



Product designation
Product type designation

Power contactor
BF330

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} ≤ 40°C	A	500
Operational current I _e	AC-1 (≤40°C)	A 500
	AC-1 (≤55°C)	A 415
	AC-1 (≤70°C)	A 360
	AC-3 (≤440V ≤55°C)	A 330
	AC-4 (400V)	A 160
Rated operational power AC-3 (T≤55°C)	230V	kW 90
	400V	kW 160
	415V	kW 160
	440V	kW 160
	500V	kW 200
	690V	kW 250
	1000V	kW 185
Rated operational current AC-3 (T≤55°C)	230V	A 330
	400V	A 330
	415V	A 330
	440V	A 330
	500V	A 300
	690V	A 300
	1000V	A 140
Rated operational power AC-1 (T≤40°C)	230V	kW 189
	400V	kW 329
	500V	kW 362
	690V	kW 568
IEC max current I _e in DC1 with L/R ≤ 1ms with 1 poles in series	75V	A 375
	110V	A 195
IEC max current I _e in DC1 with L/R ≤ 1ms with 2 poles in series	75V	A 375
	110V	A 350
	220V	A 300
IEC max current I _e in DC1 with L/R ≤ 1ms with 3 poles in series		

	75V	A	375
	110V	A	350
	220V	A	350
	330V	A	300
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IEC max current I _e in DC1 with L/R ≤ 1ms with 4 poles in series			
	75V	A	375
	110V	A	350
	220V	A	350
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IEC max current I _e in DC3-DC5 with L/R ≤ 15ms with 1 poles in series			
	75V	A	310
	110V	A	170
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IEC max current I _e in DC3-DC5 with L/R ≤ 15ms with 2 poles in series			
	75V	A	310
	110V	A	290
	220V	A	230
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IEC max current I _e in DC3-DC5 with L/R ≤ 15ms with 3 poles in series			
	75V	A	310
	110V	A	310
	220V	A	290
	330V	A	230
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IEC max current I _e in DC3-DC5 with L/R ≤ 15ms with 4 poles in series			
	75V	A	310
	110V	A	310
	220V	A	310
	330V	A	310
	460V	A	230
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Short-time allowable current for 10s (IEC/EN60947-1)		A	2640
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Protection fuse			
	gG (IEC)	A	630
	aM (IEC)	A	500
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Making capacity (RMS value)		A	3300
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Breaking capacity at voltage			
	440V	A	2640
	500V	A	2240
	690V	A	2000
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Resistance per pole (average value)		mΩ	0.12
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Power dissipation per pole (average value)			
	I _{th}	W	30
	AC-3	W	13
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Tightening torque for terminals			
	min	Nm	35
	max	Nm	35
	min	lbin	310
	max	lbin	310
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Tightening torque for coil terminal			
	min	Nm	0.8
	max	Nm	1
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Power terminal protection according to IEC/EN 60529			IP00
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Mechanical features			
Operating position			
	normal allowable		Vertical plan ±30°
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Fixing			Screw

Operations

Mechanical life	cycles	5000000
Electrical life	cycles	700000

Safety related data

Performance level B10d according to EN/ISO 13489-1

	rated load	cycles	700000
	mechanical load	cycles	5000000
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...320
holding	VA	3.5...8.0

of 50/60Hz coil powered at 60Hz

in-rush	VA	160...320
holding	VA	3.5...8.0

of 60Hz coil powered at 60Hz

in-rush	VA	160...320
holding	VA	3.5...8.0

Dissipation at holding ≤20°C 50Hz

W	3.5...8.0
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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
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Average coil consumption ≤20°C

in-rush	W	160...230
holding	W	3.5...8.0

Max cycles frequency

Mechanical operation cycles/h 1000

Operating times

Average time for Us control

in AC

Closing NO

min	ms	80
max	ms	120

Opening NO

min	ms	30
max	ms	75

UL technical data

Rated operational voltage AC (UL)	V	600
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Yielded mechanical performance

for three-phase AC motor

200/208V	HP	100
220/240V	HP	125
460/480V	HP	250
575/600V	HP	300

General USE

Contactor

AC current	A	500
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Short-circuit protection fuse, 600V

