



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

$\leq 24\text{V}$	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

$\leq 24\text{V}$	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

$\leq 24\text{V}$	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)

$\text{m}\Omega$  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

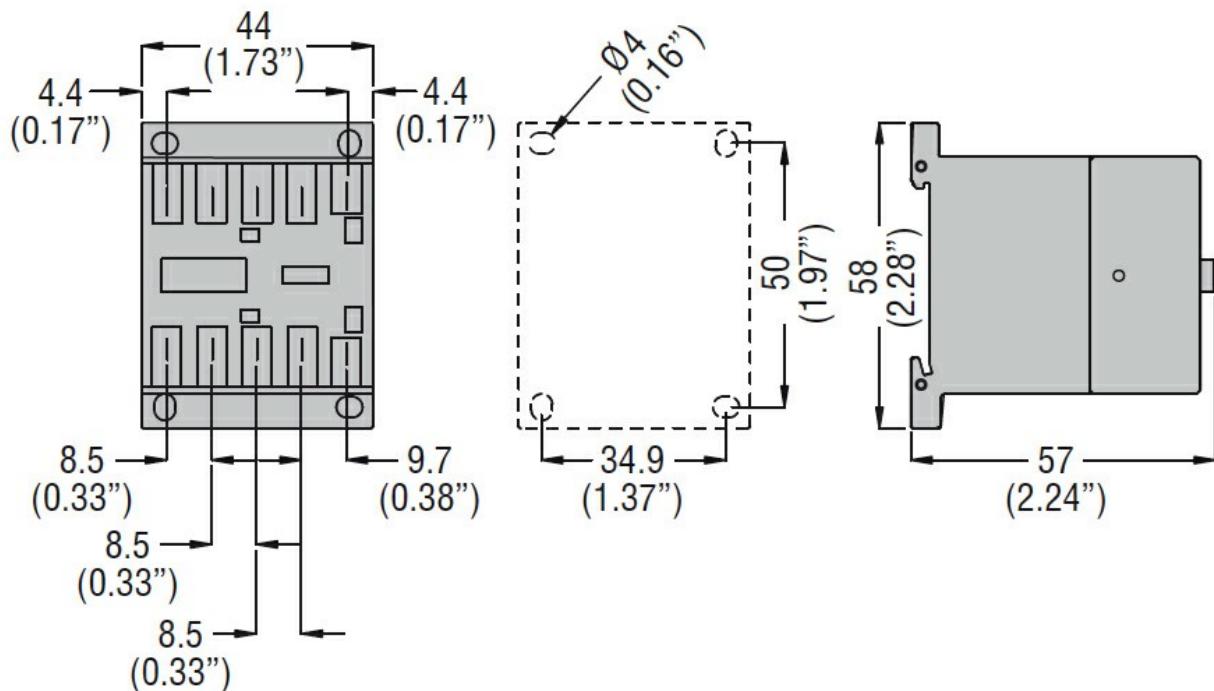
Nr. 2

Conductor section

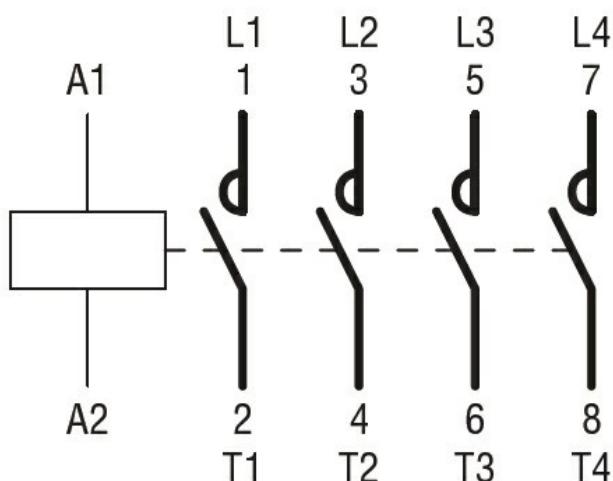
AWG/Kcmil	max	12
Flexible w/o lug conductor section	min	$\text{mm}^2$ 0.75

	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		210
<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
		cycles	20000000
EMC compatibility			yes
<b>DC coil operating</b>			
DC rated control voltage	V		110
DC operating voltage			
pick-up	min max	%Us %Us	75 115
drop-out	min max	%Us %Us	10 25
Average coil consumption ≤20°C			
	in-rush holding	W 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 ms	12 21
Opening NO			
	min max	ms ms	9 18
Closing NC			
	min max	ms ms	17 26
Opening NC			

		min	ms	7
		max	ms	17
<b>in DC</b>				
	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
<b>UL technical data</b>				
<b>Rated operational voltage AC (UL)</b>		V	600	
<b>Full-load current (FLA) for three-phase AC motor</b>				
		at 480V	A	7.6
		at 600V	A	6.1
<b>Yielded mechanical performance</b>				
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
<b>General USE</b>				
Contactor				
		AC current	A	20
<b>Short-circuit protection fuse, 600V</b>				
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
<b>Ambient conditions</b>				
<b>Temperature</b>				
Operating temperature				
		min	°C	-50
		max	°C	+70
Storage temperature				
		min	°C	-60
		max	°C	+80
<b>Max altitude</b>				
		m	3000	
<b>Resistance &amp; Protection</b>				
<b>Pollution degree</b>				3
<b>Dimensions</b>				



#### 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