, and energy management.

PLC starter kits *training kits for simplified entry into PLC and HMI applications*

PLC starter kits are ideal for experts as well as beginners, simplifies entry into the world of Delta PLCs and HMIs, familiarising users with the programming environment.

type	description	price
UT-14SS2-A	starter kit for learning programming of PLC /HMI	**6 250.00**
UT-12SE-A1	as above, but with hardware for Ethernet communication	**10 300.00**
UT-AS332-C	starter kit for learning programming of PLC	**7 610.00**

PLC starter kit

"All-in-one" training rig offers:

- **Realistic training environment:** This desktop unit integrates key components such as an AS218 PLC, DOP-107 HMI, and ME300 VFD, along with other essential automation elements, into a single, cohesive training system that simulates real-world automation scenarios.
- **Comprehensive learning:** Design and program control systems, visualise data, and execute automation tasks just like in actual industrial applications.
- **Interconnected systems:** Expand your learning by interlinking up to two additional rigs, simulating complex multi-system environments.

EMPOWER rig *desktop "all-in-one" automation kit*

The EMPower rig is the latest all in one automation training kit. This desktop type unit consists of an AS218 PLC, DOP-107 HMI, and ME300 VFD, as well as other complementary items, all integrated into a single station.

Additionally up to 2 additional rigs can be interlinked to simulate larger systems.

EMPOWER-RIG

type	description	price
EMPOWER-RIG	all-in-one automating training rig	**12 500.00**

All-In-One - Training kit

Comprising of:

1. ME300 VFD
2. DOP-107 HMI
3. AS218 PLC

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Scan to watch official Delta training videos

Indicative rated motor current conversion table

Rated power		3-phase 3-pole 50 hz				
		400V	415V	440V	500V	690V
kW	Hp	A	A	A	A	A
0.37	0.5	0.7	0.6	0.6	0.5	0.4
0.55	0.75	1.0	1.0	0.9	0.8	0.6
0.75	1	1.4	1.3	1.2	1.1	0.8
1.1	1.5	2.0	1.9	1.8	1.6	1.2
1.5	2	2.7	2.6	2.5	2.2	1.6
2.2	3	4.0	3.8	3.6	3.2	2.3
4	5.5	7.2	7.0	6.6	5.8	4.2
5.5	7.5	9.9	9.6	9.0	7.9	5.8
7.5	10	13.5	13.0	12.3	10.8	7.8
10	13.5	18.0	17.4	16.4	14.4	10.5
11	15	19.8	19.1	18.0	15.9	11.5
15	20	27.1	26.1	24.6	21.7	15.7
18.5	25	33.4	32.2	30.3	26.7	19.4
22	30	40	38	36	32	23
30	40	54	52	49	43	31
37	50	67	64	61	53	39
45	60	81	78	74	65	47
55	75	99	96	90	79	58
75	100	135	130	123	108	78
90	125	162	157	148	130	94
110	150	198	191	180	159	115
132	180	238	230	217	191	138
160	220	289	278	262	231	167
200	270	361	348	328	289	209
220	300	397	383	361	318	230
250	340	451	435	410	361	261
315	430	568	548	517	455	329
355	480	641	617	582	512	371
375	500	677	652	615	541	392

Single phase	
220V	240V
A	A
3.9	3.6
5.2	4.8
6.6	6.1
9.6	8.8
13	12
19	17
32	29
41	38
7.5	10

Note: Rated 3Ø current calculated with a power factor of 0,8
Consult contactor supplier data sheet for maximum power application
3Ø motor power calculation: $P = \sqrt{3}\ I\ V\ \cos\varphi$
1Ø motor power calcualtion : $P = I\ V\ \cos\varphi$

Contactor utilisation	
Category AC-1	Continuous current rating: All AC loads with a power factor 0.95 - heating, distribution
Category AC-2	Starting, plugging and inching of slip ring motors • starting + 2.5 times rated motor current • stopping < mains supply voltage
Category AC-2	Starting and stopping squirrel cage motors • closing and opening at 6 to 8 times rated motor current • stopping the voltage is at + 20% of mains supply voltage • light breaking
Category AC-4	Plugging and inching of squirrel cage • closing and opening 6 to 8 times rated motor current • severe breaking

Switch category of use	
A	Connecting and disconnecting under no-load conditions
B	Switching of resistive loads, including moderate overloads

AC switch utilisation category (IEC 60947-3)	
Category AC-20	Connecting and disconnecting under no-load conditions
Category AC-21	Switching of resistive loads, including moderate overloads
Category AC-22	Switching of mixed resistive and and inductive loads, including moderate overloads
Category AC-23	Switching of motor loads or highly inductive loads

DC switch utilisation category (IEC 60947-5-1)	
Category DC-20	Connecting and disconnecting under no-load conditions
Category DC-21	Switching of resistive loads, including moderate overloads
Category DC-22	Switching of mixed resistive and and inductive loads, including moderate overloads

Type 2 co-ordination tables

80kA 400V (IEC/EN60947-4-1), Direct-on-line starters with fuses

Motor			Fuse rating				
Rated output (KW)	Rated current (A)	Fuse switch type	gG	aM	Contactor	Thermal overload	Current range (A)
0.37	1.1	3631 3003	6	4	BF09A	RF380160	1-1.6
0.55	1.5	3631 3003	10	4	BF09A	RF380160	1-1.6
0.75	1.9	3631 3003	10	4	BF09A	RF380250	1.6-2.5
1.1	2.7	3631 3003	16	6	BF09A	RF380400	2.5-4
1.5	3.6	3631 3003	16	10	BF09A	RF380400	2.5-4
2.2	4.9	3631 3003	25	10	BF09A	RF380650	4-6.5
3	6.5	3631 3003	32	16	BF12A	RF381000	6.3-10
4	8.5	3631 3003	32	20	BF16A	RF381000	6.3-10
5.5	11.5	3831 3011	50	25	BF25A	RF381400	9-14
7.5	15.5	3831 3011	63	32	BF32A	RF381800	13-18
11	22	3831 3011	80	40	BF32A	RF382500	20-25
15	29	3831 3011	100	63	BF50	RF95333	20-22
18.5	35	3831 3011	125	80	BF50	RF95342	28-32
22	41	3831 3024	160	100	BF65	RF95350	35-50
30	55	3831 3024	200	100	BF95	RF95365	46-65
37	66	3831 3024	200	125	BF95	RF95382	60-82
45	80	3831 3024	250	160	BF160	RF200100	60-100
55	97	3831 3039	315	200	BF195	RF200100	90-150
75	132	3831 3039	400	250	B250	RF200150	120-200
90	160	3831 3039	400	315	B250	RF420250	150-250
110	195	3831 3039	400	355	B310	RF420250	150-250
132	230	3811 3063	630	400	B400	RF420250	150-250
160	280	3811 3063	630	500	B400	RF420300	180-300
200	350	3811 3063	630	630	B500	RF420400	250-420

80kA 400V (IEC/EN60947-4-1), Star-Delta starters with fuses

Motor			Fuse rating					
Rated output (KW}	Rated current (A)	Fuse switch type	gG	aM	Line	Delta	Star	Current range (A)
4	8.6	3631 3003	20	10	BF9A	BF9A	BF9A	
5.5	11.5	3631 3003	25	16	BF12A	BF12A	BF9A	
7.5	15.2	3631 3003	32	20	BF16A	BF16A	BF9A	6.3-10
11	22	3631 3005	40	25	BF25A	BF25A	BF9A	9-14
15	29	3631 3005	50	32	BF25A	BF25A	BF12A	13-18
18.5	35	3638 3011	63	40	BF25A	BF25A	BF18A	17-23
22	41	3638 3011	80	50	BF32A	BF32A	BF18A	24-32
30	55	3638 3011	100	63	BF38A	BF38A	BF25A	32-38
37	66	3638 3011	125	80	BF50	BF50	BF32A	35-50
45	80	3638 3011	125	100	BF65	BF65	BF32A	35-50
55	97	3831 3024	160	125	BF80	BF80	BF38A	46-65
75	132	3831 3024	200	160	BF80	BF80	BF50	60-100
90	160	3831 3024	250	200	B115	B115	BF65	90-150
110	195	3831 3024	250	200	B115	B115	BF65	120-200
132	230	3831 3039	315	250	BF160	BF160	BF80	120-200
160	280	3831 3039	400	315	BF195	BF195	B115	120-200
250	430	3811 3063	500	500	B250	B250	BF160	150-250
295	540	3811 3063	630	630	B310	B310	BF195	240-400

50kA 400V, between SM circuit breakers and contactors series BG and BF

P(kW)	I0(A)	Current adjustment	Circuit breaker	Contactor
<0.6	-	0.1 - 0.16	SM1R0016	BG6...
0.06	-	0.16 - 0.25	SM1R0025	BG6...
0.09	-	0.25 - 0.4	SM1R0040	BG6...
0.12	-	0.4 - 0.63	SM1R0063	BG6...
0.25	0.85	0.63 - 1	SM1R0100	BG6...
0.55	1.4	1 - 1.6	SM1R0160	BG6...
0.75	1.9	1.6 - 2.5	SM1R0250	BG6...
1.5	3.5	2.5 - 4	SM1R0400	BG6...
2.2	4.8	4 - 6.5	SM1R0650	BG6...
4	8	6.3 - 10	SM1R1000	BG9.../BF9...
5.5	11	9 - 14	SM1R1400	BF12...
7.5	15	13 - 18	SM1R1800	BF16...
11	21	20 - 25	SM1R2500	BF25...
15	29	22 - 32	SM1R3200	BF32...
18.5	35	28 - 40	SM1R4000	BF40...
22	41	40 - 50	SM2R5000	BF50...
30	55	45 - 63	SM2R6300	BF65...
37	67	57 - 75	SM3R7500	BF80...
45	80	80 - 100	SM3R9900	BF95...

