



Product designation Product type designation			Power contactor BG09
Contact characteristics			D003
Number of poles		Nr.	4
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		А	20
Operational current le			
	AC-1 (≤40°C)	А	20
	AC-1 (≤55°C)	А	18
	AC-1 (≤70°C)	А	15
	AC-3 (≤440V ≤55°C)	А	9
	AC-4 (400V)	А	4
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 $L/R \le 1$ ms with 1 poles in series			
	≤24V	А	12
	48V	А	10
	75V	A	4
	110V	A	3
	220V	A	-
IEC max current le in DC1 with $L/R \le 1$ ms with 2 poles in series	.0.0.4		
	≤24V	A	15
	48V	A	14
	75V	A	9
	110V	A	8
FC may summent to in DC1 with 1/D < 1ms with 2 notes in series	220V	A	_
IEC max current le in DC1 with $L/R \le 1$ ms with 3 poles in series	-041/	۸	4.0
	≤24V	A	16
	48V 75V	A A	16 10
	110V	A	10
	220V	A	2
IEC max current le in DC1 with L/R $\leq$ 1ms with 4 poles in series	2200	A	۷
	≤24V	А	16
	≤24∨ 48V	A	16
	48V 75V	A	10
	110V	A	10
	220V	A	2
	2200	~	<u>~</u>



