



Product designation  
Product type designation

Power contactor  
BF230

**Contact characteristics**

Number of poles	Nr.	3
Rated insulation voltage $U_i$ IEC/EN	V	1000
Rated impulse withstand voltage $U_{imp}$	kV	8
Operational frequency	min	Hz 25
	max	Hz 400
IEC Conventional free air thermal current $I_{th}$	A	350
Operational current $I_e$	AC-1 ( $\leq 40^\circ\text{C}$ )	A 350
	AC-1 ( $\leq 55^\circ\text{C}$ )	A 290
	AC-1 ( $\leq 70^\circ\text{C}$ )	A 250
	AC-3 ( $\leq 440\text{V} \leq 55^\circ\text{C}$ )	A 230
	AC-4 (400V)	A 110
Rated operational power AC-3 ( $T \leq 55^\circ\text{C}$ )	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 ( $T \leq 55^\circ\text{C}$ )	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 ( $T \leq 40^\circ\text{C}$ )	230V	kW 132
	400V	kW 230
	500V	kW 253
	690V	kW 397
IEC max current $I_e$ in DC1 with $L/R \leq 1\text{ms}$ with 1 poles in series	$\leq 24\text{V}$	A 350
	48V	A 350
	75V	A 350
	110V	A 145
	220V	A —
IEC max current $I_e$ in DC1 with $L/R \leq 1\text{ms}$ with 2 poles in series	$\leq 24\text{V}$	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
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EMC compatibility

yes

**AC coil operating**

Rated AC voltage at 50/60Hz, 60Hz

min	V	60
max	V	130

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
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**DC coil operating**

DC rated control voltage	min	V	60
	max	V	130

DC operating voltage	pick-up	min	%Us	85 Us min
		max	%Us	110 Us max
drop-out	max	%Us	≤70 Us min	

Average coil consumption ≤20°C	in-rush	W	160...230
	holding	W	1.5...3.0

**Max cycles frequency**

Mechanical operation	cycles/h	1000
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**Operating times**

Average time for Us control in AC	Closing NO	min	ms	50
		max	ms	100
	Opening NO	min	ms	30
		max	ms	75

**UL technical data**

Yielded mechanical performance for three-phase AC motor	200/208V	HP	75
	220/230V	HP	75
	460/480V	HP	150
	575/600V	HP	200

General USE	Contactor	AC current	A	350
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Short-circuit protection fuse, 600V High fault	Short circuit current	kA	100
	Fuse rating	A	400
Standard fault	Short circuit current	kA	10
	Fuse rating	A	400
	Fuse class		RK5

**Ambient conditions**

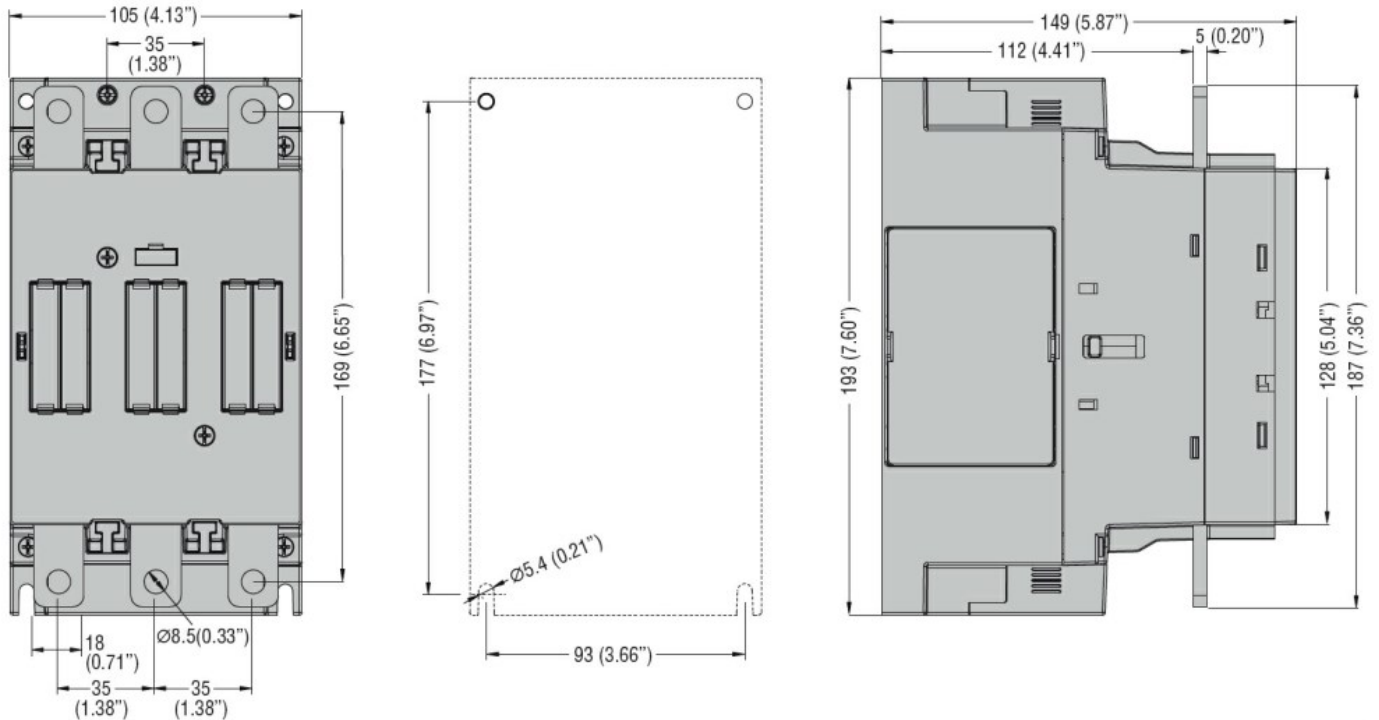
Temperature	Operating temperature	min	°C	-40
		max	°C	70
Storage temperature	min	°C	-50	
	max	°C	80	

Max altitude	m	3000
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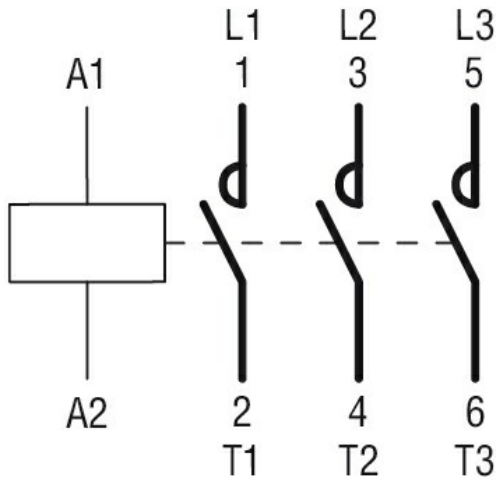
**Resistance & Protection**

Pollution degree	3
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**Dimensions**



**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

**ETIM classification**

ETIM 8.0

EC000066 -  
Power contactor,  
AC switching