



Product designation Power contactor Product type designation **BG09** Contact characteristics

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	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	A	14
	75V	Α	9
	110V	A	8
	220V	A	_
IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series	220 V	77	
TEO THAN OUT ON TOO I WITH E/IT = THIS WITH 5 POICS ITT SCHOOL	≤24V	Α	16
	≤24V 48V	A	16
	46 V 75 V	A	10
	110V	A	10
	1100	A	10



	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
	220V	Α	_
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 3 poles in series			
	≤24V	Α	10
	48V	Α	10
	75V	Α	6
	110V	Α	5
	220V	Α	0,8
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 4 poles in series			
	≤24V	Α	10
	48V	Α	10
	75V	Α	6
	110V	Α	5
	220V	Α	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)			
5 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -	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			
J 1	min	Nm	0.8
	max	Nm	1
	min	lbin	9
			-



		max	Ibin	9
Max number of wires	simultaneously connectable		Nr.	2
Conductor section				
	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		2	4 =
		min	mm²	1.5
		max	mm²	2.5
Power terminal protect	ction according to IEC/EN 60529			IP20 when
Mechanical features				properly wired
Operating position				
Operating position		normal		Vertical plan
		allowable		±30°
-		anowabic		Screw / DIN rail
Fixing				35mm
Weight			g	182
Conductor section				
	AWG/kcmil conductor section			
		max		12
Auxiliary contact char	acteristics			
•			Λ	4.0
Thermal current Ith			Α	10
Thermal current Ith IEC/EN 60947-5-1 de	esignation		Α	A600 - Q600
			A	
IEC/EN 60947-5-1 de		230V	A	
IEC/EN 60947-5-1 de		230V 400V		A600 - Q600
IEC/EN 60947-5-1 de			A	A600 - Q600 3
IEC/EN 60947-5-1 de	15	400V	A A	A600 - Q600 3 1.9
IEC/EN 60947-5-1 de Operating current AC	15	400V	A A	A600 - Q600 3 1.9
IEC/EN 60947-5-1 de Operating current AC	12	400V 500V	A A A	A600 - Q600 3 1.9 1.4
Operating current AC Operating current DC	12	400V 500V 110V 24V	A A A	A600 - Q600 3 1.9 1.4
Operating current AC Operating current DC	12	400V 500V 110V 24V 48V	A A A A	A600 - Q600 3 1.9 1.4 2.9 2.9 1.4
Operating current AC Operating current DC	12	400V 500V 110V 24V 48V 60V	A A A A A	A600 - Q600 3 1.9 1.4 2.9 2.9 1.4 1.2
Operating current AC Operating current DC	12	400V 500V 110V 24V 48V 60V 110V	A A A A A	A600 - Q600 3 1.9 1.4 2.9 2.9 1.4 1.2 0.6
Operating current AC Operating current DC	12	400V 500V 110V 24V 48V 60V 110V 125V	A A A A A A	A600 - Q600 3 1.9 1.4 2.9 2.9 1.4 1.2 0.6 0.55
Operating current AC	12	400V 500V 110V 24V 48V 60V 110V 125V 220V	A A A A A A	A600 - Q600 3 1.9 1.4 2.9 2.9 1.4 1.2 0.6 0.55 0.3
Operating current DC Operating current DC Operating current DC	12	400V 500V 110V 24V 48V 60V 110V 125V	A A A A A A	A600 - Q600 3 1.9 1.4 2.9 2.9 1.4 1.2 0.6 0.55
Operating current DC	12	400V 500V 110V 24V 48V 60V 110V 125V 220V	A A A A A A A	A600 - Q600 3 1.9 1.4 2.9 2.9 1.4 1.2 0.6 0.55 0.3 0.1
Operating current DC Operations Mechanical life	12	400V 500V 110V 24V 48V 60V 110V 125V 220V	A A A A A A A Cycles	A600 - Q600 3 1.9 1.4 2.9 2.9 1.4 1.2 0.6 0.55 0.3 0.1
Operating current DC Operations Mechanical life Electrical life	12	400V 500V 110V 24V 48V 60V 110V 125V 220V	A A A A A A A	A600 - Q600 3 1.9 1.4 2.9 2.9 1.4 1.2 0.6 0.55 0.3 0.1
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 Cycles	A600 - Q600 3 1.9 1.4 2.9 2.9 1.4 1.2 0.6 0.55 0.3 0.1
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	A600 - Q600 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 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 A Cycles cycles	A600 - Q600 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 DC Operations Mechanical life Electrical life Safety related data Performance level B1	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 A Cycles cycles	A600 - Q600 3 1.9 1.4 2.9 2.9 1.4 1.2 0.6 0.55 0.3 0.1 20000000 500000 500000
Operating current DC Operations Mechanical life Electrical life Safety related data Performance level B1	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 A Cycles cycles	A600 - Q600 3 1.9 1.4 2.9 2.9 1.4 1.2 0.6 0.55 0.3 0.1 20000000 500000 500000 20000000 yes
Operating current DC Operations Mechanical life Electrical life Safety related data Performance level B1	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 A Cycles cycles	A600 - Q600 3 1.9 1.4 2.9 2.9 1.4 1.2 0.6 0.55 0.3 0.1 20000000 500000 500000



