

Product designation				Power contactor
Product type designation				BF18
<b>Contact characteristics</b>				
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 <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
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
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 <sub>th</sub>	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	Prodotti finiti
	max	lbin	Prodotti finiti
Max number of wires simultaneously connectable		Nr.	2
Conductor section			
Flexible w/o lug conductor section			
	min	mm <sup>2</sup>	1
	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	355
<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 mechanical load	cycles cycles
		1600000 20000000
Mirror contacts according to IEC/EN 60947-4-1		Yes
EMC compatibility		Yes
Rated AC voltage at 60Hz	V	230
<b>AC coil operating</b>		
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 50/60Hz coil powered at 50Hz		
	in-rush	VA 75
	holding	VA 9
of 50/60Hz coil powered at 60Hz		
	in-rush	VA 70
	holding	VA 6.5
of 60Hz coil powered at 60Hz		
	in-rush	VA 75
	holding	VA 9
Dissipation at holding ≤20°C 50Hz	W	2.5
<b>Max cycles frequency</b>		
Mechanical operation	cycles/h	3600
<b>Operating times</b>		
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

**UL technical data**

Full-load current (FLA) for three-phase AC motor

		at 480V	A	14
		at 600V	A	17
<b>Yielded mechanical performance</b>				
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
<b>General USE</b>				
Contactor				
		AC current	A	32
<b>Short-circuit protection fuse, 600V</b>				
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
<b>Ambient conditions</b>				
<b>Temperature</b>				
Operating temperature				
		min	°C	-50
		max	°C	70
Storage temperature				
		min	°C	-60
		max	°C	80
Max altitude				
			m	3000
<b>Resistance &amp; Protection</b>				
Pollution degree				
				3
<b>Dimensions</b>				
<b>Wiring diagrams</b>				
<b>Certifications and compliance</b>				
<b>Compliance</b>				
		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		
<b>Certificates</b>				
		CCC		
		cULus		
		EAC		
<b>ETIM classification</b>				
ETIM 8.0				EC000066 - Power contactor, AC switching