



Product designation  
Product type designation

Power contactor  
BG09

### Contact characteristics

Number of poles	nr.	4
Rated insulation voltage $U_i$	V	690
Rated impulse withstand voltage $U_{imp}$	kV	6
Operating frequency		
	Operational frequency min	Hz 25
	Operational frequency max	Hz 400
Conventional free air thermal current $I_{th}$	A	20
Operating current		
	Operational current AC1 ( $\leq 40^\circ\text{C}$ )	A 20
	Operational current AC3 ( $\leq 440\text{V} \leq 55^\circ\text{C}$ )	A 9
	Operational current AC4 (400V)	A 4
Rated operational power AC1 ( $T \leq 40^\circ\text{C}$ )		
	230V kW	8
	400V kW	14
	500V kW	16
	690V kW	22
Rated operational power AC3A ( $T \leq 55^\circ\text{C}$ )		
	Rated operational power AC3 ( $T \leq 55^\circ\text{C}$ ) 230V kW	2.2
	Rated operational power AC3 ( $T \leq 55^\circ\text{C}$ ) 400V kW	4
	Rated operational power AC3 ( $T \leq 55^\circ\text{C}$ ) 415V kW	4.3
	Rated operational power AC3 ( $T \leq 55^\circ\text{C}$ ) 440V kW	4.5
	Rated operational power AC3 ( $T \leq 55^\circ\text{C}$ ) 500V kW	5
	Rated operational power AC3 ( $T \leq 55^\circ\text{C}$ ) 690V kW	5
Short-time allowable current for 10s (IEC/EN60947-1)	A	96
Protection fuse		
	gG (IEC)	A 20
	aM (IEC)	A 10
Making capacity (RMS value)	A	92
Breaking capacity at voltage		
	Breaking capacity 440V	A 72
	Breaking capacity 500V	A 72
	Breaking capacity 690V	A 72
Resistance per pole (average value)	m $\Omega$	10
Power dissipation per pole (average value)		
	Power dissipation pole (average value) $I_{th}$	W 4
	AC3	W 0.81
Tightening torque for terminals		
	min Nm	0.8
	max Nm	1
	min lbft	0.59
	max lbft	0.74
Tightening torque for coil terminal		

		min	Nm	0.8
		max	Nm	1
		min	lbft	0.8
		max	lbft	0.74
max number of wires simultaneously connectable		nr.		2
Conductor section				
	AWG			
		min		18
		max		12
Flexible w/o lug conductor section				
		min	mm <sup>2</sup>	0.75
		max	mm <sup>2</sup>	2.5
Flexible c/w lug conductor section				
		min	mm <sup>2</sup>	1.5
		max	mm <sup>2</sup>	2.5
Flexible with insulated spade lug conductor section				
		min	mm <sup>2</sup>	1.5
		max	mm <sup>2</sup>	2.5
Power terminal protection according to IEC/EN 60529				IP20 when wired
Auxiliary contact characteristics				
Operational current AC1 (≤40°C)			A	20
Operating current DC13				
		110V	A	Screw / DIN rail 35mm
Ambient conditions				
Temperature				
	Operating temperature			
		min	°C	-40
		max	°C	60
	Storage temperature			
		min	°C	-55
		max	°C	70
Max altitude			m	3000
Operating position				
		normal allowable		Vertical plan ±30°
Mounting				Screw / DIN rail 35mm
Weight			g	0.183
Operations				
Mechanical life			Cycles	20000000
Electrical life			Cycles	500000
Safety related data				
Performance level B10d according to EN/ISO 13489-1				
		rated load	Cicli	500000
		mechanical load	Cicli	20000000
Mirror contacts according to IEC/EN 60947-4-1				yes
EMC compatibility				yes
AC coil operating				
AC operating voltage				
	of 50/60Hz coil powered at 50Hz pick-up			
		min	%Us	0.75

