



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
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 $\Omega$	2.5
Power dissipation per pole (average value)	$I_{th}$	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

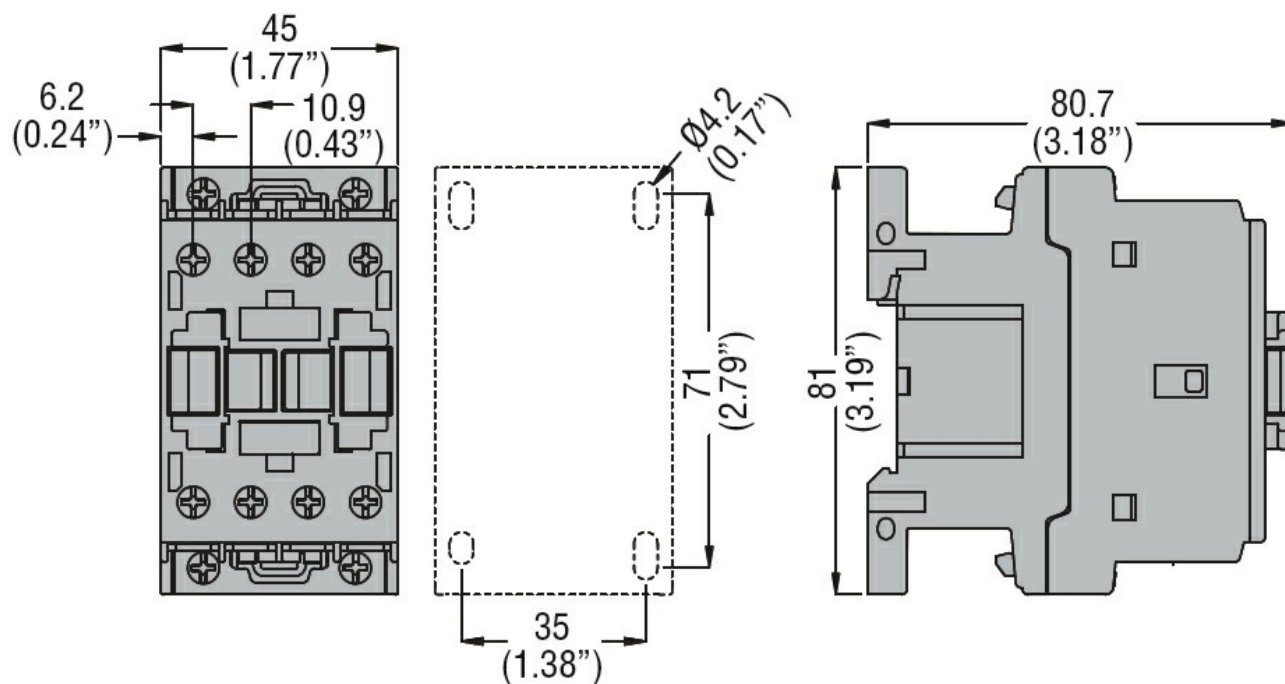
m	3000
---	------

Resistance & Protection

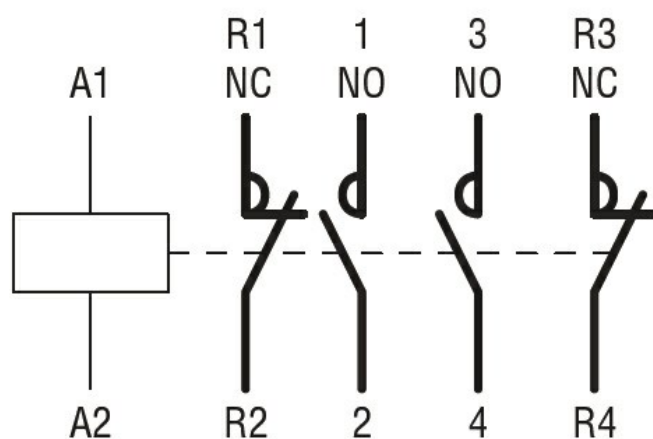
Pollution degree

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