Brake resistor chart for Delta drives

Drive FRAME	Resistor connection per brake unit	Resistor	ME 300	MS 300	C2000+	ED	Breaking Unit(s)	Total qty resistors
230V 1ph drives - 125% Braking torque/ 10 % ED								
200W	Single	RXLG-80W/750RJ	Yes	Yes			Built in	1
400W	Single	RXLG-80W/200RJ	Yes	Yes			Built in	1
750W	Single	RXLG-80W/200RJ	Yes	Yes			Built in	1
1.5kW	Single	RXLG-200W/91RJ	Yes	Yes			Built in	1
2.2kW	Single	RXLG-300W/70RJ	Yes	Yes			Built in	1
3.7kW	2 in parallel	RXLG-300W/70RJ				Yes	Built in	2
400V 3ph drives - 125% Braking torque/ 10 % ED								
400W	Single	RXLG-80W/750RJ	Yes	Yes			Built in	1
750W	Single	RXLG-80W/750RJ	Yes	Yes	Yes		Built in	1
1.5kW	Single	RXLG-200W/360RJ	Yes	Yes	Yes		Built in	1
2.2kW	Single	RXLG-300W/250RJ	Yes	Yes	Yes	Yes	Built in	1
4kW	2 in parallel	RXLG-300W/250RJ	Yes	Yes	Yes	Yes	Built in	1
5.5kW	Single	RXLG-1KW/75RJ	Yes	Yes	Yes	Yes	Built in	1
7.5kW	Single	RXLG-1KW/75RJ	Yes	Yes	Yes	Yes	Built in	1
11kW	Single	RXLG-1.5KW/43RJ		Yes	Yes	Yes	Built in	1
15kW	Single	RXLG-2kW/32RJ		Yes	Yes	Yes	Built in	1
18.5kW	Single	RXLG-2kW/32RJ		Yes	Yes	Yes	Built in	1
22kW	Single	RXLG-3kW/26RJ		Yes	Yes	Yes	Built in	1
30kW	Single	RXLG-4,8KW/16RJ			Yes	Yes	Built in	
37kW	Single	RXLG-4,8KW/16RJ			Yes	Yes	VFDB4045	1
45kW	Single	RXLG-6KW/14RJ			Yes	Yes	VFDB4045	1
55kW	Single	RXLG-4KW/20RJ			Yes		VFD4030 *2	2
75kW	Single	RXLG-4,8KW/16RJ			Yes		VFD4045 *2	2
90kW	Single	RXLG-6KW/14RJ			Yes		VFD4045 *2	2
110kW	2 in parallel	RXLG-6KW/14RJ '2			Yes		VFDB4110	2
132kW	4 in parallel	RXLG-4,8KW/16RJ •4			Yes		VFDB4160	4
160kW	4 in parallel	RXLG-4,8KW/16RJ '4			Yes		VFDB4160	4
185kW	4 in parallel	RXLG-6KW/14RJ •4			Yes		VFDB4185	4
200kW	2 in parallel	RXLG-6KW/14RJ "2			Yes		VFDB4110*2	4
220kW	2 in parallel	RXLG-6KW/14RJ "2			Yes		VFDB4110*2	4
250kW	4 in parallel	RXLG-4,8KW/16RJ •4			Yes		VFDB4160*2	8
280kW	4 in parallel	RXLG-4,8KW/16RJ •4			Yes		VFDB4160*2	8
315kW	4 in parallel	RXLG-4,8KW/16RJ •4			Yes		VFDB4160*2	8
355kW	4 in parallel	RXLG-6KW/14RJ •4			Yes		VFDB4185*2	8
400kW	3 in parallel	RXLG-6KW/14RJ •3			Yes		VFDB4160*3	9
450kW	3 in parallel	RXLG-6KW/14RJ •3			Yes		VFDB4185*3	9
500kW	4 in parallel	RXLG-6KW/14RJ •4			Yes		VFDB4185*3	12
560kW	3 in parallel	RXLG-6KW/14RJ •3			Yes		VFDB4160*4	12

Drive rating chart C2000 525 - 690V for Delta drives

Drive series	Light Duty (Default) 120% of rated current can endure for 1 minute				Heavy Duty 150% of rated current can endure for 1 minute, 180% can endure for 3 seconds			
	525V kW	575V kW	690V kW	Rated Amps	525V kW	575V kW	690V kW	Rated Amps
Nominal voltage range 525V - 600V (- 15% - + 10%)								
VFD037C53A-21	3.3	3.7	-	6.7	2	2.2	-	4.6
VFD055C53A-21	5	5.5	-	9.9	3.3	3.7	-	6.9
VFD075C53A-21	6.8	7.5	-	12.1	3.3	3.7	-	8.3
VFD110C53A-21	10	11	-	18.7	6.8	7.5	-	13
VFD150C53A-21	13	15	-	24.2	6.8	7.5	-	16.8
Nominal voltage range 525V - 690V (- 15% - + 10%)								
VFD220C63B-21	17	18	22	30	11.41	12.5	15	20
VFD300C63B-21	22	25	30	36	14	15.4	18.5	24
VFD370C63B-21	28	31	37	45	16.73	18.3	22	30
VFD450C63B-21	34	38	45	54	22.82	25	30	36
VFD550C63B-21	42	46	55	67	28.15	30.8	37	45
VFD750C63B-21	57	63	75	86	34.23	37.5	45	54
VFD900C63B-21	68	75	90	104	41.84	45.8	55	67
VFD1100C63B-21	84	92	110	125	57	62.5	75	86
VFD1320C63B-21	100	110	132	150	68.47	75	90	104
VFD1600C63B-21	122	133	160	180	95.1	91.6	110	125
VFD2000C63B-21	152	167	200	220	100.43	110	132	150
VFD2500C63B-21	190	208	250	290	121.73	133.3	160	180
VFD3150C63B-21	240	262	315	350	152.17	166.6	200	220

Drive rating chart C2000+

Drive series	(Default) Heavy Duty		Super Heavy Duty	
	150% (60sec) /180% (3 sec)		150% (60sec) / 200% (3 sec)	
	kW	Rated Amps	kW	Rated Amps
VFD007C4EA-21*	0.75	3	0.4	1.7
VFD015C4EA-21*	1.5	4	0.75	3
VFD022C4EA-21*	2.2	6	1.5	4
VFD040C4EA-21*	4	10.5	3.7	9
VFD055C4EA-21*	5.5	12	4	10.5
VFD075C4EA-21*	7.5	18	5.5	12
VFD110C4EA-21*	11	24	7.5	18
VFD150C4EA-21*	15	32	11	24
VFD185C4EA-21*	18.5	38	15	32
VFD220C4EA-21*	22	45	18.5	38
VFD300C4EA-21*	30	60	22	45
VFD370C43S-00	37	73	30	60
VFD450C43S-00	45	91	37	73
VFD550C43A-00	55	110	45	91
VFD750C43A-00	75	150	55	110
VFD900C43A-00	90	180	75	150
VFD1100C43A-00	110	220	90	180
VFD1320C43A-00	132	260	110	220
VFD1600C43A-00	160	310	132	260
VFD1850C43A-00	185	370	160	310
VFD2000C43A-00	200	395	160	310
VFD2200C43A-00	220	460	185	370
VFD2500C43A-00	250	481	200	395
VFD2800C43A-00	280	550	220	460
VFD3150C43A-00	315	616	280	550
VFD3550C43A-00	355	683	315	616
VFD4000C43A-00	400	770	355	683
VFD4500C43A-00	450	866	355	683
VFD5000C43A-00	500	930	450	866
VFD5600C43A-00	560	1094	500	930

Drive rating chart CP2000 / CFP2000

Drive series	(Default) Light Duty		Normal Duty	
	120% (1min)		120% (1min) / 160% (3 sec)	
	kW	Rated Amps	kW	Rated Amps
VFD015CP/FP	1.5	4.2	0.75	3
VFD022CP/FP	2.2	5.5	1.5	4
VFD040CP/FP	4	10.5	3.7	9
VFD055CP/FP	5.5	13	4	10.5
VFD075CP/FP	7.5	18	5.5	12
VFD110CP/FP	11	24	7.5	18
VFD150CP/FP	15	32	11	24
VFD185CP/FP	18.5	38	15	32
VFD220CP/FP	22	45	18.5	38
VFD300CP/FP	30	60	22	45
VFD370CP/FP	37	73	30	60
VFD450CP/FP	45	91	37	73
VFD550CP/FP	55	110	45	91
VFD750CP/FP	75	150	55	110
VFD900CP/FP	90	180	75	150
VFD1100CP/FP	110	220	90	180
VFD1320CP/FP	132	260	110	220
VFD1600CP/FP	160	310	132	260
VFD1850CP/FP	185	370	160	310
VFD2200CP/FP	220	460	185	370
VFD2800CP/FP	280	530	220	460
VFD3150CP/FP	315	616	280	550
VFD3550CP/FP	355	683	315	616
VFD4000CP/FP	400	770	355	683

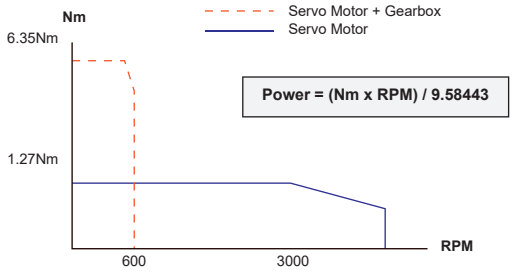
Drive dual rating chart ME300 / MS300

Dual rating allows drives to be used across a range of applications according to overload capacity required, for example:

Light Duty / Normal Duty - Fan and pump application
Heavy Duty - Compressor, crusher, spindle and conveyor

Drive series	(Default) Heavy Duty		Normal Duty	
	150% (60sec) / 200% (3sec)		120% (60sec) / 150% (3sec)	
	kW	Rated Amps	kW	Rated Amps
VFD1A6ME/MS21	0.2	1.6	0.3	1.8
VFD2A8ME/MS21	0.4	2.8	0.55	3.2
VFD4A8ME/MS21	0.75	4.8	0.9	5
VFD7A5ME/MS21	1.5	7.5	1.8	8.5
VFD11AME/MS21	2.2	11	3	12.5
VFD1A5ME/MS43	0.4	1.5	0.55	1.8
VFD2A7ME/MS43	0.75	2.7	1.1	3
VFD4A2ME/MS43	1.5	4.2	1.6	4.6
VFD5A5ME/MS43	2.2	5.5	2.8	6.5
VFD9A0ME/MS43	4	9	4.5	10.5
VFD13AME/MS43	5.5	13	6	15.7
VFD17AME/MS43	7.5	17	8.5	20.5
VFD25AMS43AFS	11	25	12	28
VFD32AMS43AFS	15	32	17	36
VFD38AMS43AFS	18.5	38	20	41.5
VFD45AMS43AFS	22	45	24	49

Gear ratio chart



Example

Servo Motor - ECMA-C10604RS
Rated Torque - 1.27 Nm
Rated Speed - 3000 RPM

Gearbox - WAB-060-005-K-P1
Ratio - 5:1
Rated Torque - 60 Nm

$T_{out} = T_m \times R$
$T_{out} = 1.27 \times 5$
$T_{out} = 6.35Nm$

$S_{out} = S_m / R$
$S_{out} = 3000 / R$
$S_{out} = 600$ RPM

T_{out} = Torque Output
S_{out} = Speed Output
T_m = Motor rated Torque
S_m = Motor rated Speed
R = Gearbox reduction ratio

Cascading according to IEC 60947-2 MCCB x160, x250, x630, P630, h1000, h1600

Cascading value in kA according to IEC 60947-2. Network: 3 phases + neutral, 380-415 VAC

Upstream Circuit Breaker

MCBs

			Reference	MJT	MA	NF	NFN	NGN	NCN	NRN			HLF	HMD	HMC
			IEC 60947-2	6kA	6kA	10kA	10kA	10kA	15kA	25kA	20kA	15kA	10kA	15kA	15kA
			IN MAX	40A	63A	40A	63A	63A	63A	6-25A	32/40A	50/63A	125A	125A	125A
			Curve	C	C	C	C	D	C	C	C	C	C	D	C
MJT	6kA		40A	C											
MA	6kA		63A	C											
NF	10kA		40A	C											
NFN	10kA		63A	C											
NGN	10kA		63A	D											
NCN	15kA		63A	C											
NRN	25kA		6-25A	C											
	20kA		32/40A	C											
	15kA		50/63A	C											
HLF	10kA		125A	C											
HMD	15kA		125A	D											
HMC	15kA		125A	C											

