



Product designation Power contactor Product type designation **BG09** 

Contact characteristics			
Number of poles		Nr.	3
Rated insulation voltage Ui IEC/EN		V	690
-		kV	
Rated impulse withstand voltage Uimp		KV	6
Operational frequency			0.5
	min	Hz	25
	max	Hz	400
IEC Conventional free air thermal current Ith		Α	20
Operational current le		_	
	AC-1 (≤40°C)	Α	20
	AC-1 (≤55°C)	Α	18
	AC-1 (≤70°C)	Α	15
	AC-3 (≤440V ≤55°C)	Α	9
	AC-4 (400V)	Α	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 le in DC1 with L/R ≤ 1ms with 1 poles in series			
	≤24V	Α	12
	48V	Α	10
	75V	Α	4
	110V	Α	3
	220V	Α	_
IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series			
•	≤24V	Α	15
	48V	Α	14
	75V	Α	9
	110V	Α	8
	220V	Α	_
IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series		<u> </u>	
same in 20 in 21 in o poise in conce	≤24V	Α	16
	48V	A	16
	75V	A	10
	110V	Α	10
	1101	, ,	. •



	220V	Α	2
IEC max current le in DC1 with L/R ≤ 1ms with 4 poles in series			
	≤24V	Α	16
	48V	Α	16
	75V	Α	10
	110V	Α	10
	220V	Α	2
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 1 poles in series			
	≤24V	Α	7
	48V	Α	6
	75V	Α	2
	110V	Α	1
	220V	Α	
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 2 poles in series			
	≤24V	Α	8
	48V	Α	8
	75V	Α	5
	110V	Α	4
<del></del>	220V	Α	
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 3 poles in series		_	
	≤24V	A	10
	48V	A	10
	75V	A	6
	110V	A	5
IFC may assument to in DC2 DC5 with L/D < 45 may with 4 males in agrica	220V	Α	0,8
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 4 poles in series	≤24V	۸	10
	≥24 V 48 V	A A	10
	75V	A	6
	110V	A	5
	220V	Α	0,8
Short-time allowable current for 10s (IEC/EN60947-1)		A	96
Protection fuse			
	gG (IEC)	Α	20
	aM (IEC)	Α	10
Making capacity (RMS value)	( - /	Α	92
Breaking capacity at voltage			
	440V	Α	72
	500V	Α	72
	690V	Α	72
Resistance per pole (average value)		mΩ	10
Power dissipation per pole (average value)			
	Ith	W	4
	AC-3	W	0.81
Tightening torque for terminals			_
	min	Nm	0.8
	max	Nm	1
	min	lbin	9
	max	Ibin	9
Tightening torque for coil terminal		_	
	min	Nm	0.8
	max	Nm	1
	min	Ibin	9



