

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 ($\leq 40^\circ\text{C}$)	A	32	
	AC-1 ($\leq 55^\circ\text{C}$)	A	26	
	AC-1 ($\leq 70^\circ\text{C}$)	A	23	
	AC-3 ($\leq 440\text{V} \leq 55^\circ\text{C}$)	A	18	
	AC-4 (400V)	A	8.5	
Rated operational power AC-1 ($T \leq 40^\circ\text{C}$)	230V	kW	12	
	400V	kW	21	
	500V	kW	26	
	690V	kW	36	
IEC max current I_e in DC1 with $L/R \leq 1\text{ms}$ with 1 poles in series	$\leq 24\text{V}$	A	17	
	48V	A	15	
	75V	A	15	
	110V	A	6	
	220V	A	–	
IEC max current I_e in DC1 with $L/R \leq 1\text{ms}$ with 2 poles in series	$\leq 24\text{V}$	A	20	
	48V	A	20	
	75V	A	20	
	110V	A	13	
	220V	A	1	
IEC max current I_e in DC1 with $L/R \leq 1\text{ms}$ with 3 poles in series	$\leq 24\text{V}$	A	22	
	48V	A	22	
	75V	A	20	
	110V	A	16	
	220V	A	11	
IEC max current I_e in DC1 with $L/R \leq 1\text{ms}$ with 4 poles in series	$\leq 24\text{V}$	A	22	
	48V	A	22	
	75V	A	20	
	110V	A	18	
	220V	A	13	
IEC max current I_e in DC3-DC5 with $L/R \leq 15\text{ms}$ with 1 poles in series	$\leq 24\text{V}$	A	12	
	48V	A	11	
	75V	A	11	
	110V	A	2	
	220V	A	–	
IEC max current I_e in DC3-DC5 with $L/R \leq 15\text{ms}$ with 2 poles in series	$\leq 24\text{V}$	A	15	

	48V	A	13
	75V	A	13
	110V	A	8
	220V	A	2
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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
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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
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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
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Making capacity (RMS value)		A	180
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Breaking capacity at voltage	440V	A	144
	500V	A	120
	690V	A	94
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Resistance per pole (average value)		mΩ	2.5
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Power dissipation per pole (average value)	I _{th}	W	2.6
	AC3	W	0.8
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Tightening torque for terminals	min	Nm	1.5
	max	Nm	1.8
	min	lbin	1.1
	max	lbin	1.5
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Tightening torque for coil terminal	min	Nm	0.8
	max	Nm	1
	min	lbin	Prodotti finiti
	max	lbin	Prodotti finiti
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Max number of wires simultaneously connectable		Nr.	2
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Conductor section	Flexible w/o lug conductor section		
	min	mm ²	1
	max	mm ²	6
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	Flexible c/w lug conductor section		
	min	mm ²	1
	max	mm ²	4
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	Flexible with insulated spade lug conductor section		
	min	mm ²	1
	max	mm ²	4
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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
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 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 W	2.4 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	min ms	7
		max ms	18
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 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