



Product designation				Power contactor
Product type designation				BF09
Contact characteristics				
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 Ω	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 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 NC
Thermal current I _{th}		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
Ambient conditions			
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	0.49

Operations

Mechanical life	Cycles	20000000
Electrical life	Cycles	2000000

Safety related data

Performance level B10d according to EN/ISO 13489-1

	rated load	Cicli	2000000
	mechanical load	Cicli	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	415

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 ≤20°C

in-rush	W	5.4
holding	W	5.4

Max cycles frequency

Mechanical operations	Cycles/h	3600
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Operating times

Average time for Us control
in DC

Closing NO	min	ms	54
	max	ms	66
Opening NO	min	ms	14
	max	ms	17
Closing NC	min	ms	24
	max	ms	30
Opening NC	min	ms	47
	max	ms	57

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

A600 - P600

General USE

Contactor

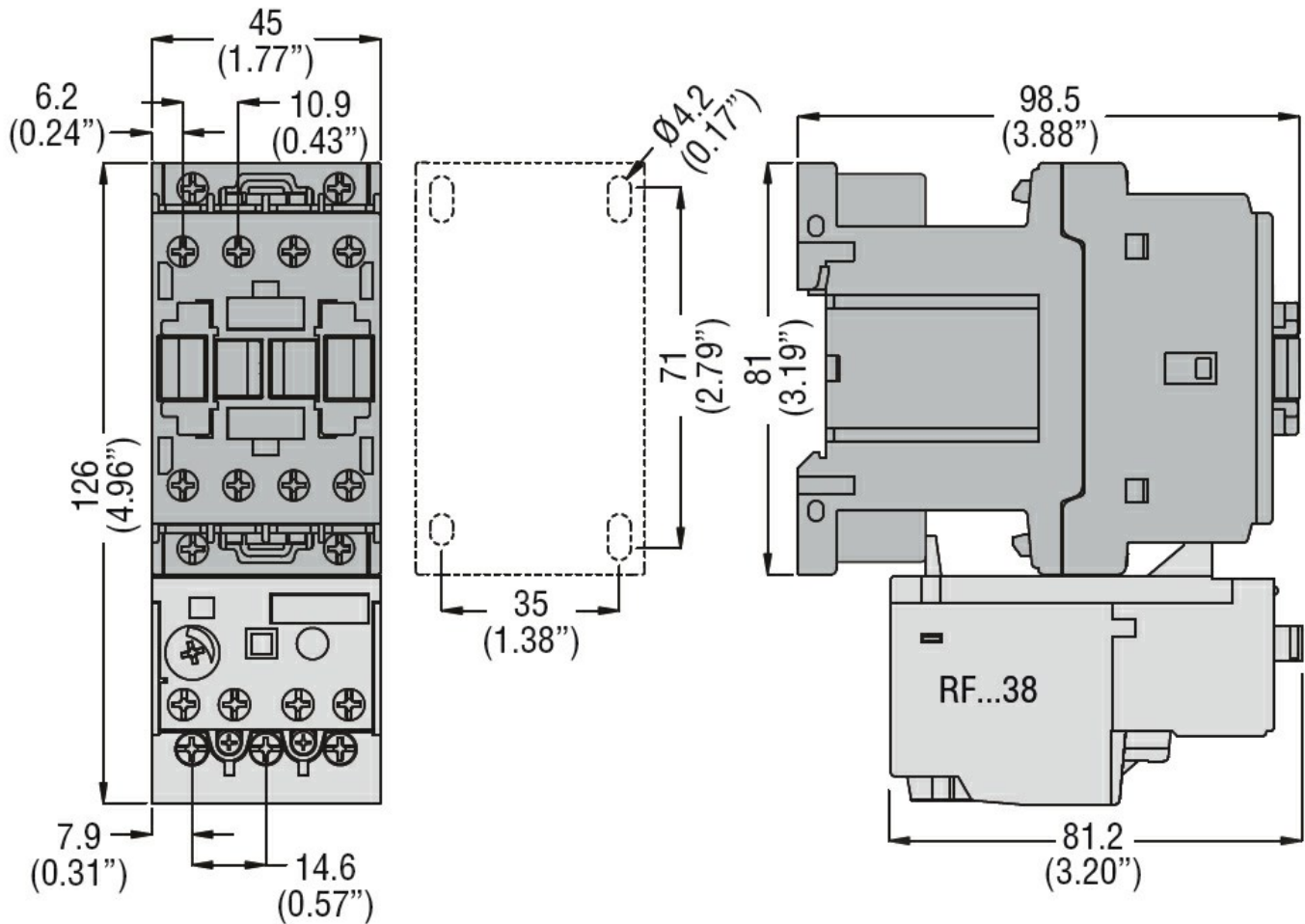
AC current A 25

Other features

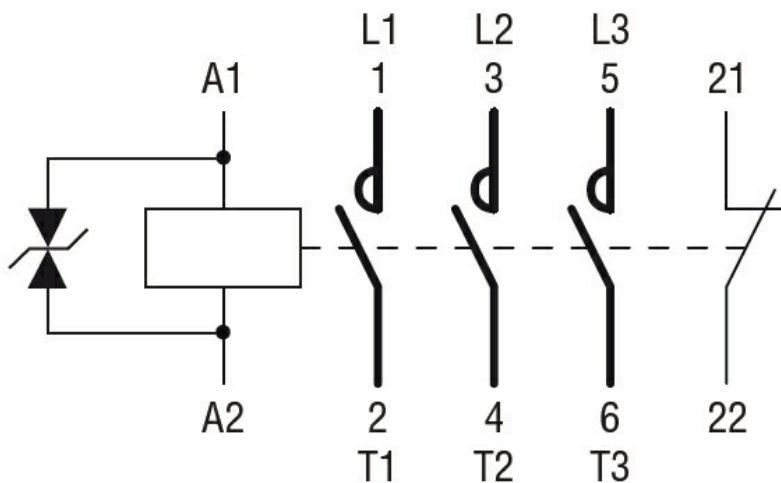
Pollution degree

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