



Product designation				Power contactor
Product type designation				BG09
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 (=40°C)	A	20	
	AC-1 (=55°C)	A	0	
	AC-3 (=440V =55°C)	A	9	
	AC-4 (400V)	A	4	
Rated operational power AC-3 (T=55°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=40°C)	230V	kW	8	
	400V	kW	14	
	500V	kW	16	
	690V	kW	22	
IEC max current I _e in DC1 with L/R = 1ms with 1 poles in series	=24V	A	12	
	48V	A	10	
	75V	A	4	
	110V	A	3	
	220V	A	–	
	IEC max current I _e in DC1 with L/R = 1ms with 2 poles in series	=24V	A	15
48V		A	14	
75V		A	9	
110V		A	8	
220V		A	–	
IEC max current I _e in DC1 with L/R = 1ms with 3 poles in series		=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 = 1ms 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 = 15ms 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 = 15ms 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 = 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 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

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)

m?	10
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Power dissipation per pole (average value)

I _{th}	W	4
AC3	W	0.81

Tightening torque for terminals

min	Nm	0.8
max	Nm	1
min	I _{bin}	9
max	I _{bin}	9

Tightening torque for coil terminal

min	Nm	0.8
max	Nm	1
min	I _{bin}	9
max	I _{bin}	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	180
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 1.2
		110V	A 0.6
		125V	A 0.55
		220V	A 0.3
		600V	A 0.1
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	460
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

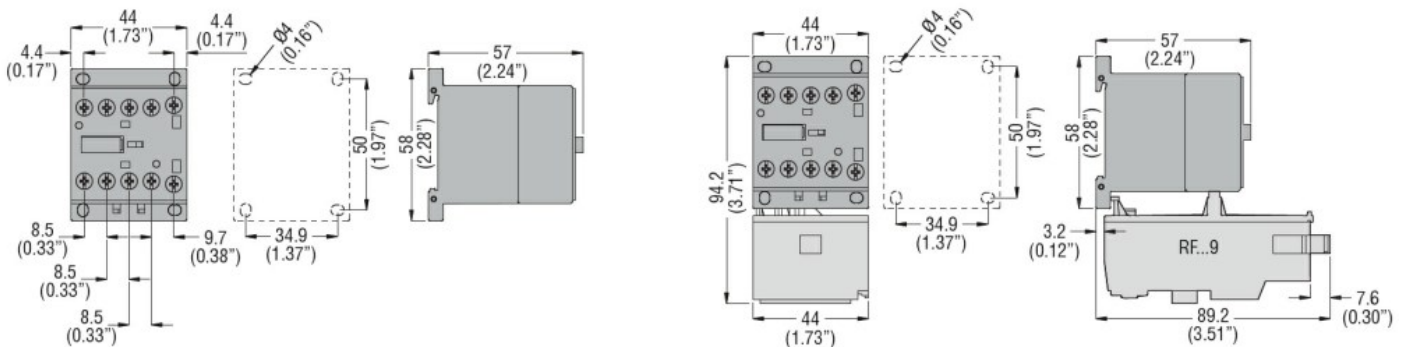
m 3000

Resistance & Protection

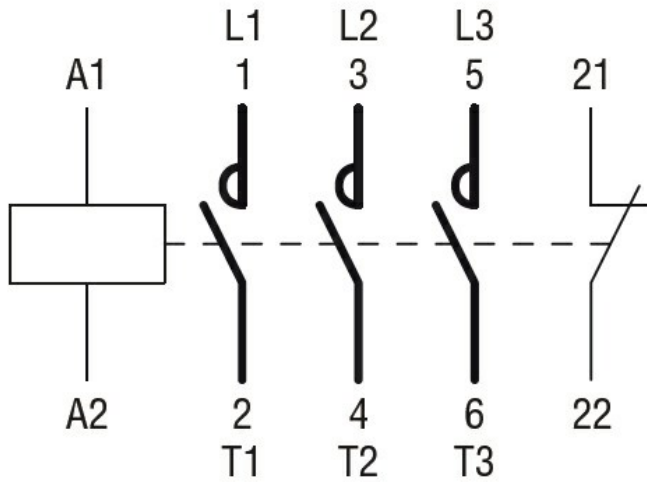
Pollution degree

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