MCCBs

HHA	HNA	HHB	HNB	HMJ	HEJ	HMW	HEW	HNE	HEE	HNF	HEF
25kA	40kA	25kA	40kA	50kA	70kA	50kA	70kA	50kA	70kA	50kA	70kA
x160	x160	x250	x250	x630		P630		h1000		h1600	
160A	160A	250A	250A	630A		630A		1000A		1600A	
Thermal Magnetic						Electronic					
25	40	20	20								
25	40	25	40	15	15	15	15	15	15	15	15
25	40	25	40	15	15	15	15	15	15	15	15
25	40	25	40	25	25	20	20	20	20	20	20
25	40	25	40	25	25	20	20	20	20	20	20
25	40	25	40	25	25	20	20	20	20	20	20
25	40	25	40	50	55	30	30	30	30	30	30
25	40	25	40	50	70	25	25	25	25	25	25
25	40	25	40	25	25	20	20	20	20	20	20
25	40	25	40	27	27	33	33	15	15	15	15
25	40	25	40	27	27	33	33	15	15	15	15
25	40	25	40	27	27	33	33	15	15	15	15

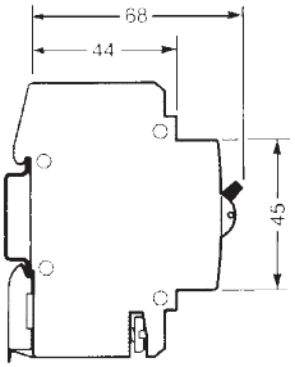
Downstream Circuit Breaker

HHA	25kA	x160	160A	Thermal Magnetic													
HNA	40kA																
HHB	25kA	x250	250A														
HNB	40kA																
HMJ	50kA	x630	630A														
HEJ	70kA																
HMW	50kA	P630	630A	Electronic													
HEW	70kA																
HNE	50kA	h1000	1000A														
HEE	70kA																
HNF	50kA	h1600	1600A														
HEF	70kA																

		25	40	50	70	50	70	45	45	28	28
			40	50	70	50	70	50	70	50	50
				50	70	50	70	45	45	28	28
				50	70	50	70	50	70	50	50
				50	70	50	70	50	70	50	70
					70		70		70		70
				50	70	50	70	50	70	50	70
					70		70		70		70
								50	70	50	70
									70		70
										50	70
											70

Note: Cascading table based on 3Ph 415V networks. MJT - only for 230V networks.

Use of MCBs in DC systems



Protection and control of circuits against overloads and short circuits – in commercial and industrial electrical distribution systems

EN 60898-1
NF C 61-410
IEC 60947-2
SANS 60947-2

DC applications

Because of their quick make and break design and excellent arc quenching capabilities, Hager circuit breakers are suitable for use on DC. When selecting a circuit breaker for any DC application it is necessary to consider 2 main points:

a) System voltage

The system voltage and the type of system determines the number of poles required to provide the necessary breaking capacity and arc control. The table gives the maximum DC voltage and breaking capacity for one pole or two poles connected in the series.

The positioning of these breaking poles in the system depends on whether the system is earthed or insulated and if it is earthed whether one polarity is earthed or the centre point is earthed.

b) Type of DC systems: 3 different types

- Network connected to the earth - one polarity earthed (+ve or -ve):
  If -ve is earthed, all poles will be placed in series in the +ve leg.
  If the +ve is earthed, all poles will be placed in the -ve leg.
  Note: an extra pole will be needed on the earthed polarity to provide isolation.
- Network connected to the earth - middle point earthed:
  The number of poles required to break Isc should be placed on each polarity.
- Network insulated to the earth:
  The number of poles required to break Isc should be split between the two polarities.

Table 1

Range	In	No. of poles in series needed for breaking	Breaking capacity (kA) L/R = 15ms ≤48V	60V	125V	250V	500V
MV	6 to 40A	1P	15	–	–	–	–
MA	2 to 63A	1P	15	–	–	–	–
		2P	20	20	–	–	–
		3P	25	25	20	–	–
		4P	35	35	25	–	–
NF	2 to 40A	1P	15	–	–	–	–
		2P	20	20	–	–	–
		3P	25	25	20	–	–
		4P	35	35	25	–	–
NFN	50 to 63 A	1P	15	15	10	–	–
		2P	20	20	15	6	–
		3P	25	25	20	10	–
		4P	35	35	25	15	10
NGN, NCN	2 to 63A	1P	15	15	10	–	–
		2P	20	20	15	6	–
		3P	25	25	20	10	–
		4P	35	35	25	15	10
NRN	6 to 25A	1P	25	25	20	–	–
		2P	35	35	25	15	–
		3P	40	40	35	20	–
		4P	45	45	40	25	10
	32 to 40A	1P	20	20	15	–	–
		2P	25	25	20	10	–
		3P	30	30	30	15	–
		4P	35	35	35	20	10
	50 to 63A	1P	15	15	10	–	–
		2P	20	20	15	6	–
		3P	25	25	20	10	–
		4P	35	35	25	15	10
HLF	80 to 125A	1P	12	12	8	–	–
		2P	15	15	10	4	–
		3P	25	25	25	10	–
		4P	30	30	30	15	5
HMC, HMD	80 to 125A	1P	15	15	10	–	–
		2P	20	20	15	6	–
		3P	30	30	30	15	–
		4P	35	35	35	20	10

Table 2
magnetic trip

		1	2	3	4
		I_{t1}	I_{t2}	I_{rm1}	I_{rm2}
Curve B	AC 50Hz	1.13 In	1.45 In	3 In	5 In
	DC	1.13 In	1.45 In	4 In	7 In
Curve C	AC 50Hz	1.13 In	1.45 In	5 In	10 In
	DC	1.13 In	1.45 In	7 In	15 In
Curve D	AC 50Hz	1.13 In	1.45 In	10 In	20 In
	DC	1.13 In	1.45 In	15 In	30 In

DC applications for DF Electric gG fuse-links

DC applications for DF gG fuse-links

Fuses are generally suitable for both AC and DC applications. The DC performance of fuse-links is different and AC ratings cannot be used for DC applications.

NH gG 500V (L/R = 15ms)

Size	Rated Current	Max. DC Voltage	DC Breaking Capacity
000 00	2A...100A 125A...160A	250 VDC	80 kA
0 0S	6A...160A 200A...250A	250 VDC 125 VDC	80 kA
1	50A...250A 315A...355A	250 VDC 80 VDC	80 kA
2	63A...400A 425A...500A	250 VDC 80 VDC	80 kA
3	250A...630A 800A	250 VDC 80 VDC	80 kA
4	315A...1000A 1250A	250 VDC 80 VDC	80 kA

NH gG 690V (L/R = 15ms)

Size	Rated Current	Max. DC Voltage	DC Breaking Capacity
000/00	2A...100A	250 VDC	25 kA
0	6A...100A	440 VDC	25 kA
1	50A...200A	440 VDC	25 kA
2	63A...315A	440 VDC	25 kA
3	250A...500A	440 VDC	25 kA
4	400A...800A	440 VDC	25 kA

DF Electric aR NH semiconductor fuse-link charts

Due to the high power dissipation of NH aR fuse links, it is necessary to apply a derating factor that determines the maximum allowable continuous current when these fuse links are installed in open type NH bases or in a fuse switch disconnector.

Fuse load constant C_L — $I_{MAX.} = In \times C_L$

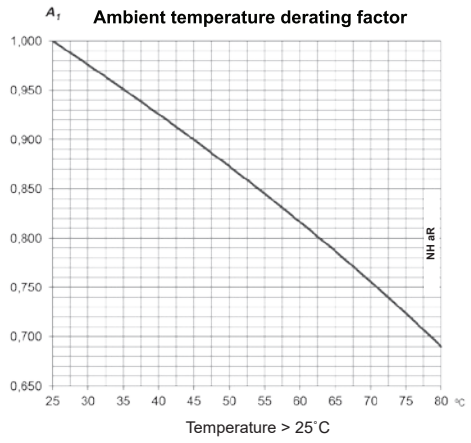
Size	In (A)	Open Type Bases	Fuse Switch Disconnectors
NH000	16	1	1
	20	1	1
	25	1	1
	32	1	1
	40	1	1
	50	1	1
	63	1	1
	80	1	0.95
	100	1	0.90
	125	0.95	0.85
	160	0.90	0.75
	200	0.80	0.70
	250	0.80	0.60
NH1	40	1	0.95
	50	0.90	0.85
	63	0.90	0.85
	80	0.90	0.85
	100	0.90	0.85
	125	0.75	0.70
	160	0.75	0.70
	200	0.75	0.70
	250	0.75	0.70
	315	0.75	0.65
	350	0.70	0.65
	400	0.70	0.60

Fuse load constant C_L — $I_{MAX.} = In \times C_L$

Size	In (A)	Open Type Bases	Fuse Switch Disconnectors
NH2	200	0.70	0.65
	250	0.70	0.65
	315	0.70	0.65
	350	0.70	0.65
	400	0.70	0.65
	450	0.65	0.60
	500	0.65	0.60
	550	0.65	0.60
	630	0.65	0.55
	700	0.65	0.55
NH3	500	0.70	0.65
	550	0.70	0.65
	630	0.70	0.65
	700	0.70	0.60
	800	0.70	0.60
	900	0.65	0.55
	1000	0.60	0.50

Ambient temperature correction coefficient (A_1)

When the utilization ambient temperature is higher than 25˚C, the fuse-link must be “de-rated”. The rated current of fuse link must be multiplied by a derating factor A1 to find the maximum operating current.
Imax = In x A1



Temperature > 25˚C

Calculating capacitor size requirements for power factor correction

It is imperative that correct capacitor sizes be selected when calculating capacitor requirements. In the case of group compensation it is recommended that the first capacitor step be equal to half the value of the following steps, to allow a smooth overall more finely tuned correction system.

Table 2 below will assist in calculating capacitor values required in specific applications. Prior knowledge of the following is required:

a) Power factor before applying capacitors *(left column)*

b) Required power factor after applying capacitors *(top row)*

c) Total consumption in kW (per kW)

The correct capacitor size can then be calculated by crossing the horizontal and vertical values of table 2.

Example:

1. Convert the plant load to kW (kVA x Power Factor = kW)
   400 kVA x 0.70 PF = 280kW (useful power).
2. To correct a load of 400 kVA at 0.70 PF to 0.96. Follow the 0.70 value (in the left vertical column table 2) horizontally until below the 0.96 value (in the top horizontal row) the value is 0.729.
3. Capacitor required to correct from 0.70 to 0.96 (Power x Capacitor from table value)
   280kW x 0.729 = 204.12 kVAr

Savings: 280kW at 0.70 PF = 400 kVA
280kW at 0.96 PF = 292 kVA
Reduction = 108 kVA (27% less of transformer load)

