



Power contactor  
BF230

Product designation

Product type designation

**Contact characteristics**

Number of poles	Nr.	3
Rated insulation voltage U <sub>i</sub> IEC/EN	V	1000
Rated impulse withstand voltage U <sub>imp</sub>	kV	8
Operational frequency	min	Hz 25
	max	Hz 400
IEC Conventional free air thermal current I <sub>th</sub>	A	350
Operational current I <sub>e</sub>	AC-1 (≤40°C)	A 350
	AC-1 (≤55°C)	A 290
	AC-1 (≤70°C)	A 250
	AC-3 (≤440V ≤55°C)	A 230
	AC-4 (400V)	A 110
Rated operational power AC-3 (T≤55°C)	230V	kW 55
	400V	kW 110
	415V	kW 110
	440V	kW 132
	500V	kW 132
	690V	kW 160
	1000V	kW 110
Rated operational current AC-3 (T≤55°C)	230V	A 230
	400V	A 230
	415V	A 230
	440V	A 230
	500V	A 184
	690V	A 165
	1000V	A 100
Rated operational power AC-1 (T≤40°C)	230V	kW 132
	400V	kW 230
	500V	kW 253
	690V	kW 397
IEC max current I <sub>e</sub> in DC1 with L/R ≤ 1ms with 1 poles in series	≤24V	A 350
	48V	A 350
	75V	A 350
	110V	A 145
	220V	A –
IEC max current I <sub>e</sub> in DC1 with L/R ≤ 1ms with 2 poles in series	≤24V	A 350

	48V	A	350
	75V	A	350
	110V	A	270
	220V	A	225
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IEC max current I <sub>e</sub> in DC1 with L/R ≤ 1ms with 3 poles in series			
	≤24V	A	350
	48V	A	350
	75V	A	350
	110V	A	270
	220V	A	270
	330V	A	225
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IEC max current I <sub>e</sub> in DC1 with L/R ≤ 1ms with 4 poles in series			
	≤24V	A	350
	48V	A	350
	75V	A	350
	110V	A	350
	220V	A	350
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IEC max current I <sub>e</sub> in DC3-DC5 with L/R ≤ 15ms with 1 poles in series			
	≤24V	A	350
	48V	A	350
	75V	A	250
	110V	A	135
	220V	A	–
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IEC max current I <sub>e</sub> in DC3-DC5 with L/R ≤ 15ms with 2 poles in series			
	≤24V	A	350
	48V	A	350
	75V	A	250
	110V	A	225
	220V	A	180
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IEC max current I <sub>e</sub> in DC3-DC5 with L/R ≤ 15ms with 3 poles in series			
	≤24V	A	350
	48V	A	350
	75V	A	250
	110V	A	250
	220V	A	225
	330V	A	180
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IEC max current I <sub>e</sub> in DC3-DC5 with L/R ≤ 15ms with 4 poles in series			
	≤24V	A	350
	48V	A	350
	75V	A	250
	110V	A	250
	220V	A	225
	330V	A	210
	460V	A	180
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Short-time allowable current for 10s (IEC/EN60947-1)		A	1840
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Protection fuse			
	gG (IEC)	A	400
	aM (IEC)	A	250
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Making capacity (RMS value)		A	2300
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Breaking capacity at voltage			
	440V	A	1840
	500V	A	1472
	690V	A	1296
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Resistance per pole (average value)		mΩ	0.18

Power dissipation per pole (average value)

Ith	W	21
AC-3	W	9.3

Tightening torque for terminals

min	Nm	18
max	Nm	18
min	Ibin	159
max	Ibin	159

Tightening torque for coil terminal

min	Nm	0.8
max	Nm	1

Power terminal protection according to IEC/EN 60529

IP00

### Mechanical features

Operating position

normal allowable	Vertical plan ±30°
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Fixing

Screw

Weight

g 3000

### Operations

Mechanical life

cycles 10000000

Electrical life

cycles 1000000

### Safety related data

Performance level B10d according to EN/ISO 13489-1

rated load	cycles	1000000
mechanical load	cycles	10000000

EMC compatibility

yes

### AC coil operating

Rated AC voltage at 50/60Hz, 60Hz

min	V	250
max	V	500

AC operating voltage

of 50/60Hz coil powered at 50Hz  
pick-up

min	%Us	80 Us min
max	%Us	110 Us max

drop-out

max	%Us	≤70 Us min
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of 50/60Hz coil powered at 60Hz  
pick-up

min	%Us	80 Us min
max	%Us	110 Us max

drop-out

max	%Us	≤70 Us min
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AC average coil consumption at 20°C

