



Product designation

Power contactor

Product type designation

BGF09

Contact characteristics

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 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-1 ($\leq 55^\circ\text{C}$) AC-1 ($\leq 70^\circ\text{C}$) AC-3 ($\leq 440\text{V} \leq 55^\circ\text{C}$) AC-4 (400V)	A A A A A 20 18 15 9 4
Rated operational power AC-3 ($T \leq 55^\circ\text{C}$)	230V 400V 415V 440V 500V 690V	kW kW kW kW kW kW 2.2 4 4.3 4.5 5 5
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

$\leq 24\text{V}$	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
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Protection fuse

gG (IEC)	A	20
aM (IEC)	A	10

Making capacity (RMS value)

A	92
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Breaking capacity at voltage

440V	A	72
500V	A	72
690V	A	72

Resistance per pole (average value)

mΩ	10
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Power dissipation per pole (average value)

I_{th}	W	4
AC-3	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 properly wired
Mechanical features				
Operating position				
			normal allowable	Vertical plan ±30°
Fixing				Screw / DIN rail 35mm
Weight			g	179
Conductor section				
AWG/kcmil conductor section				
			max	12
Auxiliary contact characteristics				
Thermal current I _{th}			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
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
AC coil operating				
Rated AC voltage at 60Hz			V	24
AC operating voltage				

of 60Hz coil powered at 60Hz
pick-up

min	%Us	75
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
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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

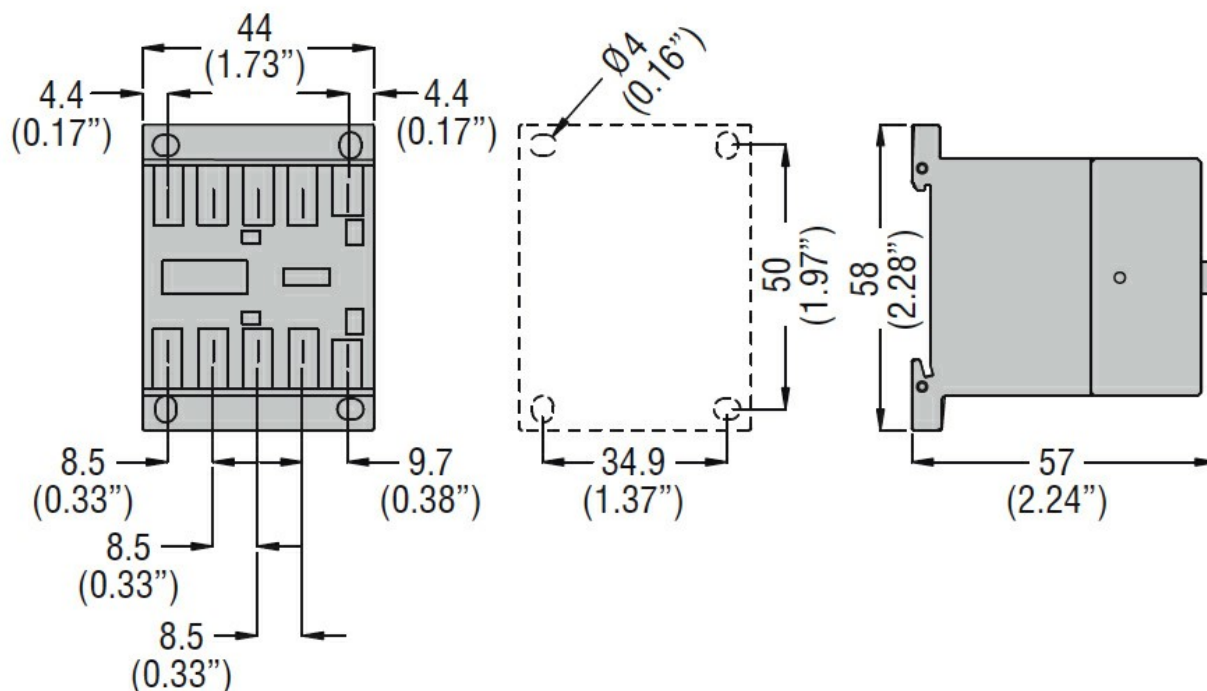
Full-load current (FLA) for three-phase AC motor

at 480V	A	7.6
at 600V	A	6.1

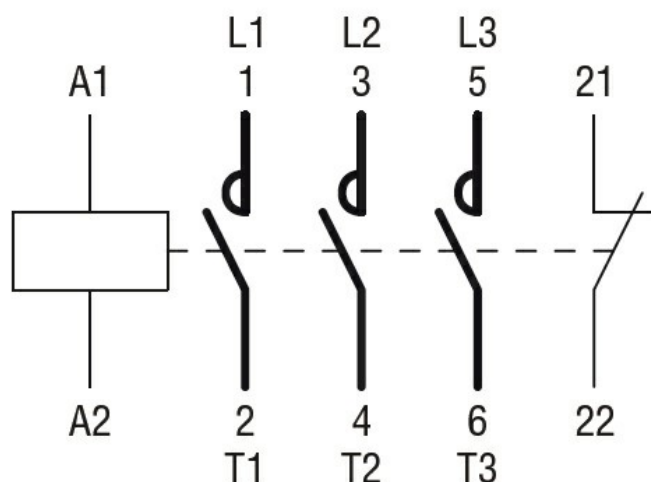
Yielded mechanical performance

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
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