



Product designation	Power contactor		
Product type designation	BF18		
<b>Contact characteristics</b>			
Number of poles	Nr.	4	
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 ( $\leq 40^{\circ}\text{C}$ )	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 <sub>e</sub> 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 <sub>e</sub> 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 <sub>e</sub> 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 <sub>e</sub> 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  $L/R \leq 15\text{ms}$  with 3 poles in series

$\leq 24\text{V}$	A	18
48V	A	18
75V	A	16
110V	A	12
220V	A	6

IEC max current  $I_e$  in DC3-DC5 with  $L/R \leq 15\text{ms}$  with 4 poles in series

$\leq 24\text{V}$	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)  $\text{m}\Omega$  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

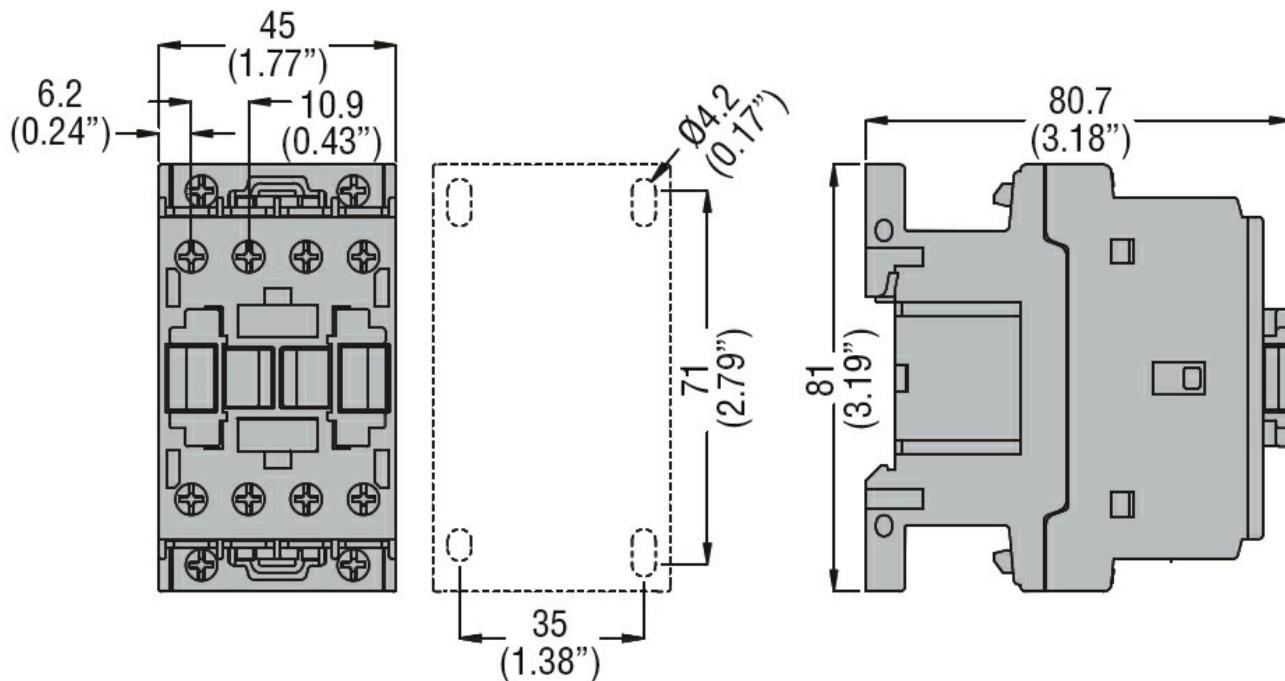
Conductor section

AWG/Kcmil	max	10
Flexible w/o lug conductor section	min	mm <sup>2</sup>

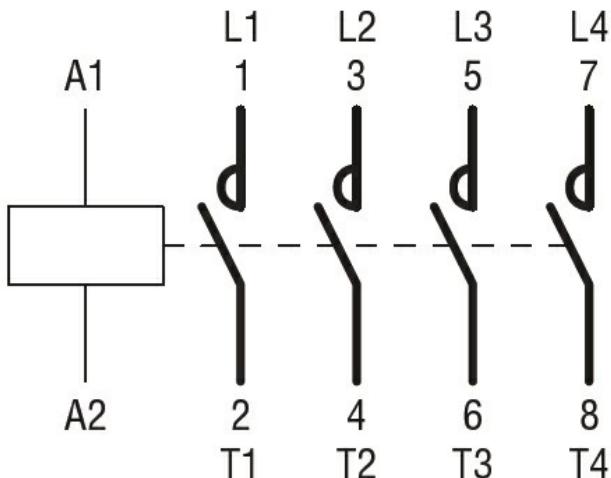
min	mm <sup>2</sup>	1
max	mm <sup>2</sup>	10

Flexible c/w lug conductor section	max	mm <sup>2</sup>	6
	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
<b>Mechanical features</b>			
Operating position	normal		Vertical plan ±30°
	allowable		
Fixing			Screw / DIN rail 35mm
Weight	g		366
<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
EMC compatibility			yes
<b>AC coil operating</b>			
Rated AC voltage at 60Hz	V		24
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 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>			
Rated operational voltage AC (UL)		V	600
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
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
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/BS 60335-1  
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