



Product designation	Power contactor		
Product type designation	BF09		
Contact characteristics			
Number of poles	Nr.	3	
Rated insulation voltage Ui IEC/EN	V	690	
Rated impulse withstand voltage $Uimp$	kV	6	
Operational frequency	min	Hz	25
	max	Hz	400
IEC Conventional free air thermal current Ith		A	25
Operational current le			
	AC-1 ($\leq 40^{\circ}\text{C}$)	A	25
	AC-1 ($\leq 55^{\circ}\text{C}$)	A	20
	AC-1 ($\leq 70^{\circ}\text{C}$)	A	18
	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
IEC max current le in DC1 with $L/R \leq 1\text{ms}$ with 1 poles in series	$\leq 24\text{V}$	A	15
	48V	A	13
	75V	A	12
	110V	A	6
	220V	A	—
IEC max current le in DC1 with $L/R \leq 1\text{ms}$ with 2 poles in series	$\leq 24\text{V}$	A	18
	48V	A	18
	75V	A	17
	110V	A	12
	220V	A	1
IEC max current le in DC1 with $L/R \leq 1\text{ms}$ with 3 poles in series	$\leq 24\text{V}$	A	20
	48V	A	20
	75V	A	20
	110V	A	15

	220V	A	10
IEC max current I_e in DC1 with $L/R \leq 1\text{ms}$ with 4 poles in series			
$\leq 24V$	A	20	
48V	A	20	
75V	A	20	
110V	A	16	
220V	A	12	
IEC max current I_e in DC3-DC5 with $L/R \leq 15\text{ms}$ with 1 poles in series			
$\leq 24V$	A	10	
48V	A	9	
75V	A	8	
110V	A	2	
220V	A	—	
IEC max current I_e in DC3-DC5 with $L/R \leq 15\text{ms}$ with 2 poles in series			
$\leq 24V$	A	13	
48V	A	11	
75V	A	10	
110V	A	7	
220V	A	2	
IEC max current I_e in DC3-DC5 with $L/R \leq 15\text{ms}$ with 3 poles in series			
$\leq 24V$	A	15	
48V	A	15	
75V	A	13	
110V	A	11	
220V	A	6	
IEC max current I_e in DC3-DC5 with $L/R \leq 15\text{ms}$ with 4 poles in series			
$\leq 24V$	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)			
	I _{th}	W	1.6
	AC3	W	0.2
Tightening torque for terminals			
	min	Nm	1.5
	max	Nm	1.8
	min	I _{bin}	1.1
	max	I _{bin}	1.5
Tightening torque for coil terminal			
	min	Nm	0.8
	max	Nm	1
	min	I _{bin}	0.8

Max number of wires simultaneously connectable	max	lbin	0.74
Conductor section	Nr.	2	
AWG/Kcmil			
Flexible w/o lug conductor section	max		10
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	496	
Conductor section			
AWG/kcmil conductor section	max		10
Auxiliary contact characteristics			
Thermal current Ith	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 609474-4-1			yes
EMC compatibility			yes
DC coil operating			
DC rated control voltage	V	60	

DC operating voltage

pick-up	min	%Us	70
	max	%Us	125
drop-out	min	%Us	10
	max	%Us	40

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

in-rush	W	5.4
holding	W	5.4

Max cycles frequency

Mechanical operation cycles/h 3600

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

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 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

