



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 ($\leq 40^\circ\text{C}$)	A	20
	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
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IEC max current I _e 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	–
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IEC max current I _e 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	–
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IEC max current I _e 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
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IEC max current I _e 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
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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
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Making capacity (RMS value)		A	92
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Breaking capacity at voltage	440V	A	72
	500V	A	72
	690V	A	72
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Resistance per pole (average value)		mΩ	10
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Power dissipation per pole (average value)	I _{th}	W	4
	AC3	W	0.81
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Tightening torque for terminals	min	Nm	0.8
	max	Nm	1
	min	lbin	0.6
	max	lbin	0.7
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Tightening torque for coil terminal	min	Nm	0.8
	max	Nm	1
	min	lbft	0.59
	max	lbft	0.74
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Max number of wires simultaneously connectable		nr.	2

Conductor section

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 wired

Mechanical features

Operating position

normal allowable	Vertical plan ±30°
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Fixing

Screw / DIN rail 35mm

Weight

g 220

Auxiliary contact characteristics

Type of contact

1 NO

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
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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

DC coil operating

DC rated control voltage

V 12

DC operating voltage

pick-up

min	%U _s	75
max	%U _s	115

drop-out

min	%U _s	10
max	%U _s	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
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Operating times

Average time for U_s 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

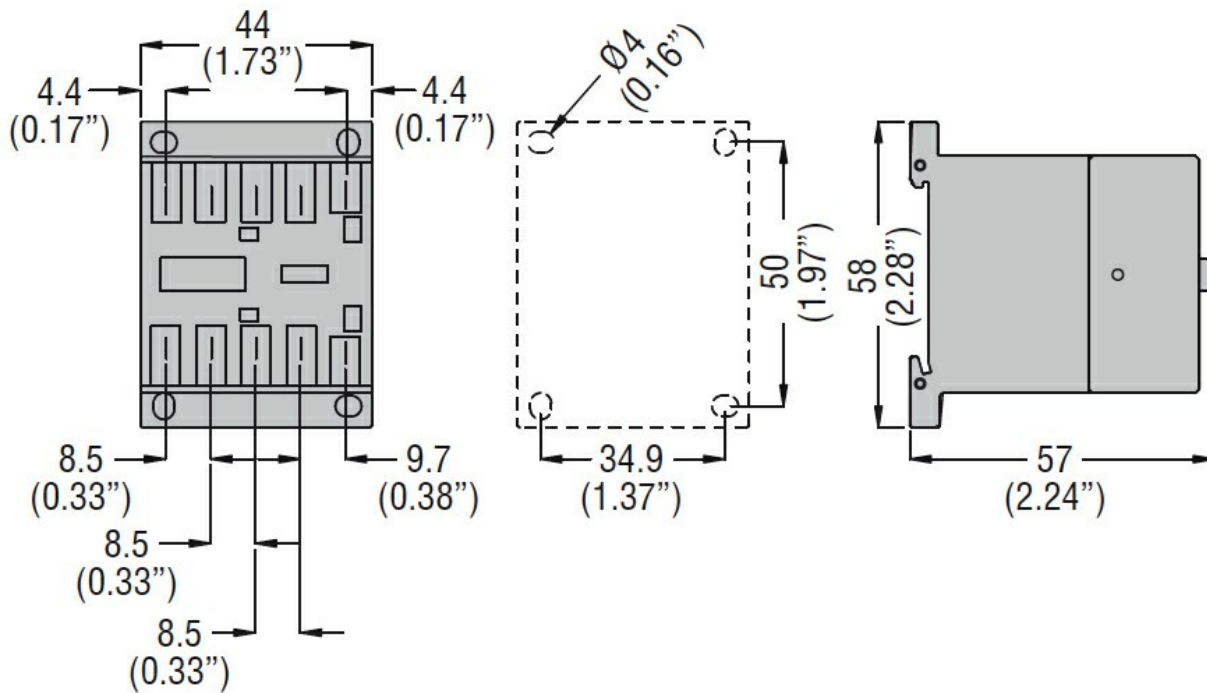
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Resistance & Protection

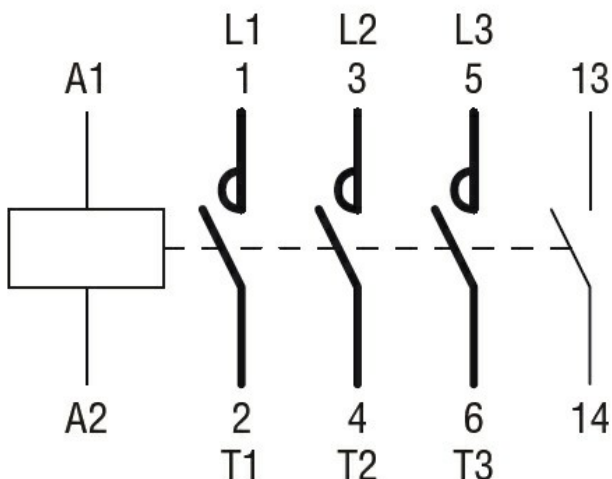
Pollution degree

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