$ \begin{array}{cccccccccccccccccccccccccccccccccccc$				
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	IEC max current le in DC3-DC5 with L/R ≤ 15ms with 1 poles in series	S		
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $			А	7
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$		48V	А	6
$\begin{array}{c c c c c c c c c c c c c c c c c c c $				
$\begin{array}{c c c c c c c } 220 & A & - \\ \hline \\$				
$\begin{array}{c c c c c c c c c c c c c c c c c c c $				
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	IEC max current le in DC3-DC5 with $1/R < 15$ ms with 2 poles in series		~	
$ \begin{array}{ccccccc} & 48V & A & 8\\ & 75V & A & 5\\ & 110V & A & 4\\ & 220V & A & -\\ \end{array} \\ \hline \begin{tabular}{lllllllllllllllllllllllllllllllllll$	in the max current le in DOS-DOS with Ert = 15ms with 2 poles in sene.		۸	0
$\begin{array}{cccc} 75 & A & 5 \\ 110 & A & 4 \\ 220 & A & - \end{array}$				
$ \begin{array}{c c c c c c } 110 & A & 4 \\ 220 & A & - \\ \hline \\ 1EC max current le in DC3-DC5 with L/R \leq 15ms with 3 poles in series \\ & \leq 24V & A & 10 \\ & 48V & A & 10 \\ & 75V & A & 6 \\ 110V & A & 5 \\ 220V & A & 0,8 \\ \hline \\ 110V & A & 5 \\ 220V & A & 0,8 \\ \hline \\ 110V & A & 5 \\ 220V & A & 0,8 \\ \hline \\ 110V & A & 5 \\ 220V & A & 0,8 \\ \hline \\ 110V & A & 5 \\ 220V & A & 0,8 \\ \hline \\ 110V & A & 5 \\ 220V & A & 0,8 \\ \hline \\ 110V & A & 5 \\ 220V & A & 0,8 \\ \hline \\ 110V & A & 5 \\ 220V & A & 0,8 \\ \hline \\ 800 & 10 & 75V & A & 6 \\ 110V & A & 5 \\ 220V & A & 0,8 \\ \hline \\ 800 & 10 & 75V & A & 0 \\ \hline \\ 800 & 10 & 72 \\ \hline \\ 800 & A & 7$				
$\begin{array}{c c c c c c c c c c c c c c c c c c c $				
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 3 poles in series $\begin{array}{cccccccccccccccccccccccccccccccccccc$				
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$			A	-
$ \begin{array}{cccc} 48V & A & 10 \\ 75V & A & 6 \\ 110V & A & 5 \\ 220V & A & 0.8 \end{array} \\ \hline \\ IEC max current le in DC3-DC5 with L/R \leq 15ms with 4 poles in series \\ \leq 24V & A & 10 \\ 48V & A & 10 \\ 75V & A & 6 \\ 110V & A & 5 \\ 220V & A & 0.8 \end{array} \\ \hline \\ Short-time allowable current for 10s (IEC/EN60947-1) & A & 96 \end{array} \\ \hline \\ Protection fuse \\ \hline \\ Protection fuse \\ \hline \\ gG (IEC) & A & 20 \\ aM (IEC) & A & 10 \\ Making capacity (RMS value) & A & 92 \end{array} \\ \hline \\ Breaking capacity at voltage \\ \hline \\ Haw V & A & 72 \\ 500V & A & 72 \\ 690V & A & 72 \\ 690V & A & 72 \\ 690V & A & 72 \\ 500V & A & 72 \\ 690V & A & 72 \\ 10 \end{array} \\ \hline \\ Power dissipation per pole (average value) & m\Omega & 10 \\ Power dissipation per pole (average value) & m\Omega & 10 \\ \hline \\ Power dissipation per pole (average value) & m\Omega & 10 \\ \hline \\ Tightening torque for terminals & min & Nm & 0.8 \\ max & Nm & 1 \\ min & lbin & 9 \\ \hline \\ Tightening torque for coil terminal & min & Nm & 0.8 \\ max & Nm & 1 \\ min & lbin & 9 \\ \hline \\ Tightening torque for coil terminal & min & Nm & 0.8 \\ max & Nm & 1 \\ min & lbin & 9 \\ \hline \\ Tightening torque for coil terminal & min & Nm & 0.8 \\ max & Nm & 1 \\ min & lbin & 9 \\ \hline \\ Tightening torque for coil terminal & Nm & 0.8 \\ max & Nm & 1 \\ min & lbin & 9 \\ \hline \\ Tightening torque for coil terminal & Nm & 0.8 \\ max & Nm & 1 \\ min & lbin & 9 \\ \hline \\ Tightening torque for coil terminal & Nm & 0.8 \\ max & Nm & 1 \\ min & lbin & 9 \\ \hline \\ Tightening torque for coil terminal & Nm & 0.8 \\ max & Nm & 1 \\ min & lbin & 9 \\ \hline \\ Tightening torque for coil terminal & Nm & 0.8 \\ max & Nm & 1 \\ min & lbin & 9 \\ \hline \\ Tightening torque for coil terminal & Nm & 0.8 \\ max & Nm & 1 \\ min & lbin & 9 \\ \hline \\ Tightening torque for coil terminal & Nm & 0.8 \\ max & lbin & 9 \\ \hline \\ Tightening torque for coil terminal & Nm & 0.8 \\ max & lbin & 9 \\ \hline \\ Tightening torque for coil terminal & Nm & 0.8 \\ max & lbin & 9 \\ \hline \\ Tightening torque for coil terminal & Nm & 0.8 \\ max & lbin & 9 \\ \hline \\ Tightening torque for coil terminal & Nm & 0.8 \\ max & lbin & 9 \\ \hline \\ Tightening torque for box & Nm & 0 \\ \hline \\ Tightening torque for$	IEC max current le in DC3-DC5 with $L/R \le 15$ ms with 3 poles in series			
$\begin{array}{c c c c c c c c c c c c c c c c c c c $				
$\begin{array}{c c c c c c c c c c c c c c c c c c c $			А	10
$\begin{array}{c c c c c c c c c c c c c c c c c c c $		75V	А	6
$\begin{array}{c c c c c c c c c c c c c c c c c c c $		110V	А	5
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 4 poles in series		220V	А	0,8
	IEC max current le in DC3-DC5 with L/R ≤ 15ms with 4 poles in series	S		
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         A         92           Breaking capacity at voltage         440V         A         72           690V         A         72         500V         A         72           690V         A         72         690V         A         72           Resistance per pole (average value)         mΩ         10         10           Power dissipation per pole (average value)         mΩ         0.81         11           Tightening torque for terminals         min         Nm         1           max         Nm         1         9         11           Tightening torque for coil terminal         min         Nm         1           min         Nm         0.8         max         Nm         1	·		А	10
$\begin{array}{cccc} 75 & A & 6 \\ 110 & A & 5 \\ 220 & A & 0.8 \end{array} \\ \hline \\ Short-time allowable current for 10s (IEC/EN60947-1) & A & 96 \end{array} \\ \hline \\ Protection fuse & & & & & & & \\ gG (IEC) & A & 20 \\ aM (IEC) & A & 10 \end{array} \\ \hline \\ Making capacity (RMS value) & A & 92 \end{array} \\ \hline \\ Breaking capacity at voltage & & & & & & & \\ 440 & A & 72 \\ 500 & A & 72 \end{array} \\ \hline \\ Breaking capacity at voltage & & & & & & & \\ 440 & A & 72 \\ 500 & A & 72 \end{array} \\ \hline \\ Resistance per pole (average value) & & & & & & & & \\ Power dissipation per pole (average value) & & & & & & & \\ Power dissipation per pole (average value) & & & & & & & & \\ Power dissipation per pole (average value) & & & & & & & & \\ Power dissipation per pole (average value) & & & & & & & & & \\ \hline \\ Tightening torque for terminals & & & & & & & & \\ min & Nm & 0.8 \\ max & Nm & 1 \\ min & lbin & 9 \\ max & lbin & 9 \end{array} \\ \hline \\ Tightening torque for coil terminal & & & & & & \\ \hline \\ Max number of wires simultaneously connectable & & & & & & \\ Nr. & 2 \end{array}$				
$\begin{array}{c c c c c c c c c c c c c c c c c c c $				
220V         A         0,8           Short-time allowable current for 10s (IEC/EN60947-1)         A         96           Protection fuse         gG (IEC)         A         20           aM (IEC)         A         92           Breaking capacity (RMS value)         A         92           Breaking capacity at voltage         440V         A         72           500V         A         72           690V         A         72           690V         A         72           690V         A         72           Resistance per pole (average value)         mΩ         10           Power dissipation per pole (average value)         mΩ         10           Power dissipation per pole (average value)         w         4           AC-3         W         0.81           Tightening torque for terminals         min         Nm         0.8           max         Nm         1         min         10           Power dissipation per pole (average value)         min         Nm         0.8           Tightening torque for terminals         min         Nm         0.8           max         Nm         1         min         Nm         1				
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       500V       A       72         690V       A       72       690V       A       72         Resistance per pole (average value)       mΩ       10       10         Power dissipation per pole (average value)       Ith       W       4         AC-3       W       0.81       max       Nm       1         Tightening torque for terminals       min       Nm       0.8       max       Ibin       9         Tightening torque for coil terminal       min       Nm       0.8       max       Nm       1         Tightening torque for coil terminal       min       Nm       0.8       max       Nm       1         Max number of wires simultaneously connectable       Nr.       2       Min       1				
$\begin{array}{llllllllllllllllllllllllllllllllllll$	Short time ellowable surrent for 10s (IEC/ENG0047.1)	2200		
