wieland

Light

Solutions for the electrical
connection of luminaires

Solutions for lighting technology

How can a pluggable installation benefit luminaire manufacturers?

Across all areas of industrial applications, prefabrication and standardized interfaces reduce the effort involved in the initial installation and offer the flexibility needed for later changes. It is this *plug* & *play* philosophy that paved the way for the revolution in entertainment electronics and the introduction of IT into all areas of life. With the *gesis*® connector system, Wieland has been enabling the realization of customized *plug* & *play* concepts for the electrical installation of lighting systems in offices, stores, industry, and the outdoor world for the last 40 years.

Quick and easy

Professional lighting solutions benefit from all the advantages that pluggability has to offer. The huge range of special components has been tailored to the requirements of our partners in the lighting industry.
Fitters benefit from a time saving of 70% and 30% lower costs when using Wieland connectors.
Luminaire manufacturers benefit from a smaller inventory, quick response time for variants, and simplified assembly.

Safe installation

Colored markings and mechanical codings enable clear assignments and prevent mismating. With *gesis* system plugs, the electrical connection meets the requirements for a permanent connection in fixed installations in accordance with the newly revised DIN EN 61535.

Cohesive concept

From the flexible distribution of power to the luminaire through to effective DALI control solutions for both indoors and outdoors, Wieland offers a cohesive concept and pluggable solutions that are optimized for the application in question. At the heart of the system lie our plug connectors and device connectors, supplemented by distribution elements, pre-assembled cables, and accessories. to be versatile. Here, unobtrusive cabling as well as safe distribution and separation of power circuits are essential.
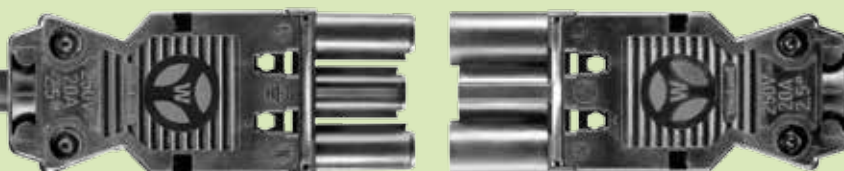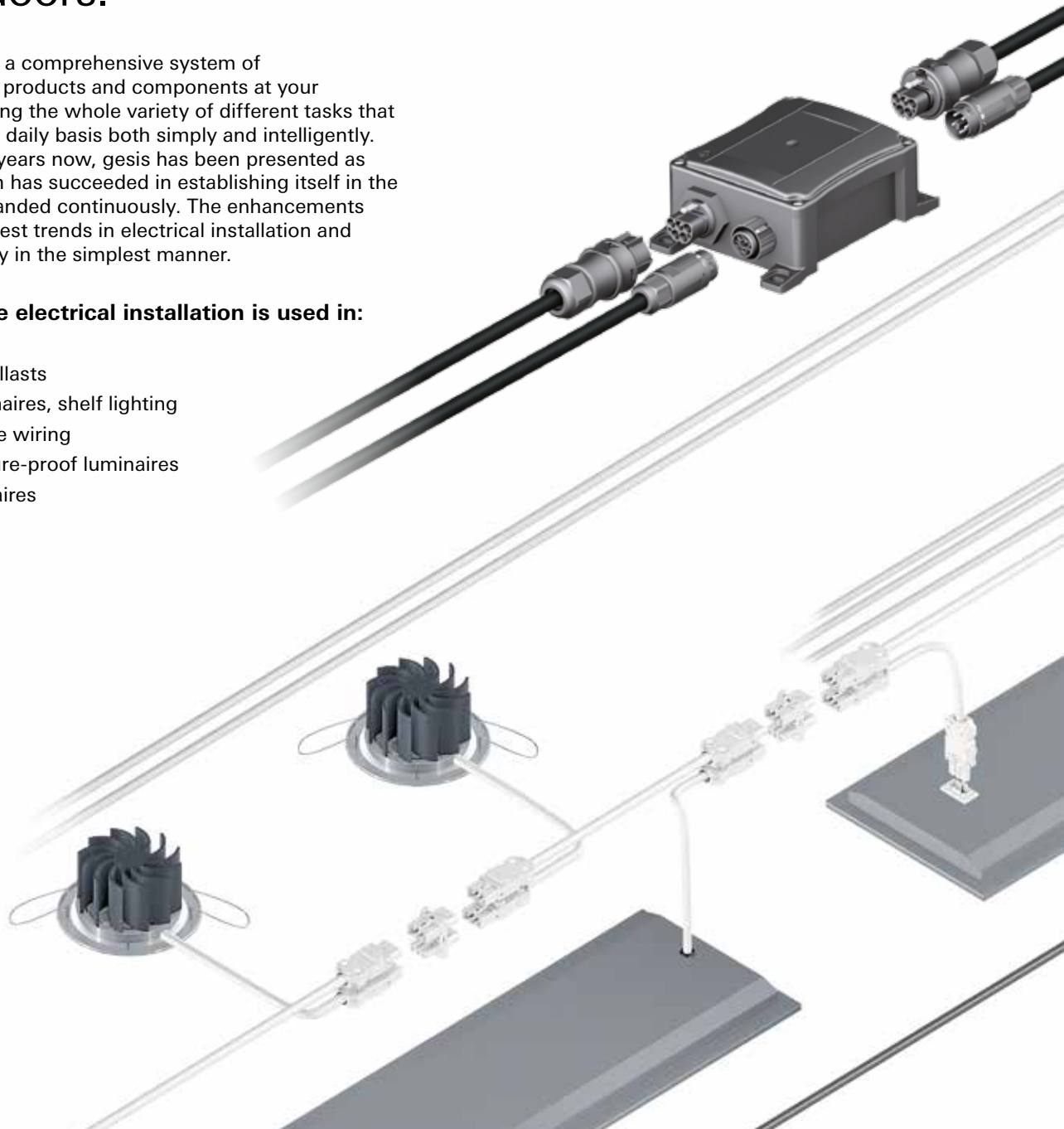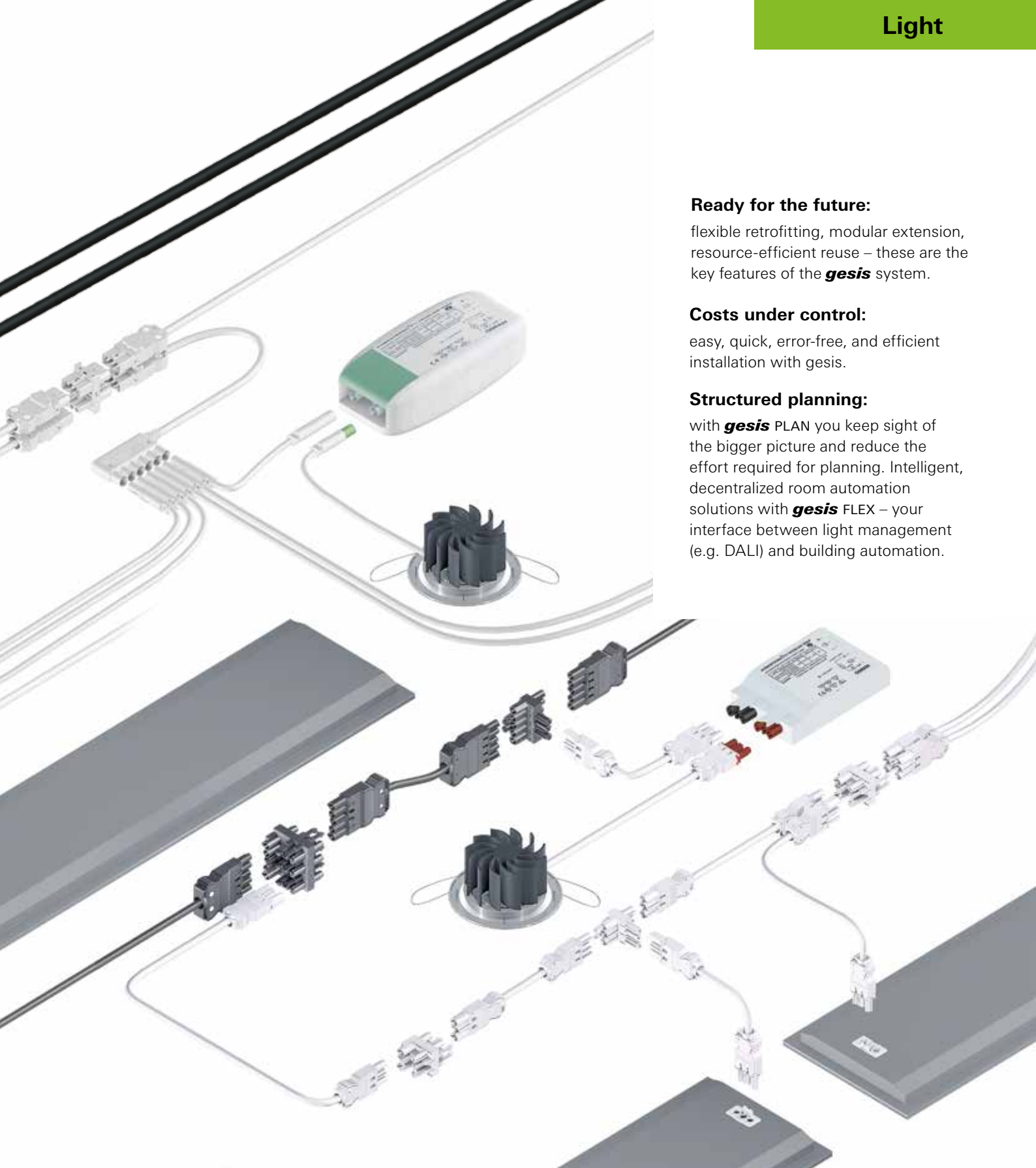
gesis®