Try the EM PFC Calculator.
Visit our website
www.em.co.za/powerfactor

Table 2

PF load before applying capacitors	Target power factor												
	0.80	0.85	0.90	0.91	0.92	0.93	0.94	0.95	0.96	0.97	0.98	0.99	Unity
0.40	1.537	1.668	1.805	1.832	1.861	1.924	1.959	1.988	2.037	2.003	2.085	2.146	2.288
0.41	1.474	1.605	1.742	1.769	1.798	1.831	1.860	1.896	1.935	1.973	2.021	2.082	2.225
0.42	1.413	1.544	1.681	1.709	1.738	1.771	1.800	1.836	1.874	1.913	1.961	2.022	2.164
0.43	1.356	1.487	1.624	1.651	1.680	1.713	1.742	1.778	1.816	1.855	1.903	1.964	2.107
0.44	1.290	1.421	1.558	1.585	1.614	1.647	1.677	1.712	1.751	1.790	1.837	1.899	2.041
0.45	1.230	1.360	1.501	1.532	1.561	1.592	1.626	1.659	1.695	1.737	1.784	1.846	1.988
0.46	1.179	1.309	1.446	1.473	1.502	1.533	1.567	1.600	1.636	1.677	1.725	1.786	1.929
0.47	1.130	1.260	1.397	1.425	1.454	1.485	1.519	1.552	1.588	1.629	1.677	1.758	1.881
0.48	1.076	1.206	1.343	1.370	1.400	1.430	1.464	1.497	1.534	1.575	1.623	1.684	1.826
0.49	1.030	1.160	1.297	1.326	1.355	1.386	1.420	1.453	1.489	1.530	1.578	1.639	1.782
0.50	0.982	1.112	1.248	1.276	1.303	1.337	1.369	1.403	1.441	1.481	1.529	1.590	1.732
0.51	0.936	1.066	1.202	1.230	1.257	1.291	1.323	1.357	1.395	1.435	1.483	1.544	1.686
0.52	0.894	1.024	1.160	1.188	1.215	1.249	1.281	1.315	1.353	1.393	1.441	1.502	1.644
0.53	0.850	0.980	1.116	1.144	1.171	1.205	1.237	1.271	1.309	1.349	1.397	1.458	1.600
0.54	0.809	0.939	1.075	1.103	1.130	1.164	1.196	1.230	1.268	1.308	1.356	1.417	1.559
0.55	0.769	0.899	1.035	1.063	1.090	1.124	1.156	1.190	1.228	1.268	1.316	1.377	1.519
0.56	0.730	0.860	0.996	1.024	1.051	1.085	1.117	1.151	1.189	1.229	1.277	1.338	1.480
0.57	0.692	0.822	0.958	0.986	1.013	1.047	1.079	1.113	1.151	1.191	1.239	1.300	1.442
0.58	0.655	0.785	0.921	0.949	0.976	1.010	1.042	1.076	1.114	1.154	1.202	1.263	1.405
0.59	0.618	0.748	0.884	0.912	0.939	0.973	1.005	1.039	1.077	1.117	1.165	1.226	1.368
0.60	0.584	0.714	0.849	0.878	0.905	0.939	0.971	1.005	1.043	1.083	1.131	1.192	1.334
0.61	0.549	0.679	0.815	0.843	0.870	0.904	0.936	0.970	1.008	1.048	1.096	1.157	1.299
0.62	0.515	0.645	0.781	0.809	0.836	0.870	0.902	0.934	0.974	1.014	1.062	1.123	1.265
0.63	0.483	0.613	0.749	0.777	0.804	0.838	0.870	0.904	0.942	0.982	1.030	1.091	1.233
0.64	0.450	0.580	0.716	0.744	0.771	0.805	0.837	0.871	0.909	0.949	0.997	1.058	1.200
0.65	0.419	0.549	0.685	0.713	0.740	0.774	0.806	0.840	0.878	0.918	0.966	1.027	1.169
0.66	0.388	0.518	0.654	0.682	0.709	0.743	0.775	0.809	0.847	0.887	0.935	0.996	1.138
0.67	0.358	0.488	0.624	0.652	0.679	0.713	0.745	0.779	0.817	0.857	0.905	0.966	1.108
0.68	0.329	0.459	0.595	0.623	0.650	0.684	0.716	0.750	0.788	0.828	0.876	0.937	1.079
0.69	0.299	0.429	0.565	0.593	0.620	0.654	0.686	0.720	0.758	0.798	0.840	0.907	1.049
0.70	0.270	0.400	0.536	0.564	0.591	0.625	0.657	0.691	**0.729**	0.769	0.811	0.878	1.020
0.71	0.242	0.372	0.508	0.536	0.563	0.597	0.629	0.663	0.701	0.741	0.783	0.850	0.992
0.72	0.213	0.343	0.479	0.507	0.534	0.568	0.600	0.634	0.672	0.712	0.754	0.821	0.963
0.73	0.186	0.316	0.452	0.480	0.507	0.541	0.573	0.607	0.645	0.685	0.727	0.794	0.936
0.74	0.159	0.289	0.425	0.453	0.480	0.514	0.546	0.580	0.618	0.658	0.700	0.767	0.909
0.75	0.132	0.262	0.398	0.426	0.453	0.487	0.519	0.553	0.591	0.631	0.673	0.740	0.882
0.76	0.105	0.235	0.371	0.399	0.426	0.460	0.492	0.526	0.564	0.604	0.652	0.713	0.855
0.77	0.079	0.209	0.345	0.373	0.400	0.434	0.466	0.500	0.538	0.578	0.620	0.687	0.829
0.78	0.053	0.183	0.319	0.347	0.374	0.408	0.440	0.474	0.512	0.552	0.594	0.661	0.803
0.79	0.026	0.156	0.292	0.320	0.347	0.381	0.413	0.447	0.485	0.525	0.567	0.634	0.776
0.80	-	0.130	0.266	0.294	0.321	0.355	0.387	0.421	0.549	0.499	0.541	0.608	0.750
0.81	-	0.104	0.240	0.268	0.295	0.329	0.361	0.395	0.433	0.473	0.515	0.582	0.724
0.82	-	0.078	0.214	0.242	0.269	0.303	0.335	0.369	0.407	0.447	0.489	0.556	0.698
0.83	-	0.052	0.188	0.216	0.243	0.277	0.309	0.343	0.381	0.421	0.463	0.530	0.672
0.84	-	0.026	0.162	0.190	0.217	0.251	0.283	0.317	0.355	0.395	0.437	0.504	0.645
0.85	-	-	0.136	0.164	0.191	0.225	0.257	0.291	0.329	0.369	0.417	0.478	0.620
0.86	-	-	0.109	0.140	0.167	0.198	0.230	0.264	0.301	0.343	0.390	0.450	0.593
0.87	-	-	0.083	0.114	0.141	0.172	0.204	0.238	0.275	0.317	0.364	0.424	0.567
0.88		-	0.054	0.085	0.112	0.143	0.175	0.209	0.246	0.288	0.335	0.395	0.538
0.89	-	-	0.028	0.059	0.086	0.117	0.149	0.183	0.230	0.262	0.309	0.369	0.512
0.90	-	-	-	0.031	0.058	0.089	0.121	0.155	0.192	0.234	0.281	0.341	0.484
0.91	-	-	-	-	0.027	0.058	0.090	0.124	0.161	0.203	0.250	0.310	0.453
0.92	-	-	-	-	-	0.031	0.063	0.097	0.134	0.176	0.223	0.283	0.426
0.93	-	-	-	-	-	-	0.032	0.066	0.103	0.145	0.192	0.252	0.395

Capacitor ratings at different voltages

kVAr at 525V	kVAr at 440V	kVAr at 415V	kVAr at 400V	capacitance total (uF)	capacitance in delta (uF)	current in delta (A) 525V	current in delta (A) 440V	current in delta (A) 415V	current in delta (A) 400V	line curent (A) 525V	line curent (A) 440V	line curent (A) 415V	line curent (A) 400V
	10	9	8	164	82		8	7	7		13	12	12
	15	13	12	247	123		11	11	10		20	19	18
	20	18	17	329	164		15	14	14		26	25	24
	25	22	21	411	206		19	18	17		33	31	30
	30	27	25	493	247		23	21	21		39	37	36
	40	36	33	658	329		30	29	28		52	50	48
	45	40	37	740	370		34	32	31		59	56	54
	50	44	41	822	411		38	36	34		66	62	60
	60	53	50	987	493		45	43	41		79	74	72
	75	67	62	1234	617		57	54	52		98	93	89
	80	71	66	1316	658		61	57	55		105	99	95
	90	80	74	1480	740		68	64	62		118	111	107
	100	89	83	1645	822		76	71	69		131	124	119
	120	107	99	1974	987		91	86	83		157	149	143
	125	111	103	2056	1028		95	89	86		164	155	149
	150	133	124	2467	1234		114	107	103		197	186	179
	175	156	145	2879	1439		133	125	121		230	217	209
	180	160	149	2961	1480		136	129	124		236	223	215
	200	178	165	3290	1645		152	143	138		262	248	239
	210	187	174	3454	1727		159	150	145		276	260	251
	225	200	186	3701	1851		170	161	155		295	278	268
	240	214	198	3948	1974		182	171	165		315	297	286
	250	222	207	4112	2056		189	179	172		328	309	298
	270	240	223	4441	2221		205	193	186		354	334	322
	275	245	227	4524	2262		208	196	189		361	340	328
	300	267	248	4935	2467		227	214	207		394	371	358
	325	289	269	5346	2673		246	232	224		426	402	388
	330	294	273	5428	2714		250	236	227		433	408	394
	350	311	289	5757	2879		265	250	241		459	433	418
	360	320	298	5922	2961		273	257	248		472	446	429
	375	334	310	6169	3084		284	268	258		492	464	447
	400	356	331	6580	3290		303	286	275		525	495	477
	420	374	347	6909	3454		318	300	289		551	520	501
	425	378	351	6991	3496		322	304	293		558	526	507
	450	400	372	7402	3701		341	322	310		590	557	537
	475	423	393	7814	3907		360	339	327		623	588	567
	480	427	397	7896	3948		364	343	331		630	594	573
	500	445	413	8225	4112		379	357	344		656	619	596
	600	534	496	9870	4935		455	429	413		787	743	716
	700	623	579	11515	5757		530	500	482		919	866	835
10	7	6	6	116	58	6	5	5	5	11	9	9	8
20	14	12	12	231	116	13	11	10	10	22	18	17	17
30	21	19	17	347	173	19	16	15	15	33	28	26	25
40	28	25	23	462	231	25	21	20	19	44	37	35	34
50	35	31	29	578	289	32	27	25	24	55	46	43	42
60	42	37	35	693	347	38	32	30	29	66	55	52	50
70	49	44	41	809	404	44	37	35	34	77	65	61	59
80	56	50	46	924	462	51	43	40	39	88	74	70	67
90	63	56	52	1040	520	57	48	45	44	99	83	78	75
100	70	62	58	1155	578	63	53	50	48	110	92	87	84
120	84	75	70	1387	693	76	64	60	58	132	111	104	101
140	98	87	81	1618	809	89	74	70	68	154	129	122	117
160	112	100	93	1849	924	102	85	80	77	176	147	139	134
180	126	112	104	2080	1040	114	96	90	87	198	166	156	151
200	140	125	116	2311	1155	127	106	100	97	220	184	174	168
220	155	137	128	2542	1271	140	117	110	106	242	203	191	184
240	169	150	139	2773	1387	152	128	120	116	264	221	209	201
260	183	162	151	3004	1502	165	138	130	126	286	240	226	218
280	197	175	163	3235	1618	178	149	141	135	308	258	243	235
300	211	187	174	3466	1733	190	160	151	145	330	276	261	251
320	225	200	186	3697	1849	203	170	161	155	352	295	278	268
400	281	250	232	4622	2311	254	213	201	193	440	369	348	335

Standard rated capacitor voltage 440V or 525V

Notes:

1. "capacitance total" refers to total calculated capacitance of the delta connected capacitor at rated capacitor voltage
2. "capacitance in delta" refers to calculated capacitance between any two terminals of delta wired capacitor
3. "line current" refers to calculated current at terminals of delta capacitor
4. calculated values may vary in practice due to tolerances allowed in manufacturing standards, and the effect of cables, discharge resistors, etc

Capacitor selection regarding harmonics

		Capacitor without reactor	Capacitor without reactor	Capacitor with reactor	Capacitor with reactor
			Standard type	Standard class	Reinforced class
S.H / S.T			15-25%	25-35%	35-50%
THDU/ THDI			≤ 3% / ≤ 10%	≤ 4% / ≤ 20%	≤ 6% / ≤ 40%