**ENERGY AND AUTOMATION** 

Max number of wires simultaneously connectable         Nr.         2           Conductor section         AWG/Kcmil         max         12           Flexible w/o lug conductor section         min         mm²         2.5           Flexible c/w lug conductor section         min         mm²         2.5           Flexible with insulated spade lug conductor section         min         mm²         1.5           max         mm²         2.5         1.5           Power terminal protection according to IEC/EN 60529         min         mm²         1.5           Mechanical features         max         mm²         2.5           Operating position         mormal allowable         s30°         1P20 when properly wired           Mechanical features         g         178         1P20 when properly wired           Mechanical features         g         178         1P20 when properly wired           Fixing         mormal allowable         s30°         Screw / DIN rail 35mm         35mm         35mm           Weight         max         1         2         20°         178         198           Conductor section         max         1         2         20°         20°         188         198         198         198			max	Ibin	9
AWG/Kcmil   Plazible w/o lug conductor section   min min min mm²   0.75 max m²   0.75 m²   0.7	Max number of wires	simultaneously connectable		Nr.	2
Piexible w/o lug conductor section	Conductor section				
Flexible w/o lug conductor section		AWG/Kcmil			
Persiste conductor section		- <del></del>	max		12
Persistance		Flexible w/o lug conductor section			
Flexible c/w lug conductor section			min		
Pickible with insulated spade lug conductor section		-	max	mm²	2.5
Place   Plac		Flexible c/w lug conductor section		•	
Flexible with insulated spade lug conductor section   min   mm²   1.5   max   mm²   2.5     Power terminal protection according to IEC/EN 60529   IP20 when properly wired wired with allowable   IP20 when properly wired wired allowable   IP20 wired wired wired plan allowable   IP20 wired plan allo					
min max         min max         mm² 2.5         2.5           Power terminal protection according to IEC/EN 60529         IP20 when properly wired           Mechanical features         Image: Properly wired           Operating position         normal allowable         ✓ vertical plan ±30°           Fixing         g 17 × 35°           Weight         g 2 × 12°           Conductor section         max         12           Awsiliary contact characteristics         x         12           Thermac current th         A 10         12           IEC/EN 60947-5-1 designation         230V         A 3           Operating current AC15         230V         A 1.4           Operating current DC12         110V         A 2.9           Operating current DC13         24V         A 2.9           Operating current DC13         24V         A 2.9           Operating current DC14         400V         A 1.4           Operating current DC15         48V         A 2.9           Operating current DC16         24V         A 2.9           Operating current DC18         48V         A 0.6           Expression         A 0.6         1.25V         A 0.5           A 2.9         A 0.5         2.0				mm²	2.5
Power terminal protection according to IEC/EN 60529         max more properly wired properly		Flexible with insulated spade lug conductor section		•	
Power terminal protection according to IEC/EN 60529   IP20 when properly wired   Mechanical features   IP20 when properly wired   IP20 when properly   IP20 when properly wired   IP2					
Province terminal protection according to IEC/EN 60529   Properly wired   Properly ferminal protection   Properly wired   Properly management   Properly wired   Properly management   Properly wired   Properly			max	mm²	
Mechanical features           Operating position         normal allowable         Vertical plan ±30°           Fixing         Screw/ DIN rail 35mm           Weight         g         178           Conductor section           AWG/kcmil conductor section           AWG/kcmil conductor section           max         12           Auxiliary contact characteristics           Thermal current lth         A         10           IEC/EN 60947-5-1 designation         A         10           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           Operating current DC13         24V         A         2.9           Auxiliary current DC13         A         1.2         1.2           110V         A         2.9         2.0           Operating current DC13         Current DC13         Current DC13	Power terminal protect	ction according to IEC/EN 60529			
Operating position         Note that plan is allowable is 30° is	Machanical factures	-			properly wired
Normal allowable   Normal all					
# 300 mallowable         ± 30° screw / DIN rail and Softman           Fixing         g 178           Conductor section           May Glykemil conductor section           max         12           Auxiliary contact characteristics           Thermal current Ith         A 600 - Q600           Deprating current AC15         230V         A 3         A 600 - Q600           Operating current DC12         230V         A 1.4         A 2.9           Operating current DC13         24V         A 2.9           48V         A 1.4         A 2.9           48V         A 1.4         A 2.9           A 24V         A 2.9           48V         A 1.4         A 0.6           110V         A 0.6         A 1.4	Operating position		normal		Vertical plan
Screw   DIN rail   35mm   35					
Name			allowable		
Weight         g         178           Conductor section           AWG/kcmil conductor section           max         12           Auxiliary contact characteristics           Thermal current Ith         A         10           LEC/EN 60947-5-1 designation         A600 - Q600           Operating current AC15         230V         A         3           400V         A         1.9         4         A         2.9         2.9         A         2.9         2.9         2.9         2.9         2.9         2.	Fixing				