gesis® – the cohesive system for efficient, pluggable installation of your lighting solutions both indoors and outdoors.

In *gesis* you have a comprehensive system of high-performance products and components at your disposal for handling the whole variety of different tasks that you deal with on a daily basis both simply and intelligently. For more than 40 years now, gesis has been presented as one system, which has succeeded in establishing itself in the market and is expanded continuously. The enhancements incorporate the latest trends in electrical installation and lighting technology in the simplest manner.

gesis pluggable electrical installation is used in:
- Street lights
- Downlights & ballasts
- Under-unit luminaires, shelf lighting
- Internal luminaire wiring
- Industrial/moisture-proof luminaires
- Recessed luminaires
- Shop lighting

Ready for the future:

flexible retrofitting, modular extension, resource-efficient reuse – these are the key features of the *gesis* system.

Costs under control:

easy, quick, error-free, and efficient installation with gesis.

Structured planning:

with *gesis* PLAN you keep sight of the bigger picture and reduce the effort required for planning. Intelligent, decentralized room automation solutions with *gesis* FLEX – your interface between light management (e.g. DALI) and building automation.

The experience of the market leader:
40 years of pluggable electrical installation.

Advantages

Easy operation:

Industrially prefabricated and tested components. Simple on-site assembly. With *gesis* pluggable luminaires, your customers save 70% of time and up to 30% of installation costs.

Quicker luminaire assembly:

Our well-conceived interfaces, the diversified connection technology, and prefabricated cable sets ensure that luminaire assembly is made much simpler by pluggable modules.

Cohesive system:

Through the standardized *gesis* interface we offer a modular system for all the electrical connections of your lighting solutions. Whether for indoor luminaires or outdoor luminaires, DALI applications, LED applications, integrated or external ballasts, 2, 3, 4, 5, or 6-pole connections – with *gesis* you always have the right product.
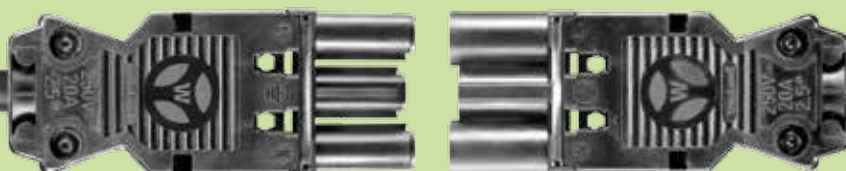
Simplified logistics:

A positive side-effect of module production is the considerable reduction in logistics. You also improve your response time for variants and special solutions.