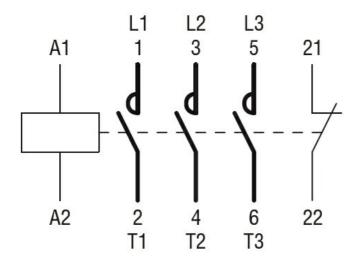
of 50/60Hz coil powered at 50Hz pick-up min %Us 75 max %Us 115 drop-out min %Us 20 max %Us 55 of 50/60Hz coil powered at 60Hz pick-up min %Us 80 max %Us 115 drop-out min %Us 80 max %Us 115 drop-out min %Us 20 max %Us 55 AC average coil consumption at 20°C of 50/60Hz coil powered at 50Hz in-rush VA 30 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 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	Rated AC voltage at 5	0/60Hz			V	230
Pick-up min %Us 75 max %Us 115 max %Us 115 max %Us 115 max %Us 115 max %Us 55 max	AC operating voltage					
Mark		of 50/60Hz coil pow				
Max Multiple Mu			pick-up			
Acceptance Ac				min		
Max				max	%Us	115
Max %Us 55			drop-out		0/11	
of 50/60Hz coil powered at 60Hz pick-up min wus wus 115 drop-out min wus wus 20 max wus 55 AC average coil consumption at 20°C of 50/60Hz coil powered at 50Hz in-rush vus 25 holding vus 4 of 50/60Hz coil powered at 60Hz in-rush holding vus 4 of 60Hz coil powered at 60Hz in-rush holding vus 4 of 60Hz coil powered at 60Hz in-rush holding vus 4 of 60Hz coil powered at 60Hz in-rush holding vus 4 of 60Hz coil powered at 60Hz in-rush holding vus 3 of 60Hz coil powered at 60Hz in-rush holding vus 3 of 60Hz coil powered at 60Hz in-rush holding vus 3 of 60Hz coil powered at 60Hz in-rush holding vus 3 of 60Hz coil powered at 60Hz in-rush holding vus 3 of 60Hz coil powered at 60Hz in-rush holding vus 3 of 60Hz coil powered at 60Hz in-rush vus 3 of 60Hz coil powered at 60Hz in-rush holding vus 3 of 60Hz coil powered at 60Hz in-rush holding vus 3 of 60Hz coil powered at 60Hz in-rush vus 3 of 60Hz coil powered at 60Hz in-rush vus 3 of 60Hz coil powered at 60Hz in-rush vus 3 of 60Hz coil powered at 60Hz in-rush vus 3 of 60Hz coil powered at 60Hz in-rush vus 3 of 60Hz coil powered at 60Hz in-rush vus 3 of 60Hz coil powered at 60Hz in-rush vus 3 of 60Hz coil powered at 60Hz in-rush vus 3 of 60Hz coil powered at 60Hz in-rush vus 3 of 60Hz coil powered at 60Hz in-rush vus 3 of 60Hz coil powered at 60Hz in-rush vus 3 of 60Hz coil powered at 60Hz in-rush vus 3 of 60Hz coil powered at 60Hz in-rush vus 3 of 60Hz coil powered at 60Hz in-rush vus 4 of 50/60Hz coil powered at 60Hz in-rush vus 4 of 50/60Hz coil powered at 60Hz in-rush vus 4 of 50/60Hz coil powered at 60Hz in-rush vus 4 of 50/60Hz coil powered at 60Hz in-rush vus 4 of 50/60Hz coil powered at 60Hz in-rush vus 4 of 50/60Hz coil powered at 60Hz in-rush vus 4 of 50/60Hz coil powered at 60Hz in-rush vus 4 of 50/60Hz coil powered at 60Hz in-rush vus 4 of 50/60Hz coil powered at 60Hz in-rush vus 4 of 50/60Hz coil powered at 60Hz in-rush vus 4 of 50/60Hz coil powered at 60Hz in-rush vus 4 of 50/60H						
Pick-up min %Us 80 max %Us 115 Morp-out min min %Us 20 max %Us 55 Molding VA 4 Molding VA 3 Molding VA 4 Molding		. (50/0011 '1		max	%Us	55
min		of 50/60Hz coil pow				
Max Mus			ріск-ир		0/11-	00
AC average coil consumption at 20°C of 50/60Hz coil powered at 50Hz in-rush VA 30 holding VA 4 vA 30 holding VA 3 3 vA 4 vA 30 holding VA 3 3 vA 4 vA 30 holding VA 4 vA 30 holding VA 4 vA vA						