AWG/kcmil conductor section	Weight			a	
AWG/kcmil conductor section   max				9	
Max   12   12   13   13   14   15   15   15   15   15   15   15	Conductor Scotlon	AWG/kemil conductor section			
Auxiliary contact characteristics		AVVO/Romii conductor section	may		12
Thermal current Ith         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 2.9 400 A 1.4           Operating current DC13         48V A 1.4 60V A 1.2 400 A 1.2 400 A 1.2	Auxiliary contact char	acteristics	max		12
EEC/EN 60947-5-1 designation	•			Α	10
Operating current AC15					
230V	IEC/EN 60947-5-1 de	esignation			A600 - Q600
A00V   A   1.9   500V   A   1.4					A600 - Q600
Departing current DC12			230V	A	
110V					3
110V			400V	Α	3 1.9
Operating current DC13	Operating current AC	15	400V	Α	3 1.9
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   0	Operating current AC	15	400V 500V	A A	3 1.9 1.4
A8V A 1.4   60V A 1.2   110V A 0.6   125V A 0.55   220V A 0.3   600V A 0.1   600V	Operating current AC  Operating current DC	12	400V 500V	A A	3 1.9 1.4
110V A 0.6   125V A 0.55   220V A 0.3   600V A 0.1   60	Operating current AC  Operating current DC	12	400V 500V 110V	A A	3 1.9 1.4 2.9
110V A 0.6   125V A 0.55   220V A 0.3   600V A 0.1	Operating current AC  Operating current DC	12	400V 500V 110V 24V	A A A	3 1.9 1.4 2.9
220V A 0.3   600V A 0.1	Operating current AC  Operating current DC	12	400V 500V 110V 24V 48V	A A A A	3 1.9 1.4 2.9 2.9 1.4
Operations         Cycles         20000000           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         5000000 mechanical load cycles           Mirror contats according to IEC/EN 609474-4-1         yes           EMC compatibility         yes	Operating current AC  Operating current DC	12	400V 500V 110V 24V 48V 60V	A A A A	3 1.9 1.4 2.9 2.9 1.4 1.2
OperationsMechanical lifecycles20000000Electrical lifecycles500000Safety related dataPerformance level B10d according to EN/ISO 13489-1rated loadcycles500000mechanical loadcycles20000000Mirror contats according to IEC/EN 609474-4-1yesEMC compatibility	Operating current AC  Operating current DC	12	400V 500V 110V 24V 48V 60V 110V	A A A A A	3 1.9 1.4 2.9 2.9 1.4 1.2 0.6
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  EMC compatibility yes	Operating current AC  Operating current DC	12	400V 500V 110V 24V 48V 60V 110V 125V	A A A A A	3 1.9 1.4 2.9 2.9 1.4 1.2 0.6 0.55
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  EMC compatibility yes	Operating current AC  Operating current DC	12	400V 500V 110V 24V 48V 60V 110V 125V 220V	A A A A A A	3 1.9 1.4 2.9 2.9 1.4 1.2 0.6 0.55 0.3
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  EMC compatibility  yes	Operating current AC  Operating current DC  Operating current DC	12	400V 500V 110V 24V 48V 60V 110V 125V 220V	A A A A A A	3 1.9 1.4 2.9 2.9 1.4 1.2 0.6 0.55 0.3
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  EMC compatibility  yes	Operating current AC  Operating current DC  Operating current DC  Operating current DC  Operating current DC	12	400V 500V 110V 24V 48V 60V 110V 125V 220V	A A A A A A A	3 1.9 1.4 2.9 2.9 1.4 1.2 0.6 0.55 0.3 0.1
rated load cycles 500000 mechanical load cycles 20000000  Mirror contats according to IEC/EN 609474-4-1  EMC compatibility  rated load cycles 500000 yes	Operating current AC  Operating current DC  Operating current DC  Operating current DC  Operating current DC  Electrical life	12	400V 500V 110V 24V 48V 60V 110V 125V 220V	A A A A A A A A Cycles	3 1.9 1.4 2.9 2.9 1.4 1.2 0.6 0.55 0.3 0.1
mechanical load cycles 20000000  Mirror contats according to IEC/EN 609474-4-1 yes  EMC compatibility yes	Operating current AC  Operating current DC  Operating current DC  Operating current DC  Operations  Mechanical life  Electrical life  Safety related data	12	400V 500V 110V 24V 48V 60V 110V 125V 220V	A A A A A A A A Cycles	3 1.9 1.4 2.9 2.9 1.4 1.2 0.6 0.55 0.3 0.1
Mirror contats according to IEC/EN 609474-4-1 yes EMC compatibility yes	Operating current AC  Operating current DC  Operating current DC  Operating current DC  Operations  Mechanical life  Electrical life  Safety related data	12	400V 500V 110V 24V 48V 60V 110V 125V 220V	A A A A A A A A Cycles	3 1.9 1.4 2.9 2.9 1.4 1.2 0.6 0.55 0.3 0.1
EMC compatibility yes	Operating current AC  Operating current DC  Operating current DC  Operating current DC  Operations  Mechanical life  Electrical life  Safety related data	12	400V 500V 110V 24V 48V 60V 110V 125V 220V 600V	A A A A A A A A Cycles cycles	3 1.9 1.4 2.9 2.9 2.9 1.4 1.2 0.6 0.55 0.3 0.1
· · · ·	Operating current AC  Operating current DC  Operating current DC  Operating current DC  Operations  Mechanical life  Electrical life  Safety related data	12 13 10d according to EN/ISO 13489-1	400V 500V 110V 24V 48V 60V 110V 125V 220V 600V	A A A A A A A Cycles cycles	3 1.9 1.4 2.9 2.9 2.9 1.4 1.2 0.6 0.55 0.3 0.1 20000000 500000
AC coil operating	Operating current AC  Operating current DC  Operating current DC  Operating current DC  Operations  Mechanical life  Electrical life  Safety related data  Performance level B1  Mirror contats accord	12 13 Od according to EN/ISO 13489-1	400V 500V 110V 24V 48V 60V 110V 125V 220V 600V	A A A A A A A Cycles cycles	3 1.9 1.4 2.9 2.9 1.4 1.2 0.6 0.55 0.3 0.1 20000000 500000
	Operating current AC  Operating current DC  Operating current DC  Operating current DC  Operations  Mechanical life  Electrical life  Safety related data  Performance level B1  Mirror contats accord  EMC compatibility	12 13 Od according to EN/ISO 13489-1	400V 500V 110V 24V 48V 60V 110V 125V 220V 600V	A A A A A A A Cycles cycles	3 1.9 1.4 2.9 2.9 2.9 1.4 1.2 0.6 0.55 0.3 0.1 20000000 500000 500000 yes