Safe & flexible installation:

Touch-proof components, secured with a lock against unintentional loosening, color-coded and mechanically coded against mismating, distinguished with international approvals and certified quality and safety.

Future-proof:

The long-standing experience and quality of the market leader ensure high contact reliability, a long service life, and high availability. With the simple, pluggable installation your customers are optimally prepared for future modifications and extensions. Compliance with stringent environmental standards in the manufacture and reusability of all components will play a huge part in helping to achieve environmental objectives.

Recessed and lay-in luminaires

Our solution for recessed and lay-in luminaires: pluggable luminaires and components for the structured electrical installation of power and signals.

DALI luminaires use the 5-pole connector system in order to operate the luminaire itself as well as the corresponding control components with a single connection (mains + signal).

Applications:

The electrical connection of recessed luminaires usually calls for the time-consuming method of opening the luminaire, baring and stripping the power supply and control cable, and inserting the illuminants on site.
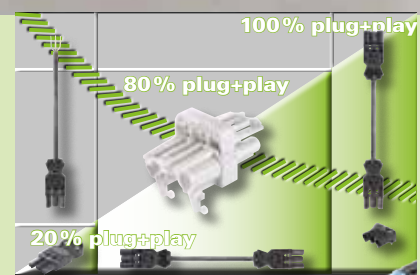With pluggable pre-assembled luminaires, the effort required for on-site assembly can be reduced quite considerably.

Solutions:

- Industrially pre-assembled components.
- Easy to plug together on site.
- For mains application (3-pole) and DALI application (5-pole).
- Flexibility to the point in time of luminaire assembly: conventional connection or pluggable with *gesis* TOP.

Advantages:

- Fast, easy, and safe installation.
- Standardized interfaces for fast replacement.
- High functional reliability through prevention of mismating.
- Simple adjustment of the installation to local conditions.

100 % plug+play

80 % plug+play

20 % plug+play
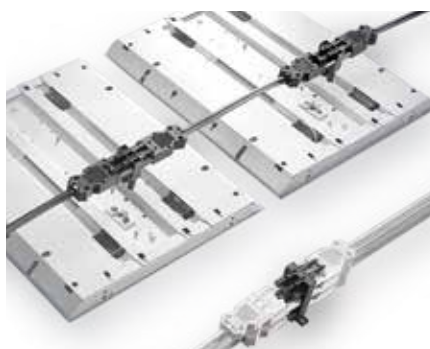
Lay-in luminaire

Pluggable connector integrated into the luminaire: *gesis*®CON (GST18®) Snap-In and T-distributor for connecting pre-assembled cables.

Lay-in luminaire

Freedom of choice with connection: recessed luminaires with BJB luminaire terminal strip can easily be upgraded to a pluggable luminaire with *gesis* TOP.

Dimmable recessed luminaire

Freedom of choice for dimmable luminaires: 5-pole connection for mains + dimming signal (e.g. DALI). Coding pastel blue.

Cohesive connector system

For distribution and luminaire connection with *gesis* CON, *gesis* MINI, *gesis* MICRO.

Downlights, spotlights & ballasts

Applications:

For connecting downlights and recessed spotlights, whether with integrated or with separate ballast. Pluggable makes everything quicker – and easier. The distinction between the primary circuit (230 V) and the connection between the ballast or driver and the luminaire (ignition voltage 5kV / constant voltage 12..24V / constant current 350..1,500 mA) and the use of different connector systems or codings prevent any confusion of circuits. Installation is error-free and easy.

Solutions:
- Industrially pre-assembled components.
- *gesis* ® CON (GST18®) for mains voltage.
- *gesis* MICRO / *gesis* 5kV / ST16 / LST03 for the secondary circuit.
- Easy to plug together on site.
- Easy replacement of faulty ballasts due to pluggable interface.

