



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	Hz	25
	max	Hz	400
IEC Conventional free air thermal current I_{th}	A	20	
Operational current I_e			
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-3 ($T \leq 55^\circ C$)	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 ($T \leq 40^\circ C$)	230V	kW	8
	400V	kW	14
	500V	kW	16
	690V	kW	22
IEC max current I_e 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 I_e 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 I_e 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 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 _{th}	W	4	
AC-3	W	0.81	
Tightening torque for terminals			
min	Nm	0.8	
max	Nm	1	
min	Ibin	9	
max	Ibin	9	
Tightening torque for coil terminal			
min	Nm	0.8	
max	Nm	1	
min	Ibin	9	

	max	Ibin	9
Max number of wires simultaneously connectable	Nr.	2	
Conductor section			
AWG/Kcmil			
Flexible w/o lug conductor section	max		12
	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	211	
Auxiliary contact characteristics			
Thermal current Ith	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 mechanical load	cycles	500000 20000000
EMC compatibility			yes
DC coil operating			
DC rated control voltage	V	24	
DC operating voltage	pick-up	min max	%Us %Us
		75 115	

drop-out	min	%Us	10
	max	%Us	25
Average coil consumption $\leq 20^{\circ}\text{C}$			
	in-rush	W	3.2
	holding	W	3.2
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
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

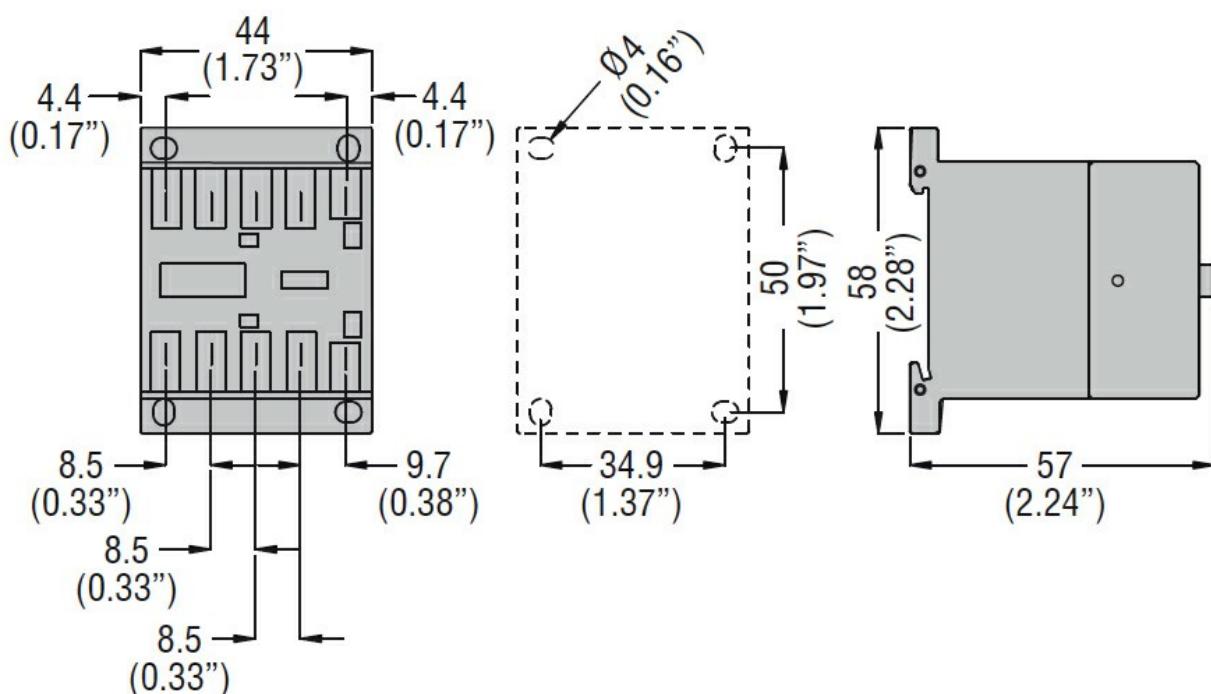
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Resistance & Protection

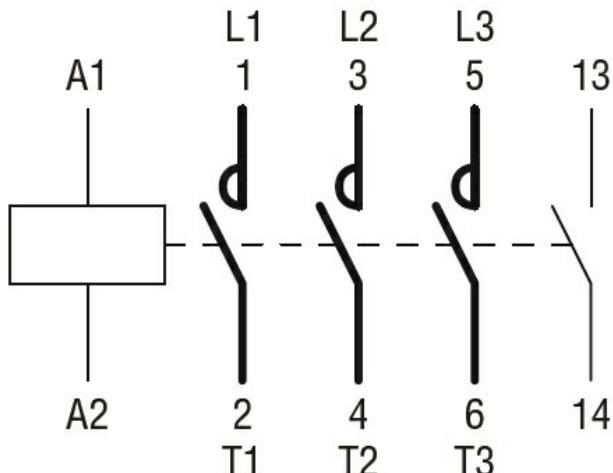
Pollution degree

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