



Product designation				Power contactor
Product type designation				BF09
<b>Contact characteristics</b>				
Number of poles	nr.			3
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	
Conventional free air thermal current $I_{th}$ IEC/EN	A			25
Operational current $I_e$	AC-1 ( $\leq 40^\circ\text{C}$ )	A	25	
	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	
Rated operational power AC-3 ( $T \leq 55^\circ\text{C}$ )	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	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	
	AC3	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	lbft	0.8
	max	lbft	0.74
Max number of wires simultaneously connectable		nr.	2
Conductor section	AWG		
	/kcmil min		16
	/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 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 I <sub>e</sub> AC-1 (≤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
Operational position	Operating position normal Operating position allowable		vertical plan ±30°
Fixing	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	0.7
max	%Us	1.25

drop-out

min	%Us	0.1
max	%Us	0.40

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

Average coil consumption $\leq 20^{\circ}\text{C}$ in-rush	W	5.4
Average coil consumption $\leq 20^{\circ}\text{C}$ holding	W	5.4

### Max cycles frequency

Mechanical operations	Cycles/h	3600
-----------------------	----------	------

### 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	54
max	ms	66

Opening NO

min	ms	14
max	ms	17

### 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

for single-phase AC motor

Yielded mechanical performance 110/120V	hp	0.75
Yielded mechanical performance 230V	hp	2

for three-phase AC motor

Yielded mechanical performance 200/208V	hp	3
Yielded mechanical performance 220/230V	hp	3
Yielded mechanical performance 460/480V	hp	5
Yielded mechanical performance 575/600V	hp	7.5

Contact rating of auxiliary contacts according to UL  
General USE

A600 - P600

Contactor

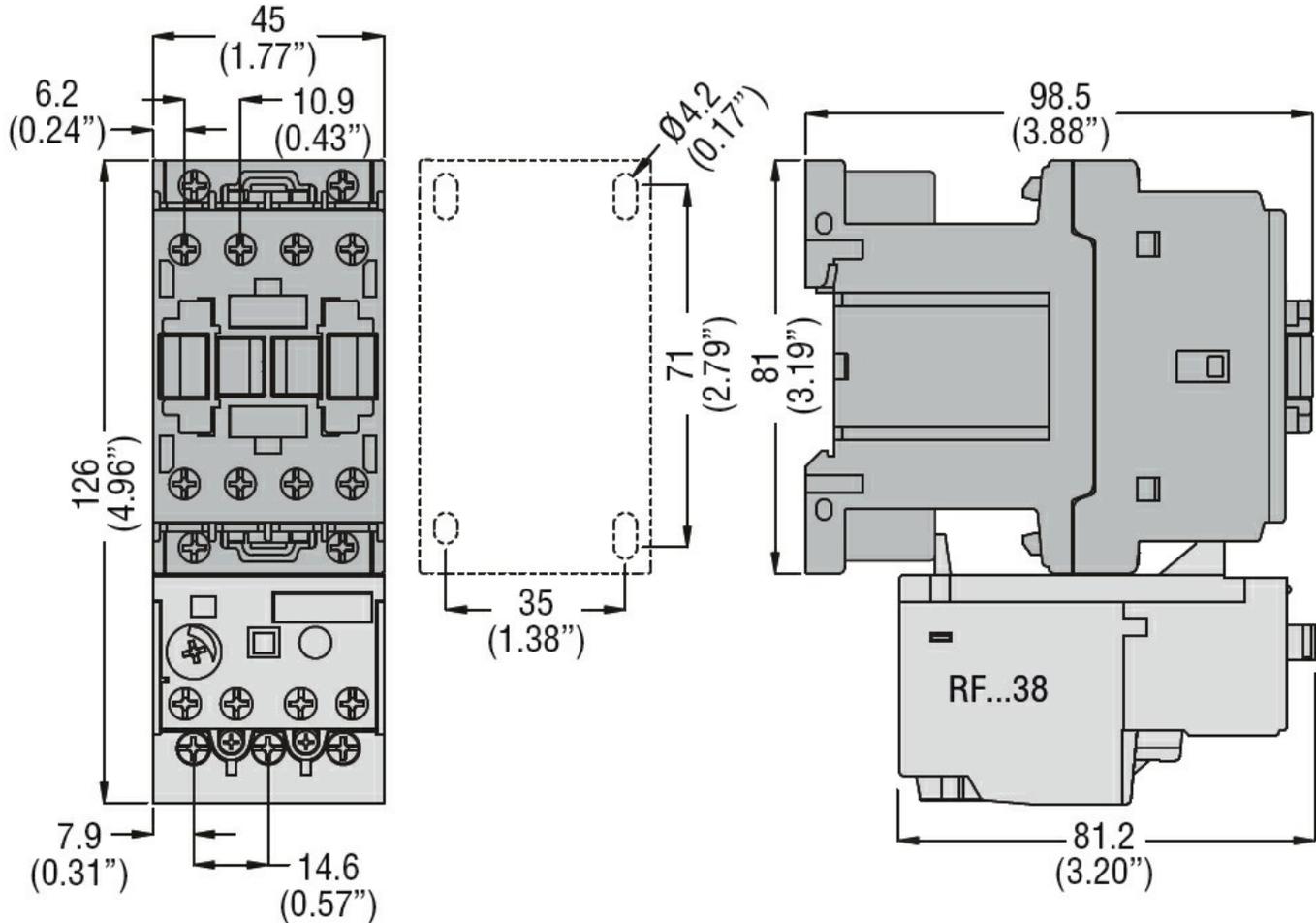
AC current A 25

Other features

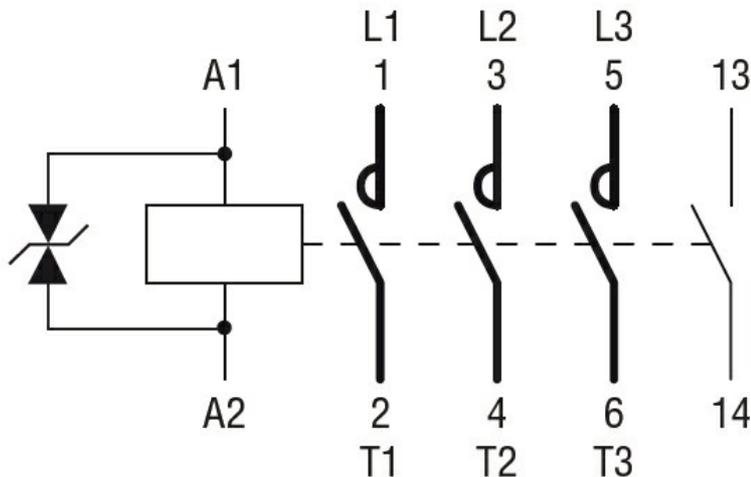
Pollution degree

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