



Product designation

Power contactor

Product type designation

BF18

Contact characteristics

Number of poles	Nr.	4
Rated insulation voltage U_i IEC/EN	V	690
Rated impulse withstand voltage U_{imp}	kV	6
Operational frequency	min	Hz 25
	max	Hz 400
IEC Conventional free air thermal current I_{th}	A	32
Operational current I_e	AC-1 (=40°C)	A 32
	AC-1 (=55°C)	A 26
	AC-1 (=70°C)	A 23
	AC-3 (=440V =55°C)	A 18
	AC-4 (400V)	A 8.5
Rated operational power AC-1 (T=40°C)	230V	kW 12
	400V	kW 21
	500V	kW 26
	690V	kW 36
IEC max current I_e in DC1 with L/R = 1ms with 1 poles in series	=24V	A 17
	48V	A 15
	75V	A 15
	110V	A 6
	220V	A –
IEC max current I_e in DC1 with L/R = 1ms with 2 poles in series	=24V	A 20
	48V	A 20
	75V	A 20
	110V	A 13
	220V	A 1
IEC max current I_e in DC1 with L/R = 1ms with 3 poles in series	=24V	A 22
	48V	A 22
	75V	A 20
	110V	A 16
	220V	A 11
IEC max current I_e in DC1 with L/R = 1ms with 4 poles in series	=24V	A 22
	48V	A 22
	75V	A 20
	110V	A 18
	220V	A 13

IEC max current Ie in DC3-DC5 with L/R = 15ms with 1 poles in series

=24V	A	12
48V	A	11
75V	A	11
110V	A	2
220V	A	–

IEC max current Ie in DC3-DC5 with L/R = 15ms with 2 poles in series

=24V	A	15
48V	A	13
75V	A	13
110V	A	8
220V	A	2

IEC max current Ie in DC3-DC5 with L/R = 15ms with 3 poles in series

=24V	A	18
48V	A	18
75V	A	16
110V	A	12
220V	A	6

IEC max current Ie in DC3-DC5 with L/R = 15ms with 4 poles in series

=24V	A	18
48V	A	18
75V	A	16
110V	A	13
220V	A	8

Short-time allowable current for 10s (IEC/EN60947-1)

A	200
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Protection fuse

gG (IEC)	A	32
aM (IEC)	A	20

Making capacity (RMS value)

A	180
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Breaking capacity at voltage

440V	A	144
500V	A	120
690V	A	94

Resistance per pole (average value)

m?	2.5
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Power dissipation per pole (average value)

Ith	W	2.6
AC3	W	0.8

Tightening torque for terminals

min	Nm	1.5
max	Nm	1.8
min	lbin	1.1
max	lbin	1.5

Tightening torque for coil terminal

min	Nm	0.8
max	Nm	1
min	lbin	0.8
max	lbin	0.74

Max number of wires simultaneously connectable

Nr.	2
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Conductor section

AWG/Kcmil

max	10
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Flexible w/o lug conductor section

min	mm ²	1
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		max	mm ²	6
Flexible c/w lug conductor section				
		min	mm ²	1
		max	mm ²	4
Flexible with insulated spade lug conductor section				
		min	mm ²	1
		max	mm ²	4
Power terminal protection according to IEC/EN 60529				IP20 when wired
Mechanical features				
Operating position				
		normal allowable		Vertical plan ±30°
Fixing				Screw / DIN rail 35mm
Weight			g	495
Conductor section				
AWG/kcmil conductor section				
		max		10
Operations				
Mechanical life			cycles	20000000
Electrical life			cycles	1600000
Safety related data				
Performance level B10d according to EN/ISO 13489-1				
		rated load mechanical load	cycles cycles	1600000 20000000
Mirror contats according to IEC/EN 609474-4-1				yes
EMC compatibility				yes
DC coil operating				
DC rated control voltage			V	24
DC operating voltage				
	pick-up	min	%Us	70
		max	%Us	125
	drop-out	min	%Us	10
		max	%Us	40
Average coil consumption =20°C				
		in-rush holding	W W	5.4 5.4
Max cycles frequency				
Mechanical operation			cycles/h	3600
Operating times				
Average time for Us control				
	in AC			
	Closing NO			
		min	ms	8
		max	ms	24
	Opening NO			
		min	ms	10
		max	ms	20
	Closing NC			
		min	ms	14
		max	ms	28
	Opening NC			

in DC		min	ms	7
		max	ms	18
	Closing NO	min	ms	54
		max	ms	66
	Opening NO	min	ms	14
		max	ms	17

UL technical data

Full-load current (FLA) for three-phase AC motor

at 480V	A	14
at 600V	A	17

Yielded mechanical performance

for single-phase AC motor

110/120V	HP	1
230V	HP	3

for three-phase AC motor

200/208V	HP	5
220/230V	HP	5
460/480V	HP	10
575/600V	HP	15

General USE

Contactor

AC current	A	32
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Short-circuit protection fuse, 600V