Min			drop out	max	%US	110
AC average coil consumption at 20°C of 50/60Hz coil powered at 50Hz In-rush			arop-out	min	0/ I Io	20
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 30 holding VA 30 holding VA 30 holding VA 4 Dissipation at holding ≤20°C 50Hz W 0.95 Max cycles frequency Max cycles frequency Max cycles frequency Average time for Us control in AC						
of 50/60Hz coil powered at 50Hz In-rush holding VA 4 of 50/60Hz coil powered at 60Hz In-rush holding VA 25 holding VA 3 holding VA 3 In-rush holding VA 3 holding VA 3 holding VA 3 holding 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 times Average time for Us control in AC	AC average coil consu	imption at 20°C		IIIdx	7003	33
In-rush holding	Ao average con const		vered at 50Hz			
holding		or ourour iz con pow	rorou at our IZ	in-ruch	\/Δ	30
of 50/60Hz coil powered at 60Hz in-rush holding						
In-rush holding		of 50/60Hz coil now	vered at 60Hz	noiding	٧/١	•
Nolding VA 3 Nolding VA 3 Nolding VA 3 Nolding VA 3 Nolding VA 4 Nolding Noldin		31 33/301 12 0011 pow	10.50 at 001 IZ	in-rush	\/A	25
of 60Hz coil powered at 60Hz in-rush						
In-rush holding		of 60Hz coil powere	ed at 60Hz	9		
Nolding VA 4 No.95		0. 00. <u>1</u> 00 po		in-rush	VA	30
Dissipation at holding ≤20°C 50Hz W 0.95 Max cycles frequency W 0.95 Mechanical operation cycles/h 3600 Operating times Average time for Us control in AC 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 18 max ms 25 Opening NO min ms 2 max ms 25 Opening NO min ms 2 max ms 3 Closing NC min ms 3						
Mac cycles frequency Mechanical operation cycles/h 3600 Operating times 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 max ms 17 in DC min ms 18 max ms 25 Opening NO min ms 18 max ms 25 Opening NO min ms 2 max ms 3 Closing NC min ms 3	Dissipation at holding:	≤20°C 50Hz		<u> </u>		
Mechanical operation cycles/h 3600 Operating times Closing NO min ms 12 max ms 21 Max ms 21 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 18 max ms 25 Opening NO min ms 18 max ms 25 Opening NO min ms 3 Closing NO min ms 3 Closing NC min ms 3 Closing NC min ms 3						
Average time for Us control in AC						
Closing NO Min Ms 12	Mechanical operation				cycles/h	3600
Closing NO min ms 12 max ms 21					cycles/h	3600
Min Ms 12 Max Ms 21	Operating times	ontrol			cycles/h	3600
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 17 max ms 25 Opening NO min ms 18 max ms 25 Opening NO min ms 18 max ms 25 Opening NO min ms 2 max ms 3 Closing NC min ms 3	Operating times				cycles/h	3600
Opening NO min ms 9 max ms 18	Operating times		Closing NO		cycles/h	3600
Min Ms 9 max ms 18	Operating times		Closing NO			12
Closing NC min ms 17 max ms 26	Operating times		-	min	ms	12
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	Operating times		-	min max	ms ms	12 21
Min Ms 17 max ms 26 26	Operating times		-	min max min	ms ms	12 21 9
Opening NC min ms 7 max ms 17	Operating times		Opening NO	min max min	ms ms	12 21 9
Opening NC min ms 7 max ms 17	Operating times		Opening NO	min max min max	ms ms ms	12 21 9 18