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Rated AC voltage at 5	50/60Hz			V	24
C operating voltage					
	of 50/60Hz coil po				
		pick-up		0/11	7.5
			min	%Us	75 445
		drop-out	max	%Us	115
		drop-out	min	%Us	20
			max	%Us	55
	of 50/60Hz coil po	owered at 60Hz	THOX	7000	
		pick-up			
		•	min	%Us	80
			max	%Us	115
		drop-out			
			min	%Us	20
			max	%Us	55
AC average coil cons					
	of 50/60Hz coil po	owered at 50Hz		3.74	20
			in-rush	VA	30
	of 50/60Hz coil po	awared at 60Hz	holding	VA	4
	or soleonz con po	υνοιθα αι ΟυΠΔ	in-rush	VA	25
			holding	VA	3
	of 60Hz coil powe	ered at 60Hz	noising .	• • • • • • • • • • • • • • • • • • • •	
	0. 00. 12 00.1 po 110	700 at 001 12	in-rush	VA	30
			in-rusn	v/\	
			holding	VA	4
Dissipation at holding	≤20°C 50Hz				
Dissipation at holding Max cycles frequency			holding	VA W	0.95
Max cycles frequency Mechanical operation			holding	VA	0.95
Max cycles frequency Mechanical operation Operating times	,		holding	VA W	0.95
Max cycles frequency Mechanical operation Operating times	control		holding	VA W	0.95
Max cycles frequency Mechanical operation Operating times	,	Olasia a NO	holding	VA W	0.95
Max cycles frequency Mechanical operation Operating times	control	Closing NO	holding	VA W cycles/h	4 0.95 3600
Max cycles frequency Mechanical operation Operating times	control	Closing NO	holding	VA W cycles/h	4 0.95 3600
Max cycles frequency Mechanical operation Operating times	control		holding	VA W cycles/h	4 0.95 3600
Max cycles frequency Mechanical operation Operating times	control	Closing NO Opening NO	holding min max	VA W cycles/h ms ms	4 0.95 3600 12 21
Max cycles frequency Mechanical operation Operating times	control		holding	VA W cycles/h	4 0.95 3600
Max cycles frequency Mechanical operation Operating times	control		min max	VA W cycles/h ms ms	4 0.95 3600 12 21
Max cycles frequency Mechanical operation Operating times	control	Opening NO	min max	VA W cycles/h ms ms	4 0.95 3600 12 21
Max cycles frequency Mechanical operation Operating times	control	Opening NO Closing NC	min max min max	VA W cycles/h ms ms ms	4 0.95 3600 12 21 9 18
Max cycles frequency Mechanical operation Operating times	control	Opening NO	min max min max min max	VA W cycles/h ms ms ms ms	4 0.95 3600 12 21 9 18 17 26
Max cycles frequency Mechanical operation Operating times	control	Opening NO Closing NC	min max min max min max min max	W cycles/h ms ms ms ms ms ms	4 0.95 3600 12 21 9 18 17 26
Max cycles frequency Mechanical operation Operating times	control in AC	Opening NO Closing NC	min max min max min max	W cycles/h ms ms ms ms ms	4 0.95 3600 12 21 9 18 17 26
Max cycles frequency Mechanical operation Operating times	control	Opening NO Closing NC Opening NC	min max min max min max min max	W cycles/h ms ms ms ms ms ms	4 0.95 3600 12 21 9 18 17 26
Max cycles frequency Mechanical operation Operating times	control in AC	Opening NO Closing NC	min max min max min max min max	W cycles/h ms ms ms ms ms ms ms	4 0.95 3600 12 21 9 18 17 26 7
Max cycles frequency Mechanical operation Operating times	control in AC	Opening NO Closing NC Opening NC	min max min max min max min max min max	VA W cycles/h ms ms ms ms ms ms ms ms	4 0.95 3600 12 21 9 18 17 26 7 17
Max cycles frequency Mechanical operation Operating times	control in AC	Opening NO Closing NC Opening NC Closing NO	min max min max min max min max	W cycles/h ms ms ms ms ms ms ms	4 0.95 3600 12 21 9 18 17 26 7
Max cycles frequency Mechanical operation Operating times	control in AC	Opening NO Closing NC Opening NC	min max min max min max min max min max	W cycles/h ms ms ms ms ms ms ms ms ms	4 0.95 3600 12 21 9 18 17 26 7 17
Max cycles frequency Mechanical operation Operating times	control in AC	Opening NO Closing NC Opening NC Closing NO	min max	W cycles/h ms	4 0.95 3600 12 21 9 18 17 26 7 17
Max cycles frequency Mechanical operation Operating times	control in AC	Opening NO Closing NC Opening NC Closing NO Opening NO	min max min max min max min max min max	W cycles/h ms ms ms ms ms ms ms ms ms	4 0.95 3600 12 21 9 18 17 26 7 17
	control in AC	Opening NO Closing NC Opening NC Closing NO	min max	W cycles/h ms	4 0.95 3600 12 21 9 18 17 26 7 17

