



Power contactor  
BF09

Product designation

Product type designation

**Contact characteristics**

Number of poles	nr.	4
Rated insulation voltage $U_i$	V	690
Rated impulse withstand voltage $U_{imp}$	kV	6
Operating frequency	Operational frequency min	Hz 25
	Operational frequency max	Hz 400
	Conventional free air thermal current $I_{th}$	A 25
Operating current	Operational current AC1 ( $\leq 40^\circ\text{C}$ )	A 25
	Operational current AC3 ( $\leq 440\text{V} \leq 55^\circ\text{C}$ )	A 9
	Operational current AC4 (400V)	A 4.9
Rated operational power AC1 ( $T \leq 40^\circ\text{C}$ )	230V	kW 9.5
	400V	kW 16
	500V	kW 21
	690V	kW 27
Rated operational power AC3 ( $T \leq 55^\circ\text{C}$ )	230V	kW 2.2
	400V	kW 4.2
	415V	kW 4.5
	440V	kW 4.8
	500V	kW 5.5
	690V	kW 7.5
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	Breaking capacity 440V	A 72
	Breaking capacity 500V	A 72
	Breaking capacity 690V	A 71
Resistance per pole (average value)	m $\Omega$	2.5
Power dissipation per pole (average value)	Power dissipation 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	lbft 1.1
	max	lbft 1.5
Tightening torque for coil terminal		

	min	Nm	0.8
	max	Nm	1
	min	lbft	0.8
	max	lbft	0.74
max number of wires simultaneously connectable		nr.	2
Conductor section			
AWG			
	min		16
	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
<b>Auxiliary contact characteristics</b>			
Operational current AC1 (≤40°C)		A	25
Operating current DC13			
	110V	A	Screw / DIN rail 35mm
<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
Operating position			
	normal allowable		Vertical plan ±30°
Mounting			Screw / DIN rail 35mm
Weight		g	0.368
<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	Cicli Cicli	2000000 20000000
Mirror contacts according to IEC/EN 60947-4-1			yes
EMC compatibility			yes
<b>AC coil operating</b>			
AC operating voltage			
	of 50/60Hz coil powered at 50Hz pick-up		
	min	%Us	0.8

		max	%Us	1.1
	drop-out			
		min	%Us	0.2
		max	%Us	0.55
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	of 50/60Hz coil powered at 60Hz			
	pick-up			
		min	%Us	0.85
		max	%Us	1.1
	drop-out			
		min	%Us	0.2
		max	%Us	0.55
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	of 60Hz coil powered at 60Hz			
	pick-up			
		min	%Us	0.8
		max	%Us	1.1
	drop-out			
		min	%Us	0.2
		max	%Us	0.55
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AC operating voltage				
	of 50/60Hz coil powered at 50Hz			
		in-rush	VA	75
		holding	VA	9
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	of 50/60Hz coil powered at 60Hz			
		in-rush	VA	70
		holding	VA	6.5
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	of 60Hz coil powered at 60Hz			
		in-rush	VA	75
		holding	VA	9
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Dissipation at holding $\leq 20^{\circ}\text{C}$ 50Hz			W	2.5
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<b>DC coil operating</b>				
DC rated control voltage		max	V	250
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<b>Max cycles frequency</b>				
Mechanical operations			Cycles/h	3600
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<b>Operating times</b>				
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
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<b>UL technical data</b>				
Full-load current (FLA) for three-phase AC motor				
		at 480V	A	7.6
		at 600V	A	0.375
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<b>Yielded mechanical performance</b>				

