

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
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	I _{bin}	1.1
	max	I _{bin}	1.5
Tightening torque for coil terminal			
	min	Nm	0.8
	max	Nm	1
	min	I _{bin}	Prodotti finiti
	max	I _{bin}	Prodotti finiti
Max number of wires simultaneously connectable		Nr.	2
Conductor section			
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	495
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	70
		max %Us	125
drop-out		min %Us	10
		max %Us	40
Average coil consumption ≤20°C			
	in-rush holding	W W	5.4 5.4
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	54
		max ms	66
	Opening NO	min ms	14
		max ms	17
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