



Product designation	Power contactor		
Product type designation	BF09		
<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	25	
Operational current I <sub>e</sub>	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
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 <sub>th</sub>	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 <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

**Mechanical features**

Operating position

normal allowable	Vertical plan ±30°
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Fixing

Screw / DIN rail  
35mm

Weight

g 360

Conductor section

AWG/kcmil conductor section	max	10
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**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

AC coil operating

Rated AC voltage at 50/60Hz	V	48
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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

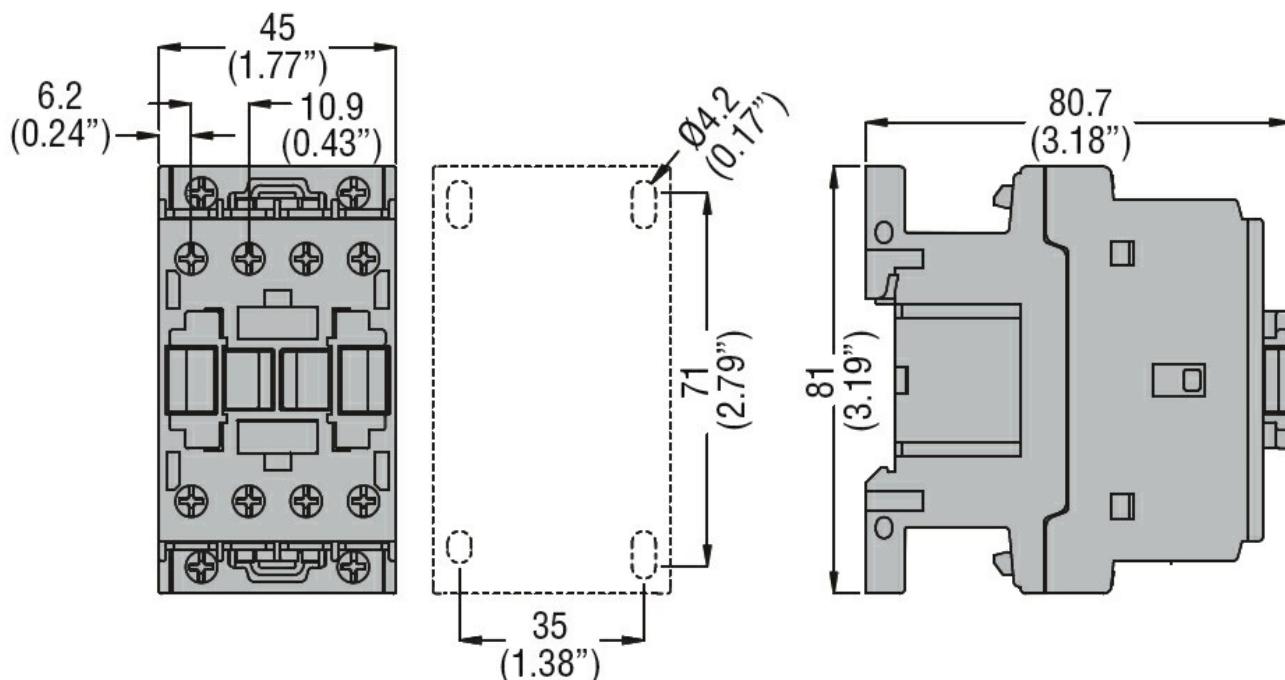
pick-up	min	%Us	85
	max	%Us	110
drop-out	min	%Us	20
	max	%Us	55

AC average coil consumption at 20°C

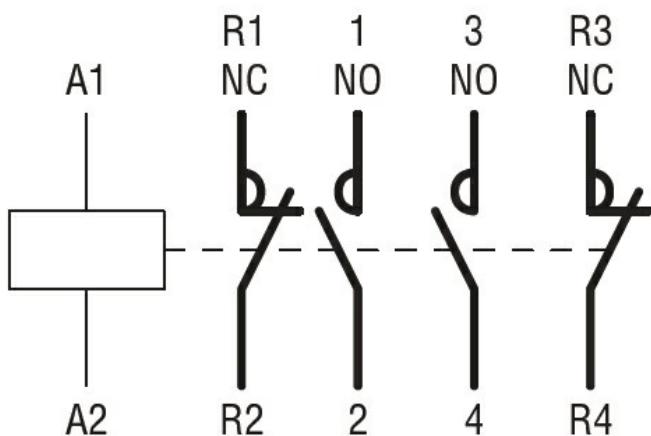
of 50/60Hz coil powered at 50Hz	in-rush	VA	75
	holding	VA	9

FOUR-POLE CONTACTOR, IEC OPERATING CURRENT ITH (AC1) = 25A, AC COIL 50/60HZ,  
48VAC, 2NO AND 2NC

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 $\leq 20^{\circ}\text{C}$ 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	7.6
	at 600V	A	9
Yielded mechanical performance			
for single-phase AC motor			
	110/120V	HP	0.8
	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
<b>Ambient conditions</b>			
Temperature			
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
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