



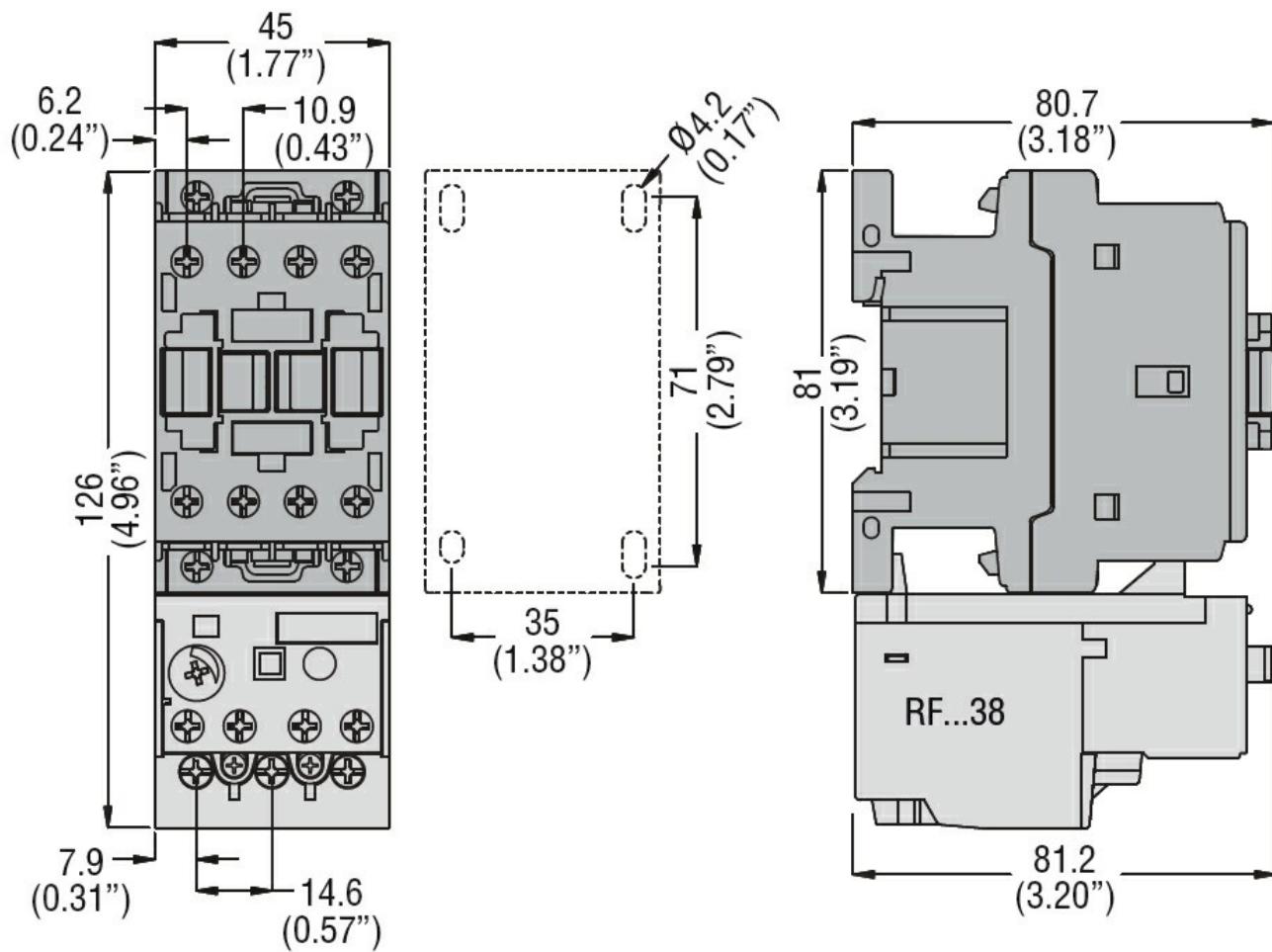
Product designation	Power contactor		
Product type designation	BF09		
Contact characteristics			
Number of poles	Nr.	3	
Rated insulation voltage U_i IEC/EN	V	690	
Rated impulse withstand voltage U_{imp}	kV	6	
Operational frequency	min	Hz	25
	max	Hz	400
IEC Conventional free air thermal current I_{th}	A	25	
Operational current I_e			
AC-1 ($\leq 40^\circ\text{C}$)	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 I_e 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 I_e 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 I_e 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	$\leq 24V$ 48V 75V 110V 220V	A	20 20 20 16 12
IEC max current I_e in DC3-DC5 with $L/R \leq 15\text{ms}$ with 1 poles in series	$\leq 24V$ 48V 75V 110V 220V	A	10 9 8 2 —
IEC max current I_e in DC3-DC5 with $L/R \leq 15\text{ms}$ with 2 poles in series	$\leq 24V$ 48V 75V 110V 220V	A	13 11 10 7 2
IEC max current I_e in DC3-DC5 with $L/R \leq 15\text{ms}$ with 3 poles in series	$\leq 24V$ 48V 75V 110V 220V	A	15 15 13 11 6
IEC max current I_e in DC3-DC5 with $L/R \leq 15\text{ms}$ with 4 poles in series	$\leq 24V$ 48V 75V 110V 220V	A	15 15 15 12 7
Short-time allowable current for 10s (IEC/EN60947-1)		A	150
Protection fuse	gG (IEC) aM (IEC)	A	25 10
Making capacity (RMS value)		A	90
Breaking capacity at voltage	440V 500V 690V	A	72 72 71
Resistance per pole (average value)		$\text{m}\Omega$	2.5
Power dissipation per pole (average value)	I _{th} AC-3	W	1.6 0.2
Tightening torque for terminals	min max min max	Nm Nm I _{bin} I _{bin}	1.5 1.8 1.1 1.5
Tightening torque for coil terminal	min max min	Nm Nm I _{bin}	0.8 1 0.8

