



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 (≤40°C)	A		25
	AC-1 (≤55°C)	A		20
	AC-1 (≤70°C)	A		18
	AC-3 (≤440V ≤55°C)	A		9
	AC-4 (400V)	A		4.9
Rated operational power AC-1 (T≤40°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)	mΩ			2.5
Power dissipation per pole (average value)	I <sub>th</sub>	W		1.6
	AC-3	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 properly wired

**Mechanical features**

Operating position

normal allowable      Vertical plan ±30°

Fixing

Screw / DIN rail 35mm

Weight

g 358

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 60947-4-1

YES

EMC compatibility

yes

**AC coil operating**

Rated AC voltage at 50/60Hz

V 230

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

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 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

**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

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

**Ambient conditions**

Temperature

Operating temperature

min	$^{\circ}\text{C}$	-50
max	$^{\circ}\text{C}$	70

Storage temperature

min	$^{\circ}\text{C}$	-60
max	$^{\circ}\text{C}$	80

Max altitude

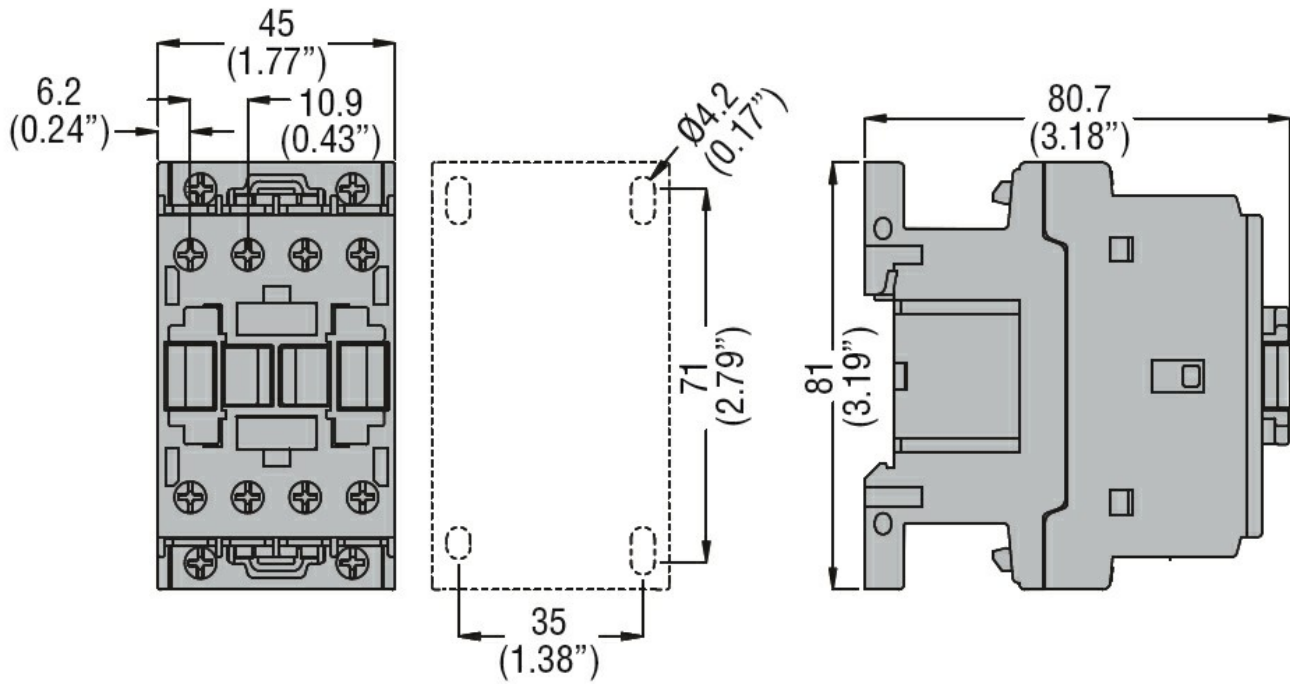
m	3000
---	------

**Resistance & Protection**

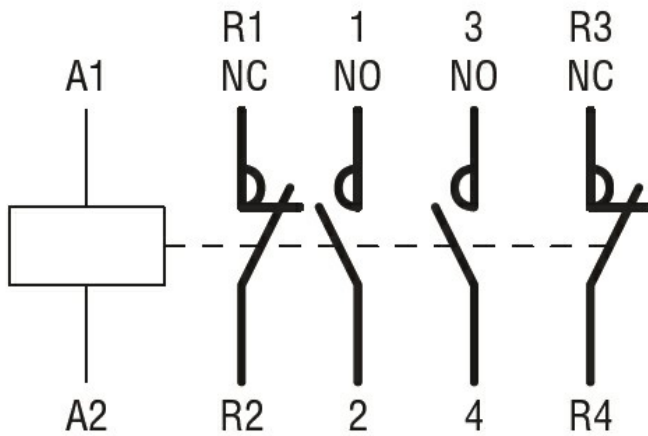
Pollution degree

3
---

**Dimensions**



### Wiring diagrams



### Certifications and compliance

#### Compliance

CSA C22.2 n° 60947-1  
CSA C22.2 n° 60947-4-1  
IEC/EN/BS 60947-1  
IEC/EN/BS 60947-4-1  
UL 60947-1  
UL 60947-4-1

#### Certificates

CCC  
cULus  
EAC

### ETIM classification

ETIM 8.0

EC000066 -  
Power contactor,  
AC switching