Advantages:
- Fast, easy, and safe installation.
- Standardized interfaces for fast replacement.
- High functional reliability through prevention of mismating.
- Easy function test for all components using pluggable test adapter.

Downlight with integrated ballast

Ballast for downlight with integrated pluggable mains connection ***gesis*** CON (GST18® solder part).

Downlight with separate ballast

The pluggable interface ***gesis*** MICRO (GST08) between electronic ballast and downlight enables quick installation on site and reduces inventory.

Electronic ballast for high-intensity discharge lamps

gesis 5kV (GST18®) is the established standard for the pluggable interface between luminaire and electronic ballast. The advantages are quick installation and a smaller inventory.

Cohesive connector system

For distribution, luminaire connection, and as an interface between electronic ballast and luminaire: ***gesis*** CON, ***gesis*** MICRO.

Pendant luminaires, strip lighting & under-unit luminaires

Applications:

Pendant luminaires, strip lighting luminaires, and under-unit luminaires for shelves require specific systems for electrical connection and through-wiring. The power and signal supply is usually from one side and is continued internally in the strip light. To achieve maximum prefabrication, smart, pluggable solutions are required both for the assembly and for the electrical connection.

Solutions:

- *gesis* ® CON (GST18®) for three-phase current wiring up to 20 A and with double tap.
- *gesis* MINI 5-pole (three-phase current) + 5-pole (signals) for optimal space
- *gesis* MICRO the smallest mains connector for pendant and under-unit luminaires.
- Harmonized snap-in elements and strip lighting connectors.

Advantages:

- Fast, easy, and safe installation.
- For more than 40 years: robust quality for every requirement.
- High functional reliability through prevention of mismating.
- The right product for through-wiring up to 4.0 mm²

Pendant luminaire

gesis MICRO (GST08) for connecting pendant luminaires. The free end is connected in the canopy. Connector (integrated at the front) or exterior connecting cable to connect two luminaires to each other flexibly.

Strip lighting luminaire

gesis MINI (GST15) 5-pole for internal three-phase current wiring and as transition to the front of the luminaire, e.g. coding pastel blue.
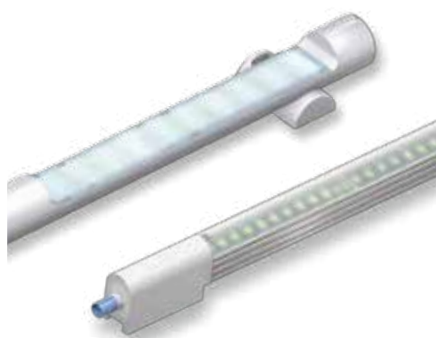
Under-unit luminaire for shelves

gesis MICRO (GST08) for front-sided connection of luminaire to separate LED driver. Distribution elements can be used to connect several luminaires, e.g. for shelf lighting.
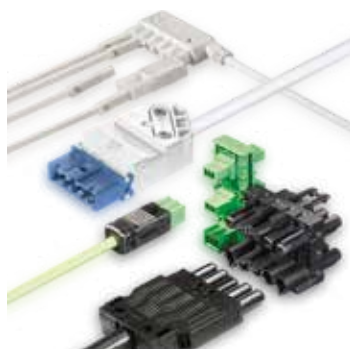
Cohesive connector system

For distribution, luminaire connection, and as strip lighting connector: *gesis* MINI, *gesis* MICRO.

Industrial luminaires

Applications:

gesis ® RST will end your search for the right solution for industrial electrical installation. The connector system, with protection rating IP66/IP68, is also suitable for temporary full immersion. Moisture-proof luminaires can be assembled and connected quickly and easily without being opened.

Solutions:

• *gesis* RST for the electrical connection of hall downlights.

• *gesis* RST 5-pole plugs for dimmable LED luminaires – light where and how it is needed!

• *gesis* RST device connectors, ready-to-use pre-assembled cables, and distribution elements for flexible installations in the IP range.

• *gesis* RST for pluggable moisture-proof luminaires.

Advantages:

• Fully equipped and tested luminaires – prefabrication saves time and money on site!

