



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
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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)

mΩ	2.5
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Power dissipation per pole (average value)

I _{th}	W	2.6
AC-3	W	0.8

Tightening torque for terminals

min	Nm	1.5
max	Nm	1.8
min	I _{bin}	1.1
max	I _{bin}	1.5

Tightening torque for coil terminal

min	Nm	0.8
max	Nm	1
min	I _{bin}	0.8
max	I _{bin}	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 properly wired
Mechanical features			
Operating position	normal allowable		Vertical plan ±30°
Fixing			Screw / DIN rail 35mm
Weight		g	500
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 609474-4-1			yes
EMC compatibility			yes
AC coil operating			
AC operating voltage			of 50/60Hz coil powered at 50Hz drop-out
	max	%Us	≤70 Us min
DC coil operating			
DC rated control voltage		V	48
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 U _s 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			
		min	ms	7
		max	ms	18
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	in DC			
	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/BS 60947-1
IEC/EN/BS 60947-4-1
UL 60947-1
UL 60947-4-1

Certificates

CCC
cULus
EAC

ETIM classification

ETIM 8.0

EC000066 -
Power contactor,
AC switching