



Product designation	Power contactor		
Product type designation	BF12		
<b>Contact characteristics</b>			
Number of poles	Nr.	4	
Rated insulation voltage Ui IEC/EN	V	690	
Rated impulse withstand voltage Uimp	kV	6	
Operational frequency	min	Hz	25
	max	Hz	400
IEC Conventional free air thermal current Ith		A	28
Operational current Ie			
	AC-1 ( $\leq 40^{\circ}\text{C}$ )	A	28
	AC-1 ( $\leq 55^{\circ}\text{C}$ )	A	23
	AC-1 ( $\leq 70^{\circ}\text{C}$ )	A	20
	AC-3 ( $\leq 440\text{V} \leq 55^{\circ}\text{C}$ )	A	12
	AC-4 (400V)	A	7.9
Rated operational power AC-1 ( $T \leq 40^{\circ}\text{C}$ )	230V	kW	10
	400V	kW	18
	500V	kW	23
	690V	kW	32
IEC max current Ie 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	13
	110V	A	6
	220V	A	—
IEC max current Ie 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	18
	110V	A	13
	220V	A	1
IEC max current Ie 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 Ie in DC1 with $L/R \leq 1\text{ms}$ with 4 poles in series	$\leq 24\text{V}$	A	20
	48V	A	20
	75V	A	20
	110V	A	16
	220V	A	12

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	10
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	12
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	15
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	15
48V	A	15
75V	A	15
110V	A	16
220V	A	7

Short-time allowable current for 10s (IEC/EN60947-1) A 150

Protection fuse

gG (IEC)	A	32
aM (IEC)	A	12

Making capacity (RMS value) A 120

Breaking capacity at voltage

440V	A	96
500V	A	96
690V	A	94

Resistance per pole (average value) m? 2.5

Power dissipation per pole (average value)

I <sub>th</sub>	W	2
AC3	W	0.4

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	0.8
max	lbin	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>	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
<b>Mechanical features</b>			
Operating position	normal allowable		Vertical plan ±30°
Fixing			Screw / DIN rail 35mm
Weight	g		350
Conductor section			
AWG/kcmil conductor section	max		10
<b>Operations</b>			
Mechanical life	cycles		20000000
Electrical life	cycles		2000000
<b>Safety related data</b>			
Performance level B10d according to EN/ISO 13489-1	rated load mechanical load	cycles	2000000 20000000
Mirror contacts according to IEC/EN 609474-4-1			yes
EMC compatibility			yes
AC coil operating			
Rated AC voltage at 60Hz	V		575
AC operating voltage			
of 60Hz coil powered at 60Hz			
pick-up	min max	%Us %Us	80 110
drop-out	min max	%Us %Us	20 55
AC average coil consumption at 20°C			
of 60Hz coil powered at 60Hz	in-rush holding	VA VA	75 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 max	ms ms	8 24
Opening NO	min max	ms ms	10 20
Closing NC			

Opening NC	min	ms	14
	max	ms	28
Closing NC	min	ms	7
	max	ms	18

#### UL technical data

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

at 480V	A	11
at 600V	A	11

#### Yielded mechanical performance

for single-phase AC motor

110/120V	HP	1
230V	HP	2

for three-phase AC motor

200/208V	HP	5
220/230V	HP	5
460/480V	HP	7.5
575/600V	HP	10

#### General USE

Contactor

AC current	A	28
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#### Short-circuit protection fuse, 600V

High fault

Short circuit current	kA	100
Fuse rating	A	30
Fuse class		J

Standard fault

Short circuit current	kA	5
Fuse rating	A	70

#### Ambient conditions

##### Temperature

Operating temperature

min	°C	-50
max	°C	70

Storage temperature

min	°C	-60
max	°C	80

##### Max altitude

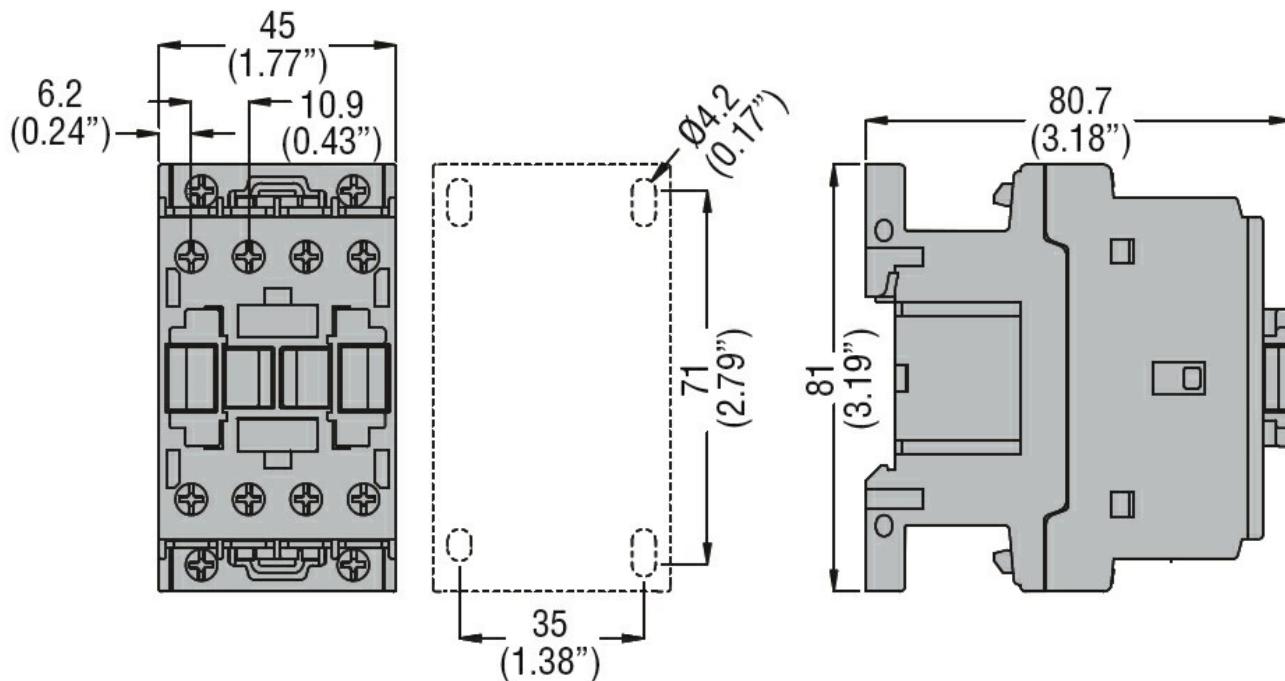
m	3000
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##### Resistance & Protection

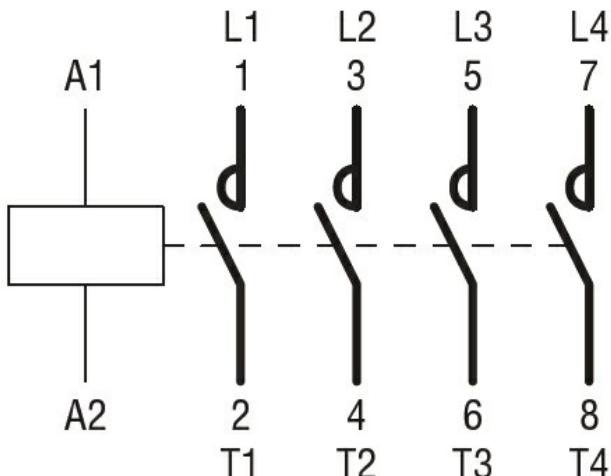
##### Pollution degree

3
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##### 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