• Installation without limitation of warranty – the luminaire retains its IP protection through to installation.

• High functional reliability through prevention of mismating.

• Fast, easy, and safe installation.

Hall downlight

Quick connection of hall luminaires without opening the housing with *gesis* RST MINI. The assembly time is reduced to 20%, the IP protection of the luminaire is preserved.

Moisture-proof luminaire

gesis RST CLASSIC pluggable connector to luminaires with higher protection rating for quick and safe assembly without opening the luminaire.

Parking garage lighting

Quick retrofitting of parking garages with energy-efficient LED lighting using the pluggable luminaire connector *gesis* RST MINI. Pre-assembled cables are inserted into the cable ducts; pluggable distribution elements are attached to the cable duct.

Cohesive connector system

Distribution elements and pre-assembled cables for outdoor use and for all applications with a higher protection rating (IP66...68).
RST20, CLASSIC: 20A
RST16, MINI: 16A

Street lights & decorative outdoor luminaires

Applications:

With *gesis* ® RST we offer the right solution for all luminaires used outdoors and in industry. The connector system, with protection rating IP66/IP68, is also suitable for brief full immersion. As an interface to moisture-proof luminaires, it offers the advantage that the luminaire no longer has to be opened for the electrical installation.

Solutions:

- *gesis* RST for modular street lights.
- *gesis* RST 5-pole plug as a service interface for programming DAL dimmable luminaires
- *gesis* RST device connectors, ready-to-use pre-assembled cables, and distribution elements for flexible outdoor installations.
- *gesis* RST for event lighting and power engineering.

Advantages:

- Fast, easy, and safe installation.
- High functional reliability through prevention of mismating.
- Easy function test without opening the luminaire
- Installation without limitation of warranty – the luminaire retains its IP protection through to installation.
- Broad system – the perfect product for every application in terms of number of poles, coding, dimensions, and design.

RST CLASSIC

Street light

Connector between LED module and ballast for extremely simple assembly: *gesis* MINI (GST15).
Connector in luminaire pole for connection and maintenance (programming): *gesis* IP+ (RST20).

Road lighting

Safe and durable electrical installation in luminaires for roads: *gesis* IP+ (RST20) connector.

Decorative outdoor luminaire

Temporary lighting installations for events and seasonal decoration: pre-assembled and pluggable with *gesis* IP+ (RST20).
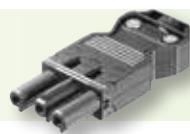
Façade lighting

Maintenance-friendly and flexible façade lighting is pluggable by design.

The *gesis*® system

gesis®CON   *gesis*® MINI

Connectors for power supply to the connector system

Distribution blocks for distributing electrical energy
or signals within the network

Prefabricated cables for transmission and
supply of electrical energy or signals

Device connections are integrated directly into terminals
and form the interface to the connector system

Technical data

	GST18®	GST15
Number of poles	3- to 6-pole	2- to 5-pole
Rated current	16 / 20A	16A
Rated voltage	250V / 400V	250V / 400V
Connection cross-section	0.5 ... 2.5mm²	0.5 ... 1.5mm²
Protection rating	IP 20/40	IP 20/40

Applications

	GST18®	GST15
Recessed luminaires	++	+
Downlights		+
Pendant luminaires		+
Under-unit luminaires		+
Street lights	+	
Industrial hall luminaires		
Moisture-proof luminaires		
Decorative outdoor luminaires		
Internal luminaire wiring		++
Connection between electronic ballast/driver and luminaire	++	+

