



Product designation
Product type designation

Power contactor
BF09

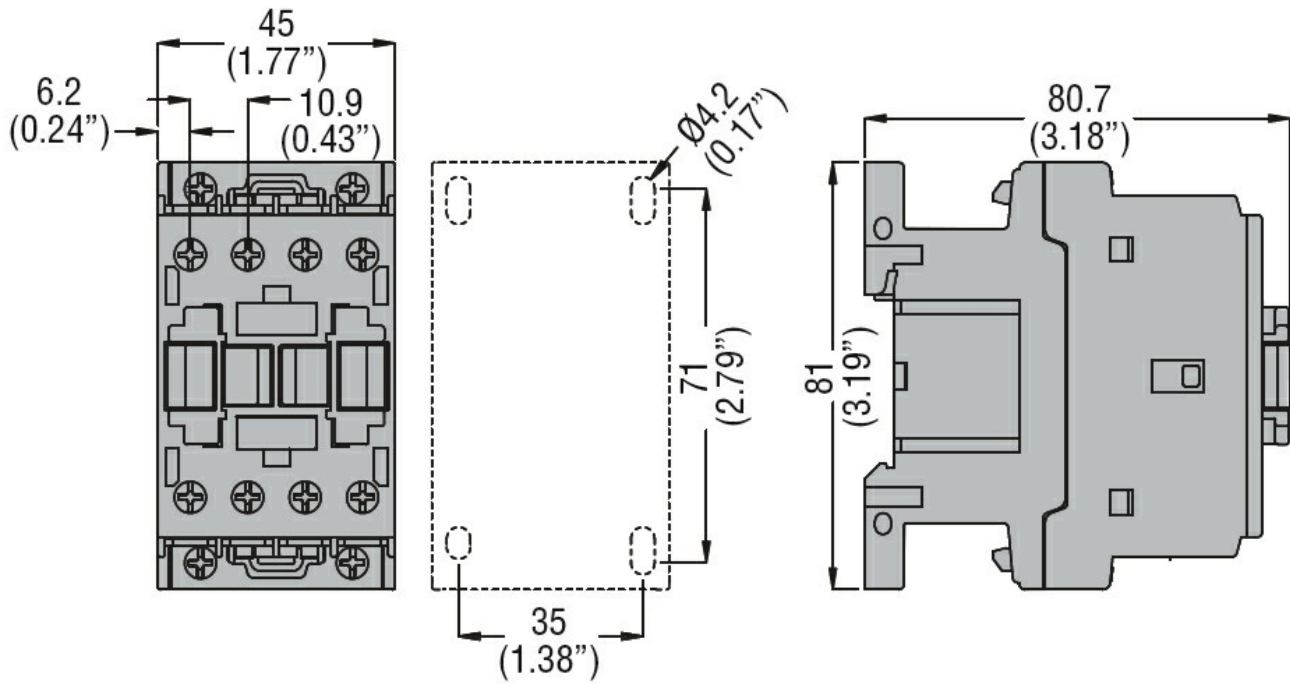
Contact characteristics

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 (=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-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 I_e 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

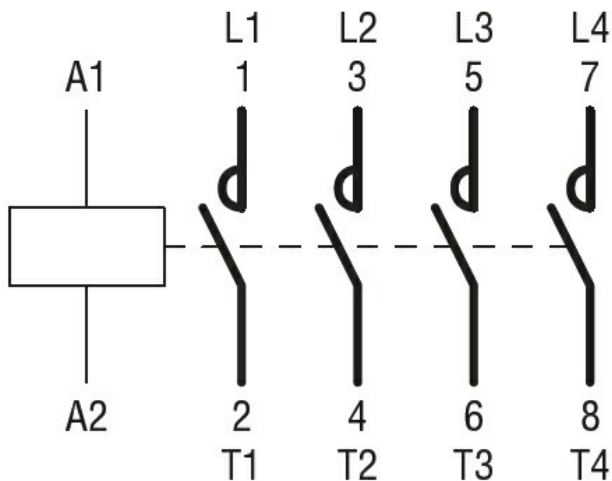
IEC max current I _e in DC3-DC5 with L/R = 15ms with 1 poles in series	=24V	A	10
	48V	A	9
	75V	A	8
	110V	A	2
	220V	A	–
	IEC max current I _e in DC3-DC5 with L/R = 15ms with 2 poles in series	=24V	A
48V		A	11
75V		A	10
110V		A	7
220V		A	2
IEC max current I _e in DC3-DC5 with L/R = 15ms with 3 poles in series		=24V	A
	48V	A	15
	75V	A	13
	110V	A	11
	220V	A	6
	IEC max current I _e in DC3-DC5 with L/R = 15ms with 4 poles in series	=24V	A
48V		A	15
75V		A	15
110V		A	12
220V		A	7
Short-time allowable current for 10s (IEC/EN60947-1)			A
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	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	356
Conductor section			
AWG/kcmil conductor section	max		10
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
		cycles	20000000
Mirror contacts according to IEC/EN 60947-4-1			yes
EMC compatibility			yes
AC coil operating			
Rated AC voltage at 50/60Hz		V	230
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	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		
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
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
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/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