High fault

Short circuit current	kA	100
Fuse rating	A	600
Fuse class		J

Standard fault

Short circuit current	kA	18
Fuse rating	A	600
Fuse class		RK5

Ambient conditions

Temperature

Operating temperature

min	°C	-40
max	°C	70

Storage temperature

min	°C	-50
max	°C	80

Max altitude

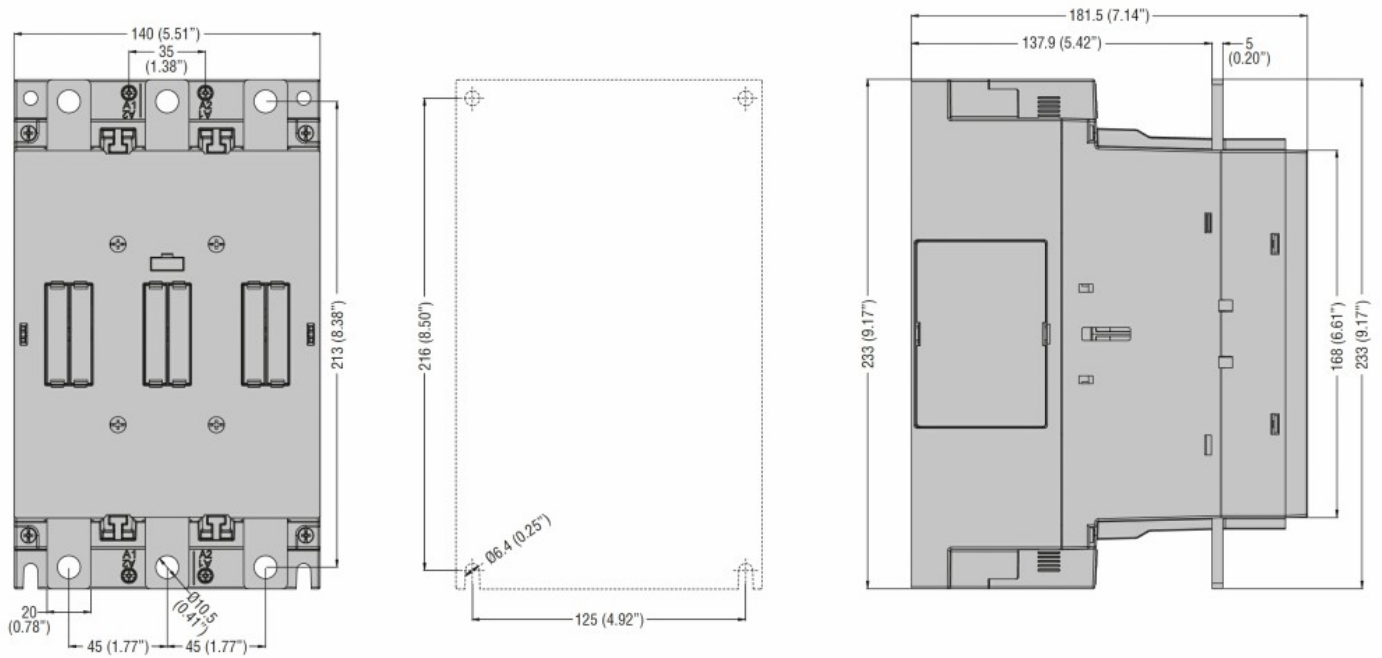
m	3000
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Resistance & Protection

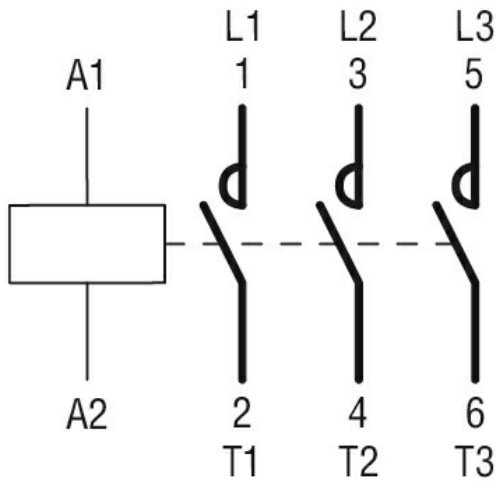
Pollution degree

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