



Product designation

Power contactor

Product type designation

BF420

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	630
Operational current I_e		
	AC-1 ($\leq 40^\circ\text{C}$)	A 600
	AC-1 ($\leq 55^\circ\text{C}$)	A 530
	AC-1 ($\leq 70^\circ\text{C}$)	A 460
	AC-3 ($\leq 440\text{V } \leq 55^\circ\text{C}$)	A 420
	AC-4 (400V)	A 200
Rated operational power AC-3 ($T \leq 55^\circ\text{C}$)		
	230V	kW 132
	400V	kW 200
	415V	kW 250
	440V	kW 250
	500V	kW 250
	690V	kW 355
	1000V	kW 170
Rated operational current AC-3 ($T \leq 55^\circ\text{C}$)		
	230V	A 420
	400V	A 420
	415V	A 420
	440V	A 420
	500V	A 344
	690V	A 354
	1000V	A 170
Rated operational power AC-1 ($T \leq 40^\circ\text{C}$)		
	230V	kW 238
	400V	kW 436
	500V	kW 480
	690V	kW 753
IEC max current I_e in DC1 with $L/R \leq 1\text{ms}$ with 3 poles in series		
	330V	A 350
IEC max current I_e in DC3-DC5 with $L/R \leq 15\text{ms}$ with 3 poles in series		
	330V	A 280
IEC max current I_e in DC3-DC5 with $L/R \leq 15\text{ms}$ with 4 poles in series		
	330V	A 350
	460V	A 280
Short-time allowable current for 10s (IEC/EN60947-1)	A	3360

Protection fuse			
	gG (IEC)	A	800
	aM (IEC)	A	500
Making capacity (RMS value)		A	4200
Breaking capacity at voltage			
	440V	A	4200
	500V	A	2752
	690V	A	2832
Resistance per pole (average value)		mΩ	0.09
Power dissipation per pole (average value)			
	Ith	W	37
	AC-3	W	18
Tightening torque for terminals			
	min	Nm	55
	max	Nm	55
	min	Ibin	486
	max	Ibin	486
Tightening torque for coil terminal			
	min	Nm	0.8
	max	Nm	1
	min	Ibin	7.1
	max	Ibin	8.8
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	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	390
holding	VA	12

of 50/60Hz coil powered at 60Hz

in-rush	VA	390
holding	VA	12

Dissipation at holding ≤20°C 50Hz

W	4
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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	390
holding	W	4

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	95
max	ms	135

Opening NO

min	ms	40
max	ms	53

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	150
220/240V	HP	150
460/480V	HP	350
575/600V	HP	450

General USE

Contactor

AC current	A	630
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Short-circuit protection fuse, 600V

High fault

Short circuit current	kA	100
Fuse rating	A	800
Fuse class		L

Standard fault

Short circuit current	kA	30
Fuse rating	A	1000
Fuse class		L

Ambient conditions

Temperature

Operating temperature

min	°C	-40
max	°C	70

Storage temperature

min	°C	-50
max	°C	80

Max altitude

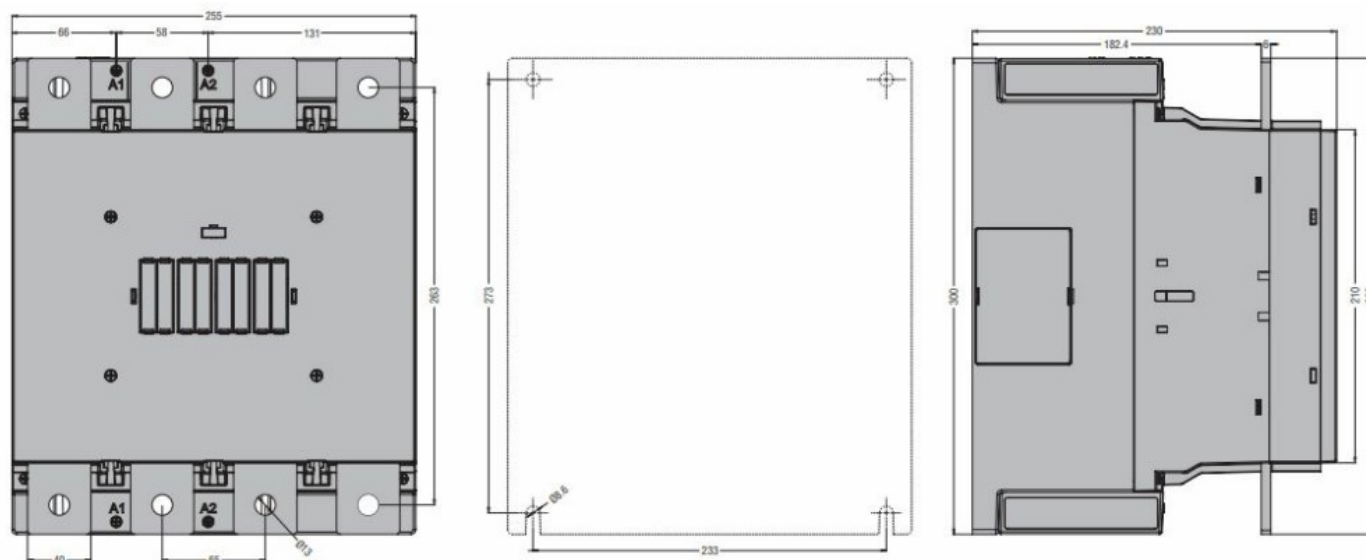
m 3000

Resistance & Protection

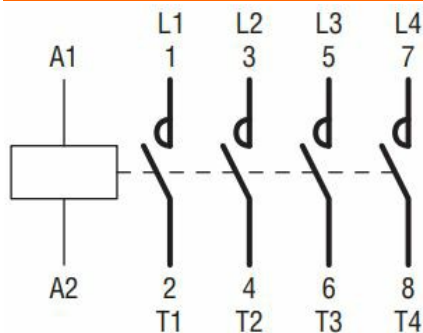
Pollution degree

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