gG (IEC) aM (IEC)         A         20 add (IEC)           Making capacity (RMS value)         A         92           Breaking capacity at voltage         440V         A         72           500V         A         72           690V         A         72           690V         A         72           Resistance per pole (average value)         mΩ         10           Power dissipation per pole (average value)         th         W         4           AC-3         W         0.81         1           Tightening torque for terminals         min         Nm         0.8           max         Nm         1         min         9           Tightening torque for coil terminal         min         Nm         0.8           max         Nm         1         min         1           min         Ibin         9         1         9           Tightening torque for coil terminal         min         Nm         0.8           max         Ibin         9         1         9           Max number of wires simultaneously connectable         Nr.         2			A	90
aM (IEC)A10Making capacity (RMS value)A92Breaking capacity at voltage440VA72440VA72500VA72690VA72690VA72Resistance per pole (average value)mΩ1010Power dissipation per pole (average value)IthW4AC-3W0.811Tightening torque for terminalsminNm0.8minIbin919Tightening torque for coil terminalminNm0.8maxNm1min1ininIbin91Tightening torque for coil terminalminNm0.8Max number of wires simultaneously connectableNr.2	Protection fuse			
Making capacity (RMS value)       A       92         Breaking capacity at voltage       440V       A       72         500V       A       72       500V       A       72         690V       A       72       690V       A       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       1.8         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       lbin       9         Max number of wires simultaneously connectable       Nr.       2       2       1       1				
Breaking capacity at voltage $ \begin{array}{ccccccccccccccccccccccccccccccccccc$		aM (IEC)		
440V         A         72           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         0.81         1           Tightening torque for terminals         min         Nm         0.8           max         Nm         1         1         9           Tightening torque for coil terminal         min         Nm         0.8           max         Nm         1         9         1           Tightening torque for coil terminal         min         Nm         0.8           max         Ibin         9         9         1           Tightening torque for coil terminal         min         Nm         0.8           max         Nm         1         9         1           Min         Ibin         9         1         9           Max number of wires simultaneously connectable         Nr.         2         1			A	92
500VA72690VA72Resistance per pole (average value)mΩ10Power dissipation per pole (average value)IthW4AC-3W0.81Tightening torque for terminalsminNm0.8maxNm1min10Tightening torque for coil terminalminNm0.8Tightening torque for coil terminalminNm1minIbin9maxNm1minIbin9maxNm1Max number of wires simultaneously connectableNr.22	Breaking capacity at voltage			
690V       A       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         min       Nm       10       10         Tightening torque for coil terminals       min       Nm       0.8         max       Nm       1       1       1         min       Ibin       9       1       1         Tightening torque for coil terminal       min       Nm       0.8         max       Ibin       9       1       1         Tightening torque for coil terminal       min       Nm       0.8         max       Ibin       9       1       1         min       Ibin       9       1       1         Max number of wires simultaneously connectable       Nr.       2		440V	А	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         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         Tightening torque for coil terminal       min       Nm       0.8       max       Nm       1         Tightening torque for coil terminal       min       Nm       0.8       max       Nm       1         Max number of wires simultaneously connectable       Nr.       2       2		500V	А	72
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 Ibin 9 max Ibin 9 Tightening torque for coil terminal Min Nm 0.8 max Nm 1 min 1bin 9 max Ibin 9 Max number of wires simultaneously connectable Nr. 2		690V	А	72
Ith       W       4         AC-3       W       0.81         Tightening torque for terminals       min       Nm       0.8         max       Nm       1       min       10         min       Ibin       9       9       1         Tightening torque for coil terminal       min       Nm       0.8         Tightening torque for coil terminal       min       Nm       0.8         Max number of wires simultaneously connectable       Nr.       2	Resistance per pole (average value)		mΩ	10
Ith       W       4         AC-3       W       0.81         Tightening torque for terminals       min       Nm       0.8         max       Nm       1       min       1bin       9         Tightening torque for coil terminal       min       Ibin       9       9         Tightening torque for coil terminal       min       Nm       0.8         max       Nm       1       1         min       Ibin       9       1         Tightening torque for coil terminal       min       Nm       0.8         Max number of wires simultaneously connectable       Nr.       2				
AC-3       W       0.81         Tightening torque for terminals       min       Nm       0.8         max       Nm       1       min       1bin       9         Tightening torque for coil terminal       min       Ibin       9         Tightening torque for coil terminal       min       Nm       0.8         Max number of wires simultaneously connectable       Nr.       2		Ith	W	4
Tightening torque for terminals       min       Nm       0.8         max       Nm       1         min       Ibin       9         Tightening torque for coil terminal       min       Nm       0.8         max       Nm       1         min       Ibin       9         Max number of wires simultaneously connectable       Nr.       2				
min       Nm       0.8         max       Nm       1         min       Ibin       9         Tightening torque for coil terminal       min       Nm       0.8         max       Nm       0.8       nax       Nm       1         min       Nm       0.8       nax       Nm       1         Tightening torque for coil terminal       min       Nm       0.8         max       Nm       1       nin       1         min       Ibin       9       nax       1         Max number of wires simultaneously connectable       Nr.       2	Tightening torque for terminals	100	••	0101
maxNm1minIbin9maxIbin9Tightening torque for coil terminalminNm0.8maxNm1minIbin9Max number of wires simultaneously connectableNr.2		min	Nim	0.9
min       Ibin       9         Tightening torque for coil terminal       9         min       Nm       0.8         max       Nm       1         min       Ibin       9         Max number of wires simultaneously connectable       Nr.       2				
max       Ibin       9         Tightening torque for coil terminal       min       Nm       0.8         max       Nm       1         min       Ibin       9         max       Ibin       9         Max number of wires simultaneously connectable       Nr.       2				
Tightening torque for coil terminal       min       Nm       0.8         max       Nm       1         min       Ibin       9         max       Ibin       9         Max number of wires simultaneously connectable       Nr.       2				
min       Nm       0.8         max       Nm       1         min       Ibin       9         max       Ibin       9         Max number of wires simultaneously connectable       Nr.       2		max	niai	9
max       Nm       1         min       Ibin       9         max       Ibin       9         Max number of wires simultaneously connectable       Nr.       2	I igntening torque for coil terminal			
min       Ibin       9         max       Ibin       9         Max number of wires simultaneously connectable       Nr.       2		min		
maxIbin9Max number of wires simultaneously connectableNr.2				
Max number of wires simultaneously connectable Nr. 2		min		9
•		max	lbin	
	Max number of wires simultaneously connectable		Nr.	2
Conductor section	Conductor section			
AWG/Kcmil				
max 12		may		12
		inax		
	Flexible w/o lug conductor section			
min mm <sup>2</sup> 0.75	Flexible w/o lug conductor section	min	mm <sup>2</sup>	0.75