Notes:
S.H and S.T are given in kVA
S.H: weighted power of harmonic generators in kVA
S.T: power of the transformer HV/LV

Servo combination selection chart

Step 1: Select a Servo Drive	Step 2 : Select a Servo Motor							Step 3: Select Power Cable				Step 4: Select Encoder Cable	
Servo Drive	A3/B3 Motor	OR	A2 Motor	OR	A3/B3 Motor + Brake IP67	OR	A2 Motor + Brake	Power Cable A3/ B3 Motor IP67	Power Cable A2 Motor	B3/A3 Power Cable + Brake IP67	Power Cable + Brake A2	Encoder Cable A3/ B3 IP67	Encoder Cable A2
ASD-B3A-0121-x	ECM-B3L-CM0401RJ1		ECMA-C10401RS					ACS3-CAPW5105	ASD-ABPW0005			ACS3-CAEN1105	ASD-ABEN0005 + ACS3-CABDC2
ASD-B3A-0421-x	ECM-B3M-CM0604RJ1		ECMA-C10604RS		ECM-B3M-CM0604SJ1			ACS3-CAPW5105	ASD-ABPW0005	ACS3-CAPW6105		ACS3-CAEN1105	ASD-ABEN0005 + ACS3-CABDC2
ASD-B3A-0721-x	ECM-B3M-CM0807RJ1		ECMA-C10807RS		ECM-B3M-CM0807SJ1		ECMA-C10807SS	ACS3-CAPW5105	ASD-ABPW0005	ACS3-CAPW6105	ASD-ABPW0105	ACS3-CAEN1105	ASD-ABEN0005 + ACS3-CABDC2
ASD-B3A-1021-x	ECM-B3M-C21010RS1		ECMA-C11010RS				ECMA-C11010SS	ACS3-CAPWA205	ASD-CAPW1005		ASD-CAPW1105	ACS3-CAENA105	ASD-CAEN1005 + ACS3-CABDC2
ASD-B3A-1521-x	ECM-B3M-E21315RS1		ECMA-E11315RS				ECMA-E11315SS	ACS3-CAPWA205	ASD-CAPW1005		ASD-CAPW1105	ACS3-CAENA105	ASD-CAEN1005 + ACS3-CABDC2
ASD-A3-0121-x	ECM-B3L-CM0401RJ1		ECMA-C10401RS					ACS3-CAPW5105	ASD-ABPW0005			ACS3-CAEN1105	ASD-ABEN0005 + ACS3-CAADC2
ASD-A3-0421-x	ECM-B3M-CM0604RJ1		ECMA-C10604RS		ECM-B3M-CM0604SJ1			ACS3-CAPW5105	ASD-ABPW0005	ACS3-CAPW6105		ACS3-CAEN1105	ASD-ABEN0005 + ACS3-CAADC2
ASD-A3-0721-x	ECM-B3M-CM0807RJ1		ECMA-C10807RS		ECM-B3M-CM0807SJ1		ECMA-C10807SS	ACS3-CAPW5105	ASD-ABPW0005	ACS3-CAPW6105	ASD-ABPW0105	ACS3-CAEN1105	ASD-ABEN0005 + ACS3-CAADC2
ASD-A3-1021-x	ECM-B3M-C21010RS1		ECMA-C11010RS				ECMA-C11010SS	ACS3-CAPWA205	ASD-CAPW1005		ASD-CAPW1105	ACS3-CAENA105	ASD-CAEN1005 + ACS3-CAADC2
ASD-A3-1521-x	ECM-B3M-E21315RS1		ECMA-E11315RS				ECMA-E11315SS	ACS3-CAPWA205	ASD-CAPW1005		ASD-CAPW1105	ACS3-CAENA105	ASD-CAEN1005 + ACS3-CAADC2
ASD-A3-2043-x	ECM-B3M-K21320RS1						ECMA-K11320SS	ACS3-CAPWA205			ASD-CAPW1305	ACS3-CAENA105	ASD-CAEN1005 + ACS3-CAADC2
ASD-A3-3043-x	ECM-B3M-L21830RS1						ECMA-L11830SS	ACS3-CAPWC405			ASD-CAPW2305	ACS3-CAENA105	ASD-CAEN1005 + ACS3-CAADC2
ASD-A3-4543-x	ECM-B3M-L21845RS1						ECMA-L11845SS	ACS3-CAPWC405			ASD-CAPW2305	ACS3-CAENA105	ASD-CAEN1005 + ACS3-CAADC2
ASD-A3-5543-x	ECM-B3M-L21855R31							ACS3-CAPWE605				ACS3-CAENA105	
ASD-A3-7543-x	ECM-B3M-LA1875R31							ACS3-CAPWE605				ACS3-CAENA105	
ASD-A3R-1B43-x	ECM-B3M-LA221BR31							ACS3-CAPWE605				ACS3-CAENA105	
ASD-A3R-1F43-x	ECM-B3M-LA221FR31							ACS3-CAPWE605				ACS3-CAENA105	
ASD-A2-0121-M			ECMA-C10401RS						ASD-ABPW0005				ASD-ABEN0005
ASD-A2-0421-M			ECMA-C10604RS						ASD-ABPW0005				ASD-ABEN0005
ASD-A2-0721-M			ECMA-C10807RS				ECMA-C10807SS		ASD-ABPW0005		ASD-ABPW0105		ASD-ABEN0005
ASD-A2-1021-M			ECMA-C11010RS				ECMA-C11010SS		ASD-CAPW1005		ASD-CAPW1105		ASD-CAEN1005
ASD-A2-1521-M			ECMA-E11315RS				ECMA-E11315SS		ASD-CAPW1005		ASD-CAPW1105		ASD-CAEN1005

TEKNOMEGA TOP busbar support fault level chart

Icc pk	Short-circuit current peak value expressed in kA
Icc rms	Effective value of short-circuit, duration equal to 1 second, expressed in kA

Icc pk (kA)	53 kA				74 kA					110 kA					143 kA					165 kA			187 kA			220 kA		
Icc rms (kA)	25 kA				35 kA					50 kA					65 kA					75 kA			85 kA			100 kA		
Space between phases (mm)	50	75	100	125	50	75	100	125	150	50	75	100	125	150	50	75	100	125	150	100	125	150	100	125	150	100	125	150
TOP 1010 (Top 2/5TN)											(1 x 5mm bar per phase)																	
30 x 5	**225**	280	320	360	**160**	200	230	260	-	**110**	135	155	175	-	-	100	120	130	-	-	-	-	-	-	-	-	-	-
40 x 5	**265**	320	370	415	**190**	230	265	300	-	**125**	155	180	200	-	-	120	135	155	-	-	-	-	-	-	-	-	-	-
50 x 5	**295**	360	415	465	**210**	260	300	335	-	**140**	175	200	225	-	**110**	130	155	170	-	-	-	-	-	-	-	-	-	-
60 x 5	**330**	405	470	525	**235**	290	335	375	-	**160**	195	225	250	-	**120**	150	170	195	-	-	-	-	-	-	-	-	-	-
80 x 5	**370**	455	530	585	**265**	325	375	420	-	**180**	220	250	285	-	**135**	170	195	220	-	-	-	-	-	-	-	-	-	-
TOP 1010 (Top 2/5TN)											(2 x 5mm bars per phase)																	
30 x 5	**320**	390	450	510	**230**	280	320	360	-	**150**	190	220	240	-	**120**	150	170	190	-	-	-	-	-	-	-	-	-	-
40 x 5	**370**	450	520	580	**260**	320	370	420	-	**180**	220	250	280	-	**140**	170	190	220	-	-	-	-	-	-	-	-	-	-
50 x 5	**410**	510	580	650	**300**	360	420	470	-	**200**	240	280	310	-	**150**	190	220	240	-	-	-	-	-	-	-	-	-	-
60 x 5	**460**	570	660	730	**330**	410	470	520	-	**220**	270	320	350	-	**170**	210	240	270	-	-	-	-	-	-	-	-	-	-
80 x 5	**520**	640	740	830	**370**	460	530	590	-	**250**	310	360	400	-	**165**	240	250	310	-	-	-	-	-	-	-	-	-	-
TOP 1025 (Top 1/10T)											(1 x 10mm bars per phase)																	
30 x 10	**455**	555	640	720	**325**	400	460	520	-	**220**	270	310	350	-	**170**	205	240	265	-	-	-	-	-	-	-	-	-	-
40 x 10	**525**	645	745	835	**375**	460	530	600	-	**255**	310	360	400	-	**195**	240	275	310	-	-	-	-	-	-	-	-	-	-
50 x 10	**590**	720	830	935	**420**	515	595	665	-	**285**	350	400	450	-	**200**	255	310	345	-	-	-	-	-	-	-	-	-	-
60 x 10	**645**	790	900	900	**460**	565	650	730	-	**310**	380	490	490	-	**200**	255	340	380	-	-	-	-	-	-	-	-	-	-
80 x 10	**745**	900	900	900	**535**	650	750	845	-	**335**	440	565	565	-	**200**	300	390	435	-	-	-	-	-	-	-	-	-	-
100 x 10	**830**	900	900	900	**590**	730	840	900	-	**335**	490	635	635	-	**200**	300	400	490	-	-	-	-	-	-	-	-	-	-
120 x 10	**900**	900	900	900	**650**	790	900	900	-	**335**	500	690	690	-	**200**	300	400	500	-	-	-	-	-	-	-	-	-	-

Icc pk (kA)	53 kA			74 kA				110 kA				143 kA					165 kA				187 kA				220 kA			
Icc rms (kA)	25 kA			35 kA				50 kA				65 kA					75 kA				85 kA				100 kA			
Space between phases (mm)	75	100	125	75	100	125	150	75	100	125	150	75	100	125	150	175	100	125	150	175	100	125	150	175	100	125	150	175
TOP 1040 (Top 2/10TN)												(2 x 10mm bars per phase)																
30 x 10	**785**	900	900	**560**	650	720	790	**380**	440	490	530	**270**	335	370	410	-	**240**	265	-	-	**205**	270	320	310	-	-	-	-
40 x 10	**900**	900	900	**650**	750	840	900	**440**	500	560	620	**270**	365	430	470	-	**275**	310	-	-	**205**	270	340	320	-	-	-	-
50 x 10	**900**	900	900	**720**	840	900	900	**460**	560	630	690	**270**	365	455	530	-	**310**	345	-	-	**205**	270	340	320	-	-	-	-
60 x 10	**900**	900	900	**790**	900	900	900	**460**	610	690	750	**270**	365	455	545	-	**340**	380	-	-	**205**	270	340	320	-	-	-	-
80 x 10	**900**	900	900	**900**	900	900	900	**460**	610	770	870	**270**	365	455	545	-	**390**	435	-	-	**205**	270	340	320	-	-	-	-
100 x 10	**900**	900	900	**900**	900	900	900	**460**	610	770	900	**270**	365	455	545	-	**400**	490	-	-	**205**	270	340	320	-	-	-	-
120 x 10	**900**	900	900	**900**	900	900	900	**460**	610	770	900	**270**	365	455	545	-	**400**	500	-	-	**205**	270	340	320	-	-	-	-
TOP 1050 (Top 3/10TN)												(3 x 10mm bars per phase)																
30 x 10	-	900	900	-	790	890	900	-	530	600	650	-	410	460	500	540	**350**	400	440	470	**275**	345	380	420	-	-	-	-
40 x 10	-	900	900	-	900	900	900	-	620	690	750	-	470	530	580	630	**350**	440	500	540	**275**	345	440	480	-	-	-	-
50 x 10	-	900	900	-	900	900	900	-	690	770	840	-	470	590	650	700	**350**	440	530	610	**275**	345	415	480	-	-	-	-
60 x 10	-	900	900	-	900	900	900	-	750	840	900	-	470	590	710	770	**350**	440	530	620	**275**	345	415	480	-	-	-	-
80 x 10	-	900	900	-	900	900	900	-	870	900	900	-	470	590	710	825	**350**	440	530	620	**275**	345	415	480	-	-	-	-
100 x 10	-	900	900	-	900	900	900	-	900	900	900	-	470	590	710	825	**350**	440	530	620	**275**	345	415	480	-	-	-	-
120 x 10	-	900	900	-	900	900	900	-	900	900	900	-	470	590	710	825	**350**	440	530	620	**275**	345	415	480	-	-	-	-