	drop-out	max	%Us	1.15
		min	%Us	0.2
	of 50/60Hz coil powered at 60Hz	max	%Us	0.55
		pick-up	min	%Us
	drop-out		max	%Us
		of 60Hz coil powered at 60Hz	min	%Us
	pick-up		max	%Us
		drop-out	min	%Us
			max	%Us
		AC operating voltage		
	of 50/60Hz coil powered at 50Hz	in-rush	VA	30
		holding	VA	4
	of 50/60Hz coil powered at 60Hz	in-rush	VA	25
		holding	VA	3
	of 60Hz coil powered at 60Hz	in-rush	VA	30
		holding	VA	4
	Dissipation at holding ≤20°C 50Hz		W	0.95
	DC coil operating			
DC rated control voltage				
	max	V	480	
DC operating voltage				
Average coil consumption ≤20°C				
	in-rush	W	3.2	
	holding	W	3.2	
Max cycles frequency				
Mechanical operations			Cycles/h 3600	
Operating times				
Average time for Us control				
in AC				
	Closing NO	min	ms	12
		max	ms	21
	Opening NO	min	ms	9
		max	ms	18
	Closing NC	min	ms	17
		max	ms	26
	Opening NC	min	ms	7
		max	ms	17
UL technical data				

Full-load current (FLA) for three-phase AC motor

at 480V	A	7.6
at 600V	A	6.1

Yielded mechanical performance

for single-phase AC motor

at 110/120V	hp	0.5
at 230V	hp	1.5

for three-phase AC motor

at 200/208V	hp	2
at 220/230V	hp	3
at 460/480V	hp	5
at 575/600V	hp	5

General USE

Contactor

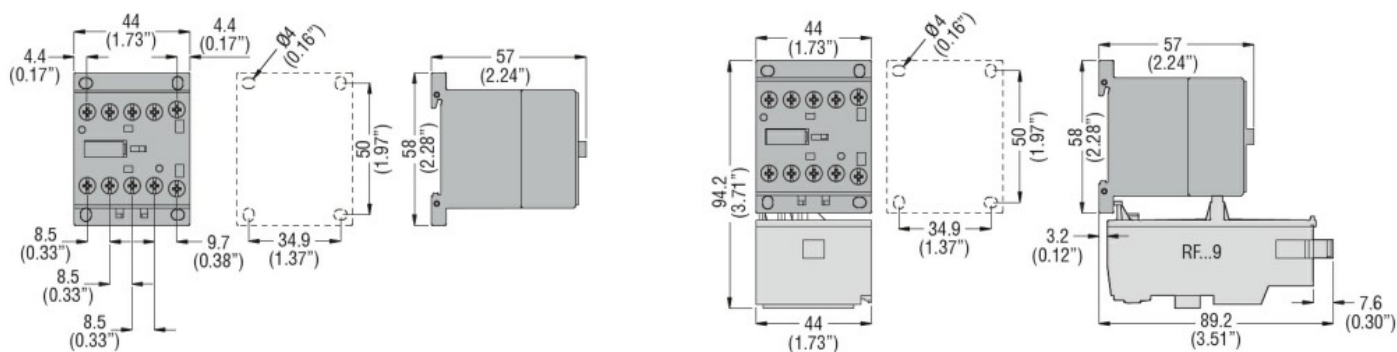
AC current	A	20
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Other features

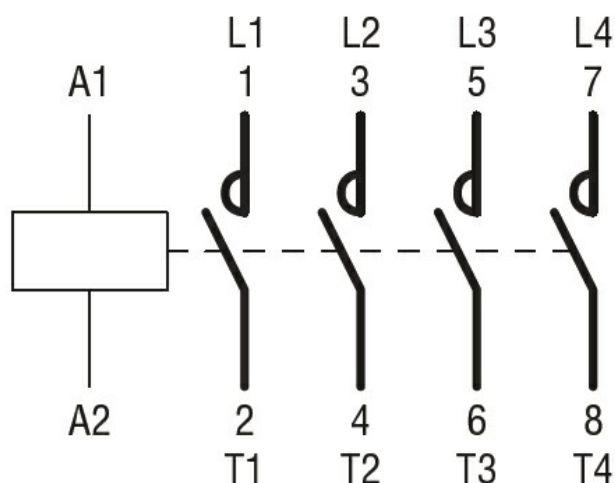
Pollution degree

3

Dimensions



Wiring diagrams



Certifications and compliance

Certifications

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

Compliance

CCC

cULus

EAC

ETIM 6 classification

EC000066 - Power contactor, AC switching