



Power contactor
BF230

Product designation

Product type designation

Contact characteristics

Number of poles	Nr.	4
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-4 (400V)	A 110
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 $L/R \leq 1\text{ms}$ with 3 poles in series	$\leq 24\text{V}$	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 $L/R \leq 1\text{ms}$ with 4 poles in series	$\leq 24\text{V}$	A 350
	48V	A 350
	75V	A 350
	110V	A 350
	220V	A 350

IEC max current I_e in DC3-DC5 with $L/R \leq 15\text{ms}$ with 1 poles in series

$\leq 24\text{V}$	A	350
48V	A	350
75V	A	250
110V	A	135
220V	A	–

IEC max current I_e in DC3-DC5 with $L/R \leq 15\text{ms}$ with 2 poles in series

$\leq 24\text{V}$	A	350
48V	A	350
75V	A	250
110V	A	225
220V	A	180

IEC max current I_e in DC3-DC5 with $L/R \leq 15\text{ms}$ with 3 poles in series

$\leq 24\text{V}$	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 $L/R \leq 15\text{ms}$ with 4 poles in series

$\leq 24\text{V}$	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 allowable	Vertical plan $\pm 30^\circ$
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Fixing				Screw
Weight		g		4000
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	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		min	%Us	20
		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		min	%Us	20
		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	250
		max	V	500
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

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

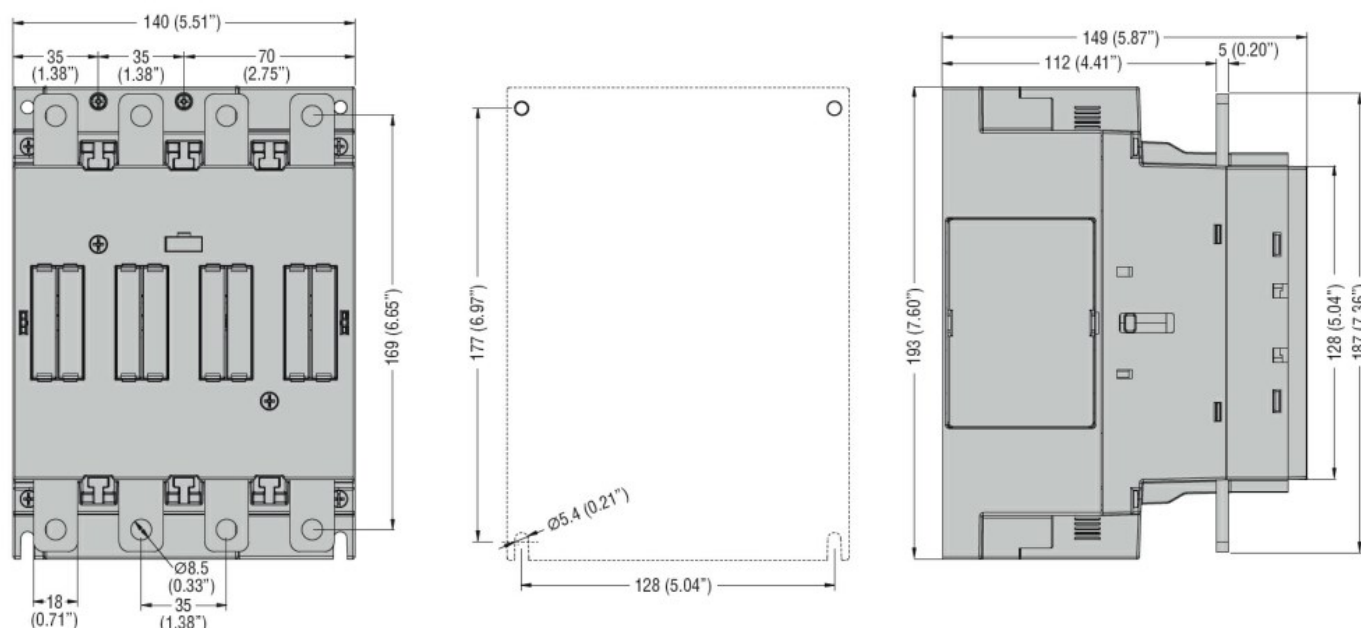
m	3000
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Resistance & Protection

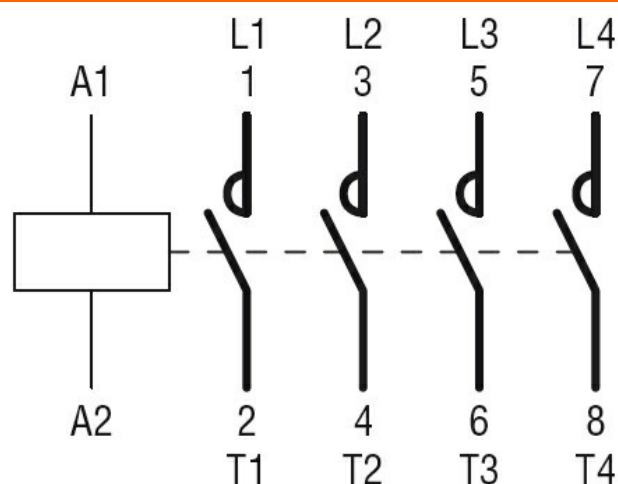
Pollution degree

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