gesis ® MICRO	*gesis* ® LST	**RST** CLASSIC	**RST** MINI
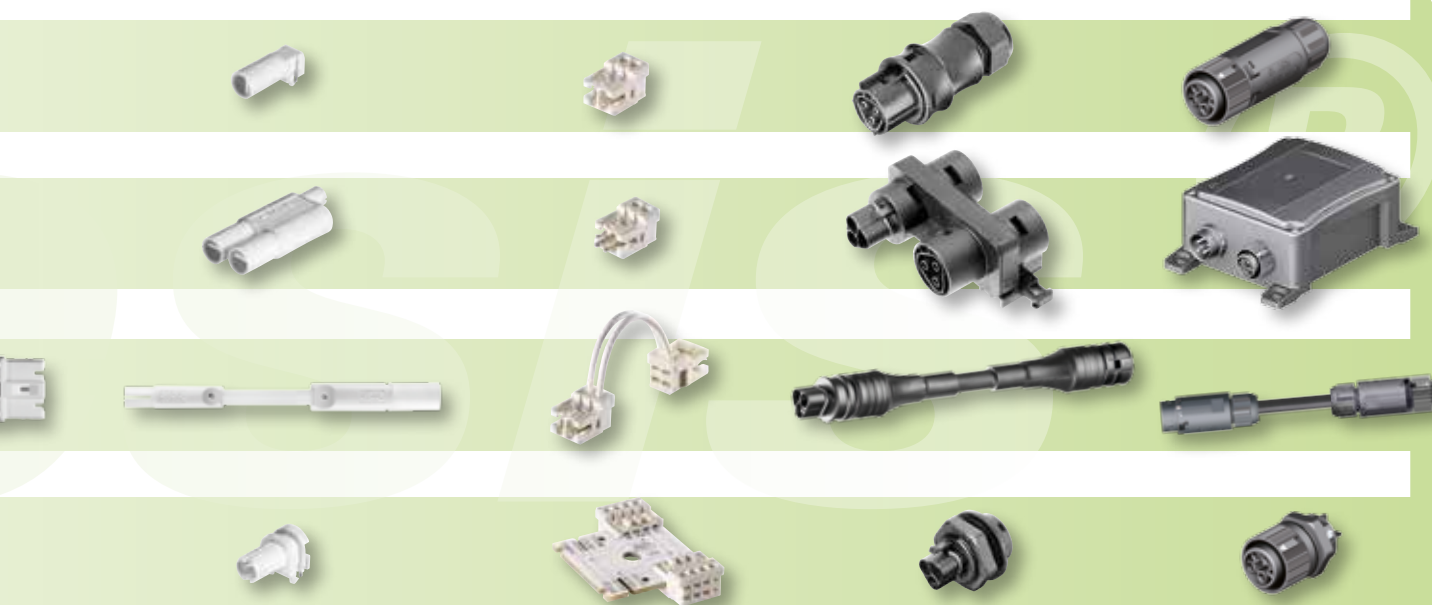
GST08	LST03	RST20	RST 16
2- to 3-pole	2- to 4-pole	2- to 5-pole	2- to 5-pole
2.5 / 6A	3,0A	20 / 32A	16A
250V / 24V	32V	250V / 400V	250V / 400V
0.75mm²	0.22 ... 0.35mm²	0.5 ... 6mm²	0.25 ... 1.5mm²
IP 20/40	-	IP 65/68	IP66, IP69K/IP68

GST08	LST03	RST20	RST 16
+			
++			
++			
++			
		++	+
		++	+
		++	++
		+	++
+	++		
++	+	+	

The experience of the market leader
40 years of pluggable electrical installation

Application fields in which our products and solutions are used.

Recessed luminaires

Downlights

Pendant luminaires

Decorative outdoor luminaires

Moisture-proof luminaires

Under-unit luminaires

Connection between electronic ballast/ driver and luminaire

Internal luminaire wiring

Industrial hall luminaires

Street lights

YEARS gesis®

plug + play

Excerpt from the reference list containing international companies in the lighting industry:

FIRMEN:

ABEL	FAGERHULT	OKTALITE	TARGETTI
ALTO	GLAMOX	OMS	TCI
ANSORG	HARVARD	OSRAM	THORN
ANTARES	HAVELLS	PHILIP	TRATO
ARTEMIDE	HELLA	PRACHT	TRAXON
BEGHELLI	HOFFMEISTER	PHILIPS	TRIDONIC
BRILUM	IGUZZINI	POLAM	TRILUX
COMATELEC	INDALUX	POULSEN	WALDMANN
COOPER	INNOTEK	PROFESSIONAL	WILA
CREE	KREON	REGENT	XAL
DEXTRA	LA	REGIOLUX	ZUMTOBEL
DIETAL	LARSEN	RELCO	
DISANO	LENNEPER	REM	
DURLUM	LG	RIEGENS	
ENCAPSULITE	LIVAL	RUUD	
ERCO	LUMENPULSE	RZB	
ETAP	LUX	SCHREDER	
	MARTIN	SITECO	
	MASSIVE	STAKO	
	NORDEON	SYLVANIA	

