



Product designation				Power contactor
Product type designation				BF330
<b>Contact characteristics</b>				
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			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 current AC-3 ( $T \leq 55^\circ\text{C}$ )	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 ( $T \leq 40^\circ\text{C}$ )	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 <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    1000000

EMC compatibility    yes

### AC coil operating

Rated AC voltage at 50/60Hz, 60Hz

min	V	60
max	V	130

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	60
max	V	130

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**

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

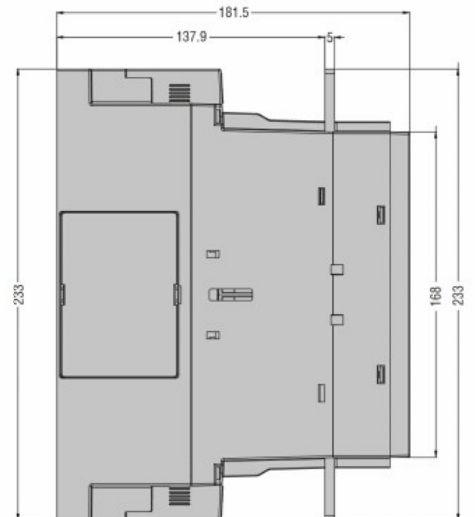
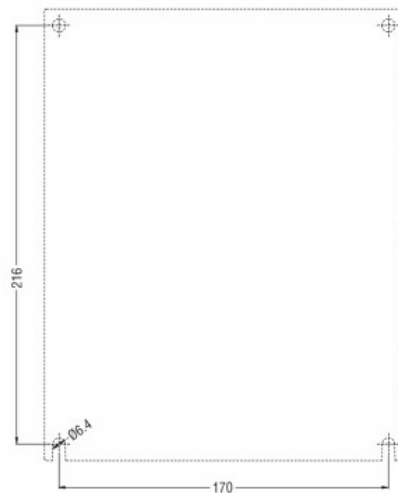
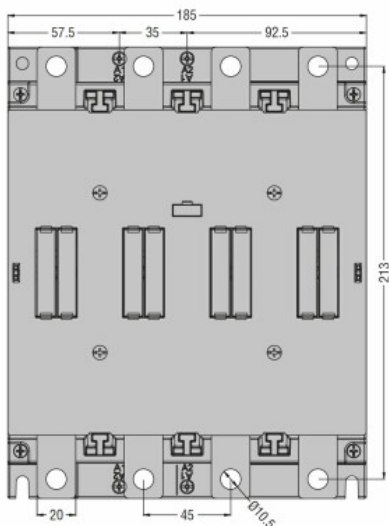
m	3000
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**Resistance & Protection**

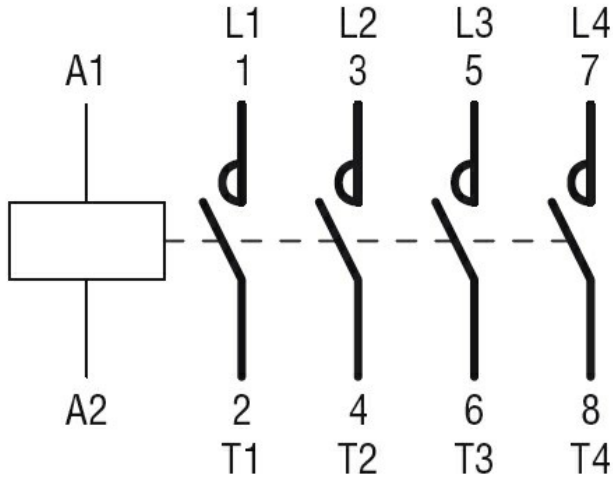
Pollution degree

3

**Dimensions**



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