



Product designation	Power contactor		
Product type designation	BF09		
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	25
Operational current I _e			
	AC-1 ($\leq 40^{\circ}\text{C}$)	A	25
	AC-1 ($\leq 55^{\circ}\text{C}$)	A	20
	AC-1 ($\leq 70^{\circ}\text{C}$)	A	18
	AC-3 ($\leq 440\text{V} \leq 55^{\circ}\text{C}$)	A	9
	AC-4 (400V)	A	4.9
Rated operational power AC-1 ($T \leq 40^{\circ}\text{C}$)			
	230V	kW	9.5
	400V	kW	16
	500V	kW	21
	690V	kW	27
IEC max current I _e in DC1 with L/R $\leq 1\text{ms}$ with 1 poles in series			
	$\leq 24\text{V}$	A	15
	48V	A	13
	75V	A	12
	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	18
	48V	A	18
	75V	A	17
	110V	A	12
	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	20
	48V	A	20
	75V	A	20
	110V	A	15
	220V	A	10
IEC max current I _e 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	10
48V	A	9
75V	A	8
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	13
48V	A	11
75V	A	10
110V	A	7
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	15
48V	A	15
75V	A	13
110V	A	11
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	12
220V	A	7

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

Protection fuse

gG (IEC)	A	25
aM (IEC)	A	10

Making capacity (RMS value) A 90

Breaking capacity at voltage

440V	A	72
500V	A	72
690V	A	71

Resistance per pole (average value) m? 2.5

Power dissipation per pole (average value)

I _{th}	W	1.6
AC3	W	0.2

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 ²

min mm² 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 wired	
Mechanical features				
Operating position	normal		Vertical plan	
	allowable		±30°	
Fixing			Screw / DIN rail	
			35mm	
Weight	g		492	
Conductor section				
AWG/kcmil conductor section	max		10	
Operations				
Mechanical life	cycles		20000000	
Electrical life	cycles		2000000	
Safety related data				
Performance level B10d according to EN/ISO 13489-1	rated load	cycles	2000000	
	mechanical load	cycles	20000000	
Mirror contacts according to IEC/EN 609474-4-1			yes	
EMC compatibility			yes	
DC coil operating				
DC rated control voltage	V		12	
DC operating voltage				
pick-up	min	%Us	70	
	max	%Us	125	
drop-out	min	%Us	10	
	max	%Us	40	
Average coil consumption ≤20°C	in-rush	W	5.4	
	holding	W	5.4	
Max cycles frequency				
Mechanical operation	cycles/h		3600	
Operating times				
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
in DC			
Closing NO			
min	ms	54	
max	ms	66	
Opening NO			
min	ms	14	
max	ms	17	

UL technical data

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

at 480V	A	7.6
at 600V	A	0.375

Yielded mechanical performance

for single-phase AC motor

110/120V	HP	0.75
230V	HP	2

for three-phase AC motor

200/208V	HP	3
220/230V	HP	3
460/480V	HP	5
575/600V	HP	7.5

General USE

Contactor

AC current	A	25
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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	60

Ambient conditions

Temperature

Operating temperature

min	°C	-50
max	°C	70

Storage temperature

min	°C	-60
max	°C	80

Max altitude

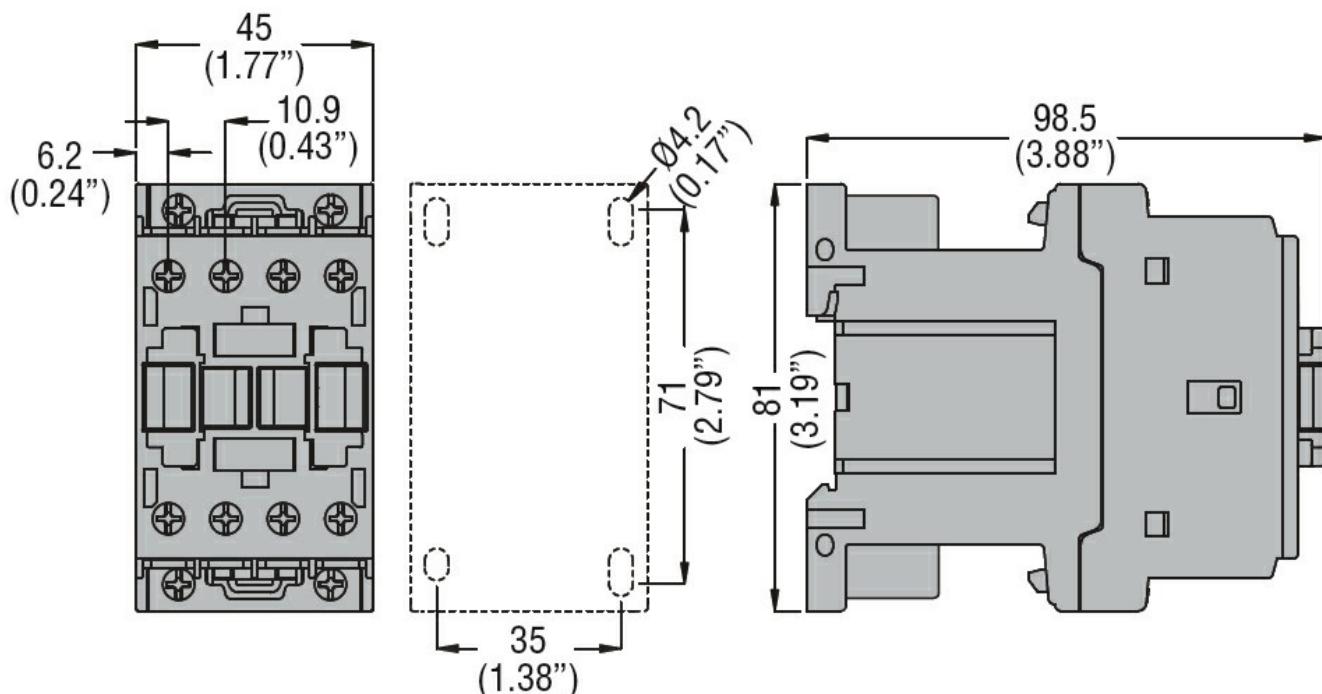
m 3000

Resistance & Protection

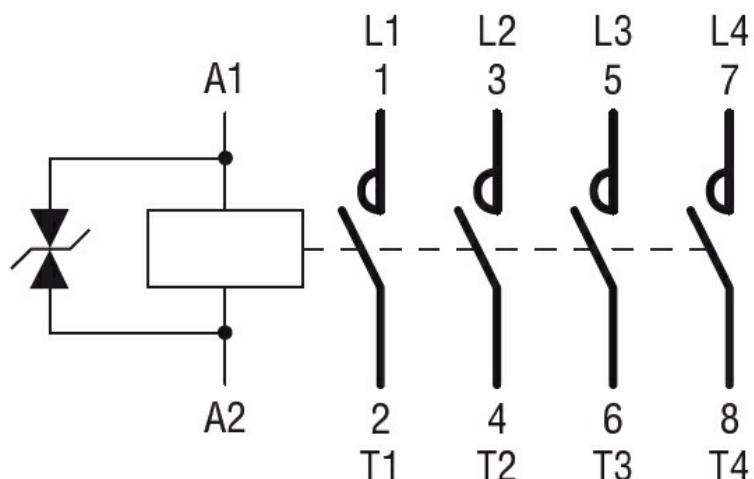
Pollution degree

3

Dimensions



Wiring diagrams



Certifications and compliance

Compliance

[CSA C22.2 n° 60947-1](#)

[CSA C22.2 n° 60947-4-1](#)

[IEC/EN 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