



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 <sup>2</sup>	1
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		max	mm <sup>2</sup>	6
Flexible c/w lug conductor section		min	mm <sup>2</sup>	1
		max	mm <sup>2</sup>	4
Flexible with insulated spade lug conductor section		min	mm <sup>2</sup>	1
		max	mm <sup>2</sup>	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	354
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 contats according to IEC/EN 609474-4-1		yes		
EMC compatibility		yes		
AC coil operating				
Rated AC voltage at 60Hz			V	120
AC operating voltage		of 60Hz coil powered at 60Hz		
		pick-up		
		min	%Us	80
		max	%Us	110
		drop-out		
		min	%Us	20
		max	%Us	55
AC average coil consumption at 20°C		of 60Hz coil powered at 60Hz		
		in-rush holding	VA	75
			VA	9
Dissipation at holding =20°C 50Hz			W	2.5
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		

Opening NC	min	ms	14
	max	ms	28
	min	ms	7
	max	ms	18

#### 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

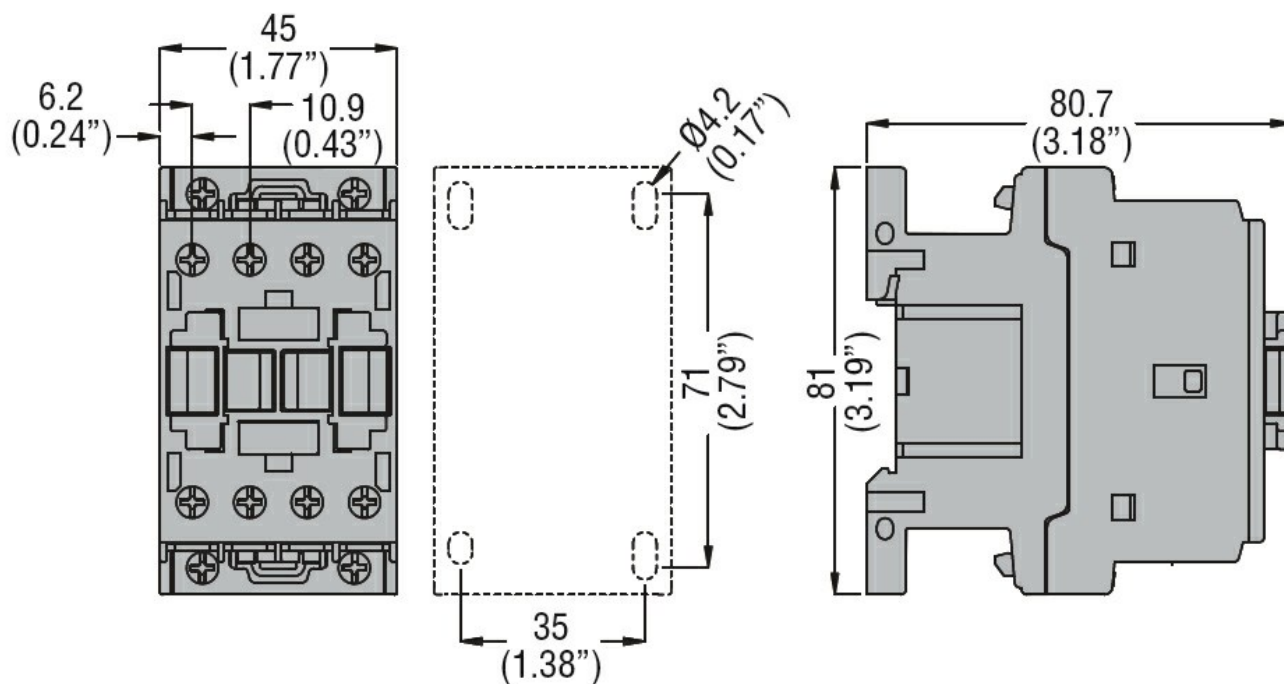
m	3000
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#### Resistance & Protection

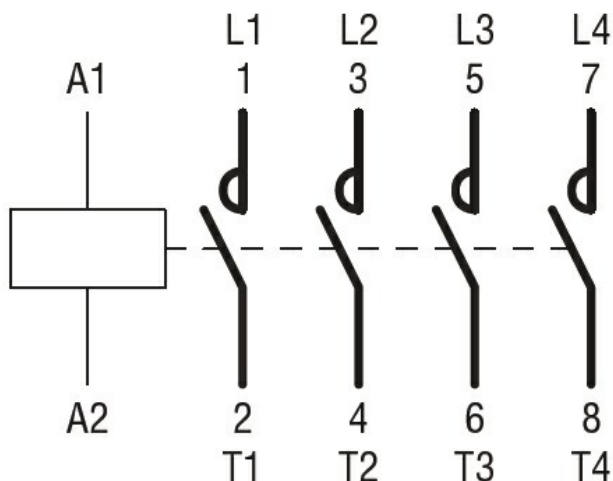
Pollution degree

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