TOP junior compact busbar supports

Icc pk (kA)	53 kA	74 kA	110 kA	132 kA
Icc rms (kA)	25 kA	35 kA	50 kA	60 kA
Space between phases (mm)	70 mm			
TOP Junior 1/10 (1 x 10mm bar per phase)				
30 x 10	540	385	260	200
40 x 10	610	445	285	200
50 x 10	695	495	285	200
60 x 10	760	545	285	200
80 x 10	870	630	285	200

Icc pk (kA)	53 kA	74 kA	110 kA	132 kA
Icc rms (kA)	25 kA	35 kA	50 kA	60 kA
Space between phases (mm)	70 mm			
TOP Junior 2/5 (1 x 5mm bar per phase)				
30 x 10	270	190	130	105
40 x 10	310	220	150	125
50 x 10	350	250	165	129
60 x 10	380	275	180	129
80 x 10	390	310	210	129

Icc pk (kA)	53 kA	74 kA	110 kA	132 kA
Icc rms (kA)	25 kA	35 kA	50 kA	60 kA
Space between phases (mm)	70 mm			
TOP Junior 2/5 (2 x 5mm bar per phase)				
30 x 10	380	270	180	150
40 x 10	440	310	210	165
50 x 10	490	350	235	165
60 x 10	540	385	240	165
80 x 10	620	445	240	165

Socomec busbar support fault levels

Adhering to the maximum distances between two supports ensures the busbar supports are able to withstand the given short circuit current values. At these values, deformation of the copper bars may occur. These deformations are permitted by standard IEC 60439-1 as long as they adhere to the insulation distances.

SBC 10 Busbar supports

Peak Isc		15kA	24kA	48kA	63kA	82kA	114kA	space between phases	in cabinet 45°C bars 80°C
Rms Isc		9kA	12kA	23kA	30kA	39kA	52kA		
Bar (mm)	No.	Max. L (distance between centres of sets of supports in mm)						d (mm)	Iz (A)
25 x 10	1	1000	1000	500	375	275	200	65	-
25 x 10	2	1000	1000	525	400	300	200	90	850
40 x 10	1	1000	1000	650	475	375	250	65	700
40 x 10	2	1000	1000	700	525	400	275	90	1250
50 x 10	1	1000	1000	725	550	425	300	65	850
50 x 10	2	1000	1000	800	600	475	325	90	1550
60 x 10	1	1000	1000	800	625	475	325	65	1000
60 x 10	2	1000	1000	900	675	525	350	90	1800
80 x 10	1	1000	1000	975	725	550	400	65	1300
80 x 10	2	1000	1000	1000	850	650	350	90	2300
100 x 10	1	1000	1000	1000	850	650	400	65	1550
100 x 10	2	1000	1000	1000	975	675	350	90	2750

SBC ER Busbar supports

Peak Isc		63kA	82kA	114kA	152kA	165kA	187kA	space between phases	in cabinet 45°C bars 80°C
Rms Isc		30kA	39kA	52kA	69kA	75kA	85kA		
Bar (mm)	No.	Max. L (distance between centres of sets of supports in mm)						d (mm)	Iz (A)
50 x 5	1	600	500	325	175	150	-	70	600
50 x 5	2	600	500	325	175	150	100	70	1050
60 x 5	1	625	525	350	200	175	-	70	700
60 x 5	2	625	525	350	200	175	125	70	1250
80 x 5	1	625	525	350	200	175	125	70	900
80 x 5	2	625	525	350	200	175	125	70	1550
100 x 5	1	650	550	375	225	200	175	70	1100
100 x 5	2	650	550	375	225	200	175	70	1900
50 x 10	1	1000	1000	650	250	200	150	70	850
50 x 10	2	1000	1000	650	250	200	150	70	1550
60 x 10	1	1000	1000	675	275	225	175	70	1050
60 x 10	2	1000	1000	675	275	225	175	70	1850
80 x 10	1	1000	1000	700	300	250	175	70	1300
80 x 10	2	1000	1000	700	300	250	175	70	2300
100 x 10	1	1000	1000	725	325	275	175	70	1550
100 x 10	2	1000	1000	725	325	275	175	70	2750
120 x 10	1	1000	1000	725	350	275	200	70	1900
120 x 10	2	1000	1000	725	350	275	200	70	3350

SBE 44 Busbar supports

Peak Isc		10kA	15kA	24kA	38kA	48kA	63kA	space between phases	in cabinet 45°C bars 80°C
Rms Isc		6kA	9kA	12kA	19kA	23kA	30kA		
Bar (mm)	No.	Max. L (distance between centres of sets of supports in mm)						d (mm)	Iz (A)
15 x 3	1	950	625	400	250	175	-	35	160
15 x 5	1	1000	825	500	300	175	-	35	220
20 x 5	1	1000	1000	675	300	175	-	35	280
20 x 8	1	1000	1000	775	300	175	-	35	370
32 x 5	1	1000	1000	675	250	170	-	35	410

SBP 44 Busbar supports

Peak Isc		10kA	15kA	24kA	48kA	63kA	82kA	space between phases	in cabinet 45°C bars 80°C
Rms Isc		6kA	9kA	12kA	23kA	30kA	39kA		
Bar (mm)	No.	Max. L (distance between centres of sets of supports in mm)						d (mm)	Iz (A)
20 x 5	1	1000	1000	800	350	200	125	50	280
25 x 5	1	1000	1000	1000	350	200	125	50	330
32 x 5	1	1000	1000	1000	350	200	120	50	390
25 x 10	1	1000	1000	1000	350	200	125	50	500
30 x 10	1	1000	1000	1000	350	200	120	50	580
32 x 10	1	1000	1000	1000	350	200	120	50	610

SANS 10142-1:2017 Edition 2
Single-core PVC insulated cables, unarmoured, with or without sheath.
(SANS 1507-3) Current-carrying capacity copper conductors.
Installation method 3 *(clipped direct)*.

Cable current ratings

Conventional rated thermal current (A)	Copper conductor section			
	Cable		Busbars	
	No.	Section (mm)²	No.	Dim (mm)
15 A	1x	1.0	-	-
20 A	1x	1.5	-	-
27 A	1x	2.5	-	-
37 A	1x	4.0	-	-
47 A	1x	6.0	-	-
65 A	1x	10	-	-
87 A	1x	16	-	-
115 A	1x	25	-	-
140 A	1x	35	-	-
180 A	1x	50	1	15 x 5
235 A	1x	70	1	20 x 5
280 A	1x	95	-	-
330 A	1x	120	1	30 x 5
380 A	1x	150	-	-
433 A	1x	185	-	-
510 A	1x	240	-	-
590 A	2x	150	-	-
630 A	2x	185	1	30 x 10
740 A	2x	240	1	40 x 10
800 A	-	-	1	40 x 10
1000 A	-	-	1	50 x 10
1250 A	-	-	1	60 x 10
1600 A	-	-	1	80 x 10
2000 A	-	-	1	100 X 10

WÖHNER busbar support fault level chart

Icc kA pk		42	52.7	63	73.5	84
Icc kA eff. 1 s		20	25	30	35	40
01485/01495/01356		D = 60 (mm)				
E	20 X 5	400	250	-	-	-
	30 x 5	600	350	250	-	-
	20 x 10	470	300	-	-	-
	30 x 10	650	600	450	300	250
01231("H" Profile)		D = 60 (mm)				
	"H" Profile	1100	1000	770	700	550
01479		D = 100 (mm)				
E	30 X 10	600	400	-	-	-
	40 x 10	600	500	-	-	-
	50 x 10	600	500	-	-	-
	60 x 10	650	600	600	-	-
01230		D = 185 (mm)				
E	60 X 10	600	600	500	-	-
	80 x 10	600	600	500	-	-
	100 x 10	600	600	500	-	-
	120 x 10	600	600	500	-	-
	"H" Profile	600	600	600	600	600

Current rating of non-insulated flat busbar

A correction factor complying with DIN 43671 can be determined for **flat busbars** using the table below. The factor is dependant on the relevant ambient temperature. This correction factor should be taken into account when conditions change and loading is continuous.

	busbar temperature											
	50°C	55°C	60°C	65°C	70°C	75°C	80°C	85°C	90°C	100°C	110°C	120°C
air temp	correction factor k_2											
20°C	1.00	1.15	1.20	1.25	1.35	1.42	1.48	1.55	1.62	1.70	1.80	1.90
25°C	0.95	1.05	1.1	1.20	1.25	1.35	1.40	1.45	1.55	1.65	1.75	1.85
30°C	0.80	0.92	1.0	1.10	1.15	1.25	1.32	1.40	1.45	1.55	1.70	1.80
35°C	0.70	0.80	0.90	1.00	1.10	1.15	1.25	1.30	1.40	1.50	1.60	1.70
40°C	0.55	0.66	0.80	0.90	1.00	1.10	1.15	1.25	1.30	1.45	1.55	1.65
45°C	0.40	0.52	0.65	0.75	0.90	0.95	1.05	1.15	1.25	1.35	1.50	1.60
50°C	0.30	0.35	0.50	0.65	0.80	0.90	1.00	1.05	1.15	1.30	1.40	1.55
55°C	–	–	0.35	0.55	0.65	0.75	0.90	0.95	1.05	1.20	1.35	1.45
60°C	–	–	–	0.30	0.50	0.65	0.75	0.85	0.95	1.10	1.25	1.40

30 x 10 busbar can under normal operating conditions be loaded with 630A. If the load is increased to 800 A - it represents a 1.27 increase factor. With 35°C ambient, one can expect between 80°C and 85°C busbar temperature

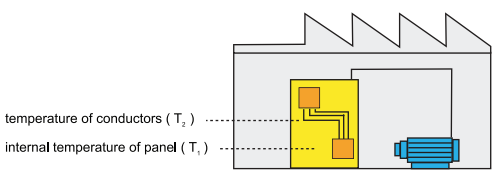
Δ T (°K) calculation

eg.

T_1 (internal panel temperature) 50°C
T_2 (temperature of conductor) 100°C

temperature rise of conductor = T_2 - T_1 = Δ T(°K)

eg. T_2 (100°C) - T_1 (50°C) = select from 50°K



IP rating chart

The system provides a classification from solid objects to liquids in relation to electrical equipment and enclosures.
IP rating consists of **2 codes** (i.e. IP65).

