

Three-pole contactor, IEC operating current le (AC3) = 9A, AC coil 50/60Hz, 24VAC, 1NC auxiliary



Product designation			Power contactor
Product type designation			BG09
Contact characteristics			
Number of poles		Nr.	3
Rated insulation voltage Ui IEC/EN		V	690
Rated impulse withstand voltage Uimp		kV	6
Operational frequency			
	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	0
	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			
·	≤24V	Α	16
	48V	A	16
	75V	Α	10
	110V	Α	10
	220V	Α	2

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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			
The max can only to the Boo Boo man Ent a rome man 2 police in conce	≤24V	Α	8
	48V	A	8
	75V	A	5
	110V	A	4
	220V	A	<del>4</del> -
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 3 poles in series	220 V		
TEO MAX current le in DOO-DOO with D/K > 10ms with 3 poles in series	≤24V	٨	10
	≤24V 48V	A	
		A	10
	75V	A	6
	110V	A	5
IFO	220V	Α	0,8
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 4 poles in series	.0.04		
	≤24V	Α	10
	48V	Α	10
	75V	Α	6
	110V	Α	5
	220V	A	0,8
Short-time allowable current for 10s (IEC/EN60947-1)		Α	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)			
, , , , , , , , , , , , , , , , , , , ,	lth	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	Παλ	10111	<u> </u>
ngmoning torque for contentinial	min	Nm	0.8
		Nm	
	max min	lbin	1 9
		lbin	9
	max	IDIII	J



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May number of wires	simultaneously connectable		Nr.	2
Conductor section	Simultaneously connectable		INI.	2
Conductor Scotlon	AWG/Kcmil			
	, , , , , , , , , , , , , , , , , , , ,	max		12
	Flexible w/o lug conductor section			
	•	min	mm²	0.75
		max	mm²	2.5
	Flexible c/w lug conductor section			
		min	mm²	1.5
		max	mm²	2.5
	Flexible with insulated spade lug conductor section			
		min	mm²	1.5
	W 150/5N 00500	max	mm²	2.5
	ction according to IEC/EN 60529			IP20 when wired
Mechanical features				
Operating position		normal		Vertical plan
		normal allowable		Vertical plan ±30°
		allowable		Screw / DIN rail
Fixing				35mm
Weight			g	180
Conductor section				
	AWG/kcmil conductor section			
		max		12
Auxiliary contact chara	acteristics			
Thermal current Ith			Α	10
IEC/EN 60947-5-1 de	•			A600 - Q600
Operating current AC	15			
		230V	Α	3
		400V	Α	1.9
0 " 100	40	500V	A	1.4
Operating current DC	12	4401/	۸	0.0
Operating ourrent DC	12	110V	Α	2.9
Operating current DC	13	24V	Α	2.9
		48V	A	1.4
		60V	A	1.2
		110V	A	0.6
		125V	A	0.55
		220V	Α	0.3
		600V	Α	0.1
Operations				
Mechanical life			cycles	20000000
Electrical life			cycles	500000
Safety related data				
Performance level B1	0d according to EN/ISO 13489-1		_	
		rated load	cycles	500000
Minnen acceptate		mechanical load	cycles	20000000
	ing to IEC/EN 609474-4-1			yes
EMC compatibility				yes
AC coil operating Rated AC voltage at 5	20/60Hz		V	24
AC operating voltage	JU/JUI 12		V	<b>4</b>
To operating voltage				





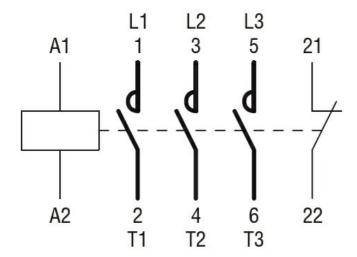
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of 50/60Hz coil powered at 60Hz pick-up					
Max		of 50/60Hz coil powered at 50Hz			
Max   Mus   115   Mus   115   Mus   115   Mus   Mus   115   Mus		pick-up			
Acceptance   Ac			min	%Us	
Min			max	%Us	115
Max		drop-out			
of 50/60Hz coil powered at 60Hz pick-up    min			min	%Us	20