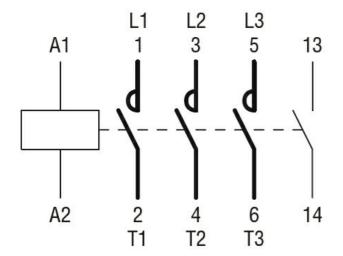


Opening NC

	Opening	NC		
		min	ms	11
		max	ms	17
UL technical data				
	) for three-phase AC motor			
ruii-ioau current (FLA)	) for timee-phase AC motor	. 1 400) /		7.0
		at 480V	Α	7.6
		at 600V	Α	6.1
Yielded mechanical pe	erformance			
	for single-phase AC motor			
		110/120V	HP	0.5
		230V	HP	1.5
	for three-phase AC motor			
	for three phase Ao motor	200/208V	HP	2
		220/230V	HP	3
		460/480V	HP	5
		575/600V	HP	5
General USE				
	Contactor			
		AC current	Α	20
Short-circuit protection	n fuse 600V	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		
Onort offour protootion				
	High fault			400
		Short circuit current	kA	100
		Fuse rating	Α	30
		Fuse class		J
	Standard fault			
		Short circuit current	kA	5
		Fuse rating	Α	30
		Fuse class		RK5
Contact rating of auxili	ary contacts according to UL	1 400 01400		A600 - Q600
Ambient conditions	ary contacts according to OL			A000 - Q000
Temperature				
	Operating temperature			
		min	°C	-50
		max	°C	+70
	Storage temperature			
		min	°C	-60
		max	°C	+80
Max altitude		max		3000
	- n		m	3000
Resistance & Protection	on			
Pollution degree				3
Dimensions				
4.4 (0.17") (0.17") (0.33") (0.33") (0.33") (0.33") (0.33")	34.9 — (1.37")	3.2 (1.37") 3.2 (0.12"	(2.28") 5	8F9 7.6 (0.30")
		(1.73")		(0.01)
Wiring diagrams				



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## 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