



Power contactor  
BF09

Product designation

Product type designation

**Contact characteristics**

Number of poles	nr.	3
Rated insulation voltage U <sub>i</sub>	V	690
Rated impulse withstand voltage U <sub>imp</sub>	kV	6
Operating frequency		
	Operational frequency min	Hz 25
	Operational frequency max	Hz 400
Conventional free air thermal current I <sub>th</sub>	A	25
Operating current		
	Operational current AC3 (≤440V ≤55°C)	A 9
	Operational current AC4 (400V)	A 4.9
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)	mΩ	2.5
Power dissipation per pole (average value)		
	Power dissipation 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	lbft 1.1
	max	lbft 1.5
Tightening torque for coil terminal		
	min	Nm 0.8
	max	Nm 1
	min	lbft 0.59
	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
<b>Auxiliary contact characteristics</b>			
Type of contact			1 NA
Thermal current Ith			A 25
IEC/EN 60947-5-1 designation			A600
<b>Ambient conditions</b>			
Temperature			
Operating temperature			
	min	°C	-50
	max	°C	70
Storage temperature			
	min	°C	-60
	max	°C	80
Max altitude			m 3,000
Operating position			
	normal allowable		Vertical plan ±30°
Mounting			Screw / DIN rail 35mm
Weight			g 0.367
<b>Operations</b>			
Mechanical life			Cycles 20,000,000
Electrical life			Cycles 2000000
<b>Safety related data</b>			
Performance level B10d according to EN/ISO 13489-1 -			
	Performance level B10d according to EN/ISO 13489-1 1000000 load		
	Performance level B10d according to EN/ISO 13489-2 2000000 load		
Mirror contacts according to IEC/EN 60947-4-1			Yes
EMC compatibility			Yes
<b>AC coil operating</b>			
Rated AC voltage at 50/60Hz, 60Hz			
	min	V	12
	max	V	600
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

of 60Hz coil powered at 60Hz			
pick-up	min	%Us	80
	max	%Us	110
drop-out			
	min	%Us	20
	max	%Us	55

AC operating voltage

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

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
---	--	--	---	-----

Max cycles frequency

Mechanical operations	Cycles/h	3,600
-----------------------	----------	-------

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

UL technical data

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

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

Contact rating of auxiliary contacts according to UL

SI - A600

General USE

Contactor

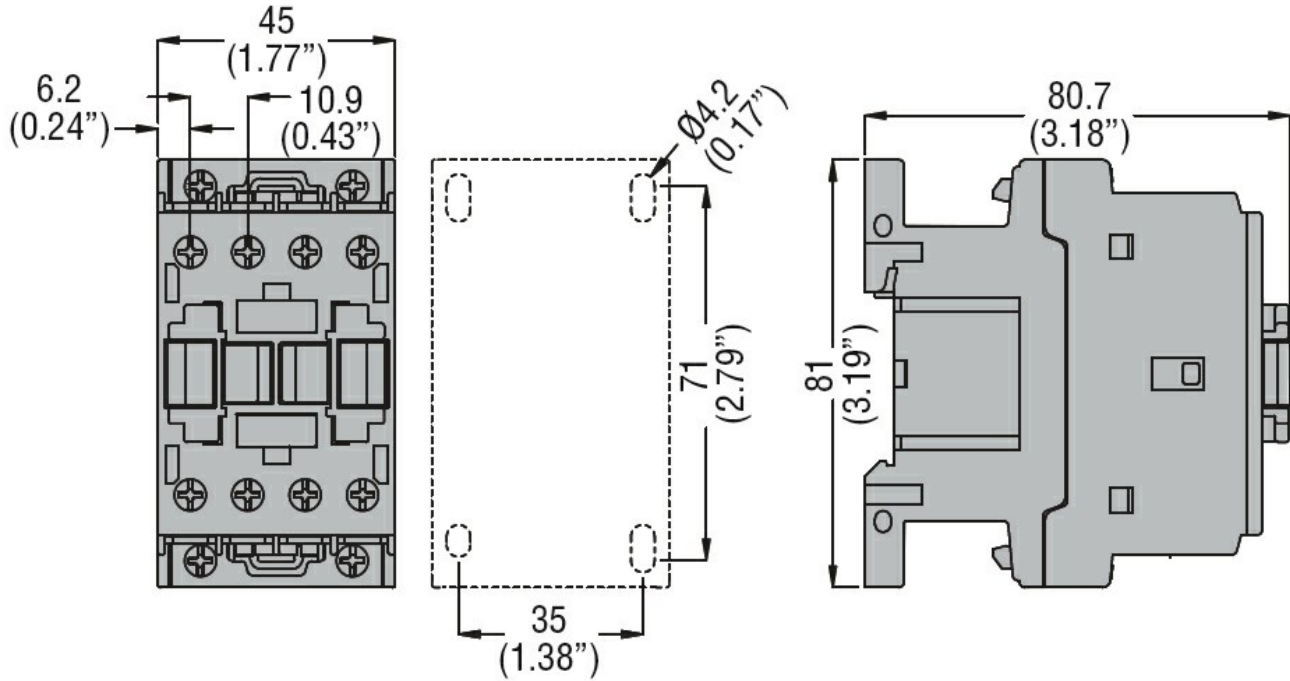
AC current	A	25
------------	---	----

Auxiliary contacts

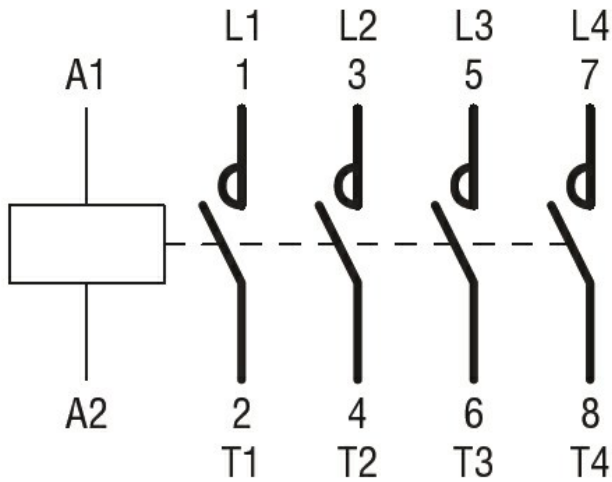
AC voltage	V	600
------------	---	-----

AC current	A	10
DC voltage	V	250
DC current	A	1

**Dimensions**



**Wiring diagrams**



**Certifications and compliance**

**Certifications**

- 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

**Compliance**

- CCC
- cULus
- EAC

**ETIM 6 classification**

EC000066 - Power contactor, AC switching