



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 max	Hz Hz 25 400
IEC Conventional free air thermal current I_{th}	A	20
Operational current I_e	AC-1 ($\leq 40^\circ\text{C}$) AC-3 ($\leq 440\text{V}$ $\leq 55^\circ\text{C}$) AC-4 (400V)	A A A 20 9 4
Rated operational power AC-1 ($T \leq 40^\circ\text{C}$)	230V 400V 500V 690V	kW kW kW kW 8 14 16 22
IEC max current I_e in DC1 with $L/R \leq 1\text{ms}$ with 1 poles in series	$\leq 24\text{V}$ 48V 75V 110V 220V	A A A A A 12 10 4 3 –
IEC max current I_e in DC1 with $L/R \leq 1\text{ms}$ with 2 poles in series	$\leq 24\text{V}$ 48V 75V 110V 220V	A A A A A 15 14 9 8 –
IEC max current I_e in DC1 with $L/R \leq 1\text{ms}$ with 3 poles in series	$\leq 24\text{V}$ 48V 75V 110V 220V	A A A A A 16 16 10 10 2
IEC max current I_e in DC1 with $L/R \leq 1\text{ms}$ with 4 poles in series	$\leq 24\text{V}$ 48V 75V 110V 220V	A A A A A 16 16 10 10 2
IEC max current I_e in DC3-DC5 with $L/R \leq 15\text{ms}$ with 1 poles in series	$\leq 24\text{V}$	A 7

	48V	A	6
	75V	A	2
	110V	A	1
	220V	A	—
IEC max current I _e 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 _e 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 _e 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 _{th}	W	4
	AC3	W	0.81
Tightening torque for terminals			
	min	Nm	0.8
	max	Nm	1
	min	lbin	9
	max	lbin	9
Tightening torque for coil terminal			
	min	Nm	0.8
	max	Nm	1
	min	lbin	9
	max	lbin	9
Max number of wires simultaneously connectable		Nr.	2
Conductor section			
AWG/Kcmil			
	max		12
Flexible w/o lug conductor section			
	min	mm ²	0.75
	max	mm ²	2.5
Flexible c/w lug conductor section			

	min	mm ²	1.5
	max	mm ²	2.5
Flexible with insulated spade lug conductor section			
	min	mm ²	1.5
	max	mm ²	2.5
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	210
Conductor section			
	AWG/kcmil conductor section		
	max		12
Auxiliary contact characteristics			
Thermal current I _{th}		A	10
IEC/EN 60947-5-1 designation			Q600
Operations			
Mechanical life		cycles	20000000
Electrical life		cycles	500000
Safety related data			
Performance level B10d according to EN/ISO 13489-1			
	rated load	cycles	500000
	mechanical load	cycles	20000000
Mirror contacts according to IEC/EN 60947-4-1			yes
EMC compatibility			yes
DC coil operating			
DC rated control voltage		V	110
DC operating voltage			
	pick-up		
	min	%U _s	75
	max	%U _s	115
	drop-out		
	min	%U _s	10
	max	%U _s	25
Average coil consumption ≤20°C			
	in-rush	W	3.2
	holding	W	3.2
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

in DC	Opening NC	max	ms	26
		min	ms	7
		max	ms	17
	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

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
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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

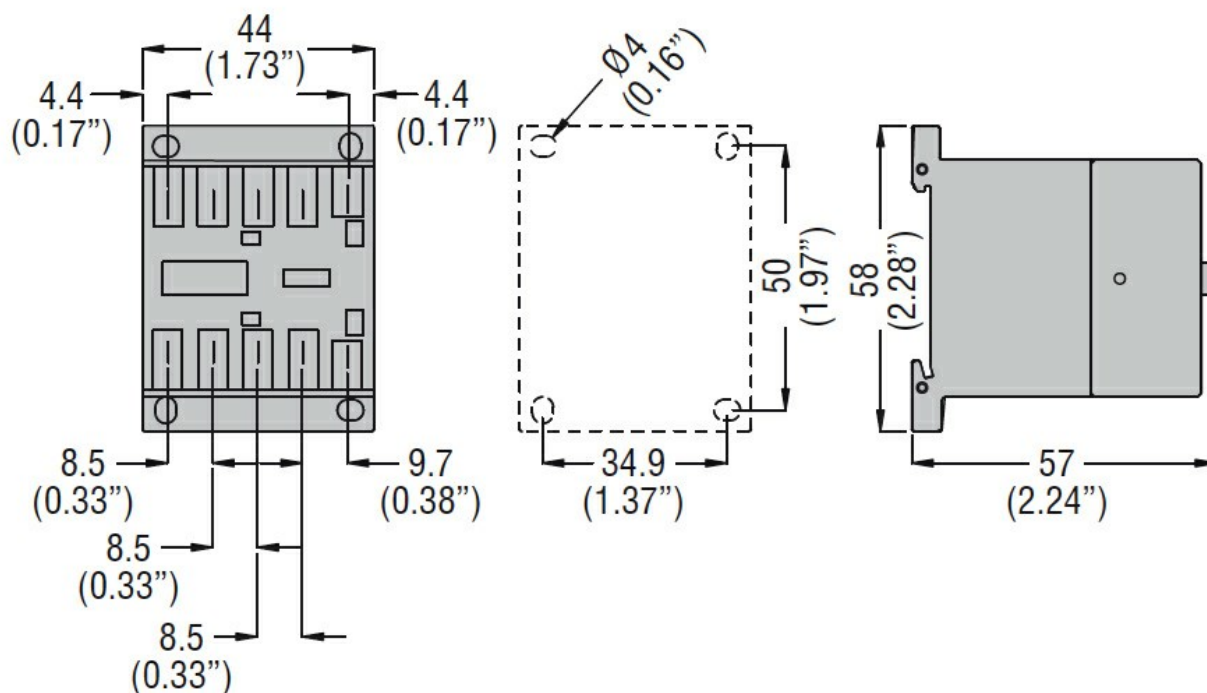
m	3000
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Resistance & Protection

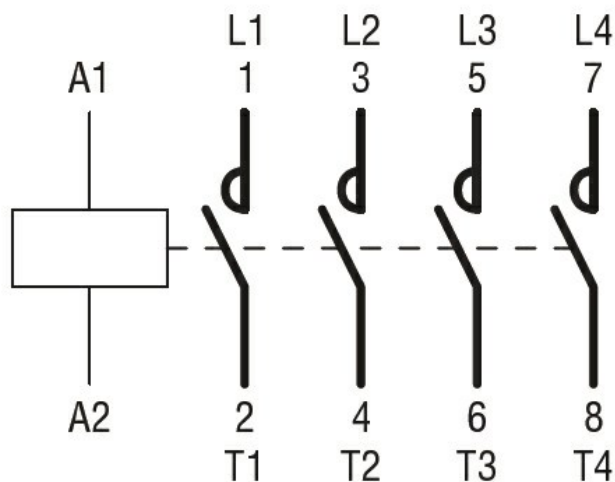
Pollution degree

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