



Product designation				Power contactor
Product type designation				BF09
<b>Contact characteristics</b>				
Number of poles	nr.	3		
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>			
Type of contact			1 NO
Thermal current I <sub>th</sub>		A	10
IEC/EN 60947-5-1 designation			A600 - P600
Operational current AC1 (≤40°C)		A	25
Operating current AC15	230V	A	3
	400V	A	1.9
	500V	A	1.4
Operating current DC12	110V	A	5.7
Operating current DC13	24V	A	5.7
	48V	A	2.9
	60V	A	2.3
	110V	A	Screw / DIN rail 35mm
	125V	A	0.6
	220V	A	0.2
	600V	A	1.2
<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	0.5

**Operations**

Mechanical life	Cycles	20000000
Electrical life	Cycles	2000000

**Safety related data**

Performance level B10d according to EN/ISO 13489-1

	rated load mechanical load	Cicli Cicli	2000000 20000000
Mirror contats according to IEC/EN 609474-4-1			yes
EMC compatibility			yes

**DC coil operating**

DC rated control voltage

min	V	6
max	V	250

DC operating voltage

pick-up

min	%Us	0.8
max	%Us	1.10

drop-out

min	%Us	0.1
max	%Us	0.40

Average coil consumption  $\leq 20^{\circ}\text{C}$

in-rush	W	2.4
holding	W	2.4

**Max cycles frequency**

Mechanical operations	Cycles/h	3600
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**Operating times**

Average time for Us control

in AC

Closing NC

min	ms	14
max	ms	28

Opening NC

min	ms	7
max	ms	18

in DC

Closing NO

min	ms	75
max	ms	91

Opening NO

min	ms	15
max	ms	19

**UL technical data**

Full-load current (FLA) for three-phase AC motor

at 480V	A	7.6
at 600V	A	0.375

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  
 General USE

A600 - P600

Contactor

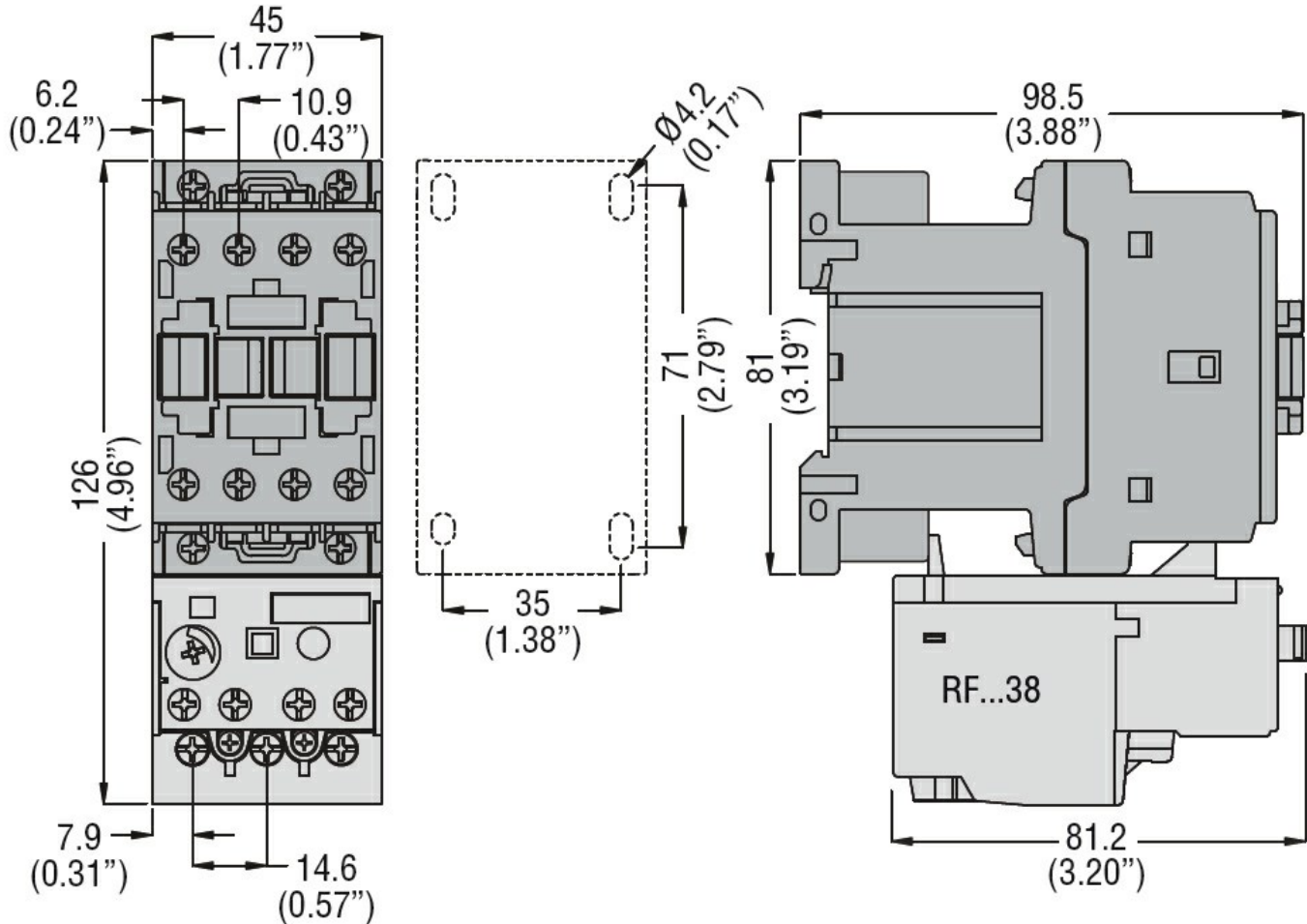
AC current A 25

**Other features**

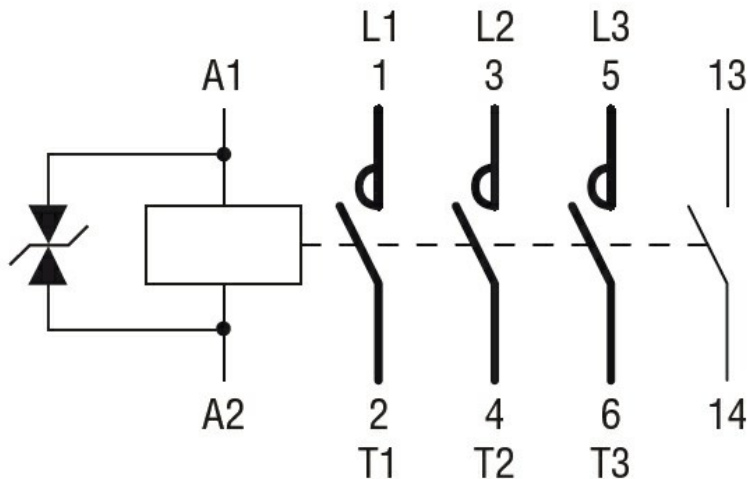
Pollution degree

3

**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