Pick-up   Min			max	%Us	55
Max		of 50/60Hz coil powered at 60Hz			
Max		pick-up			
AC average coil consumption at 20°C   of 50/60Hz coil powered at 50Hz   of 50/60Hz coil powered at 50Hz   of 50/60Hz coil powered at 60Hz   of 60Hz coil powered at 60Hz   of			min	%Us	80
Max   Multiple   Mul			max	%Us	115
AC average coil consumption at 20°C   of 50/60Hz coil powered at 50Hz		drop-out			
AC average coil consumption at 20°C of 50/60Hz coil powered at 50Hz    In-rush   VA   30   Nolding   VA   4			min	%Us	20
of 50/60Hz coil powered at 50Hz    In-rush   VA   30     holding   VA   4     of 50/60Hz coil powered at 60Hz     In-rush   NA   25     holding   VA   3     holding   VA   3     In-rush   NA   30     holding   VA   3     In-rush   VA   30     holding   VA   3     In-rush   VA   30     holding   VA   4     In-rush   VA   30     In-rush   VA   4     In-rush   VA   30     In-rush   VA   30     In-rush   VA   4     In-rush   VA   30     In-rush   VA   4     In-rush   VA   4     In-rush   VA   4     In-rush   VA   4     In-rush   VA   10     In-rush   VA   10     In-rush   VA   VA   10     In-rush   VA   VA   VA     In-rush   VA   VA     In-rush   VA   VA     In-rush   VA   VA     In-rush			max	%Us	55
of 50/60Hz coil powered at 50Hz    In-rush   VA   30     holding   VA   4     of 50/60Hz coil powered at 60Hz     In-rush   NA   25     holding   VA   3     holding   VA   3     In-rush   NA   30     holding   VA   3     In-rush   VA   30     holding   VA   3     In-rush   VA   30     holding   VA   4     In-rush   VA   30     In-rush   VA   4     In-rush   VA   30     In-rush   VA   30     In-rush   VA   4     In-rush   VA   30     In-rush   VA   4     In-rush   VA   4     In-rush   VA   4     In-rush   VA   4     In-rush   VA   10     In-rush   VA   10     In-rush   VA   VA   10     In-rush   VA   VA   VA     In-rush   VA   VA     In-rush   VA   VA     In-rush   VA   VA     In-rush	AC average coil consu	nption at 20°C			
In-rush   VA   30   holding   VA   4   4   4   4   4   4   4   4   4	· ·				
Molding		•	in-rush	VA	30
of 50/60Hz coil powered at 60Hz    in-rush   VA   3   3     of 60Hz coil powered at 60Hz     in-rush   VA   3     of 60Hz coil powered at 60Hz     in-rush   VA   3     in-rush   VA   3     holding   VA   4     Dissipation at holding ≤20°C 50Hz   W   0.95     Max cycles frequency     Max cycles frequency     Mechanical operation   cycles/h   3600     Operating limes     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 NO     in DC     Closing NO     min   ms   17     max   ms   17     max   ms   17     max   ms   17     max   ms   25     Opening NO     min   ms   18     max   ms   25     Opening NO     min   ms   2     max   ms   3     min   ms					
In-rush holding		of 50/60Hz coil powered at 60Hz			
Molding		01 00,001 12 0011 powerou at 001 12	in-rush	VA	25
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   W   0.95     Max ms   12     max ms   12     max ms   18     max ms   17     max ms   25     Opening NO   min ms   2     max ms   3     Closing NC   min ms   3     max ms   3     max ms   3     max ms   5     Opening NC   min ms   5     Opening NC   min ms   3     max ms   5     Opening NC   min ms   10     Opening NC   min					
In-rush   VA   30   holding   VA   4		of 60Hz coil powered at 60Hz	Tiolanig	• • • • • • • • • • • • • • • • • • • •	