First digit	Protection against solid objects	Second digit	Protection against moisture
0	No protection	0	No protection
1	Protection against objects >50mm	1	Protection against vertically dripping water
2	Protection against objects >12.5mm	2	Protection against spraying water ±15° from vertical
3	Protection against objects >2.5mm	3	Protection against spraying water ±60° from vertical
4	Protection against objects 1.0mm	4	Protection against spraying water ±90° from vertical
5	Dust protection (limited ingress)	5	Protection against low pressure water jets
6	Dust tight protection	6	Protection against high pressure water jets
		7	Protection against temporary immersion (15cm and 1cm)
		8	Protection against continuous immersion under pressure

NB: IP69K refers to the product ability to resist ingress of high temperature (steam) and high pressure washdowns normally used to sanitise equipment.

IK rating chart

Degree of protection against mechanical wear and tear.
IK rating consists of **2 codes** (i.e. IK06).

Code		Height (cm)	Impact Energy (J)
01	0.2kg	7.5	0.15
02		10	0.20
03		17.5	0.35
04		25	0.50
05		35	0.70
06		20	1
07	0.5kg	40	2
08	1.7kg	29.5	5
09	5kg	20	10
10		40	20

Conversion tables

Length	From:	to	meter	foot	inch
	1 meter (m)		1	3.281	39.37
	1 inch (in / ")		0.0254	0.08378	1
	1 foot (ft / ')		0.3048	1	12
Weight	**From:**	**to**	**kg**	**lb**	**oz**
	1 kilogram (kg)		1	2.205	35.27
	1 pound (1b)		0.454	1	16
	1 ounce (oz)		0.028	0.0625	1
Pressure	**From:**	**to**	**n/m²**	**bar**	**PSI**
	1 n/m² or pascal		1	0.00001	0.000145
	1 bar		100000	1	14.504
	1 PSI		6849.76	0.0689476	1

Power Factor Correction

Individual motor compensation

Capacitor rating in kVAr			To improve P.F to 0.95 or better at all loads			
motor kW	2 pole 3000rpm	4 pole 1500rpm	6 pole 1000rpm	8 pole 750rpm	10 pole 600rpm	12 pole 500rpm
1.5	0.5	1	1	1.5	1.5	1.5
2.2	0.75	1	1	1.5	1.5	1.5
4	1.0	1.5	2	2.5	3	3
5.5	1.5	2	3	3.5	4	4
7.5	2.5	3	3.5	4	5	5
11	4	4	4.5	6	6	6
15	5	5	6	8	8	10
18.5	6	6	7	8	10	12
22	7	8	9	10	12	14
30	9	10	11	14	14	16
37	12	12	14	16	18	18
45	14	14	15	18	20	22
55	15	16	18	20	22	26
63	16	18	20	22	24	28
75	20	22	24	26	28	32
90	25	26	30	32	35	30
110	28	30	32	35	38	45
132	30	32	32.6	38	45	60

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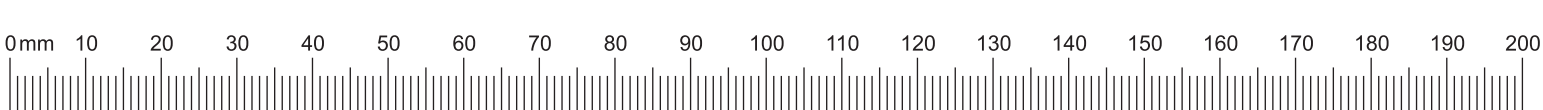
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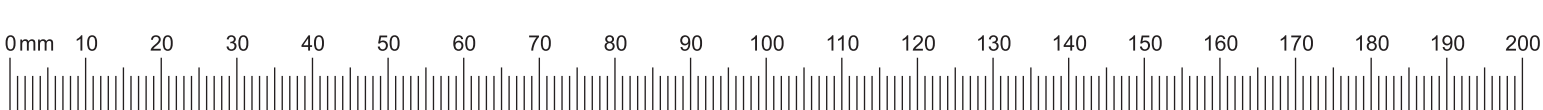
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Standard terms and conditions

