

Product designation				Power contactor
Product type designation				BF18
<b>Contact characteristics</b>				
Number of poles	Nr.			3
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-3 ( $T \leq 55^\circ\text{C}$ )	230V	kW	4	
	400V	kW	7.5	
	415V	kW	9	
	440V	kW	9	
	500V	kW	10	
	690V	kW	10	
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				

	≤24V	A	12
	48V	A	11
	75V	A	11
	110V	A	2
	220V	A	–
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IEC max current I <sub>e</sub> 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
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IEC max current I <sub>e</sub> 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 <sub>e</sub> 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 <sub>th</sub>	W	2.6
	AC3	W	0.8
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Tightening torque for terminals	min	Nm	1.5
	max	Nm	1.8
	min	I <sub>bin</sub>	1.1
	max	I <sub>bin</sub>	1.5
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Tightening torque for coil terminal	min	Nm	0.8
	max	Nm	1
	min	I <sub>bin</sub>	Prodotti finiti
	max	I <sub>bin</sub>	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 <sup>2</sup>	1
	max	mm <sup>2</sup>	6
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	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
<b>Mechanical features</b>			
Operating position	normal allowable		Vertical plan ±30°
Fixing			Screw / DIN rail 35mm
Weight		g	500
<b>Auxiliary contact characteristics</b>			
Type of contact			1 NO
Thermal current I <sub>th</sub>		A	10
IEC/EN 60947-5-1 designation			A600 - P600
Operating current AC15	230V	A	3
	400V	A	1.9
	500V	A	1.4
Operating current DC12	110V	A	5.7
Operating current DC13	24V	A	5.7
	48V	A	2.9
	60V	A	2.3
	110V	A	1.25
	125V	A	1.1
	220V	A	0.55
	600V	A	0.2
<b>Operations</b>			
Mechanical life		cycles	20000000
Electrical life		cycles	1600000
<b>Safety related data</b>			
Performance level B10d according to EN/ISO 13489-1	rated load	cycles	1600000
	mechanical load	cycles	20000000
Mirror contacts according to IEC/EN 60947-4-1			Yes
EMC compatibility			Yes
<b>DC coil operating</b>			
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	W	2.4
	holding	W	2.4
<b>Max cycles frequency</b>			
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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Auxiliary contacts

AC voltage	V	600
AC current	A	10
DC voltage	V	250
DC current	A	1

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

Contact rating of auxiliary contacts according to UL

A600 - P600

**Ambient conditions**

Temperature

Operating temperature

min	°C	-50
max	°C	70

Storage temperature

min	°C	-60
max	°C	80

Max altitude

m 3000

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