Pluggable installation solutions from Wieland
Additional information

Technical support
Automation technology:

■ Safety technology *safety*
  Phone: +49 951 9324-999
  e-mail: safety@wieland-electric.com

■ Remote power distribution *podis* ®
  Phone: +49 951 9324-998

■ *interface:* Power supply, industrial Ethernet
  switches, timer relays, measuring and monitoring
  relays, coupling relays, analog modules, remote
  I/O, surge protection, passive interfaces
  Phone: +49 951 9324-995

■ DIN rail terminal blocks *fasis, selos*
  Phone: +49 951 9324-991

■ Industrial multipole connectors *revos*
  Phone: +49 951 9324-992

■ PCB terminals and connectors *wiecon*
  Appliance terminals, european terminal strips,
  housings for electronic components
  Phone: +49 951 9324-993

  Fax: +49 951 9326-991
  e-mail: AT.TS@wieland-electric.com

Technical support
Building services engineering:
■ System connectors for building installation
  gesis CON, *gesis* RAN, *gesis* ELECTRONIC
  Phone: +49 951 9324-996

■ DIN rail terminal blocks *fasis* BIT, *selos* BIT
  Phone: +49 951 9324-991
  Fax: +49 951 9326-996

■ **e-mail: BIT.TS@wieland-electric.com**

Further information on the topic
of pluggable installation:

gesis INDOOR   Order No. 0670.1
gesis OUTDOOR   Order No. 0690.1
gesis ELECTRONIC   Order No. 0700.1

gesis RAN   Order No. 0409.1
Shop fitting   Order No. 0417.1

Wieland products in general:

Wieland product overview   Order No. 0901.1

General information and news:
www.wieland-electric.com
Visit our e-Shop at
http://eshop.wieland-electric.com

Sales service:

■ To contact our sales department regarding availability,
  delivery schedules, and pricing please call
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Industrial technology

Solutions for the control cabinet
- DIN rail terminal blocks
  – Screw, tension spring or push-in connection technology
  – Wire cross sections up to 240 mm^2
  – Numerous special functions
  – Software solutions interfacing to CAE systems
- Safety
  – Safe signal acquisition
  – Safety switching devices
  – Modular safety modules
  – Compact safety controllers
  – Application consulting and training
- Network engineering and fieldbus systems
  – Remote maintenance via VPN industrial router and VPN service portal
  – Industrial Ethernet switches
  – PLC and I/O systems, standard and
    increased environmental conditions
- Interface
  – Power supply units
  – Overvoltage protection
  – Coupling relays, semiconductor switches
  – Timer relays, measuring and monitoring relays
  – Analog coupling and converter modules
  – Passive interfaces

Solutions for field applications
- Decentralized installation and automation technology
  – Electrical installation for wind tower
  – Fieldbus interfaces and motor starters
- Connectors for industrial applications
  – Rectangular and round connectors
  – Aluminum or plastic housings
  – Degree of protection up to IP 68
  – Current-carrying capacity up to 100 A
  – Connectors for hazardous areas
  – Modular, application-specific technology

PC board terminals and connectors
  – Screw or spring clamp connection technology
  – Spacings: 3.5 mm to 10.16 mm
  – Reflow or wave soldering process

Building and installation technology
- Building installation systems
  – Main power supply connectors IP 20/IP 65 … IP 68
  – Bus connectors
  – Low-voltage connectors
  – Power distribution system with flat cables
  – Distribution systems
  – Bus systems in KNX, LON and wireless technology
  – DIN rail terminal blocks for electrical installations
  – Overvoltage protection

contacts
are
green.

wieland