



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 ( $\leq 40^\circ\text{C}$ )	A 20
	AC-1 ( $\leq 55^\circ\text{C}$ )	A 18
	AC-1 ( $\leq 70^\circ\text{C}$ )	A 15
	AC-3 ( $\leq 440\text{V} \leq 55^\circ\text{C}$ )	A 12
	AC-4 (400V)	A 4.8
Rated operational power AC-3 ( $T \leq 55^\circ\text{C}$ )	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 ( $T \leq 40^\circ\text{C}$ )	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 Ie in DC1 with L/R ≤ 1ms with 4 poles in series	≤24V	A	–
	48V	A	–
	75V	A	–
	110V	A	–
	220V	A	–
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	–
	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)	Ith	W	4
	AC-3	W	1.44
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	lbin	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

**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

**Auxiliary contact characteristics**

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

**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
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
<b>Max cycles frequency</b>		
Mechanical operation	cycles/h	3600
<b>Operating times</b>		
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
<b>UL technical data</b>		
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

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
Fuse class		RK5

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

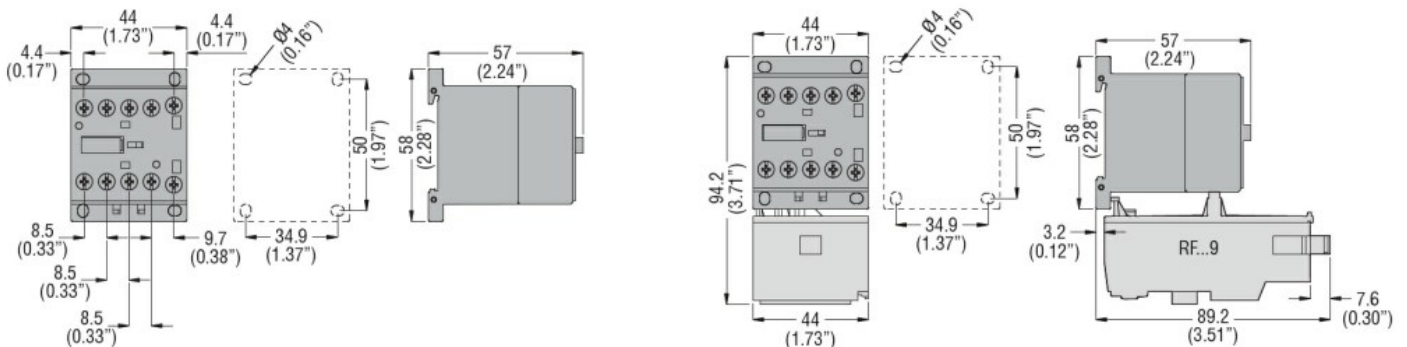
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Resistance & Protection

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