



Product designation
Product type designation

Power contactor
BF09

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
IEC Conventional free air thermal current I_{th}	A	25
Operational current I_e	AC-1 (=40°C)	A 25
	AC-1 (=55°C)	A 20
	AC-1 (=70°C)	A 18
	AC-3 (=440V =55°C)	A 9
	AC-4 (400V)	A 4.9
Rated operational power AC-3 (T=55°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=40°C)	230V kW	9.5
	400V kW	16
	500V kW	21
	690V kW	27
IEC max current I_e in DC1 with L/R = 1ms with 1 poles in series	=24V A	15
	48V A	13
	75V A	12
	110V A	6
	220V A	—
IEC max current I_e in DC1 with L/R = 1ms with 2 poles in series	=24V A	18
	48V A	18
	75V A	17
	110V A	12
	220V A	1
IEC max current I_e in DC1 with L/R = 1ms with 3 poles in series	=24V A	20
	48V A	20
	75V A	20
	110V A	15

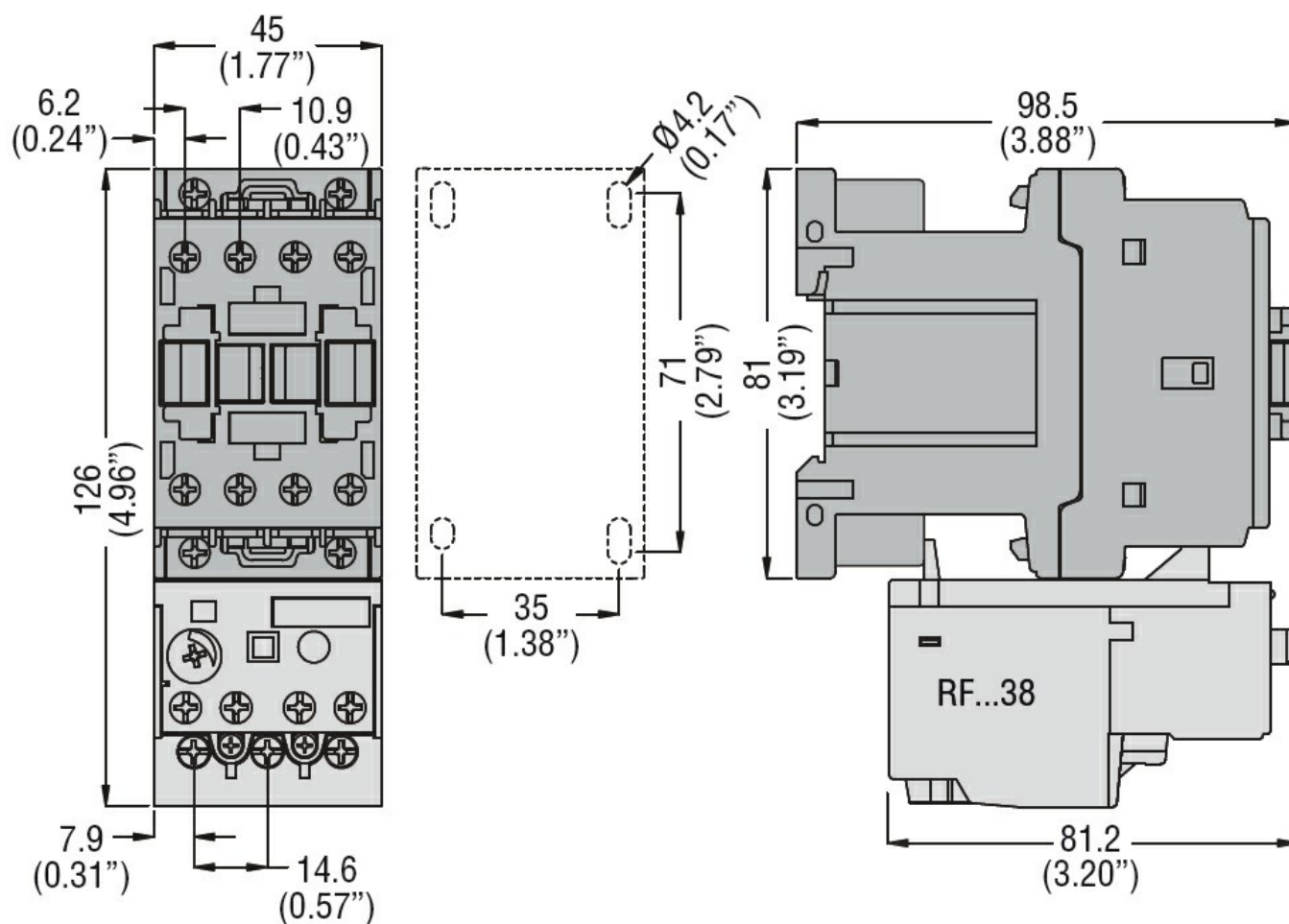
	220V	A	10
IEC max current Ie in DC1 with L/R = 1ms with 4 poles in series			
	=24V	A	20
	48V	A	20
	75V	A	20
	110V	A	16
	220V	A	12
IEC max current Ie in DC3-DC5 with L/R = 15ms with 1 poles in series			
	=24V	A	10
	48V	A	9
	75V	A	8
	110V	A	2
	220V	A	–
IEC max current Ie in DC3-DC5 with L/R = 15ms with 2 poles in series			
	=24V	A	13
	48V	A	11
	75V	A	10
	110V	A	7
	220V	A	2
IEC max current Ie in DC3-DC5 with L/R = 15ms with 3 poles in series			
	=24V	A	15
	48V	A	15
	75V	A	13
	110V	A	11
	220V	A	6
IEC max current Ie in DC3-DC5 with L/R = 15ms with 4 poles in series			
	=24V	A	15
	48V	A	15
	75V	A	15
	110V	A	12
	220V	A	7
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?	2.5
Power dissipation per pole (average value)			
	Ith	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	lbin	0.8