		max	mm²	2.5
	Flexible c/w lug conductor section	Παλ		2.0
		min	mm²	1.5
		max	mm²	2.5
	Flexible with insulated spade lug conductor	or section		
		min	mm²	1.5
		max	mm²	2.5
Power terminal protect	tion according to IEC/EN 60529			IP20 when
				properly wired
Mechanical features				
Operating position				Mantical alay
		normal allowable		Vertical plan ±30°
		allowable		±30 Screw / DIN rail
Fixing				35mm
Weight			g	175
Conductor section			9	110
	AWG/kcmil conductor section			
		max		12
Auxiliary contact chara	acteristics			
Thermal current Ith			А	10
IEC/EN 60947-5-1 de	signation			A600
Operations				
Mechanical life			cycles	2000000
Electrical life			cycles	500000
Safety related data				
Performance level B1	0d according to EN/ISO 13489-1			
		rated load	cycles	500000
		mechanical load	cycles	2000000
	ng to IEC/EN 609474-4-1			yes
EMC compatibility				yes
AC coil operating			N/	40
Rated AC voltage at 5	0/60HZ		V	48
AC operating voltage	of 50/60Hz coil powered at 50Hz			
	pick-up			
	ρισκ-αρ	min	%Us	75
		max	%Us	115
	drop-out	max	,	
		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	20
		max	%Us	55
AC average coil consu	-			
	of 50/60Hz coil powered at 50Hz		1.74	
		in-rush	VA	30
		holding	VA	4
	of 50/60Hz coil powered at 60Hz	:	١/٨	25
		in-rush	VA	25



