



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
IEC max current I _e 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
IEC max current I _e 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
IEC max current I _e 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	—
IEC max current I _e 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
IEC max current I _e 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
IEC max current I _e 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
Short-time allowable current for 10s (IEC/EN60947-1)		A	1840
Protection fuse			
	gG (IEC)	A	400
	aM (IEC)	A	250
Making capacity (RMS value)		A	2300
Breaking capacity at voltage			
	440V	A	1840
	500V	A	1472
	690V	A	1296
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		Vertical plan
	allowable		±30°
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
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
	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
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

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
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Average coil consumption ≤20°C

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

Max cycles frequency

Mechanical operation

cycles/h 1000

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
Fuse class		J

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

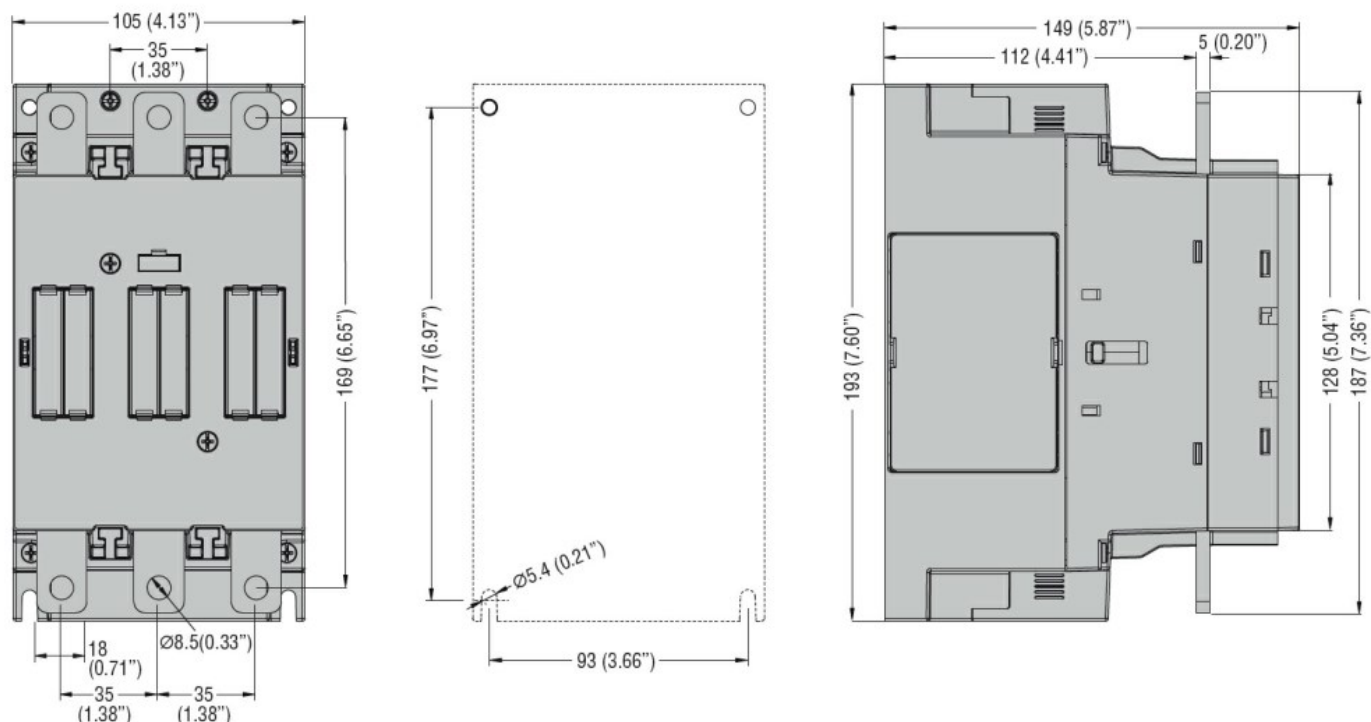
m	3000
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Resistance & Protection

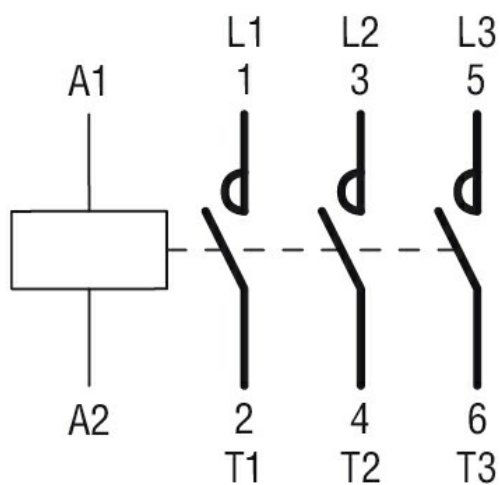
Pollution degree

3

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