



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 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-3 ($\leq 440\text{V} \leq 55^\circ\text{C}$) AC-4 (400V)	A A A 160 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		

	≤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
Making capacity (RMS value)		A	92
Breaking capacity at voltage			
	440V	A	72
	500V	A	72
	690V	A	72
Resistance per pole (average value)		m?	10
Power dissipation per pole (average value)			
	Ith	W	4
	AC3	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 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	120
AC operating voltage			
of 60Hz coil powered at 60Hz pick-up			

drop-out	min	%Us	75
	max	%Us	115
	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			
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

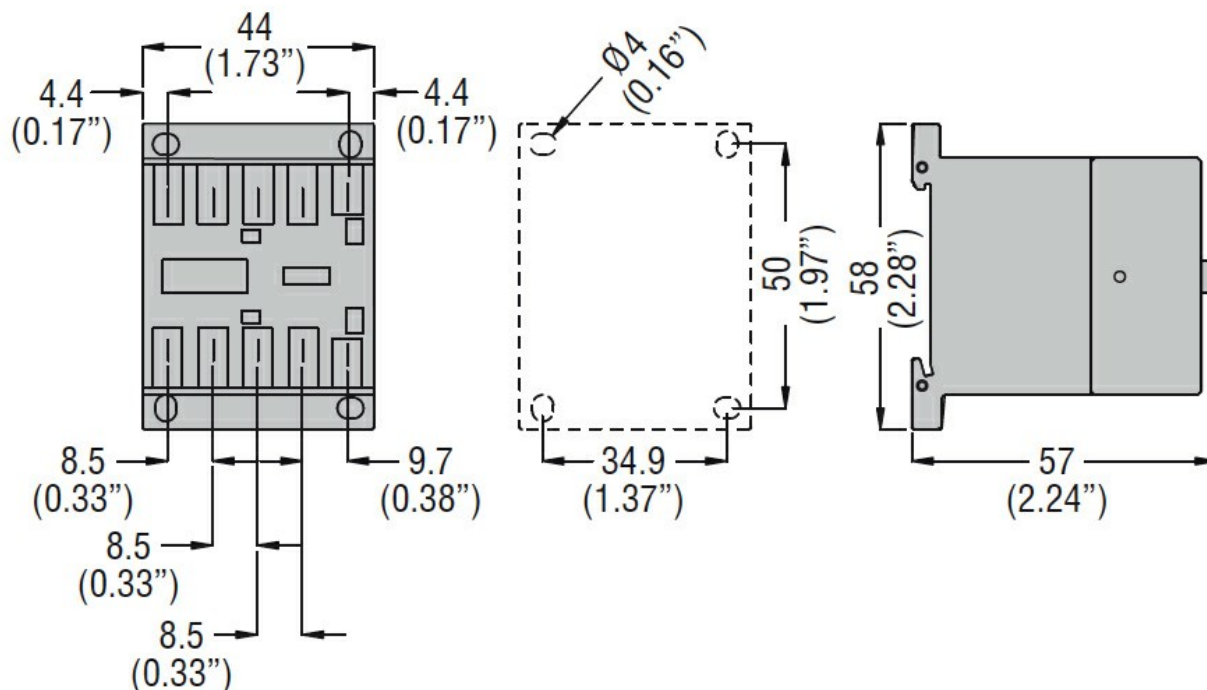
m 3000

Resistance & Protection

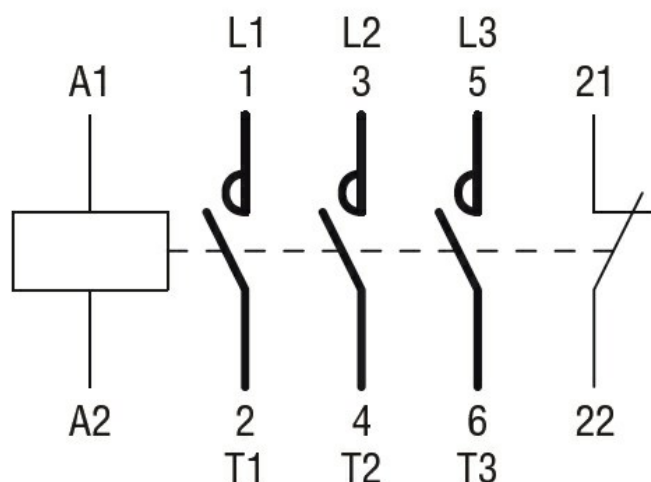
Pollution degree

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