



Product designation Power contactor  
Product type designation BF330

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

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...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
---	-----------

**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	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
-----------------------------------	---	-----

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
------------	---	-----

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

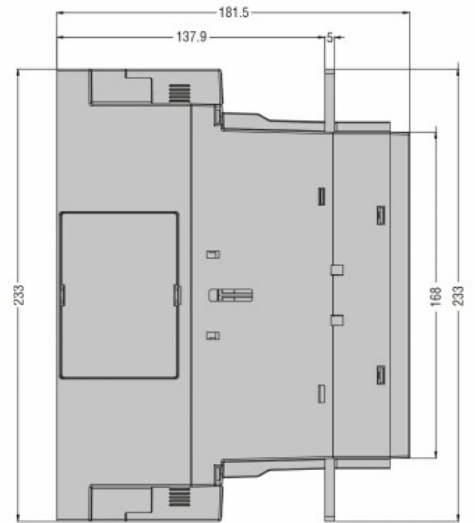
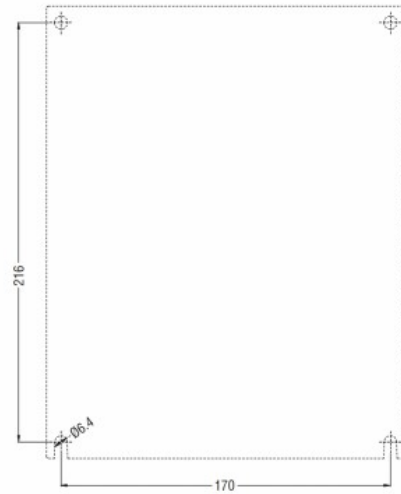
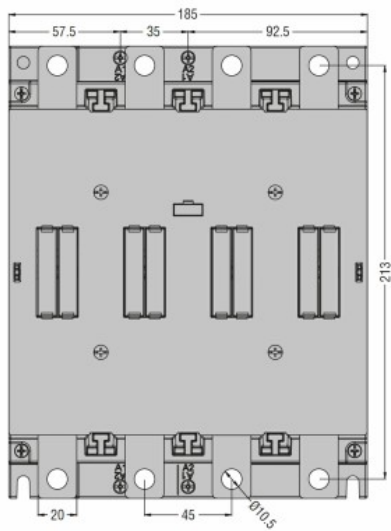
m	3000
---	------

**Resistance & Protection**

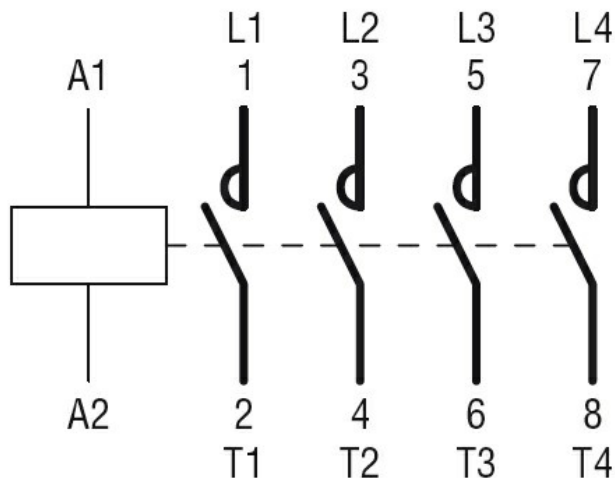
Pollution degree

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