



Product designation	Power contactor		
Product type designation	BGF09		
<b>Contact characteristics</b>			
Number of poles	Nr.	3	
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-3 ( $T \leq 55^\circ\text{C}$ )	230V	kW	2.2
	400V	kW	4
	415V	kW	4.3
	440V	kW	4.5
	500V	kW	5
	690V	kW	5
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			
≤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			
≤24V	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)		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	Ibin	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 - Q600
Operating current AC15			
	230V	A	3
	400V	A	1.9
	500V	A	1.4
Operating current DC12	110V	A	2.9
Operating current DC13			
	24V	A	2.9
	48V	A	1.4
	60V	A	1.1
	125V	A	0.3
	220V	A	0.1
	600V	A	0.6
<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	cycles	500000
	mechanical load	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

THREE-POLE CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 9A, AC COIL 50/60HZ,  
 230VAC, 1NO AUXILIARY CONTACT, FASTON TERMINALS

		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	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
Max cycles frequency				
Mechanical operation			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
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
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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

Contact rating of auxiliary contacts according to UL

A600 - Q600

Ambient conditions

Temperature

Operating temperature

min	°C	-50
max	°C	+70

Storage temperature

min	°C	-60
max	°C	+80

Max altitude

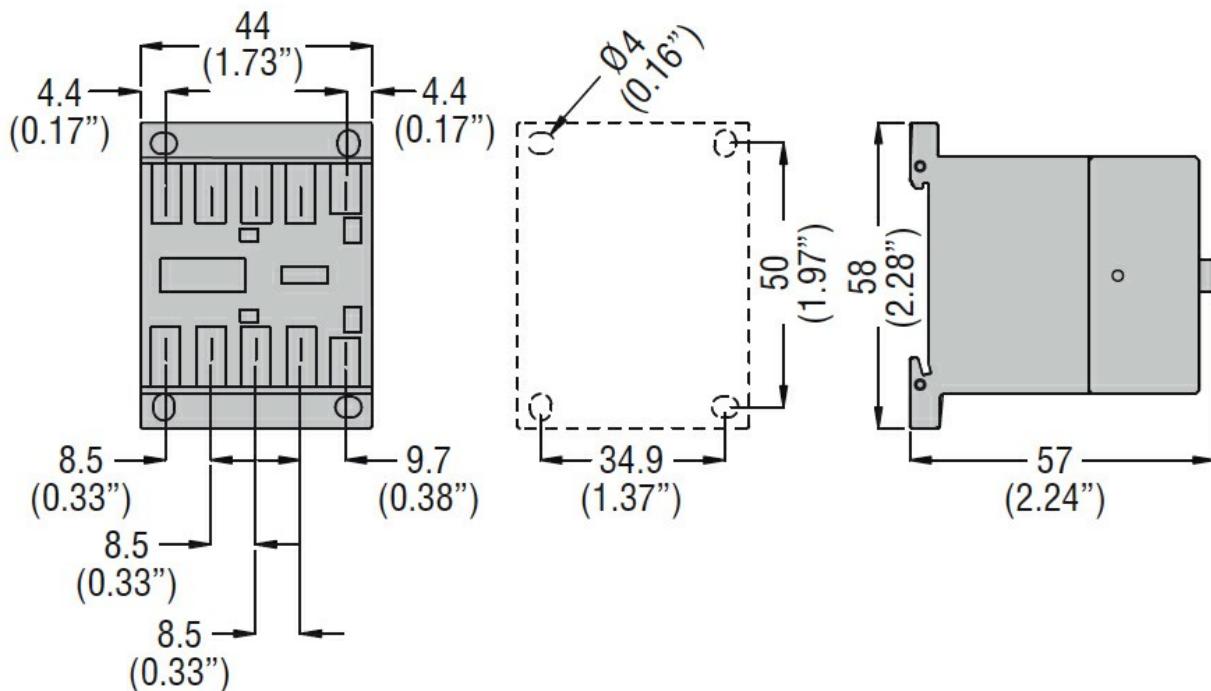
m 3000

Resistance & Protection

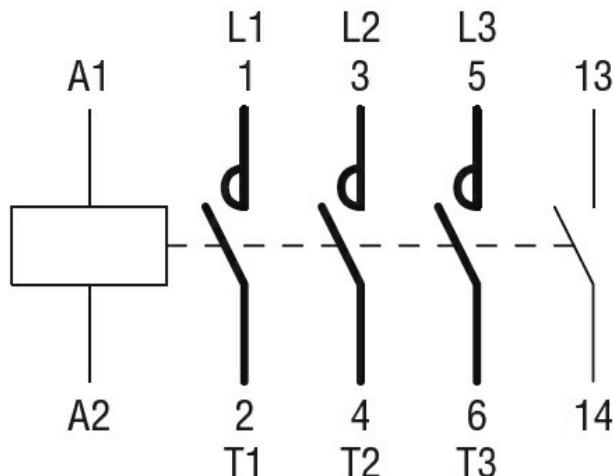
Pollution degree

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