



Product designation

Power contactor

Product type designation

BGF09

**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	20
Operational current $I_e$	AC-1 ( $\leq 40^\circ\text{C}$ )	A 20
	AC-1 ( $\leq 55^\circ\text{C}$ )	A 18
	AC-1 ( $\leq 70^\circ\text{C}$ )	A 15
	AC-3 ( $\leq 440\text{V } \leq 55^\circ\text{C}$ )	A 9
	AC-4 (400V)	A 4
Rated operational power AC-1 ( $T \leq 40^\circ\text{C}$ )	230V	kW 8
	400V	kW 14
	500V	kW 16
	690V	kW 22
IEC max current $I_e$ in DC1 with $L/R \leq 1\text{ms}$ with 1 poles in series	$\leq 24\text{V}$	A 12
	48V	A 10
	75V	A 4
	110V	A 3
	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 15
	48V	A 14
	75V	A 9
	110V	A 8
	220V	A –
IEC max current $I_e$ in DC1 with $L/R \leq 1\text{ms}$ with 3 poles in series	$\leq 24\text{V}$	A 16
	48V	A 16
	75V	A 10
	110V	A 10
	220V	A 2
IEC max current $I_e$ in DC1 with $L/R \leq 1\text{ms}$ with 4 poles in series	$\leq 24\text{V}$	A 16
	48V	A 16
	75V	A 10
	110V	A 10
	220V	A 2

IEC max current I <sub>e</sub> in DC3-DC5 with L/R ≤ 15ms with 1 poles in series			
≤24V	A	7	
48V	A	6	
75V	A	2	
110V	A	1	
220V	A	–	
IEC max current I <sub>e</sub> in DC3-DC5 with L/R ≤ 15ms with 2 poles in series			
≤24V	A	8	
48V	A	8	
75V	A	5	
110V	A	4	
220V	A	–	
IEC max current I <sub>e</sub> in DC3-DC5 with L/R ≤ 15ms with 3 poles in series			
≤24V	A	10	
48V	A	10	
75V	A	6	
110V	A	5	
220V	A	0,8	
IEC max current I <sub>e</sub> in DC3-DC5 with L/R ≤ 15ms with 4 poles in series			
≤24V	A	10	
48V	A	10	
75V	A	6	
110V	A	5	
220V	A	0,8	
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			
	440V	A	72
	500V	A	72
	690V	A	72
Resistance per pole (average value)		mΩ	10
Power dissipation per pole (average value)			
	I <sub>th</sub>	W	4
	AC-3	W	0.81
Tightening torque for terminals			
	min	Nm	0.8
	max	Nm	1
	min	I <sub>bin</sub>	9
	max	I <sub>bin</sub>	9
Tightening torque for coil terminal			
	min	Nm	0.8
	max	Nm	1
	min	I <sub>bin</sub>	9
	max	I <sub>bin</sub>	9
Max number of wires simultaneously connectable		Nr.	2
Conductor section			
AWG/Kcmil			
	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 properly wired
<b>Mechanical features</b>			
Operating position	normal allowable		Vertical plan ±30°
Fixing			Screw / DIN rail 35mm
Weight		g	181
<b>Auxiliary contact characteristics</b>			
Thermal current I <sub>th</sub>		A	10
IEC/EN 60947-5-1 designation			A600
<b>Operations</b>			
Mechanical life		cycles	20000000
Electrical life		cycles	500000
<b>Safety related data</b>			
Performance level B10d according to EN/ISO 13489-1	rated load mechanical load	cycles	500000
		cycles	20000000
EMC compatibility			yes
<b>AC coil operating</b>			
Rated AC voltage at 50/60Hz		V	230
AC operating voltage			
of 50/60Hz coil powered at 50Hz			
pick-up	min	%Us	75
	max	%Us	115
drop-out	min	%Us	20
	max	%Us	55
of 50/60Hz coil powered at 60Hz			
pick-up	min	%Us	80
	max	%Us	115
drop-out	min	%Us	20
	max	%Us	55
AC average coil consumption at 20°C			
of 50/60Hz coil powered at 50Hz	in-rush holding	VA	30
		VA	4
of 50/60Hz coil powered at 60Hz	in-rush holding	VA	25
		VA	3
of 60Hz coil powered at 60Hz	in-rush holding	VA	30
		VA	4

