



Product designation				Power contactor
Product type designation				BG12
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-3 (=440V =55°C)	A		12
	AC-4 (400V)	A		4.8
Rated operational power AC-3 (T=55°C)	230V	kW		3.2
	400V	kW		5.7
	415V	kW		6.2
	440V	kW		5.5
	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	
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	
	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	
48V		A		16
75V		A		10
110V		A		10
220V		A		2

	=24V	A	–
	48V	A	–
	75V	A	–
	110V	A	–
	220V	A	–
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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	–
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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	–
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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
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IEC max current Ie in DC3-DC5 with L/R = 15ms with 4 poles in series	=24V	A	–
	48V	A	–
	75V	A	–
	110V	A	–
	220V	A	–
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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	16
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Making capacity (RMS value)		A	120
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Breaking capacity at voltage	440V	A	96
	500V	A	72
	690V	A	72
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Resistance per pole (average value)		m?	10
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Power dissipation per pole (average value)	Ith	W	4
	AC3	W	1.44
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Tightening torque for terminals	min	Nm	0.8
	max	Nm	1
	min	Ibin	9
	max	Ibin	9
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Tightening torque for coil terminal	min	Nm	0.8
	max	Nm	1
	min	Ibin	9
	max	Ibin	9
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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 184

Conductor section

AWG/kcmil conductor section			max	12
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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	230
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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	11
at 600V	A	11

Yielded mechanical performance

for single-phase AC motor

110/120V	HP	0.5
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	230V	HP	1.5
for three-phase AC motor			
	200/208V	HP	3
	220/230V	HP	3
	460/480V	HP	7.5
	575/600V	HP	10

General USE

Contactor	AC current	A	20
Short-circuit protection fuse, 600V	Short circuit current	kA	100
High fault	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

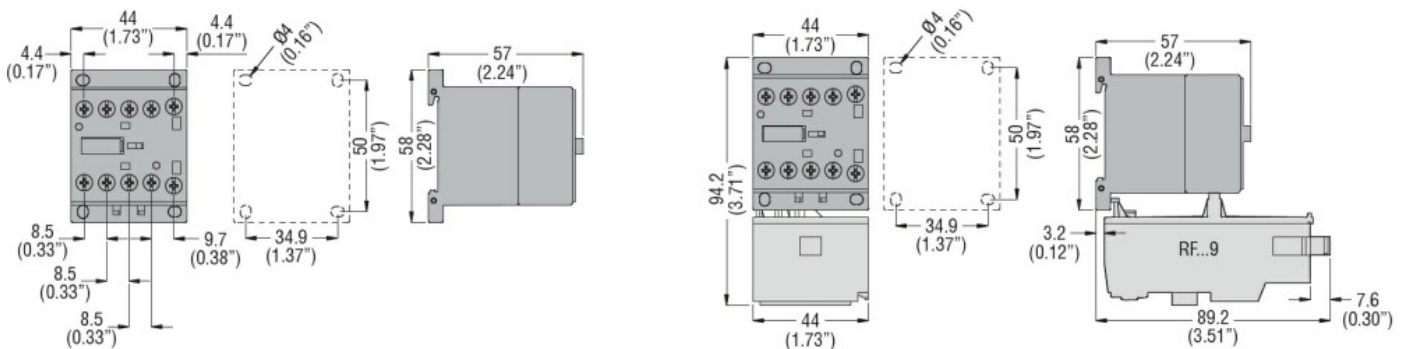
Storage temperature	min	°C	-60
	max	°C	+80

Max altitude m 3000

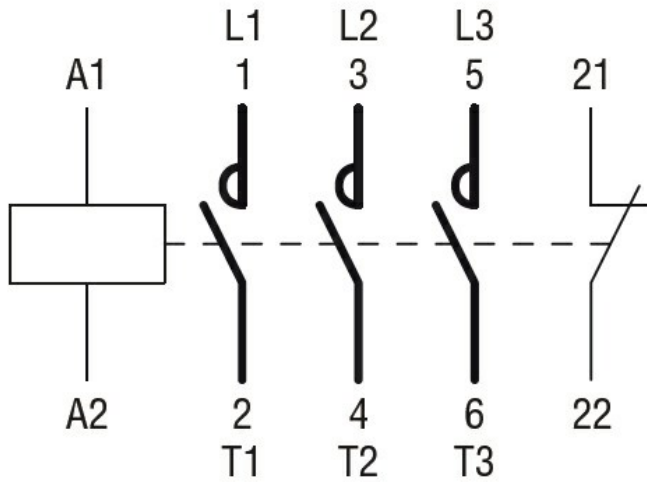
Resistance & Protection

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