



Product designation

Power contactor

Product type designation

BF500

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	700
Operational current I_e	AC-1 ($\leq 40^\circ\text{C}$)	A 600
	AC-1 ($\leq 55^\circ\text{C}$)	A 590
	AC-1 ($\leq 70^\circ\text{C}$)	A 510
	AC-3 ($\leq 440\text{V } \leq 55^\circ\text{C}$)	A 500
	AC-4 (400V)	A 230
Rated operational power AC-3 ($T \leq 55^\circ\text{C}$)	230V	kW 160
	400V	kW 250
	415V	kW 250
	440V	kW 250
	500V	kW 355
	690V	kW 400
	1000V	kW 200
Rated operational current AC-3 ($T \leq 55^\circ\text{C}$)	230V	A 500
	400V	A 500
	415V	A 500
	440V	A 500
	500V	A 488
	690V	A 400
	1000V	A 200
Rated operational power AC-1 ($T \leq 40^\circ\text{C}$)	230V	kW 265
	400V	kW 461
	500V	kW 507
	690V	kW 795
IEC max current I_e in DC1 with $L/R \leq 1\text{ms}$ with 1 poles in series	75V	A 650
	110V	A 320
IEC max current I_e in DC1 with $L/R \leq 1\text{ms}$ with 2 poles in series	75V	A 650
	110V	A 550
	220V	A 450
IEC max current I_e in DC1 with $L/R \leq 1\text{ms}$ with 3 poles in series		

	75V	A	650
	110V	A	600
	220V	A	600
	330V	A	450
IEC max current Ie in DC1 with L/R ≤ 1ms with 4 poles in series			
	75V	A	650
	110V	A	600
	220V	A	600
IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 1 poles in series			
	75V	A	550
	110V	A	320
IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 2 poles in series			
	75V	A	550
	110V	A	550
	220V	A	450
IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 3 poles in series			
	75V	A	550
	110V	A	550
	220V	A	550
	330V	A	450
IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 4 poles in series			
	75V	A	550
	110V	A	550
	220V	A	550
	330V	A	450
	460V	A	450
Short-time allowable current for 10s (IEC/EN60947-1)		A	4050
Protection fuse			
	gG (IEC)	A	800
	aM (IEC)	A	500
Making capacity (RMS value)		A	5000
Breaking capacity at voltage			
	440V	A	5000
	500V	A	3904
	690V	A	3200
Resistance per pole (average value)		mΩ	0.09
Power dissipation per pole (average value)			
	Ith	W	49
	AC-3	W	25
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

Vertical plan

	allowable	±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
	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
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	390
	holding	W	4
Max cycles frequency			
Mechanical operation			
		cycles/h	1000
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
-----------------------------------	---	-----

Yielded mechanical performance

for three-phase AC motor

200/208V	HP	150
220/240V	HP	200
460/480V	HP	400
575/600V	HP	500

General USE

Contactor

AC current	A	700
------------	---	-----

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

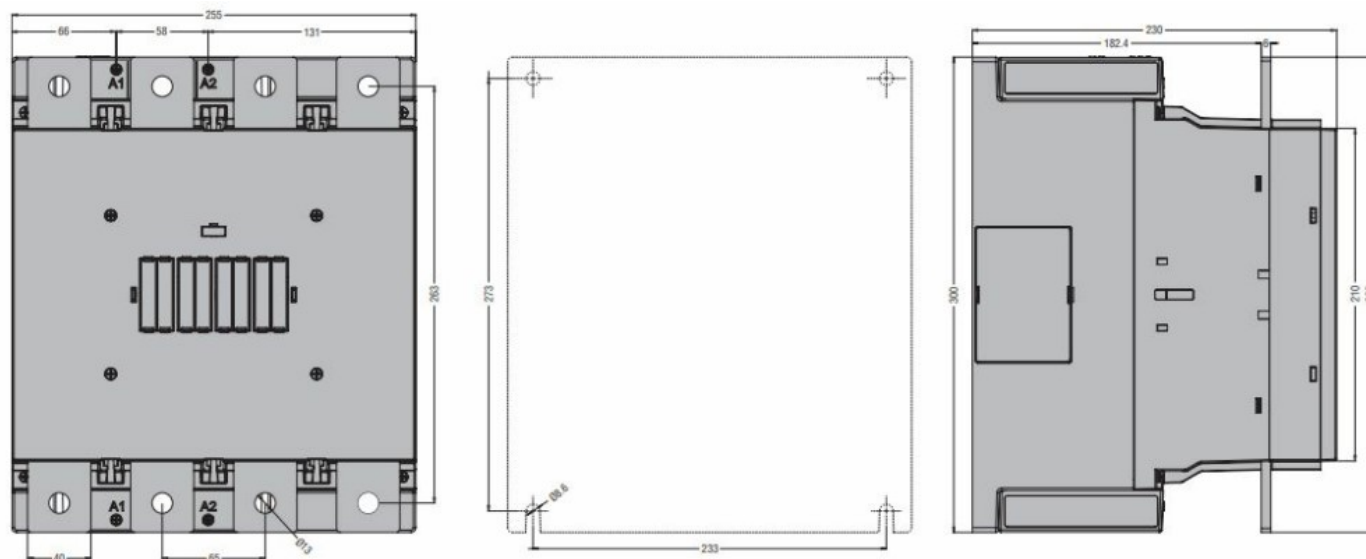
m	3000
---	------

Resistance & Protection

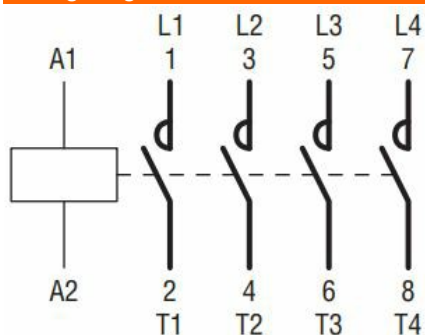
Pollution degree

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