Dissipation at holding ≤20°C 50Hz   W 0.95		or corrected at corre	in-rush	\/Δ	30
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         17           max         ms         26           Opening NC         min         ms         17           in DC         Closing NO         min         ms         18           Opening NO         min         ms         2           max         ms         3         2           max         ms         3           Closing NC         min         ms         3           min         ms         3           max         ms         5           Opening NC         min         ms         5	Dissipation at holding s	20°C 50Hz	Holding		
Mechanical operation   Cycles/h   3600		20 0 301 12		VV	0.95
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  Closing NO  min ms 7 max ms 17  in DC  Closing NO  min ms 18 max ms 25  Opening NO  min ms 18 max ms 25  Closing NO  min ms 18 max ms 25  Opening NO  min ms 3 max ms 3  Closing NC  min ms 3 max ms 5  Opening NC	moonamoar operation			cvcles/h	3600
Closing NO    Min   Ms   12				cycles/h	3600
Closing NO    min   ms   12   max   ms   21	Operating times	ntrol		cycles/h	3600
Min   Ms   12   Max   Ms   21	Operating times			cycles/h	3600
Opening NO    min   ms   9   max   ms   18	Operating times	in AC	nO	cycles/h	3600
Opening NO    min   ms   9   max   ms   18	Operating times	in AC			
Min   Ms   9   Max   Ms   18	Operating times	in AC	min	ms	12
Closing NC    min ms 17 max ms 26     Opening NC     min ms 7 max ms 17     max ms 17 max ms 17     max ms 17 max ms 17     max ms 17 max ms 17     max ms 25     Opening 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 3 max ms 5     min	Operating times	in AC Closing N	min max	ms	12
Closing NC    min   ms   17   max   ms   26	Operating times	in AC Closing N	min max NO	ms ms	12 21
Min   Ms   17   max   ms   26	Operating times	in AC Closing N	min max NO min	ms ms	12 21 9
Opening NC    min   ms   7   max   ms   17	Operating times	in AC  Closing N  Opening	min max NO min max	ms ms	12 21 9
Opening NC    min   ms   7   max   ms   17	Operating times	in AC  Closing N  Opening	min max NO min max	ms ms ms	12 21 9 18
min ms 7 max ms 17	Operating times	in AC  Closing N  Opening	min max NO min max IC	ms ms ms ms	12 21 9 18
Max ms 17	Operating times	in AC  Closing N  Opening I  Closing N	min max NO min max IC min max	ms ms ms ms	12 21 9 18
Closing NO    Min   Ms   18   max   ms   25	Operating times	in AC  Closing N  Opening I  Closing N	min max NO min max IC min max NC	ms ms ms ms	12 21 9 18 17 26
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	Operating times	in AC  Closing N  Opening I  Closing N	min max NO min max IC min max NC min max	ms ms ms ms ms	12 21 9 18 17 26
min ms 18 max ms 25	Operating times	in AC  Closing N  Opening I  Closing N  Opening I	min max NO min max IC min max NC min max	ms ms ms ms ms	12 21 9 18 17 26
Opening NO  min ms 2 max ms 25  Min ms 2 max ms 3  Closing NC  min ms 3 max ms 5  Opening NC	Operating times	in AC  Closing N  Opening I  Closing N  Opening I  in DC	min max NO min max IC min max NC min max	ms ms ms ms ms	12 21 9 18 17 26
Opening NO  min ms 2 max ms 3  Closing NC  min ms 3 max ms 5  Opening NC	Operating times	in AC  Closing N  Opening I  Closing N  Opening I  in DC	min max NO min max IC min max NC min max	ms ms ms ms ms	12 21 9 18 17 26 7