1. Representations:
1.1. The Purchaser acknowledges that it does not rely on any representations made by THE COMPANY, in regard to the goods or any of its qualities, leading up to the conclusion of this Agreement, other than those contained in this Agreement. All specifications, price lists, performance figures, advertisements, brochures and other technical data furnished by THE COMPANY in respect of the goods (or ancillary services) orally or in writing will not form part of the Agreement in any way unless agreed to in writing by THE COMPANY.
1.2. The Purchaser agrees that neither THE COMPANY nor any of its employees will be liable for any negligent or innocent misrepresentations made to the Purchaser.
1.3. It is the sole responsibility of the Purchaser to determine that the goods (or ancillary services) ordered are suitable for the purposes of intended use.
2. Prices and Rates:
2.1. Prices are exclusive of VAT.
2.2. The prices are based on the cost to THE COMPANY of material, labour, transport, insurance and the rates of exchange ruling at the date of the sale. In the event of there being any increase or additional cost arising due to factors beyond the control of THE COMPANY, which affects any such costs prior to delivery, the prices will be subject to variation proportionally and without prior notice, at the discretion of THE COMPANY. All prices quoted do not include applicable value added taxes or duties unless where specially referred to. Additionally, no local taxes, local levies or other charges are included in the prices unless specifically indicated on the quote as a separate line item or as specifically stated to be included in the price on the proposal document, as applicable.
2.3. The Purchaser agrees to the standard rates of THE COMPANY for any goods, or ancillary services rendered in relation to the goods, which rates may be obtained on request by the Purchaser to THE COMPANY.
3. Quotations:
3.1. All quotations will remain valid for a period of 30 days from the date of the quotation, unless otherwise specified in writing by THE COMPANY, or until the date of issue of a new price list, (which price list will be furnished to the Purchaser by THE COMPANY), whichever occurs first.
3.2. All quotations are subject to the availability of the goods or ancillary services and subject to correction of good faith errors by THE COMPANY and the prices quoted are subject to any increases in the cost price, including currency fluctuations, as contemplated in clause 2.2 of this Part B, before acceptance of the order.
4. Acceptance:
4.1. The Purchaser hereby confirms that -
4.1.1. the goods or ancillary services on any Tax Invoice issued by THE COMPANY duly represent the goods or ancillary services ordered by the Purchaser at the prices agreed to by the Purchaser; and
4.1.2. where delivery / performance has already taken place, that the goods or ancillary services were inspected and that the Purchaser is satisfied that these conform in all respects to the quality and quantity ordered and are free from any defects.
4.2. Failure on the part of the Purchaser to object to any item appearing on THE COMPANY'S statement of account within 14 days of date of dispatch of such statement, shall deem the account to be in order.
5. Delivery/Performance and Insurance:
5.1. THE COMPANY shall be entitled in its sole discretion to split the delivery / performance of the goods or ancillary services ordered in the quantities and on the dates it decides.
5.2. THE COMPANY shall be entitled to invoice each delivery / performance actually made separately.
5.3. Any delivery note or waybill (copy or original) signed by the Purchaser or a third party engaged to transport the goods and held by THE COMPANY shall be proof that valid delivery was made to the Purchaser.
5.4. The risk of damage to, destruction or theft of goods shall pass to the Purchaser upon delivery of the goods, and the Purchaser undertakes to comprehensively insure the goods until paid for in full.
5.5. Delivery and performance times quoted are merely estimates and are not binding on THE COMPANY.
5.6. THE COMPANY shall not be responsible for freight or courier or any other delivery charges, and the Purchaser is required to appoint its own delivery agent at its own cost. Goods to be dispatched to the Purchaser by rail or other carriers shall be at the Purchaser's risk from the time delivery is made by THE COMPANY to the carrier.
5.7. Claims for shortages or damages must be notified in writing within 48 hours after delivery of goods, failing which no claim will be recognised.
5.8. THE COMPANY will repair or at its discretion replace, at THE COMPANY'S premises, any goods sold which are proved within 12 (twelve) months from delivery, not to conform to specification or to be defective due to faulty workmanship or materials.
6. Indemnity: The Purchaser indemnifies THE COMPANY against, and excludes THE COMPANY's liability for, any claims for shortages or damages that may arise from Part B of such Agreement after the expiry of the 48 hour period contemplated in clause 5.7 of this Part B.
7. Returns:
7.1. All goods taken on a consignment basis by the Purchaser are deemed sold if not returned within 7 days in the original condition, in the original packaging and with all accessories and manuals intact.
7.2. Should THE COMPANY agree to accept return of goods, the Purchaser warrants the good condition thereof and a 15% (fifteen percent) handling charge shall apply.
8. Warranties:
8.1. Goods are sold voetstoots with no warranty against patent or latent defects and all other guarantees including common law guarantees are hereby specifically excluded, save for the 1 (one) year guarantee provided by THE COMPANY, from date of invoice, contemplated in clause 5.8 of this Part B above. Ancillary services carry no guarantee.
8.2. Should the goods supplied by THE COMPANY be used in the Purchaser's process and THE COMPANY is thereafter paid subject to and as a ratio of the Purchaser's production, THE COMPANY makes no warranty that the specific goods supplied by it will yield any particular production by the Purchaser.
9. Exclusion of liability:
Under no circumstances shall THE COMPANY, nor its employees, agents, sub-contractors or other persons for whom THE COMPANY may be liable in law (in whose favour this constitutes a stipulatio alteri), be liable for any indirect, extrinsic, special, penal, punitive, exemplary or consequential loss or damages, including loss of profits, from whatever cause arising, and whether or not the loss or damage was foreseeable, which may be suffered or incurred by the Purchaser, its customers, affiliates, directors, employees, contractors and/or agents, as a result of, or in connection with, the provisions of this Agreement, or for any delictual liability of any nature whatsoever, including arising from any misuse, abuse or neglect of the goods or ancillary services.
10. Payment of invoices and Credit Approved Purchasers:
10.1. The Purchaser agrees that the amount contained in a Tax Invoice issued by THE COMPANY shall be due and payable unconditionally (a) in cash on order; or (b) if the Purchaser is a Credit Approved Purchaser, within 30 days from the end of the month in which a Tax Invoice has been issued by THE COMPANY: or (c) on other terms agreed in writing with the COMPANY.
10.2. The Purchaser agrees to pay the amount on the Tax Invoice into THE COMPANY's designated bank account, or at such other place THE COMPANY may designate in writing.
10.3. The risk of payment rests with the Purchaser.
10.4. If the Purchaser orders goods that are non-stocked goods, which do not appear in THE COMPANY'S most recent catalogue, the Purchaser shall pay 50% (fifty percent) of the selling price on order, as a non-refundable deposit. All non-stocked goods are not returnable.
10.5. The Purchaser has no right to withhold payment for any reason whatsoever and agrees that no extension of payment of any nature shall be extended to the Purchaser and any such extension will not be applicable or enforceable unless agreed to by THE COMPANY, reduced to writing and signed by the Purchaser and a duly authorised representative of THE COMPANY.
10.6. The Purchaser is not entitled to set off any amount due to the Purchaser by THE COMPANY against this debt, and THE COMPANY shall be entitled to allocate any payments received from or credit granted to the Purchaser towards any obligation owed by the Purchaser.
10.7. The Purchaser agrees that the amount due and payable to THE COMPANY may be determined and proven by a certificate issued and signed by any director or manager or member or partner of THE COMPANY, whose authority need not be proven or by any independent auditor nominated by THE COMPANY. Such certificate shall be binding and shall be proof of the indebtedness of the Purchaser, and the Purchaser shall bear the onus of proving that the amount is not due and payable.
10.8. Any printout or computer evidence tendered by the Company shall be admissible evidence in relation to clause 10.7 of this Part B.
10.9. The Purchaser agrees that interest shall be payable at the maximum legal interest rate prescribed in terms of the National Credit Act No 34 of 2005 on any monies past due date to THE COMPANY and that interest shall be calculated daily and compounded monthly from the date of acceptance of the order.
10.10. A Credit Approved Purchaser acknowledges that the extension of credit by THE COMPANY for the purchase of goods represents an Incidental Credit Agreement between the Purchaser and THE COMPANY, as defined by the National Credit Act No. 34 of 2005, unless the Purchaser is a juristic person whose asset value or annual turnover, together with the combined asset value or annual turnover of all related juristic persons, at the time this Agreement becomes an incidental credit agreement, equals or exceeds the threshold value determined by the Minister in terms of section 7(1) of the National Credit Act No. 34 of 2005.
11. Remedies:
11.1. The Purchaser agrees that if an account is not settled in full (a) against order; or (b) within the period agreed in clause 10.1 of this Part B above in the case of a Credit Approved Purchaser; THE COMPANY is: entitled to elect to (i) demand specific performance of the Purchaser's payment obligations, (ii) immediately institute action against the Purchaser at the sole expense of the Purchaser; or (iii) to cancel the Agreement and take possession of any goods delivered to the Purchaser, and (iv) claim damages. These remedies are without prejudice to any other right THE COMPANY may be entitled to in terms of this Agreement or in law. THE COMPANY reserves its right to stop supply immediately on cancellation or on non-payment. A Credit Approved Purchaser will forthwith lose this approval when payment is not made according to these terms and conditions, and all amounts then outstanding shall immediately become due and payable.
11.2. THE COMPANY shall be entitled to withdraw or amend credit facilities at any time within its sole discretion.
11.3. In the event that the Purchaser is a company and the Board of the company resolves that the company voluntarily begins business rescue proceedings, or in the event that the business rescue proceedings are commenced by a third party in terms of the provisions of Chapter 6 of the Companies Act 71 of 2008, this Agreement is deemed to have terminated on the date on which the Purchaser's board passed the said resolution or such proceedings were commenced by a third party.
11.4. The Purchaser irrevocably authorises THE COMPANY to enter its premises to repossess any goods delivered, with a duly authorised court order, and indemnifies THE COMPANY completely against any damage whatsoever relating to the removal of repossessed goods.
11.5. In the event of cancellation of the Agreement by THE COMPANY, it is entitled not to produce the goods in respect of the unmade balance of a contract and to recover any loss sustained thereby from the Purchaser.
11.6. The Purchaser shall be liable to THE COMPANY for all legal expenses on the attorney-and-client scale (not limited by tariff) of an attorney and counsel (whether junior or senior) incurred by THE COMPANY in the event of (a) any default by the Purchaser or (b) any litigation in regard to the validity and enforceability of this Agreement. The Purchaser shall also be liable for any letter of demand, tracing, collection or valuation fees incurred as well as for any costs, including stamp duties, for any form of security that THE COMPANY may demand. The Purchaser acknowledges that these charges have been fully explained to it, and that it shall be liable for payment thereof.
11.7. The Purchaser agrees that no indulgence whatsoever by THE COMPANY will affect the terms of this Agreement or any of the rights of THE COMPANY and such indulgence shall not constitute a waiver by THE COMPANY in respect of any of its rights herein. Under no circumstances will THE COMPANY be estopped from exercising any of its rights in terms of this Agreement.
11.8. Other events which will entitle THE COMPANY to the rights contemplated in this clause 11 include if the Purchaser breaches any term of this Agreement in addition to the default contemplated in clause 11.1 and fails to remedy such default within a period of 7 (seven) days after the delivery of written notice by THE COMPANY to the Purchaser requiring the Purchaser to remedy the default, or if the Purchaser makes any attempt of compromise with its creditors, commits an act of insolvency, is placed into provisional or final liquidation, or under provisional or final sequestration or judgment is recorded against the Purchaser or any of its principals, or the Purchaser causes to be done anything which may prejudice THE COMPANY's rights hereunder or at all (including committing a violation of the South African Prevention and Combating of Corrupt Activities Act, 2004 or the Prevention of Organised Crime Act, 1998), without prejudice to any other right which THE COMPANY may have against the Purchaser. In this sentence, any goods delivered by THE COMPANY to the Purchaser and in respect of which payment has not been made at the date on which one of the aforementioned events occurs shall immediately be returned to and recoverable by THE COMPANY and the Agreement pursuant to which such goods were sold shall be deemed to have been cancelled in respect of the goods so returnable.
11.9. The Purchaser agrees that THE COMPANY will be immediately and irrevocably released from any contractual damages and penalty obligations should any event in clauses 11 or 17 of this Part B occur.
11.10. Termination of this Agreement (for whatever reason) shall be without prejudice to any rights or obligations of a party which have accrued or become due prior to the date of termination.
12. Ownership:
12.1. All goods supplied by THE COMPANY remain the property of THE COMPANY until such goods have been fully paid for, whether such goods are attached to other property or not.
12.2. The Purchaser shall not allow the goods to become encumbered in any manner prior to the full payment thereof and shall advise third parties of the rights of THE COMPANY in and to the goods.
12.3. If any goods supplied to the Purchaser are of a generic nature and have become the property of the Purchaser by operation of law the Purchaser shall be obliged on notice of cancellation of the Agreement to retransfer the same quantity of goods and ownership thereof to THE COMPANY.
13. Jurisdiction and governing law:
13.1. The Parties will attempt in good faith to promptly resolve any dispute arising from or in connection with this Agreement by negotiations between representatives of the parties who have authority to settle the dispute. Any dispute not resolved by negotiation may then, at THE COMPANY'S election, be submitted for final resolution to either –
13.1.1. the Arbitration Foundation of Southern Africa in accordance with its Rules; or
13.1.2. a court of competent jurisdiction.
13.2. If the dispute is referred to arbitration, the parties agree to the following:
13.2.1. One arbitrator will be appointed;
13.2.2. The place of the arbitration will be Johannesburg, South Africa;
13.2.3. The language of the arbitration will be English; and
13.2.4. There will be no appeal process and the decision of the arbitrator will be final and binding.
13.3. If the dispute is referred to a court of competent jurisdiction, The Purchaser hereby consents that THE COMPANY shall have the right to institute any legal action in the Magistrate's Court, notwithstanding that the amounts claimed by THE COMPANY shall exceed the jurisdiction of the Magistrate's Court. THE COMPANY may, at its option, institute any such proceedings in the High Court of the Republic of South Africa, Gauteng Local Division, Johannesburg (or any successor to that court), and in such event, the Purchaser hereby irrevocably and unconditionally consents to the jurisdiction of the High Court, in regard to all matters arising from this Agreement.
13.4. This Agreement and its interpretation is subject to South African law.
14. Notices:
14.1. Any document shall be deemed duly presented to and accepted by the Purchaser (i) within 3 days of prepaid registered mail to any of the Purchaser's business or postal addresses or to the personal address of any director, member or owner of the Purchaser; or (ii) within 24 hours of being emailed to any of the Purchaser's email addresses or any director, member's or owner's email addresses; or (iii) on being delivered by hand to the Purchaser or any director, member or owner of the Purchaser; or (iv) within 48 hours if sent by overnight courier or (v) within 7 days of being sent by surface mail.
14.2. The Purchaser chooses its address for any notification by THE COMPANY, or service of legal documents or processes as the address for delivery of the goods nominated in the Credit Application form or if no Credit Application form, in the applicable purchase order, as its chosen domicilium citandi et executandi.
15. Change of Management and Shareholding in Purchaser, or disposal of Purchaser's business: The Purchaser undertakes to inform THE COMPANY in writing within 7 days of any change of Director, Member, Shareholder, Owner or Partner or address, or 14 days prior to selling or alienating the Purchaser's shares or business, and failure to do so will constitute a material breach of this Agreement. Upon receipt of such written notification, THE COMPANY reserves the right, at its sole discretion, to withdraw or amend any credit facility advanced to the Purchaser, it being acknowledged by the Purchaser that such discretion is exercised by THE COMPANY on reasonable commercial grounds.
16. Protection of Personal Information: The Purchaser hereby consents to the storage and use by THE COMPANY of the personal information that it has provided to THE COMPANY for establishing its credit rating, and to THE COMPANY disclosing such information to credit control companies, banks and other institutions involved in rating credit, in accordance with the Protection of Personal Information Act 4 of 2013. The Purchaser agrees that THE COMPANY will not be held liable for the good faith disclosure of any of this information to such third parties and that no further specific consent needs to be obtained for the transfer of such information to a specific third party.
17. Force majeure: Any order is subject to cancellation by THE COMPANY due to Acts of God or from any cause beyond the control of THE COMPANY which has endured for a period of at least 30 days or more from its commencement (whereafter force majeure may be declared). Neither THE COMPANY nor the Purchaser shall be in breach of its obligations under this Agreement (save for payment obligations) to the extent that performance of such obligations is prevented by any circumstances of force majeure and the affected party shall take reasonable steps to shorten and avoid the delay. If force majeure continues for 90 consecutive days, then THE COMPANY shall be entitled to terminate the Agreement on 14 days written notice to the Purchaser and to obtain payment in respect of deliveries already made and/or ancillary services already performed prior to date of such termination. No claim for damages of any nature whatsoever and from whatsoever cause arising shall lie against THE COMPANY in respect of such interruption, delay, suspension or termination of the Agreement on account of a force majeure event.
18. Confidentiality:
18.1. Any information obtained by either party to this Agreement in terms, or arising from the implementation, of this Agreement shall be treated as confidential by the receiving party and shall not be used, divulged or permitted to be divulged to any person not being a party to this Agreement, without the prior written consent of the other disclosing party, save that –
18.1.1. each party shall be entitled to disclose such information to such of its employees (which shall include any of its directors) who need to know for the purposes of this Agreement. Before revealing such information to any such employees, it undertakes to procure that the employees are aware of the confidential nature of the information being made available to them;
18.1.2. any information which is required to be furnished by law or by existing contract or by any stock exchange on which the shares of either party to this Agreement are listed may be so furnished;
18.1.3. either party shall be entitled (after consultation with the other party so as to avoid embarrassment or prejudice to the extent possible) to make such information available to its shareholders as may be necessary to enable such shareholders to consider the value and prospects of their shareholdings;
18.1.4. neither party shall be precluded from divulging any information to any person who is negotiating with such party for the acquisition of an interest in such party, provided that the person to whom any disclosure is made in the aforesaid circumstances shall first have undertaken in writing not to divulge such information to any other person and to use it only for the purpose of evaluating the business;
18.1.5. no party shall be precluded from using or divulging such information in order to pursue any legal remedy available to it.
18.2. The provisions of this clause 18 of this Part B shall continue following the termination or expiry of a party's obligations under this Agreement.
19. Publicity: The Purchaser agrees that THE COMPANY may disclose in the ordinary course of business the Purchaser's name and logo on THE COMPANY's customer list and website. For the work performed pursuant to this Agreement, the Purchaser consents (or shall procure its customer's consent where the Purchaser is not the end user) to THE COMPANY's desire to publicise a brief summary thereof, identifying the type of work performed, THE COMPANY's products and services used, location, industry and the Purchaser's name for marketing purposes only.

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