High fault

Short circuit current	kA	100
Fuse rating	A	60
Fuse class		J

Standard fault

Short circuit current	kA	5
Fuse rating	A	80

Ambient conditions

Temperature

Operating temperature

min	°C	-50
max	°C	70

Storage temperature

min	°C	-60
max	°C	80

Max altitude

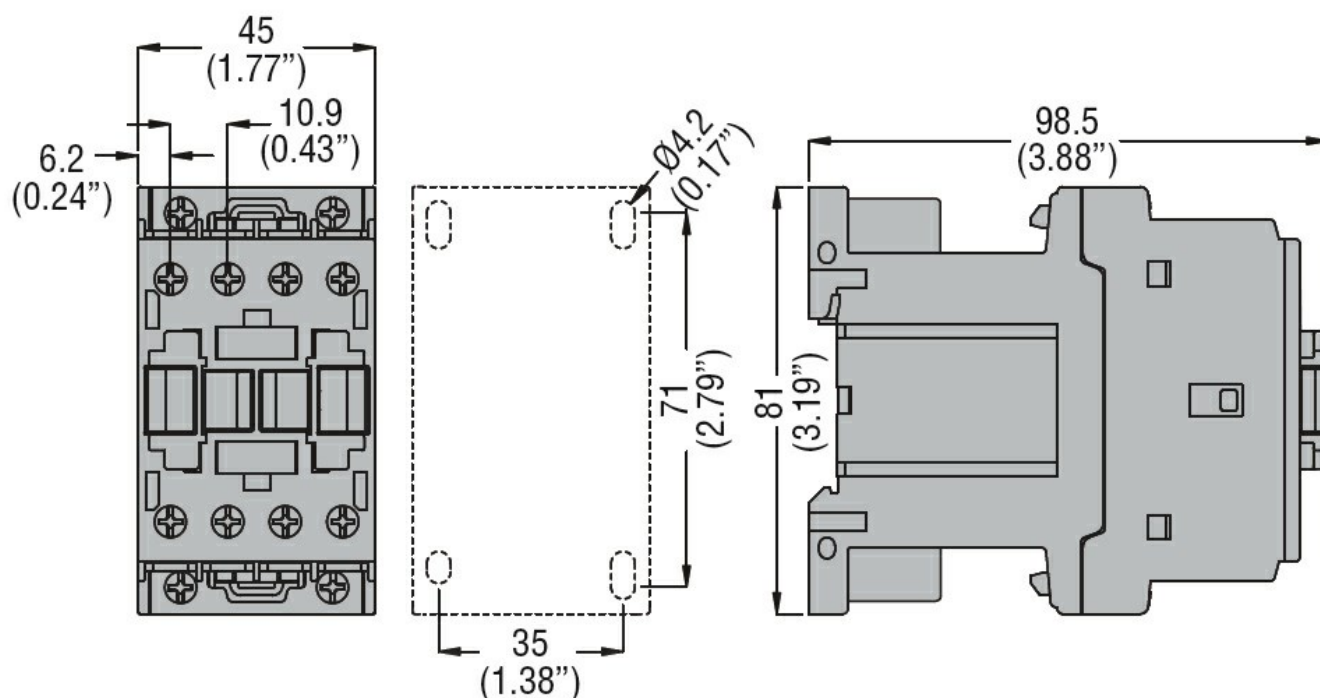
m	3000
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Resistance & Protection

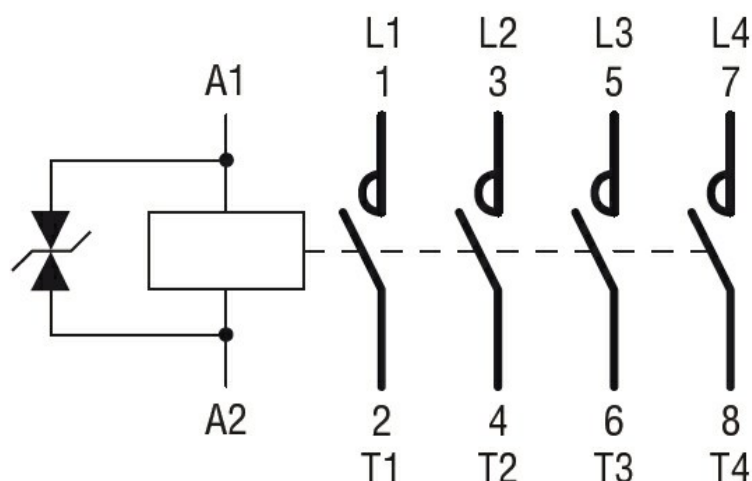
Pollution degree

3

Dimensions



Wiring diagrams



Certifications and compliance

Compliance

CSA C22.2 n° 60947-1
CSA C22.2 n° 60947-4-1
IEC/EN 60947-1
IEC/EN 60947-4-1
UL 60947-1
UL 60947-4-1

Certificates

CCC
cULus
EAC

ETIM classification

ETIM 8.0

EC000066 -
Power contactor,
AC switching