min ms 2 max ms 3  Closing NC  min ms 3 max ms 5  Opening NC	Operating times	in AC  Closing N  Opening I  Closing N  Opening I  in DC	min max NO min max IC min max NC min max NC	ms ms ms ms ms	12 21 9 18 17 26 7 17
Closing NC  min ms 3  max ms 3  min ms 3  max ms 5  Opening NC	Operating times	in AC  Closing N  Opening N  Closing N  Opening N  Opening N  Closing N  Closing N	min max NO min max IC min max NC min max NC min max	ms ms ms ms ms	12 21 9 18 17 26 7 17
Closing NC  min ms 3  max ms 5  Opening NC	Operating times	in AC  Closing N  Opening N  Closing N  Opening N  Opening N  Closing N  Closing N	min max NO min max IC min max NC min max NO min max	ms ms ms ms ms ms	12 21 9 18 17 26 7 17
min ms 3 max ms 5 Opening NC	Operating times	in AC  Closing N  Opening N  Closing N  Opening N  Opening N  Closing N  Closing N	min max NO min max IC min max NC min max NO min max NO min max NO min max	ms ms ms ms ms ms	12 21 9 18 17 26 7 17
max ms 5 Opening NC	Operating times	in AC  Closing N  Opening I  Closing N  Opening I  in DC  Closing N  Opening I	min max NO min max IC min max NC min max NO min max NO min max NO min max	ms ms ms ms ms ms	12 21 9 18 17 26 7 17
Opening NC	Operating times	in AC  Closing N  Opening I  Closing N  Opening I  in DC  Closing N  Opening I	min max NO min max IC min max NC min max NO min max NO min max NO min max NO	ms ms ms ms ms ms ms	12 21 9 18 17 26 7 17
	Operating times	in AC  Closing N  Opening I  Closing N  Opening I  in DC  Closing N  Opening I	Min max NO  min max IC  min max NC  min max NO  min max IO  min max NO  min max NO  min max IC  min max	ms ms ms ms ms ms ms	12 21 9 18 17 26 7 17
min ms 11	Operating times	in AC  Closing N  Opening I  Closing N  Opening I  in DC  Closing N  Opening I  Closing N  Closing N	Min max NO  min max C  min max NC  min max NO  min max C  min max  MO  min max MO  min max MO  min max MO  min max MO  min max	ms ms ms ms ms ms ms	12 21 9 18 17 26 7 17
	Operating times	in AC  Closing N  Opening I  Closing N  Opening I  in DC  Closing N  Opening I  Closing N  Closing N	Min max NO  min max IC  min max NC  min max NO  min max IC  min max NO  min max NO	ms ms ms ms ms ms ms	12 21 9 18 17 26 7 17 18 25 2 3 3 5

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		max	ms	17
UL technical data				
Full-load current (FLA	A) for three-phase AC motor			
		at 480V	Α	7.6
		at 600V	Α	6.1
Yielded mechanical p	erformance			
	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	Α	20
Short-circuit protection	n fuse, 600V			
	High fault			
		Short circuit current	kA	100
		Fuse rating	Α	30
		Fuse class		J
	Standard fault			
		Short circuit current	kA	5
		Fuse rating	Α	30
Contact rating of auxi	liary contacts according to UL			A600 - Q600
Ambient conditions				
Temperature				
•	Operating temperature			
		min	°C	-50
		max	°C	+70
	Storage temperature			
	3 1	min	°C	-60
		max	°C	+80
Max altitude			m	3000
Resistance & Protect	ion			
Pollution degree				3
Dimensions				
		44 046		
4.4 (0.17") (0.17")	87.6 57 (2.24")	(1.73") 0 0 0	(2	57
<b>***</b>	9	(1.97")	(2.28")	
<b>***</b>	(1.97°) (1.97°) (2.28°)	2, <u>1</u> ⊕ ⊕ ⊕ ⊕ ⊕	G	
8.5 (0.33") (0.38")	34.9 (1.37")	3.2 (1.37") (0.12'	")	RF9
(0.33")	V /	<u> </u>	L	76
8.5 (0.33")		(1.73")		89.2 (3.51") (0.30")
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