



Product designation

Power contactor

Product type designation

BF09

Contact characteristics

Number of poles	Nr.	4
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-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 Ω	2.5
Power dissipation per pole (average value)	I_{th}	W 1.6
	AC-3	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	lbin 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
properly wired

Mechanical features

Operating position

	normal allowable	Vertical plan ±30°
Fixing		Screw / DIN rail 35mm
Weight	g	360

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
EMC compatibility			yes

AC coil operating

Rated AC voltage at 50/60Hz	V	110
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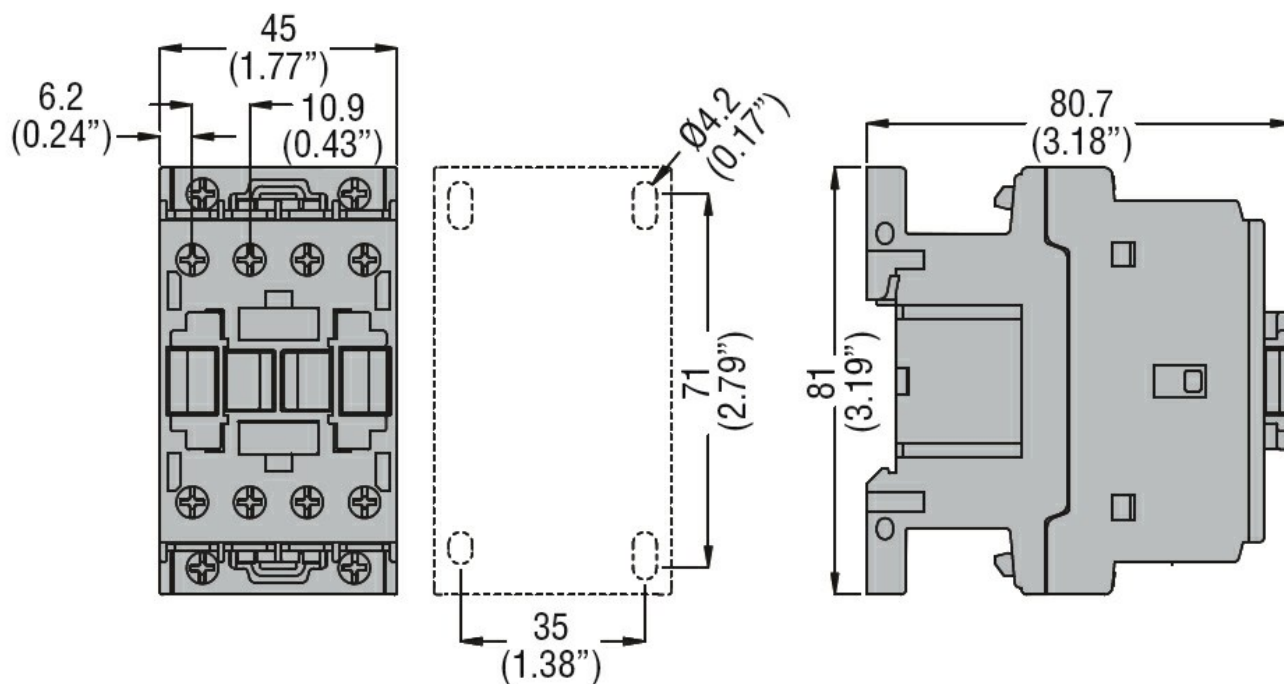
AC operating voltage

of 50/60Hz coil powered at 50Hz			
pick-up	min	%Us	80
	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

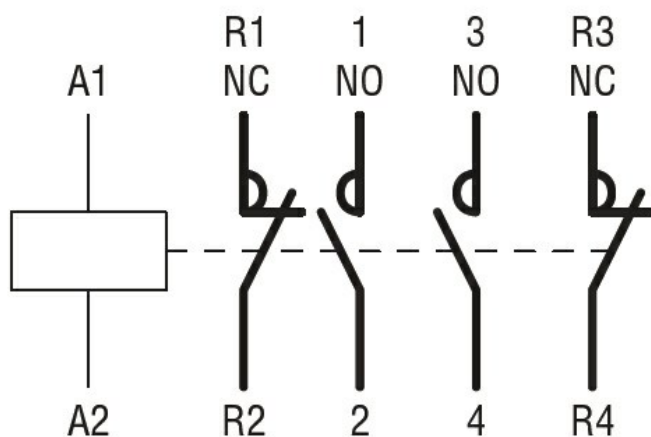
AC average coil consumption at 20°C

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 holding	VA VA	75 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 max	ms ms	8 24
	Opening NO	min max	ms ms	10 20
	Closing NC	min max	ms ms	14 28
	Opening NC	min max	ms ms	7 18
UL technical data				
Rated operational voltage AC (UL)			V	600
Full-load current (FLA) for three-phase AC motor		at 480V at 600V	A A	7.6 9
Yielded mechanical performance				
	for single-phase AC motor	110/120V 230V	HP HP	0.8 2
	for three-phase AC motor	200/208V 220/230V 460/480V 575/600V	HP HP HP HP	3 3 5 7.5
General USE				
	Contactor	AC current	A	25
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