



Product designation				Power contactor
Product type designation				BF18
<b>Contact characteristics</b>				
Number of poles	Nr.			3
Rated insulation voltage U <sub>i</sub> IEC/EN	V			690
Rated impulse withstand voltage U <sub>imp</sub>	kV			6
Operational frequency	min	Hz	25	
	max	Hz	400	
IEC Conventional free air thermal current I <sub>th</sub>	A			32
Operational current I <sub>e</sub>	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-3 (T≤55°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≤40°C)	230V	kW	12	
	400V	kW	21	
	500V	kW	26	
	690V	kW	36	
IEC max current I <sub>e</sub> 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 <sub>e</sub> 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 <sub>e</sub> 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 <sub>e</sub> 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 <sub>e</sub> 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 <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
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
	AC-3	W	0.8
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
Tightening torque for coil terminal	min	Nm	0.8
	max	Nm	1
	min	I <sub>bin</sub>	0.8

		max	I <sub>bin</sub>	0.74
Max number of wires simultaneously connectable			Nr.	2
Conductor section	AWG/Kcmil	max		10
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 properly wired

### Mechanical features

Operating position		normal allowable		Vertical plan ±30°
Fixing				Screw / DIN rail 35mm
Weight			g	365
Conductor section	AWG/kcmil conductor section	max		10

### Auxiliary contact characteristics

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

### Operations

Mechanical life		cycles		20000000
Electrical life		cycles		1600000

### Safety related data

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

### AC coil operating

Rated AC voltage at 50/60Hz	V	24
AC operating voltage		
of 50/60Hz coil powered at 50Hz		
pick-up	min %Us	80
	max %Us	110
drop-out	min %Us	20
	max %Us	55
of 50/60Hz coil powered at 60Hz		
pick-up	min %Us	85
	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
<b>UL technical data</b>		
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
<b>General USE</b>				
	Contactor	AC current	A	32
	Auxiliary contacts	AC voltage	V	600
		AC current	A	10
		DC voltage	V	250
		DC current	A	1
<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
Contact rating of auxiliary contacts according to UL				A600 - P600
<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>				



### 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