



Product designation	Power contactor		
Product type designation	BF330		
<b>Contact characteristics</b>			
Number of poles	Nr.	4	
Rated insulation voltage U <sub>i</sub> IEC/EN	V	1000	
Rated impulse withstand voltage U <sub>imp</sub>	kV	8	
Operational frequency	min	Hz	25
	max	Hz	400
IEC Conventional free air thermal current I <sub>th</sub> ≤ 40°C	A	500	
Operational current I <sub>e</sub>	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 <sub>e</sub> in DC1 with L/R ≤ 1ms with 1 poles in series	75V	A	375
	110V	A	195
IEC max current I <sub>e</sub> in DC1 with L/R ≤ 1ms with 2 poles in series	75V	A	375
	110V	A	350
	220V	A	300
IEC max current I <sub>e</sub> in DC1 with L/R ≤ 1ms with 3 poles in series			

	75V	A	375
	110V	A	350
	220V	A	350
	330V	A	300
IEC max current I <sub>e</sub> in DC1 with L/R ≤ 1ms with 4 poles in series			
	75V	A	375
	110V	A	350
	220V	A	350
IEC max current I <sub>e</sub> in DC3-DC5 with L/R ≤ 15ms with 1 poles in series			
	75V	A	310
	110V	A	170
IEC max current I <sub>e</sub> in DC3-DC5 with L/R ≤ 15ms with 2 poles in series			
	75V	A	310
	110V	A	290
	220V	A	230
IEC max current I <sub>e</sub> 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 I <sub>e</sub> 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)			
	I <sub>th</sub>	W	30
	AC-3	W	13
Tightening torque for terminals			
	min	Nm	35
	max	Nm	35
	min	lbin	310
	max	lbin	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 allowable	Vertical plan ±30°
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	24
	max	V	60

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	20
max	V	60

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

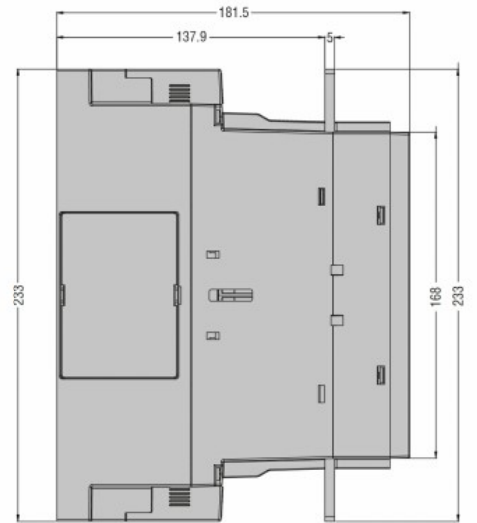
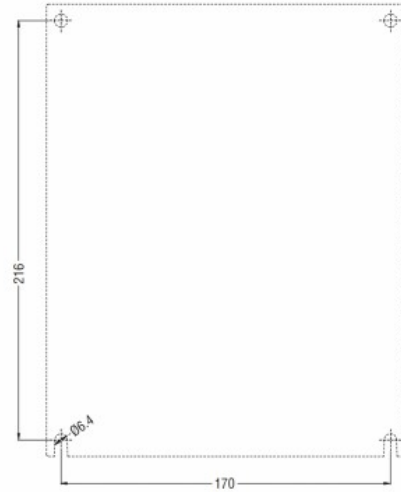
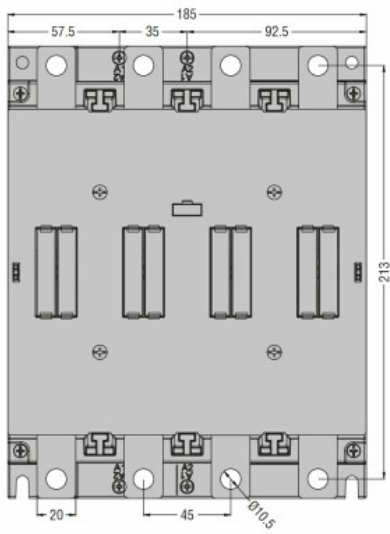
m	3000
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**Resistance & Protection**

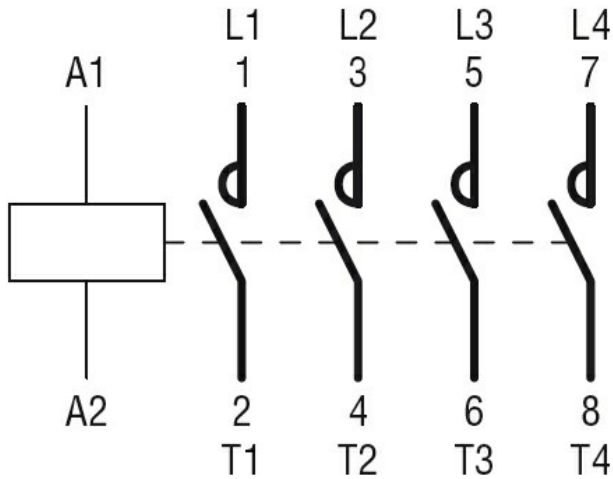
Pollution degree

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