of 50/60Hz coil powered at 50Hz

in-rush	VA	160...230
holding	VA	1.5...3.0

of 50/60Hz coil powered at 60Hz

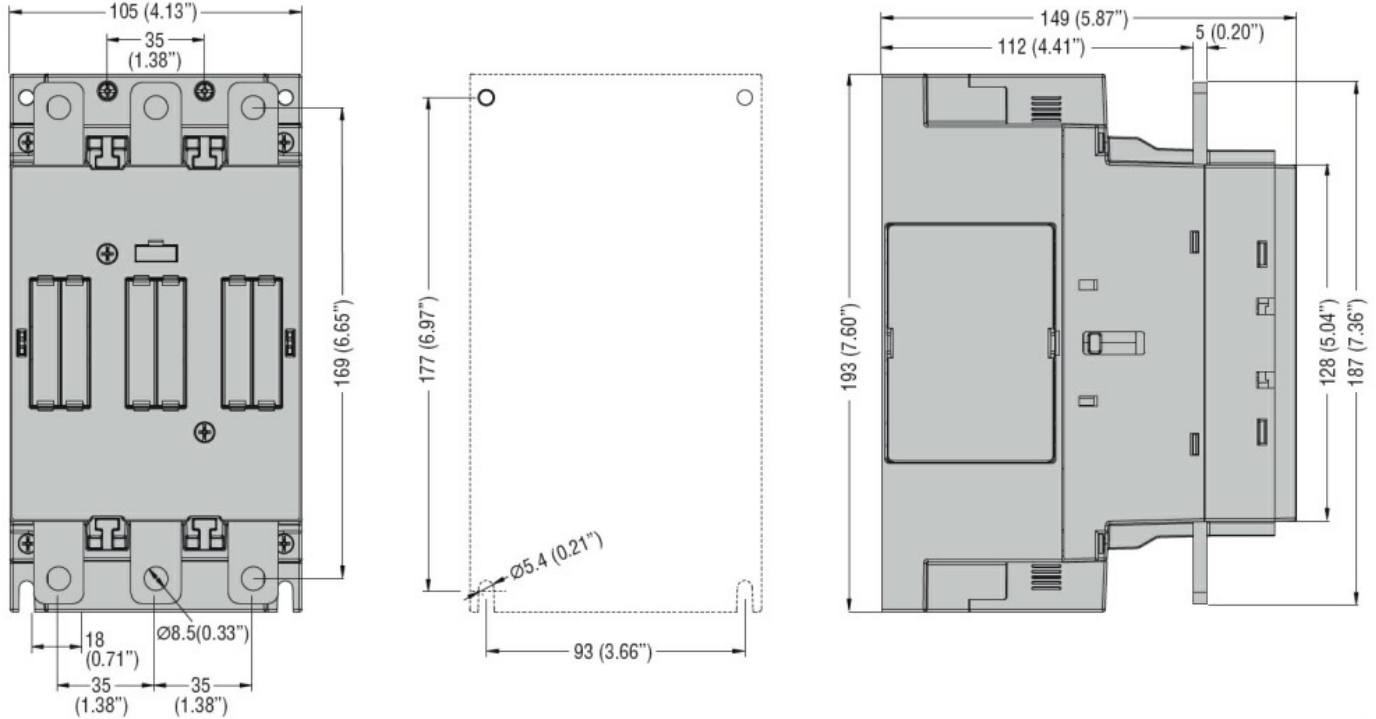
in-rush	VA	160...230
holding	VA	1.5...3.0

of 60Hz coil powered at 60Hz

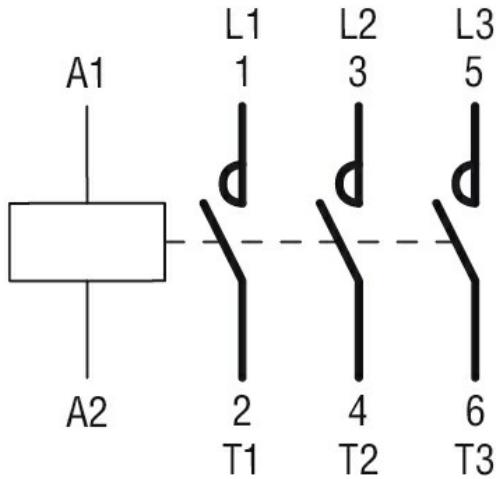
in-rush	VA	160...230
holding	VA	1.5...3.0

Dissipation at holding ≤20°C 50Hz		W	1.5...3.0
<b>DC coil operating</b>			
DC rated control voltage		min	V 250
		max	V 500
<b>DC operating voltage</b>			
pick-up		min	%Us 85 Us min
		max	%Us 110 Us max
drop-out		max	%Us ≤70 Us min
<b>Average coil consumption ≤20°C</b>			
		in-rush	W 160...230
		holding	W 1.5...3.0
<b>Max cycles frequency</b>			
Mechanical operation		cycles/h	1000
<b>Operating times</b>			
Average time for Us control			
in AC			
Closing NO		min	ms 50
		max	ms 100
Opening NO		min	ms 30
		max	ms 75
<b>UL technical data</b>			
Rated operational voltage AC (UL)		V	600
<b>Yielded mechanical performance</b>			
for three-phase AC motor			
		200/208V	HP 75
		220/230V	HP 75
		460/480V	HP 150
		575/600V	HP 200
<b>General USE</b>			
Contactor		AC current	A 350
<b>Short-circuit protection fuse, 600V</b>			
High fault		Short circuit current	kA 100
		Fuse rating	A 400
		Fuse class	J
Standard fault		Short circuit current	kA 10
		Fuse rating	A 400
		Fuse class	RK5
<b>Ambient conditions</b>			
<b>Temperature</b>			
Operating temperature		min	°C -40
		max	°C 70
Storage temperature		min	°C -50
		max	°C 80

Max altitude	m	3000
<b>Resistance &amp; Protection</b>		
Pollution degree		3
<b>Dimensions</b>		



**Wiring diagrams**



**Certifications and compliance**

Compliance	CSA C22.2 n° 60947-1
	CSA C22.2 n° 60947-4-1
	IEC/EN/BS 60947-1
	IEC/EN/BS 60947-4-1
	UL 60947-1
	UL 60947-4-1

Certificates	cULus
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**ETIM classification**

ETIM 8.0

EC000066 -  
Power contactor,  
AC switching