



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 $L/R \leq 15\text{ms}$ 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)

mΩ	2.5
----	-----

Power dissipation per pole (average value)

I_{th}	W	2.6
AC-3	W	0.8

Tightening torque for terminals

min	Nm	1.5
max	Nm	1.8
min	Ibin	1.1
max	Ibin	1.5

Tightening torque for coil terminal

min	Nm	0.8
max	Nm	1
min	Ibin	0.8
max	Ibin	0.74

Max number of wires simultaneously connectable

Nr.	2
-----	---

Conductor section

AWG/Kcmil

max	10
-----	----

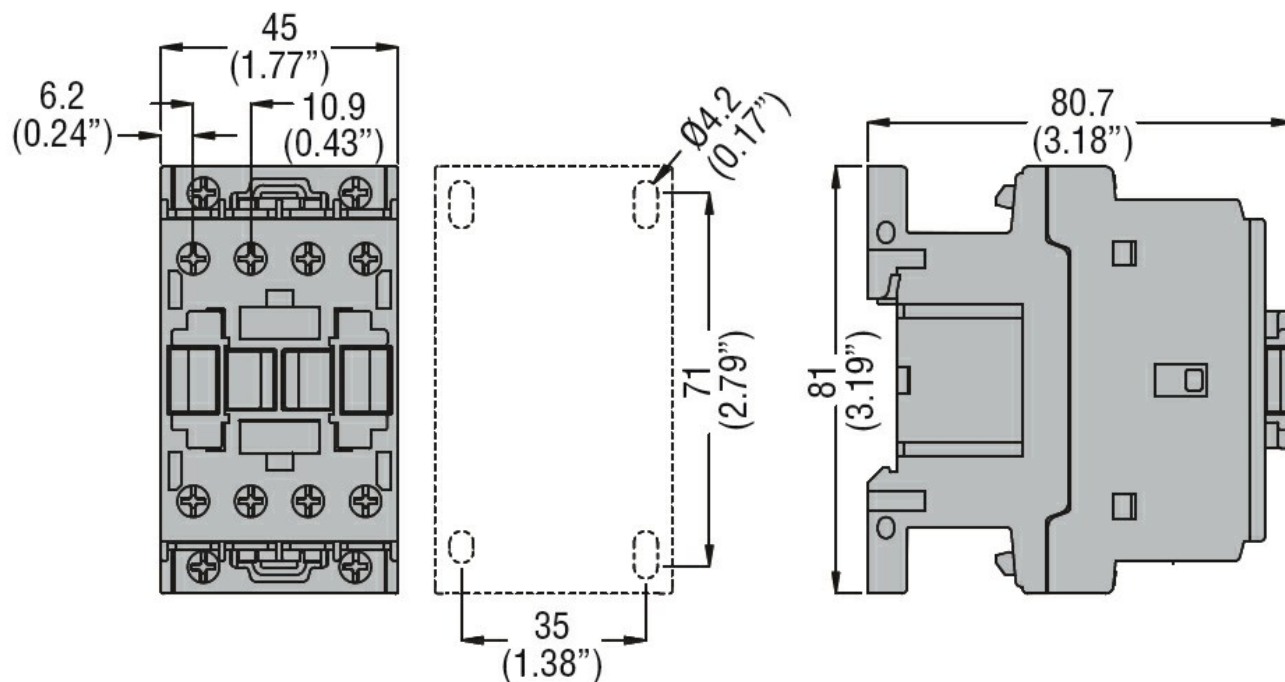
Flexible w/o lug conductor section

min	mm ²	1
-----	-----------------	---

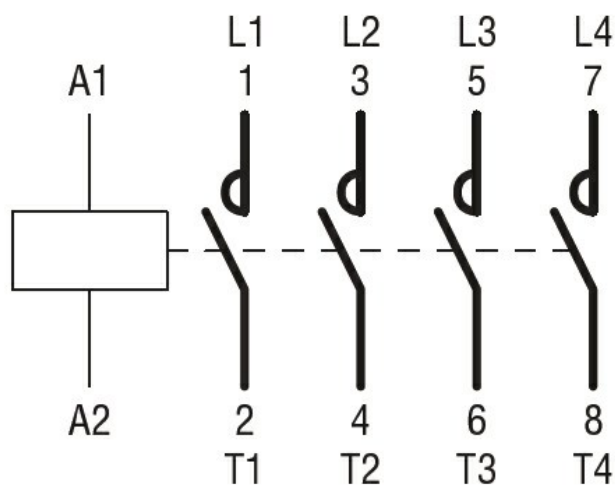
	max	mm ²	6
Flexible c/w lug conductor section	min	mm ²	1
	max	mm ²	4
Flexible with insulated spade lug conductor section	min	mm ²	1
	max	mm ²	4
Power terminal protection according to IEC/EN 60529			IP20 when properly wired
Mechanical features			
Operating position	normal allowable		Vertical plan ±30°
Fixing			Screw / DIN rail 35mm
Weight		g	360
Conductor section			
AWG/kcmil conductor section	max		10
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	1600000
		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	230
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 holding	VA	75
		VA	9
of 50/60Hz coil powered at 60Hz	in-rush holding	VA	70
		VA	6.5
of 60Hz coil powered at 60Hz	in-rush	VA	75

	holding	VA	9
Dissipation at holding $\leq 20^{\circ}\text{C}$ 50Hz		W	2.5
Max cycles frequency			
Mechanical operation		cycles/h	3600
Operating times			
Average time for U_s 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
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	$^{\circ}\text{C}$	-50
	max	$^{\circ}\text{C}$	70
Storage temperature			
	min	$^{\circ}\text{C}$	-60
	max	$^{\circ}\text{C}$	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 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