



Product designation

Power contactor

Product type designation

BF400

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}	A	600
Operational current I_e	AC-1 ($\leq 40^\circ\text{C}$)	A 600
	AC-1 ($\leq 55^\circ\text{C}$)	A 500
	AC-1 ($\leq 70^\circ\text{C}$)	A 435
	AC-3 ($\leq 440\text{V } \leq 55^\circ\text{C}$)	A 400
	AC-4 (400V)	A 190
Rated operational power AC-3 ($T \leq 55^\circ\text{C}$)	230V	kW 110
	400V	kW 200
	415V	kW 200
	440V	kW 200
	500V	kW 250
	690V	kW 315
	1000V	kW 200
Rated operational current AC-3 ($T \leq 55^\circ\text{C}$)	230V	A 400
	400V	A 400
	415V	A 400
	440V	A 400
	500V	A 350
	690V	A 350
	1000V	A 155
Rated operational power AC-1 ($T \leq 40^\circ\text{C}$)	230V	kW 227
	400V	kW 395
	500V	kW 434
	690V	kW 681
IEC max current I_e in DC1 with $L/R \leq 1\text{ms}$ with 1 poles in series	75V	A 400
	110V	A 250
IEC max current I_e in DC1 with $L/R \leq 1\text{ms}$ with 2 poles in series	75V	A 400
	110V	A 400
	220V	A 350
IEC max current I_e in DC1 with $L/R \leq 1\text{ms}$ with 3 poles in series		

	75V	A	400
	110V	A	400
	220V	A	400
	330V	A	350
IEC max current Ie in DC1 with L/R ≤ 1ms with 4 poles in series			
	75V	A	400
	110V	A	400
	220V	A	400
IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 1 poles in series			
	75V	A	350
	110V	A	200
IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 2 poles in series			
	75V	A	350
	110V	A	350
	220V	A	280
IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 3 poles in series			
	75V	A	350
	110V	A	350
	220V	A	350
	330V	A	280
IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 4 poles in series			
	75V	A	350
	110V	A	350
	220V	A	350
	330V	A	350
	460V	A	280
Short-time allowable current for 10s (IEC/EN60947-1)		A	3200
Protection fuse			
	gG (IEC)	A	800
	aM (IEC)	A	500
Making capacity (RMS value)		A	4000
Breaking capacity at voltage			
	440V	A	3200
	500V	A	2752
	690V	A	2504
Resistance per pole (average value)		mΩ	0.12
Power dissipation per pole (average value)			
	Ith	W	43.2
	AC-3	W	19
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
Mechanical features			
Operating position			
	normal allowable		Vertical plan ±30°
Fixing			Screw

Operations

Mechanical life	cycles	5000000
Electrical life	cycles	600000

Safety related data

Performance level B10d according to EN/ISO 13489-1

	rated load	cycles	600000
	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
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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	125
220/230V	HP	150
460/480V	HP	350
575/600V	HP	400

General USE

Contactor

AC current	A	600
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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

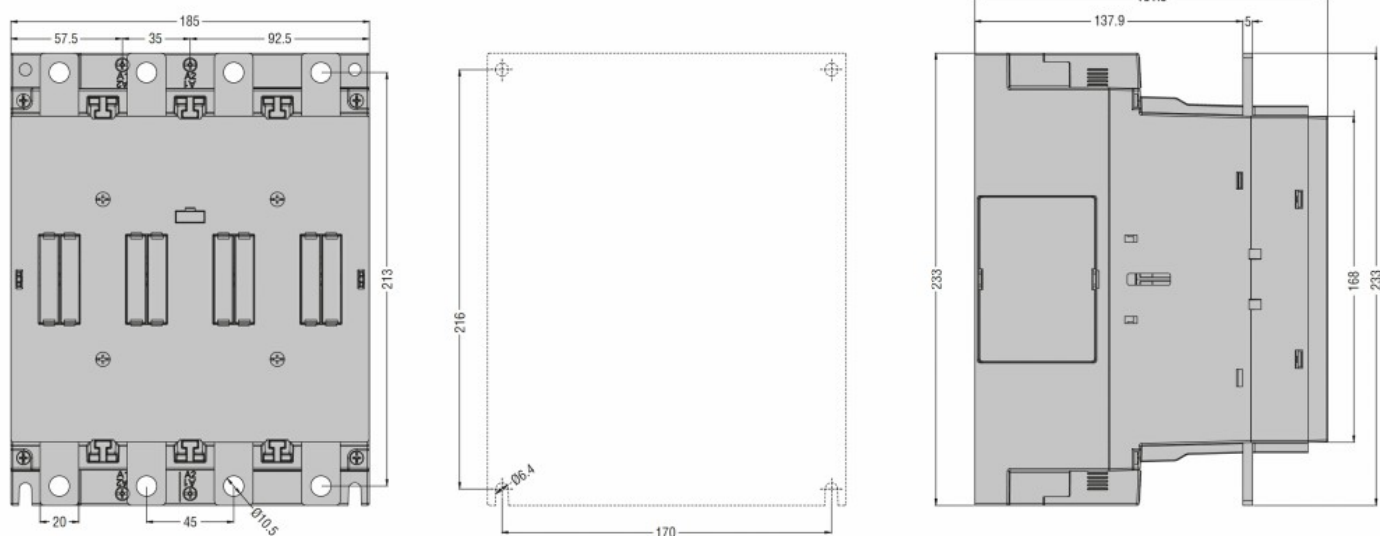
m	3000
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Resistance & Protection

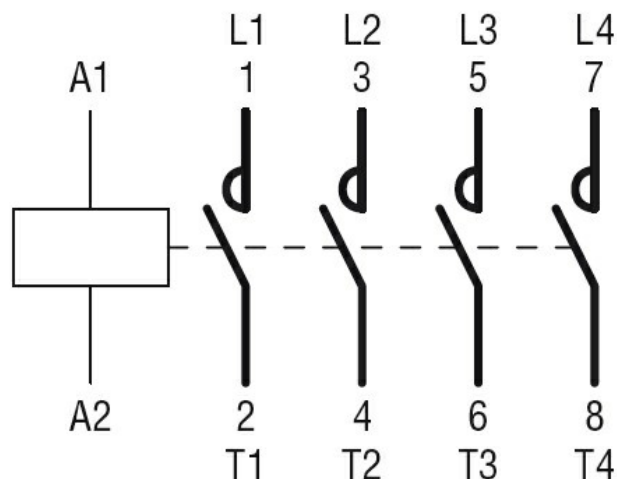
Pollution degree

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