min ms 7 max ms 17	Operating times		Opening NO	min max min max min	ms ms ms ms	12 21 9 18
max ms 17	Operating times		Opening NO Closing NC	min max min max min	ms ms ms ms	12 21 9 18
in DC Closing NO min ms 18 max ms 25 Opening NO min ms 2 max ms 3 Closing NC min ms 3	Operating times		Opening NO Closing NC	min max min max min max	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	Operating times		Opening NO Closing NC	min max min max min max min	ms ms ms ms ms	12 21 9 18 17 26
min ms 18 max ms 25 Opening NO min ms 2 max ms 3 Closing NC min ms 3	Operating times	in AC	Opening NO Closing NC	min max min max min max min	ms ms ms ms ms	12 21 9 18 17 26
Opening NO max ms 25 Opening NO min ms 2 max ms 3 Closing NC min ms 3	Operating times	in AC	Opening NO Closing NC Opening NC	min max min max min max min	ms ms ms ms ms	12 21 9 18 17 26
Opening NO min ms 2 max ms 3 Closing NC min ms 3	Operating times	in AC	Opening NO Closing NC Opening NC	min max min max min max min max	ms ms ms ms ms ms	12 21 9 18 17 26 7
min ms 2 max ms 3 Closing NC min ms 3	Operating times	in AC	Opening NO Closing NC Opening NC	min max min max min max min max	ms ms ms ms ms ms	12 21 9 18 17 26 7 17
max ms 3 Closing NC min ms 3	Operating times	in AC	Opening NO Closing NC Opening NC Closing NO	min max min max min max min max	ms ms ms ms ms ms	12 21 9 18 17 26 7 17
Closing NC min ms 3	Operating times	in AC	Opening NO Closing NC Opening NC Closing NO	min max min max min max min max	ms ms ms ms ms ms	12 21 9 18 17 26 7 17
min ms 3	Operating times	in AC	Opening NO Closing NC Opening NC Closing NO	min max	ms ms ms ms ms ms ms	12 21 9 18 17 26 7 17
	Operating times	in AC	Opening NO Closing NC Opening NC Closing NO Opening NO	min max	ms ms ms ms ms ms ms	12 21 9 18 17 26 7 17
max ms 5	Operating times	in AC	Opening NO Closing NC Opening NC Closing NO Opening NO	min max min max min max min max min max	ms ms ms ms ms ms	12 21 9 18 17 26 7 17
	Operating times	in AC	Opening NO Closing NC Opening NC Closing NO Opening NO	min max	ms m	12 21 9 18 17 26 7 17



Opening NC

	m	in ms	11
	ma	x ms	17
UL technical data			
Full-load current (FLA) for three-phase	AC motor		
	at 480	V A	7.6
	at 600	V A	6.1
Yielded mechanical performance			
for single-phas	e AC motor		
	110/120		0.5
	230	V HP	1.5
for three-phase			
	200/208		2
	220/230		3
	460/480		5
	575/600	V HP	5
General USE			
Contactor			
	AC curre	nt A	20
Short-circuit protection fuse, 600V			
High fault			
	Short circuit curre		100
	Fuse ratir	_	30
	Fuse clas	SS	J
Standard fault			
	Short circuit curre		5
	Fuse ratir	-	30
	Fuse clas	SS	RK5
Contact rating of auxiliary contacts acco	rding to UL		A600 - Q600
Ambient conditions			
Temperature			
Operating temp			
	m		-50
	ma	x °C	+70
Storage tempe			•
	m		-60
	ma		+80
Max altitude		m	3000
Resistance & Protection			
Pollution degree			3
Dimensions			
4.4 (0.17") (0.17") (0.17") (0.33") (0.33") (0.33") (0.33") (0.38") (1.37")	, F	3	RF9 7.6 (0.30")
8.5 (0.33")	(1.73")		(3.51")
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