	max	I _{bin}	0.74
Max number of wires simultaneously connectable		Nr.	2
Conductor section			
AWG/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
Mechanical features			
Operating position	normal allowable		Vertical plan ±30°
Fixing			Screw / DIN rail 35mm
Weight		g	502
Conductor section			
AWG/kcmil conductor section	max		10
Auxiliary contact characteristics			
Thermal current I _{th}		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
Operations			
Mechanical life		cycles	20000000
Electrical life		cycles	2000000
Safety related data			
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
DC coil operating			
DC rated control voltage		V	24

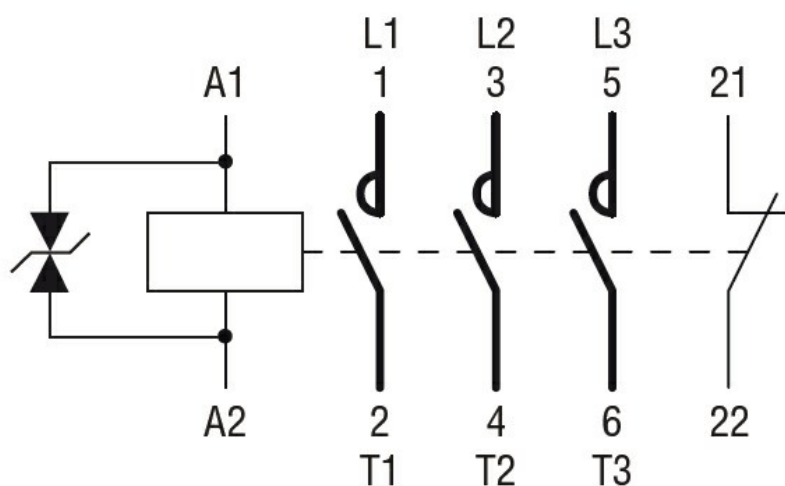
DC operating voltage				
pick-up	min	%Us	80	
	max	%Us	110	
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drop-out	min	%Us	10	
	max	%Us	40	
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Average coil consumption =20°C				
	in-rush	W	2.4	
	holding	W	2.4	
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Max cycles frequency				
Mechanical operation		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	
	<hr/>			
	in DC	Closing NO	min	ms 75
			max	ms 91
		Opening NO	min	ms 15
max			ms 19	
Closing NC		min	ms 24	
		max	ms 30	
Opening NC		min	ms 67	
		max	ms 81	
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UL technical data				
Full-load current (FLA) for three-phase AC motor				
		at 480V	A	7.6
	at 600V	A	0.375	
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Yielded mechanical performance				
for single-phase AC motor	110/120V	HP	0.75	
	230V	HP	2	
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for three-phase AC motor	200/208V	HP	3	
	220/230V	HP	3	
	460/480V	HP	5	
	575/600V	HP	7.5	

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
Short-circuit protection fuse, 600V				
High fault		Short circuit current	kA	100
		Fuse rating	A	30
		Fuse class		J
Standard fault		Short circuit current	kA	5
		Fuse rating	A	60
Contact rating of auxiliary contacts according to UL				A600 - P600
Ambient conditions				
Temperature				
Operating temperature		min	°C	-50
		max	°C	70
Storage temperature		min	°C	-60
		max	°C	80
Max altitude			m	3000
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 classification

ETIM 8.0

EC000066 -
Power contactor,
AC switching