General USE

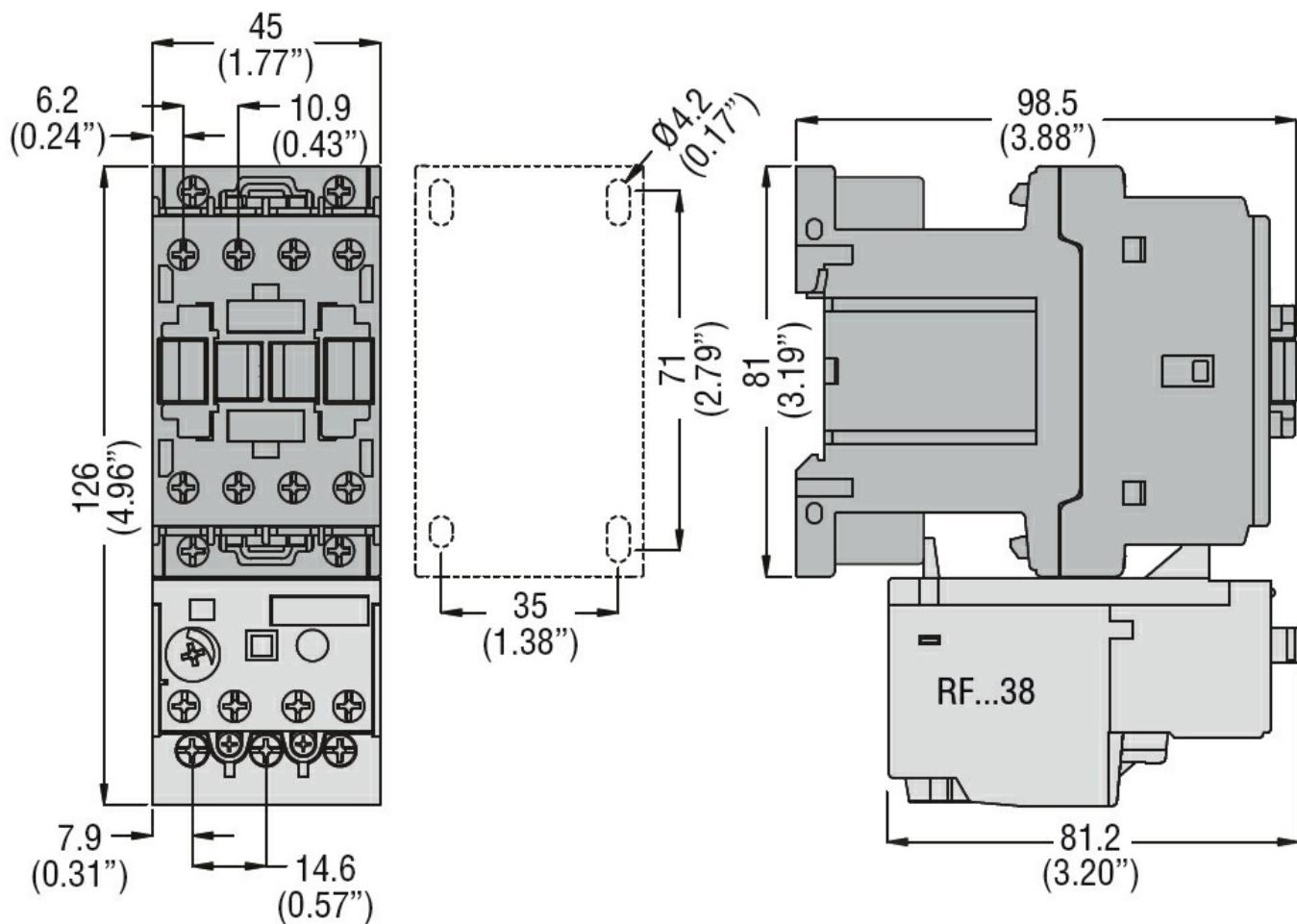
Contactor

AC current	A	25
------------	---	----

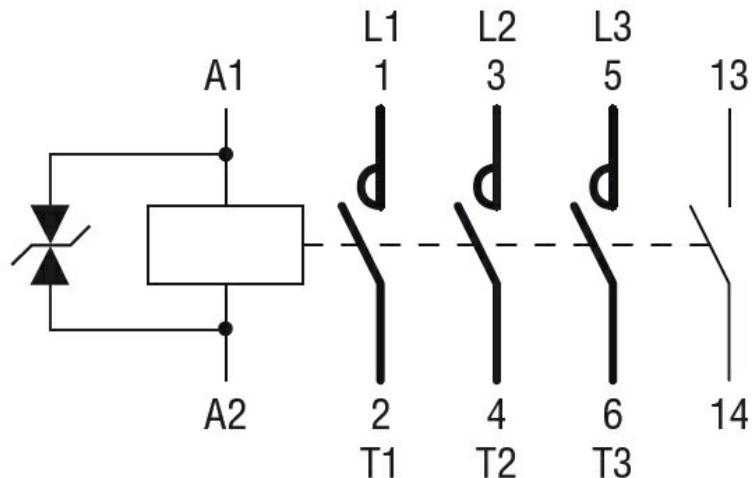
Auxiliary contacts

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 Fuse rating Fuse class	kA A J	100 30 J
Standard fault			
	Short circuit current Fuse rating	kA A	5 60
Contact rating of auxiliary contacts according to UL			A600 - P600
Ambient conditions			
Temperature			
Operating temperature	min max	°C °C	-50 70
Storage temperature	min max	°C °C	-60 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