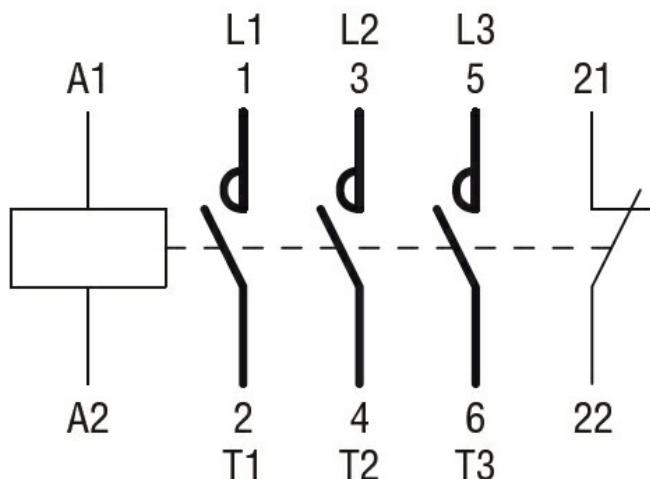
	max	Ibin	0.74			
Max number of wires simultaneously connectable	Nr. 2					
Conductor section						
AWG/Kcmil						
Flexible w/o lug conductor section	max	10				
	min	mm ²	1			
	max	mm ²	6			
Flexible c/w lug conductor section	min	mm ²	1			
	max	mm ²	4			
Flexible with insulated spade lug conductor section	min	mm ²	1			
	max	mm ²	4			
Power terminal protection according to IEC/EN 60529	IP20 when properly wired					
Mechanical features						
Operating position	normal allowable	Vertical plan ±30°				
Fixing	Screw / DIN rail 35mm					
Weight	g	352				
Auxiliary contact characteristics						
Thermal current I _{th}	A	10				
IEC/EN 60947-5-1 designation	A600 - P600					
Operating current AC15	230V 400V 500V	A	3 1.9 1.4			
Operating current DC12	110V	A	5.7			
Operating current DC13	24V 48V 60V 110V 125V 220V 600V	A	5.7 2.9 2.3 1.25 1.1 0.55 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 mechanical load	cycles	2000000 20000000			
Mirror contacts according to IEC/EN 609474-4-1	Yes					
EMC compatibility	yes					
AC coil operating						
Rated AC voltage at 60Hz	V	460				
AC operating voltage of 60Hz coil powered at 60Hz						

pick-up	min	%Us	80
	max	%Us	110
drop-out	min	%Us	20
	max	%Us	55
AC average coil consumption at 20°C of 60Hz coil powered at 60Hz			
	in-rush	VA	75
	holding	VA	9
Dissipation at holding ≤20°C 50Hz		W	2.5
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
UL technical data			
Rated operational voltage AC (UL)		V	600
Full-load current (FLA) for three-phase AC motor			
	at 480V	A	7.6
	at 600V	A	9
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	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 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/BS 60947-1

IEC/EN/BS 60947-4-1

UL 60947-1

UL 60947-4-1

Certificates

CCC

cULus

EAC

ETIM classification

ETIM 8.0

EC000066 -
Power contactor,
AC switching