



Product designation	Power contactor		
Product type designation	BGF09		
<b>Contact characteristics</b>			
Number of poles	Nr.	4	
Rated insulation voltage Ui IEC/EN	V	690	
Rated impulse withstand voltage Uimp	kV	6	
Operational frequency	min	Hz	25
	max	Hz	400
IEC Conventional free air thermal current Ith	A	20	
Operational current Ie			
	AC-1 ( $\leq 40^{\circ}\text{C}$ )	A	160
	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 Ie 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 Ie 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 Ie 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 Ie 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 Ie 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 $L/R \leq 15\text{ms}$ 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 $L/R \leq 15\text{ms}$ 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 $L/R \leq 15\text{ms}$ 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)		m?	10
Power dissipation per pole (average value)			
	I <sub>th</sub>	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 <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
<b>Mechanical features</b>			
Operating position	normal allowable		Vertical plan ±30°
Fixing			Screw / DIN rail 35mm
Weight	g		210
Conductor section			
AWG/kcmil conductor section	max		12
<b>Auxiliary contact characteristics</b>			
Thermal current I <sub>th</sub>	A		10
IEC/EN 60947-5-1 designation			Q600
<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 20000000
Mirror contacts according to IEC/EN 609474-4-1			yes
EMC compatibility			yes
<b>DC coil operating</b>			
DC rated control voltage	V		48
DC operating voltage			
pick-up	min max	%Us	75 115
drop-out	min max	%Us	10 25
Average coil consumption ≤20°C	in-rush holding	W	3.2 3.2
<b>Max cycles frequency</b>			
Mechanical operation		cycles/h	3600
<b>Operating times</b>			
Average time for Us control			
in AC			
Closing NO	min max	ms	12 21
Opening NO	min max	ms	9 18
Closing NC	min	ms	17

Opening NC	max	ms	26
	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**

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

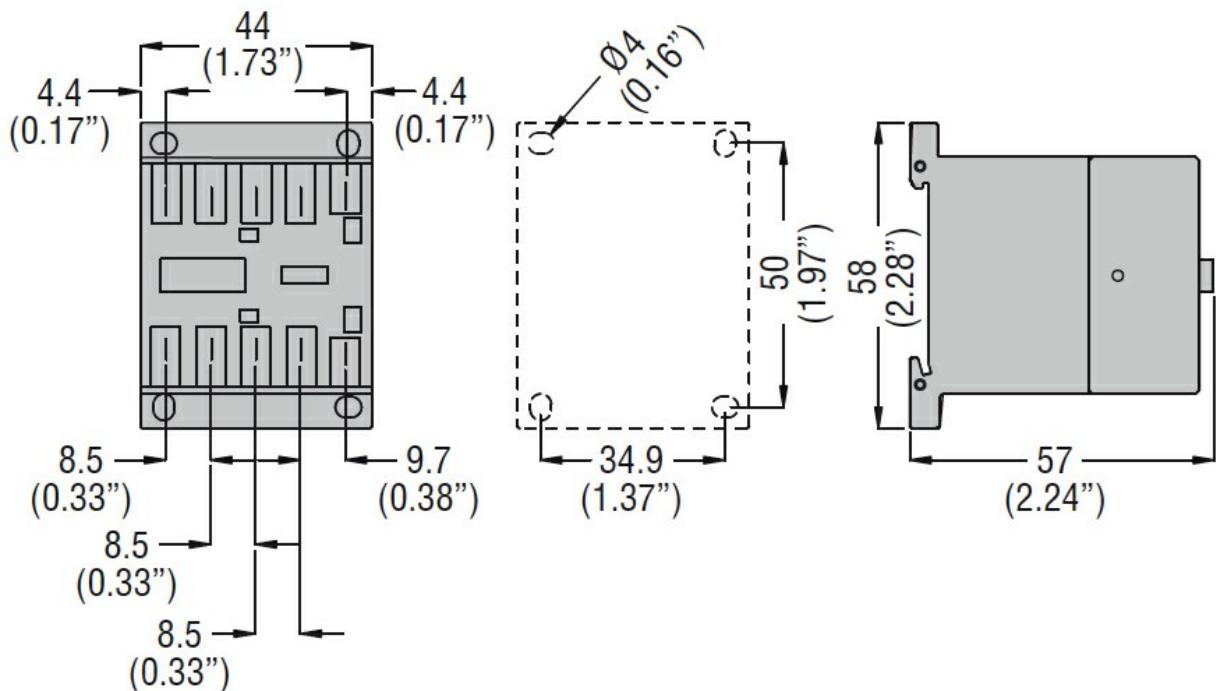
m 3000

Resistance & Protection

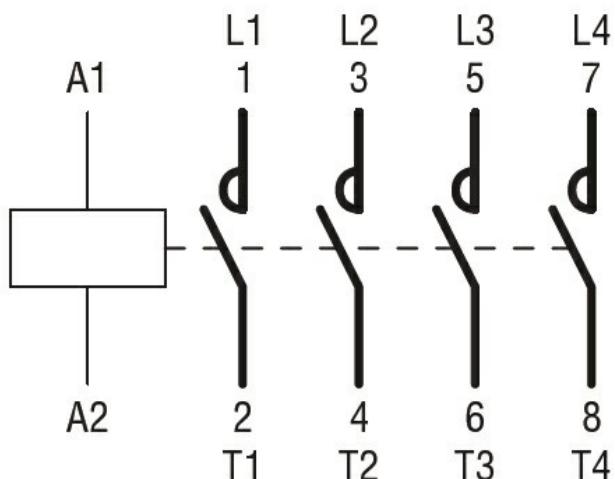
3

Pollution degree

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