



Power contactor
BF09

Product designation

Product type designation

Contact characteristics

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 Ω	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 ²	1
	max	mm ²	6
Flexible c/w lug conductor section	min	mm ²	1
	max	mm ²	4
Flexible with insulated spade lug conductor section	min	mm ²	1
	max	mm ²	4
Power terminal protection according to IEC/EN 60529	IP20 when wired		
Auxiliary contact characteristics			
Type of contact	1 NO		
Thermal current I _{th}	A	10	
IEC/EN 60947-5-1 designation	A600 - P600		
Operational current I _e 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
Ambient conditions			
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	0.354

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

AC coil operating

AC operating voltage

of 50/60Hz coil powered at 50Hz				
pick-up	min	%Us	0.8	
	max	%Us	1.1	
drop-out	min	%Us	0.2	
	max	%Us	0.55	
of 50/60Hz coil powered at 60Hz				
pick-up	min	%Us	0.85	
	max	%Us	1.1	
drop-out	min	%Us	0.2	
	max	%Us	0.55	
of 60Hz coil powered at 60Hz				
pick-up	min	%Us	0.8	
	max	%Us	1.1	
drop-out	min	%Us	0.2	
	max	%Us	0.55	

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 ≤20°C 50Hz		W	2.5

DC coil operating

DC rated control voltage

max	V	250
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Max cycles frequency

Mechanical operations	Cycles/h	3600
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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	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

A600 - P600

General USE

Contactor

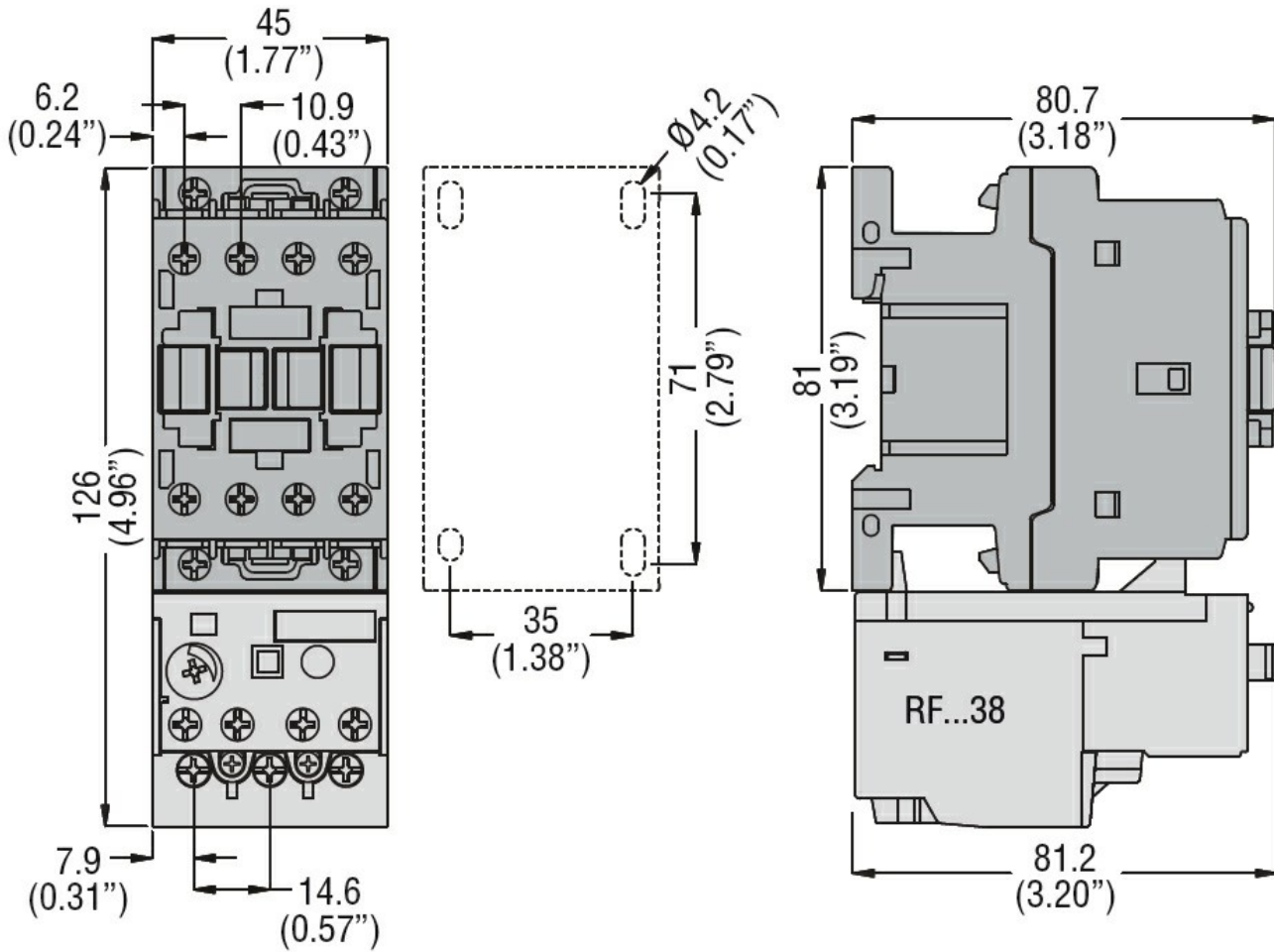
AC current	A	25
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Other features

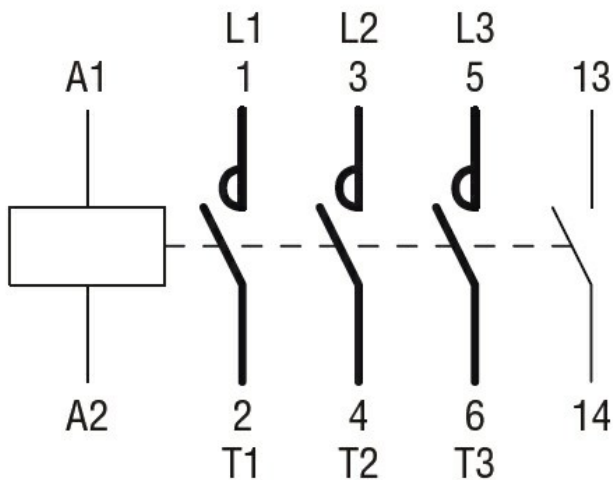
Pollution degree

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