



Product designation

Power contactor

Product type designation

BG12

**Contact characteristics**

Number of poles	Nr.	3
Rated insulation voltage U <sub>i</sub> IEC/EN	V	690
Rated impulse withstand voltage U <sub>imp</sub>	kV	6
Operational frequency	min	Hz 25
	max	Hz 400
IEC Conventional free air thermal current I <sub>th</sub>	A	20
Operational current I <sub>e</sub>	AC-1 (≤40°C)	A 20
	AC-1 (≤55°C)	A 18
	AC-1 (≤70°C)	A 15
	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 <sub>e</sub> 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 <sub>e</sub> 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 <sub>e</sub> 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 <sub>e</sub> in DC1 with L/R ≤ 1ms with 4 poles in series			
	≤24V	A	—
	48V	A	—
	75V	A	—
	110V	A	—
	220V	A	—
IEC max current I <sub>e</sub> 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 <sub>e</sub> 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 <sub>e</sub> 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 <sub>e</sub> in DC3-DC5 with L/R ≤ 15ms with 4 poles in series			
	≤24V	A	—
	48V	A	—
	75V	A	—
	110V	A	—
	220V	A	—
Short-time allowable current for 10s (IEC/EN60947-1)		A	96
Protection fuse			
	gG (IEC)	A	20
	aM (IEC)	A	16
Making capacity (RMS value)		A	120
Breaking capacity at voltage			
	440V	A	96
	500V	A	72
	690V	A	72
Resistance per pole (average value)		mΩ	10
Power dissipation per pole (average value)			
	I <sub>th</sub>	W	4
	AC-3	W	1.44
Tightening torque for terminals			
	min	Nm	0.8
	max	Nm	1
	min	I <sub>bin</sub>	9
	max	I <sub>bin</sub>	9
Tightening torque for coil terminal			
	min	Nm	0.8
	max	Nm	1
	min	I <sub>bin</sub>	9

	max	I <sub>bin</sub>	9
Max number of wires simultaneously connectable		Nr.	2
Conductor section			
AWG/Kcmil	max		12
Flexible w/o lug conductor section	min	mm <sup>2</sup>	0.75
	max	mm <sup>2</sup>	2.5
Flexible c/w lug conductor section	min	mm <sup>2</sup>	1.5
	max	mm <sup>2</sup>	2.5
Flexible with insulated spade lug conductor section	min	mm <sup>2</sup>	1.5
	max	mm <sup>2</sup>	2.5
Power terminal protection according to IEC/EN 60529			IP20 when properly wired
<b>Mechanical features</b>			
Operating position	normal allowable		Vertical plan ±30°
Fixing			Screw / DIN rail 35mm
Weight		g	175
<b>Auxiliary contact characteristics</b>			
Thermal current I <sub>th</sub>		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
<b>Operations</b>			
Mechanical life		cycles	20000000
Electrical life		cycles	500000
<b>Safety related data</b>			
Performance level B10d according to EN/ISO 13489-1	rated load	cycles	500000
	mechanical load	cycles	20000000
EMC compatibility			yes
<b>AC coil operating</b>			
Rated AC voltage at 50/60Hz		V	48
AC operating voltage			of 50/60Hz coil powered at 50Hz pick-up

		min	%Us	75
		max	%Us	115
drop-out				
		min	%Us	20
		max	%Us	55
of 50/60Hz coil powered at 60Hz				
pick-up		min	%Us	80
		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
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

Rated operational voltage AC (UL)	V	600
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
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			
Short-circuit protection fuse, 600V	Contactor		
		AC current	A 20
	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
		Fuse class	RK5

Contact rating of auxiliary contacts according to UL A600 - Q600

#### Ambient conditions

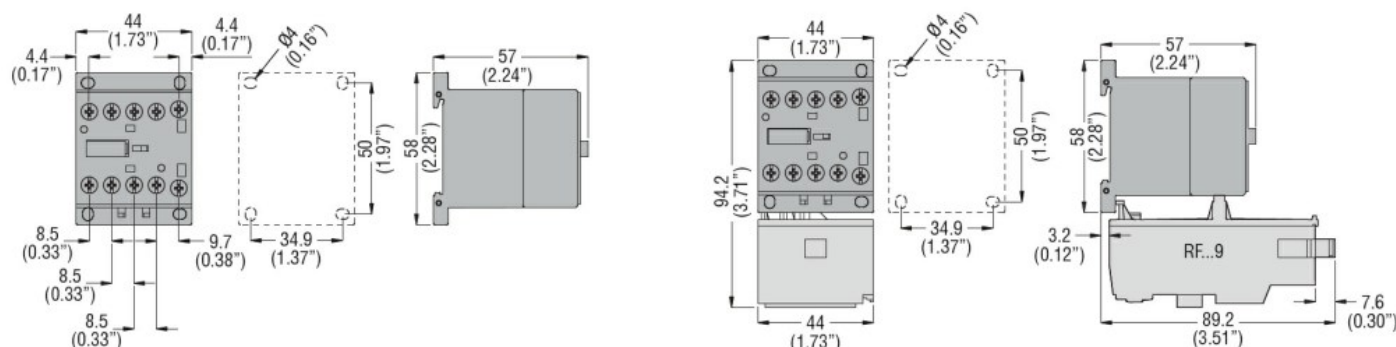
Temperature				
Operating temperature		min	°C	-50
		max	°C	+70
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Storage temperature		min	°C	-60
		max	°C	+80

Max altitude m 3000

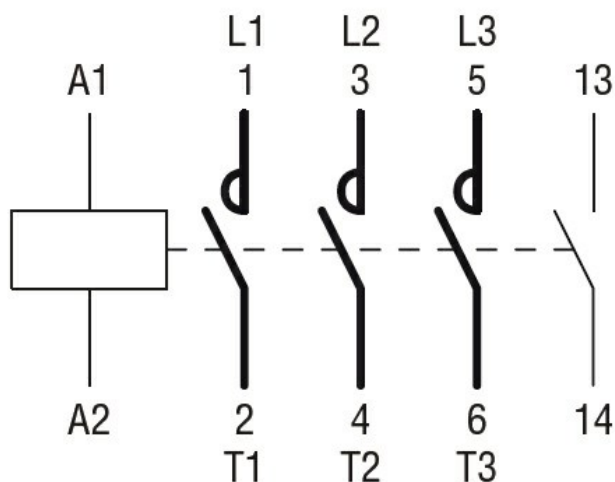
#### Resistance & Protection

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