



Product designation

Power contactor

Product type designation

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 $I_{th}$	A	500
Operational current $I_e$	AC-1 ( $\leq 40^\circ\text{C}$ )	A 500
	AC-1 ( $\leq 55^\circ\text{C}$ )	A 415
	AC-1 ( $\leq 70^\circ\text{C}$ )	A 360
	AC-3 ( $\leq 440\text{V } \leq 55^\circ\text{C}$ )	A 330
	AC-4 (400V)	A 160
Rated operational power AC-3 ( $T \leq 55^\circ\text{C}$ )	230V	kW 90
	400V	kW 160
	415V	kW 160
	440V	kW 160
	500V	kW 200
	690V	kW 250
	1000V	kW 185
Rated operational power AC-1 ( $T \leq 40^\circ\text{C}$ )	230V	kW 189
	400V	kW 329
	500V	kW 362
	690V	kW 568
IEC max current $I_e$ in DC1 with $L/R \leq 1\text{ms}$ with 1 poles in series	75V	A 375
	110V	A 195
IEC max current $I_e$ in DC1 with $L/R \leq 1\text{ms}$ with 2 poles in series	75V	A 375
	110V	A 350
	220V	A 300
IEC max current $I_e$ in DC1 with $L/R \leq 1\text{ms}$ with 3 poles in series	75V	A 375
	110V	A 350
	220V	A 350
	330V	A 300
IEC max current $I_e$ in DC1 with $L/R \leq 1\text{ms}$ with 4 poles in series	75V	A 375
	110V	A 350
	220V	A 350

IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 1 poles in series			
	75V	A	310
	110V	A	170
IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 2 poles in series			
	75V	A	310
	110V	A	290
	220V	A	230
IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 3 poles in series			
	75V	A	310
	110V	A	310
	220V	A	290
	330V	A	230
IEC max current Ie 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
Short-time allowable current for 10s (IEC/EN60947-1)		A	2640
Protection fuse			
	gG (IEC)	A	630
	aM (IEC)	A	500
Making capacity (RMS value)		A	3300
Breaking capacity at voltage			
	440V	A	2640
	500V	A	2240
	690V	A	2000
Resistance per pole (average value)		mΩ	0.12
Power dissipation per pole (average value)			
	Ith	W	30
	AC3	W	13
Tightening torque for terminals			
	min	Nm	35
	max	Nm	35
	min	Ibin	310
	max	Ibin	310
Tightening torque for coil terminal			
	min	Nm	0.8
	max	Nm	1
Power terminal protection according to IEC/EN 60529			IP00
<b>Mechanical features</b>			
Operating position			
	normal		Vertical plan
	allowable		±30°
Fixing			Screw
<b>Operations</b>			
Mechanical life		cycles	5000000
Electrical life		cycles	700000
<b>Safety related data</b>			
Performance level B10d according to EN/ISO 13489-1			
	rated load	cycles	1000000
EMC compatibility			yes
<b>AC coil operating</b>			

Rated AC voltage at 50/60Hz, 60Hz

min	V	100
max	V	250

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	100
max	V	250

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

Yielded mechanical performance

for three-phase AC motor

200/208V	HP	100
220/230V	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

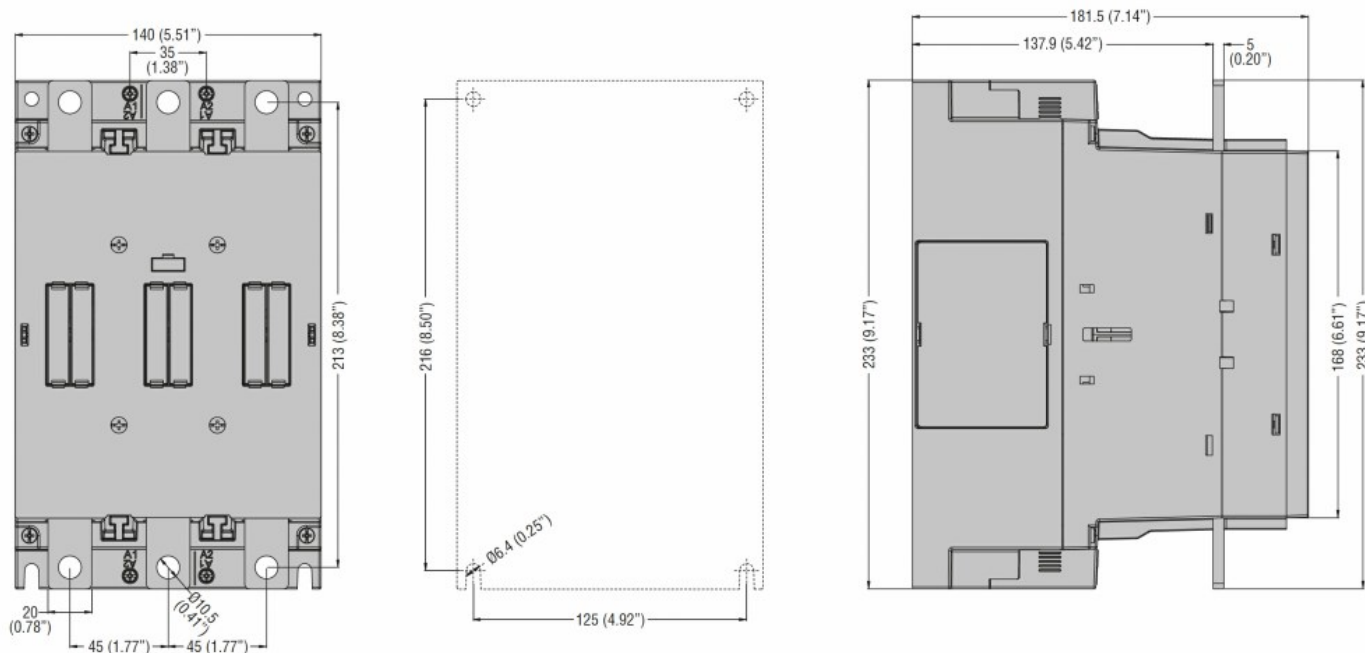
m	3000
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## Resistance & Protection

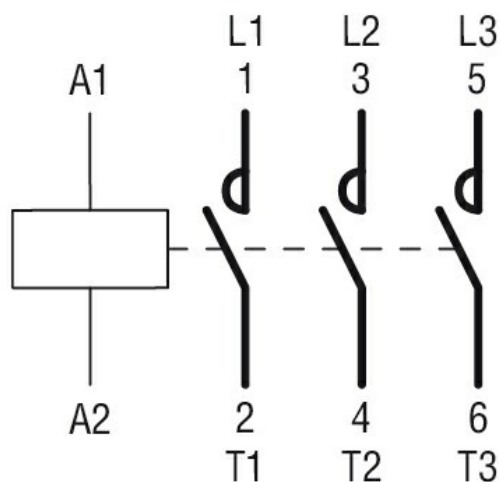
### Pollution degree

3

## Dimensions [mm (in)]



## 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