**11BG09T4A048** FOUR-POLE CONTACTOR, AC COIL 50/60HZ, 48VAC

		holding	VA	3
	of 60Hz coil powered at 60Hz	norang		<u> </u>
		in-rush	VA	30
		holding	VA	4
Dissipation at holding	≤20°C 50Hz		W	0.95
Max cycles frequency				
Mechanical operation			cycles/h	3600
Operating times				
Average time for Us c	ontrol			
	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 po				
	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
0		575/600V	HP	5
General USE				
	Contactor			
	<i>.</i>	AC current	A	20
Short-circuit protection				
•				
	High fault	Short circuit current	kA	100

11BG09T4A048 The characteristics described in this document are subject to updates or modifications at any time. The descriptions, technical and functional information, illustrations and instructions in this brochure are purely illustrative, and are consequently not contractually binding



11BG09T4A048 FOUR-POLE CONTACTOR, AC COIL 50/60HZ, 48VAC

	Fuse rating	А	30
	Fuse class		J
Standard fault			
	Short circuit current	kA	5
	Fuse rating	А	30
	Fuse class		RK5
Ambient conditions Femperature			
Operating temperature			
Operating temperature	min	°C	-50
	max	°Č	+70
Storage temperature			
	min	°C	-60
	max	°C	+80
Max altitude		m	3000
Resistance & Protection			2
Pollution degree Dimensions			3
Dimensions $(1.73')^{-1} (0.17'') \otimes (0.17'')$	(1.73") ( <sup>6</sup> ), <sup>6</sup> )		
(0.33") (0.33") (0.33") (0.33") (0.33") (0.33") (0.38") (1.37") (0.38") (1.37") (0.38") (1.37") (0.38") (1.37") (0.38") (1.37") (0.38") (1.37") (0.38") (1.37") (0.38") (0			RF9
$A1 \qquad 1 \qquad 3 \qquad 5 \qquad 7$ $A1 \qquad J \qquad $			
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			

Certificates

UL 60947-4-1

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## 11BG09T4A048 FOUR-POLE CONTACTOR, AC COIL 50/60HZ, 48VAC

	CCC	
	cULus	
	EAC	
ETIM classification		
		-

**ETIM 8.0** 

EC000066 -Power contactor, AC switching