for single-phase AC motor

at 110/120V	hp	0.75
at 230V	hp	2

for three-phase AC motor

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

General USE

Contactor

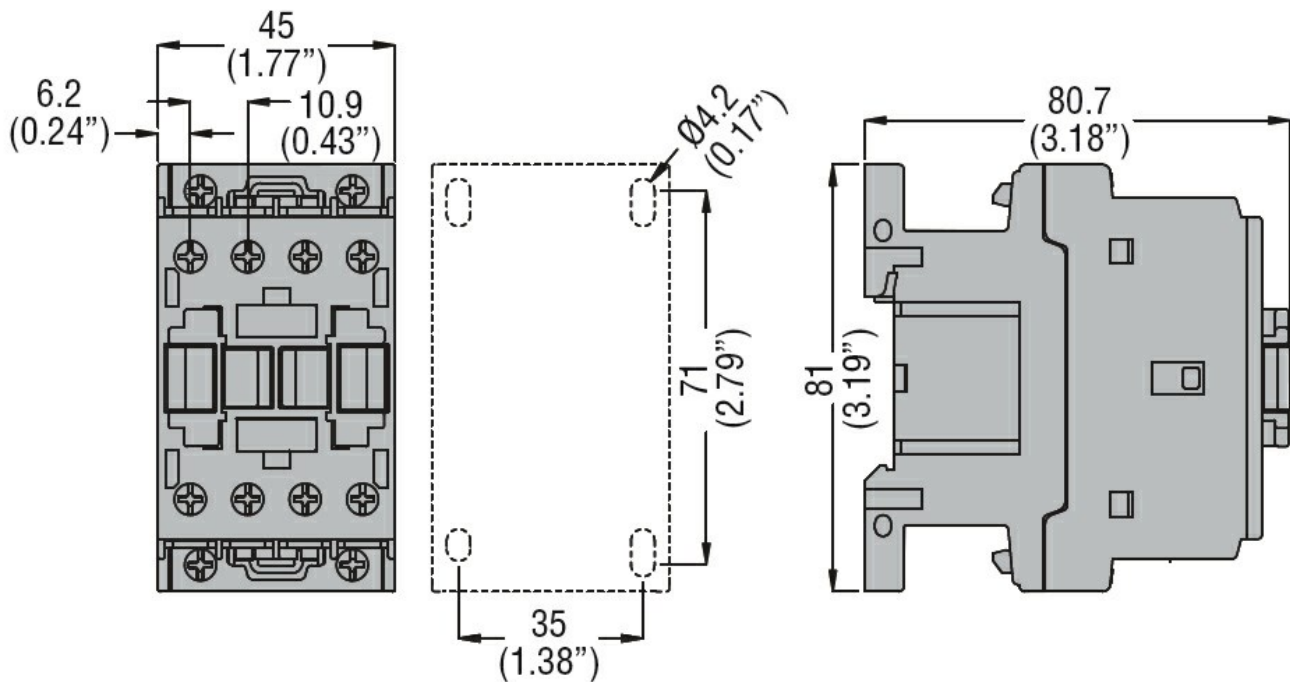
AC current	A	25
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**Other features**

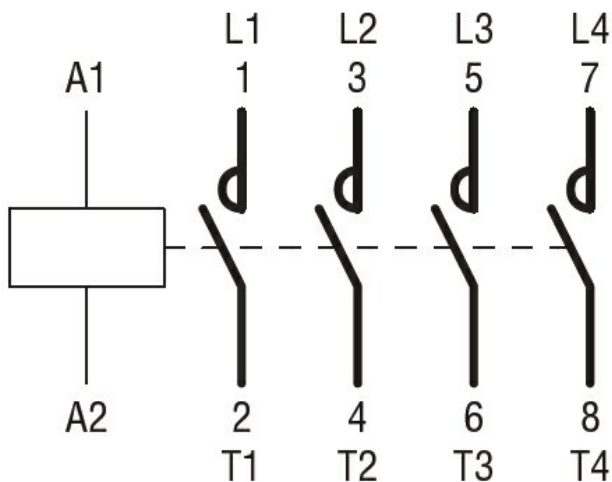
Pollution degree

3

**Dimensions**



**Wiring diagrams**



**Certifications and compliance**

Certifications

CSA C22.2 n° 60947-1

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CSA C22.2 n° 60947-4-1

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IEC/EN 60947-1

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IEC/EN 60947-4-1

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UL 60947-1

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UL 60947-4-1

Compliance

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CCC

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cULus

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EAC

**ETIM 6 classification**

EC000066 - Power contactor, AC switching