



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 I _e 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 I _e 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 I _e 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 I _e 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
Protection fuse			
	gG (IEC)	A	32
	aM (IEC)	A	20
Making capacity (RMS value)		A	180
Breaking capacity at voltage			
	440V	A	144
	500V	A	120
	690V	A	94
Resistance per pole (average value)		mΩ	2.5
Power dissipation per pole (average value)			
	I _{th}	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
Conductor section			
AWG/Kcmil			
	max		10
Flexible w/o lug conductor section			
	min	mm ²	1

		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	502
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	1600000
			cycles	20000000
Mirror contacts according to IEC/EN 60947-4-1				yes
EMC compatibility				yes
DC coil operating				
DC rated control voltage			V	24
DC operating voltage				
pick-up		min	%Us	80
		max	%Us	110
drop-out		min	%Us	10
		max	%Us	40
Average coil consumption =20°C		in-rush holding	W	2.4
			W	2.4
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	75
		max	ms	91
	Opening NO	min	ms	15
		max	ms	19

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

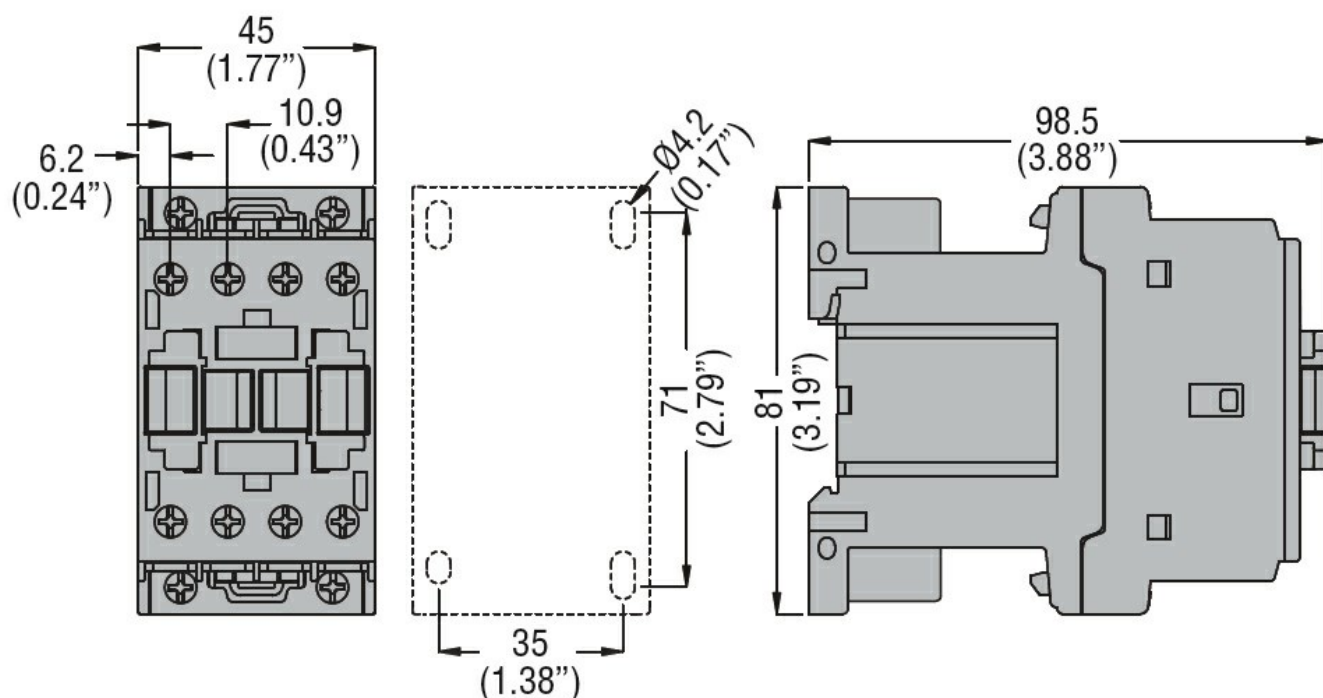
m	3000
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Resistance & Protection

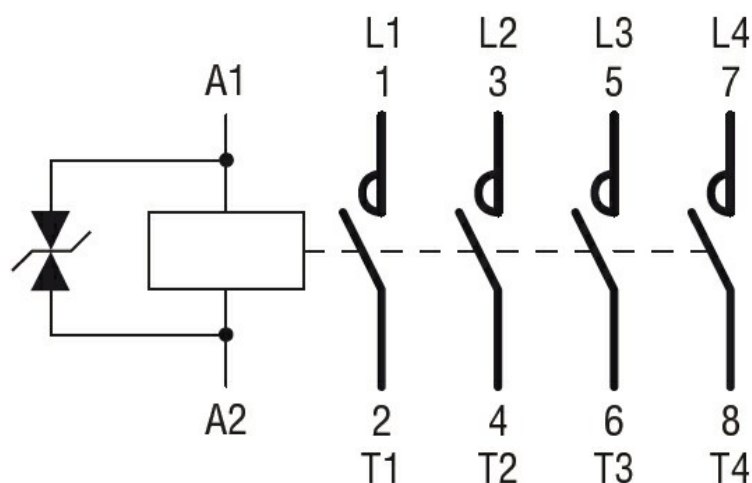
Pollution degree

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