



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 ($\leq 40^\circ\text{C}$)	A 20
	AC-1 ($\leq 55^\circ\text{C}$)	A 0
	AC-3 ($\leq 440\text{V } \leq 55^\circ\text{C}$)	A 9
	AC-4 (400V)	A 4
Rated operational power AC-3 ($T \leq 55^\circ\text{C}$)	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 ($T \leq 40^\circ\text{C}$)	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	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	lbin	9
	max	lbin	9
Tightening torque for coil terminal			
	min	Nm	0.8
	max	Nm	1
	min	lbin	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 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 contats according to IEC/EN 609474-4-1			yes	
EMC compatibility			yes	
AC coil operating				
Rated AC voltage at 60Hz			V	48
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

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

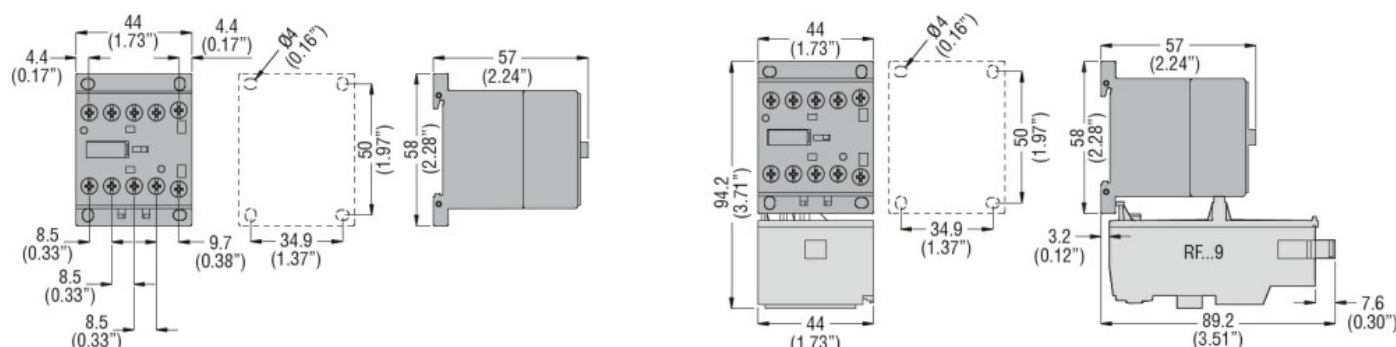
		110/120V	HP	0.5
		230V	HP	1.5
for three-phase AC motor				
		200/208V	HP	2
		220/230V	HP	3
		460/480V	HP	5
		575/600V	HP	5
General USE				
Contactor		AC current	A	20
Short-circuit protection fuse, 600V				
High fault		Short circuit current	kA	100
		Fuse rating	A	30
		Fuse class	J	
Standard fault				
		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

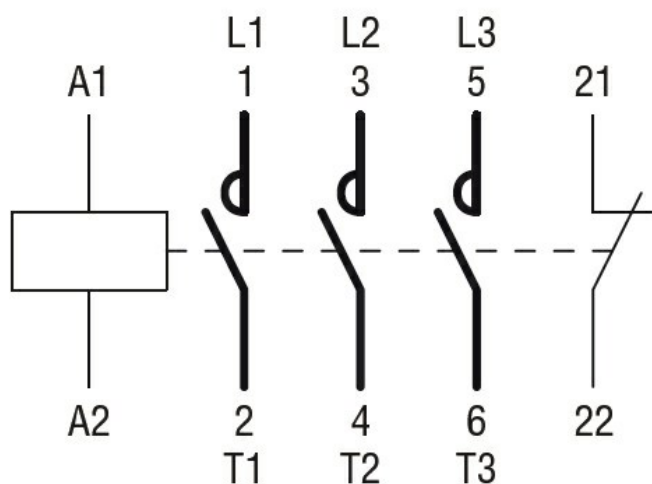
Pollution degree

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