



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-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	
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	
	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			
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>Mechanical features</b>			
Operating position		normal allowable	Vertical plan ±30°
Fixing			Screw / DIN rail 35mm
Weight		g	362
<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
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	1.25
	125V	A	1.1
	220V	A	0.55
	600V	A	0.2
<b>Operations</b>			
Mechanical life		cycles	2000000
Electrical life		cycles	2000000
<b>Safety related data</b>			
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
<b>AC coil operating</b>			
Rated AC voltage at 50/60Hz, 60Hz	min	V	12

		max	V	600
AC operating voltage				
	of 50/60Hz coil powered at 50Hz			
	pick-up			
		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 operating voltage 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 ≤20°C 50Hz			W	2.5
<b>DC coil operating</b>				
DC rated control voltage		max	V	250
<b>Max cycles frequency</b>				
Mechanical operations			cycles/h	3600
<b>Operating times</b>				
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
<b>UL technical data</b>				
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			
		110/120V	hp	0.75
		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

Contact rating of auxiliary contacts according to UL

A600 - P600

General USE

Contactor

AC current A 25

Auxiliary contacts

AC voltage V 600  
AC current A 10  
DC voltage V 250  
DC current A 1

**Ambient conditions**

Temperature

Operating temperature

min °C -50  
max °C 70

Storage temperature

min °C -60  
max °C 80

Max altitude

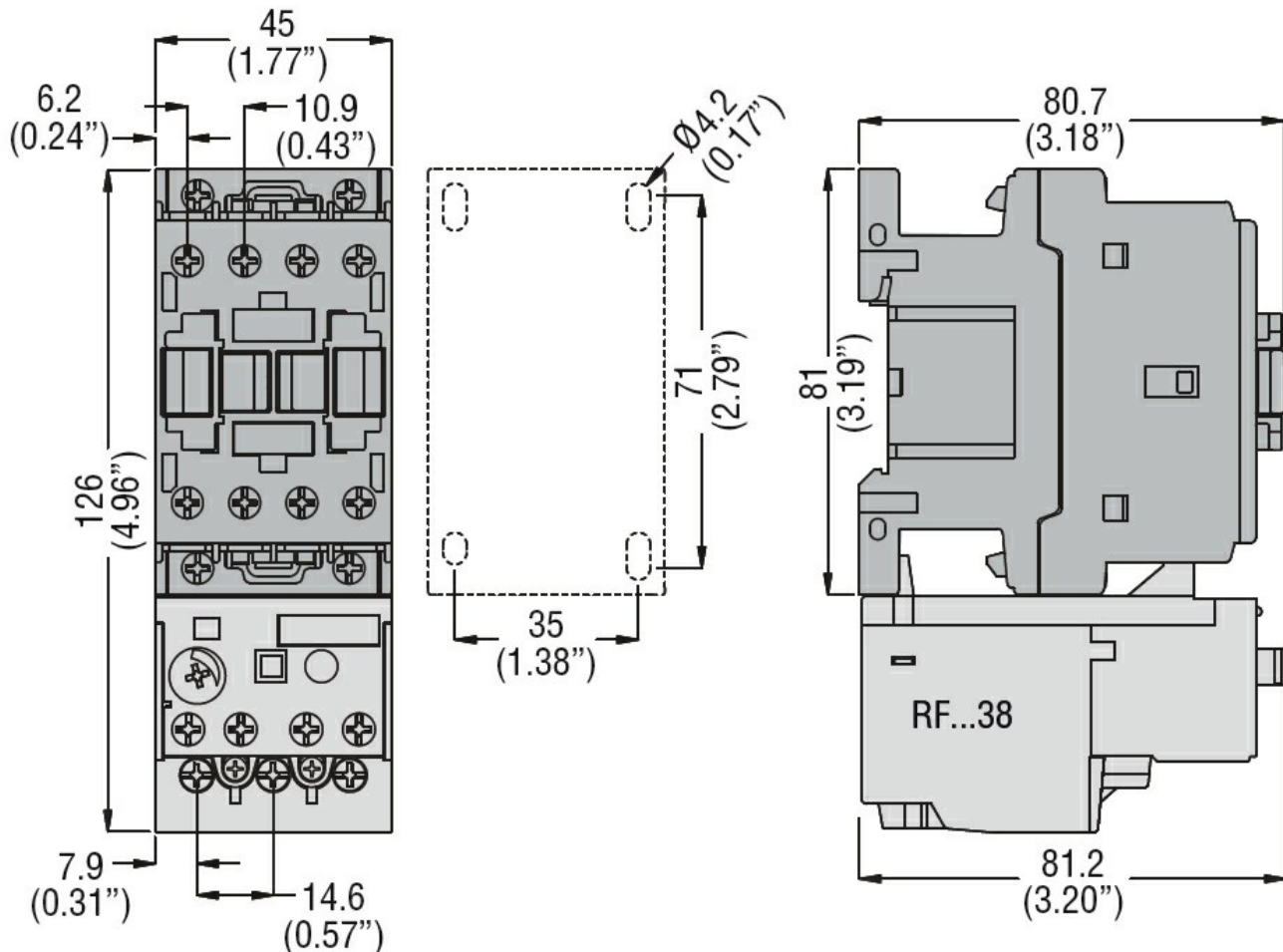
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**Resistance & Protection**

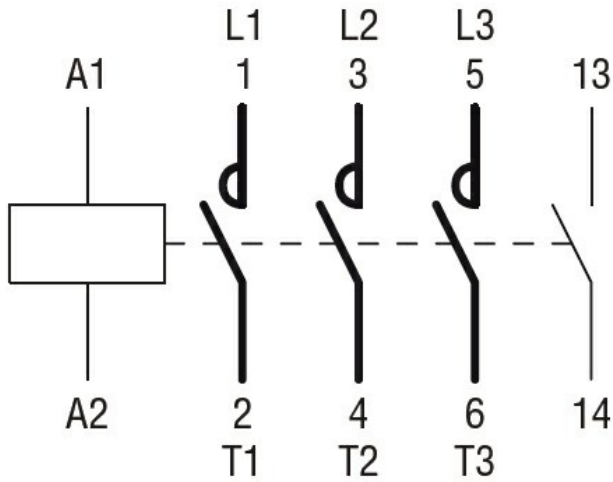
Pollution degree

3

**Dimensions**



Wiring diagrams



Certifications and compliance

Compliance

CSA C22.2 n° 60947-1  
 CSA C22.2 n° 60947-4-1  
 IEC/EN 60947-1  
 IEC/EN 60947-4-1  
 UL 60947-1  
 UL 60947-4-1

Certificates

CCC  
 cULus  
 EAC

ETIM 6 classification

EC000066 - Power contactor, AC switching