



Product designation
Product type designation

Power contactor
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 ($\leq 40^\circ\text{C}$)	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 Ie in DC1 with L/R ≤ 1ms with 4 poles in series	≤24V	A	16	
	48V	A	16	
	75V	A	10	
	110V	A	10	
	220V	A	2	
	IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 1 poles in series	≤24V	A	7
48V		A	6	
75V		A	2	
110V		A	1	
220V		A	–	
IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 2 poles in series		≤24V	A	8
	48V	A	8	
	75V	A	5	
	110V	A	4	
	220V	A	–	
	IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 3 poles in series	≤24V	A	10
48V		A	10	
75V		A	6	
110V		A	5	
220V		A	0,8	
IEC max current Ie in DC3-DC5 with L/R ≤ 15ms 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	
		A	92	
Making capacity (RMS value)		A	92	
Breaking capacity at voltage	440V	A	72	
	500V	A	72	
	690V	A	72	
		mΩ	10	
Resistance per pole (average value)				
Power dissipation per pole (average value)	Ith	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		
	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	
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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
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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

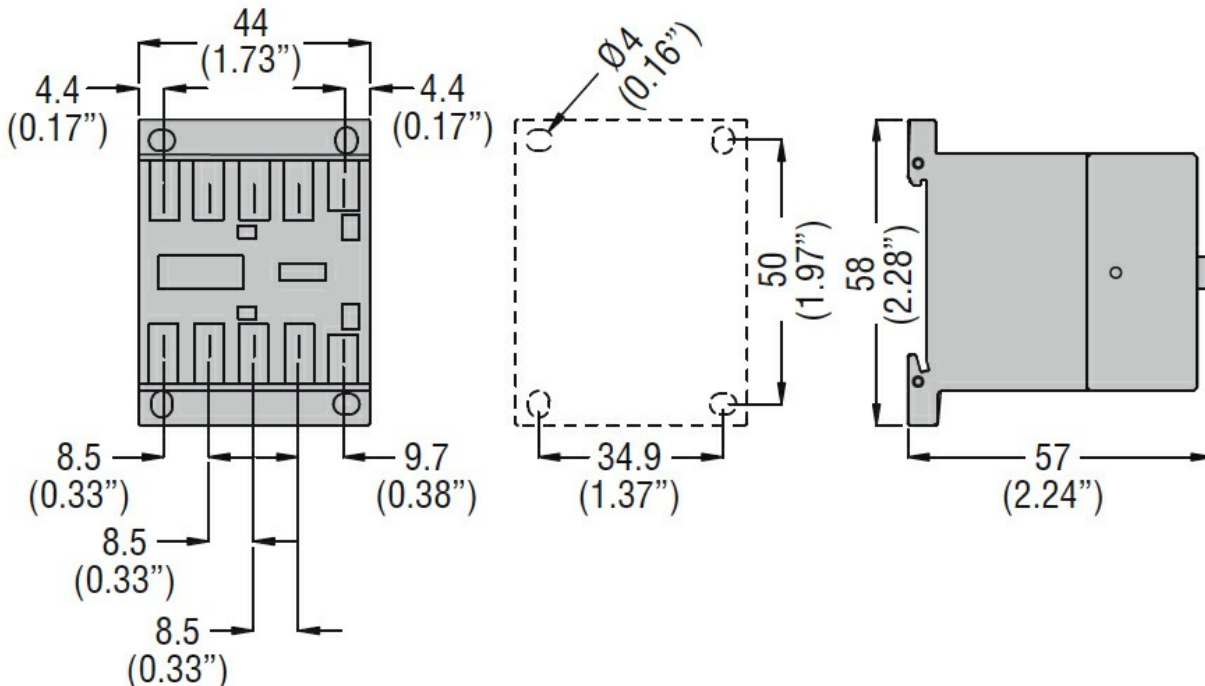
m 3000

Resistance & Protection

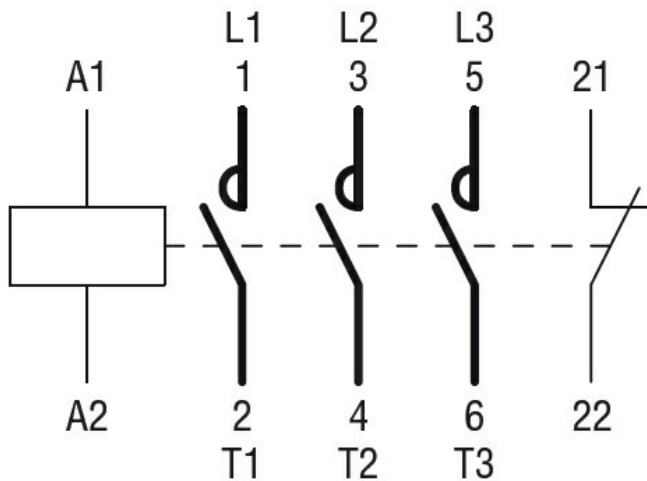
Pollution degree

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