Dissipation at holding $\leq 20^{\circ}\text{C}$ 50Hz		W	0.95
Max cycles frequency			
Mechanical operation		cycles/h	3600
Operating times			
Average time for $U_s$ 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
in DC			
Closing NO		min	ms 18
		max	ms 25
Opening NO		min	ms 2
		max	ms 3
Closing NC		min	ms 3
		max	ms 5
Opening NC		min	ms 11
		max	ms 17
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 6.1
Yielded mechanical performance			
for single-phase AC motor		110/120V	HP 0.5
		230V	HP 1.5
for three-phase AC motor		200/208V	HP 2
		220/230V	HP 3
		460/480V	HP 5
		575/600V	HP 5
General USE			
Contactor		AC current	A 20
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	30

#### Ambient conditions

##### Temperature

##### Operating temperature

min	°C	-50
max	°C	+70

##### Storage temperature

min	°C	-60
max	°C	+80

##### Max altitude

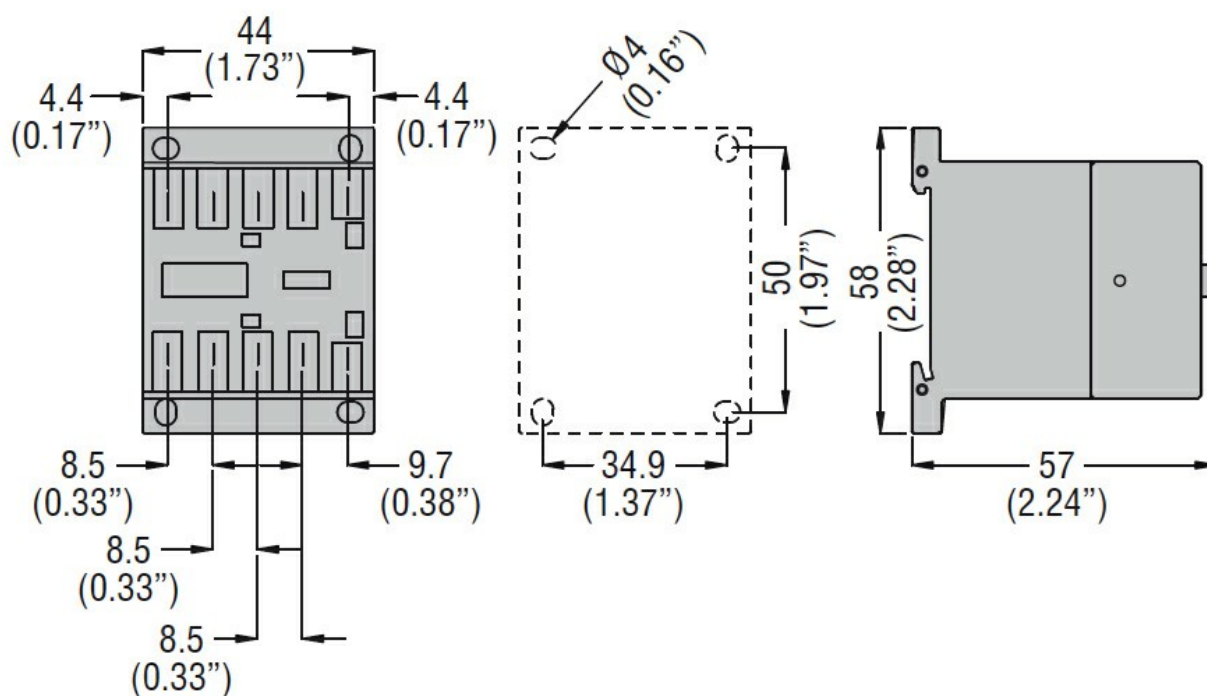
m	3000
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#### Resistance & Protection

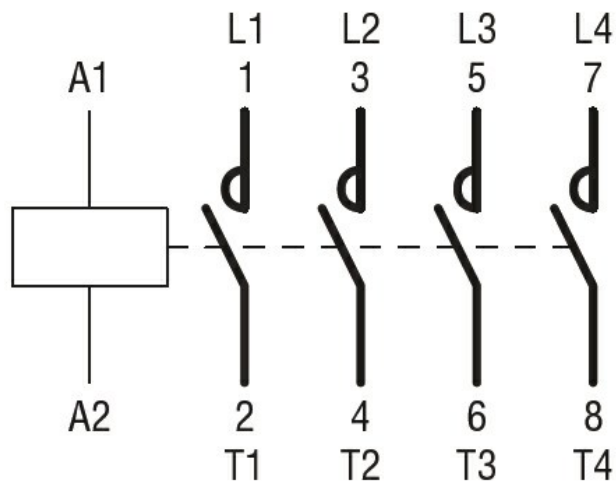
##### Pollution degree

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