

Product designation				Power contactor
Product type designation				BGF09
<b>Contact characteristics</b>				
Number of poles	Nr.			4
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-3 ( $\leq 440\text{V} \leq 55^\circ\text{C}$ )	A	9	
	AC-4 (400V)	A	4	
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 $I_e$ in DC1 with $L/R \leq 1\text{ms}$ with 4 poles in series	$\leq 24\text{V}$	A	16	
	48V	A	16	
	75V	A	10	
	110V	A	10	
	220V	A	2	
IEC max current $I_e$ in DC3-DC5 with $L/R \leq 15\text{ms}$ with 1 poles in series	$\leq 24\text{V}$	A	7	
	48V	A	6	
	75V	A	2	
	110V	A	1	
	220V	A	–	
IEC max current $I_e$ in DC3-DC5 with $L/R \leq 15\text{ms}$ with 2 poles in series	$\leq 24\text{V}$	A	8	
	48V	A	8	
	75V	A	5	

	110V	A	4
	220V	A	–
IEC max current $I_e$ 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
IEC max current $I_e$ 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
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 $\Omega$	10
Power dissipation per pole (average value)			
	$I_{th}$	W	4
	AC3	W	0.81
Tightening torque for terminals			
	min	Nm	0.8
	max	Nm	1
	min	$I_{bin}$	0.6
	max	$I_{bin}$	0.7
Tightening torque for coil terminal			
	min	Nm	0.8
	max	Nm	1
	min	$I_{bin}$	Prodotti finiti
	max	$I_{bin}$	Prodotti finiti
Max number of wires simultaneously connectable		Nr.	2
Conductor section			
Flexible w/o lug conductor section			
	min	mm <sup>2</sup>	0.75
	max	mm <sup>2</sup>	2.5
Flexible c/w lug conductor section			
	min	mm <sup>2</sup>	1.5
	max	mm <sup>2</sup>	2.5
Flexible with insulated spade lug conductor section			
	min	mm <sup>2</sup>	1.5
	max	mm <sup>2</sup>	2.5
Power terminal protection according to IEC/EN 60529			IP20 when wired
<b>Mechanical features</b>			
Operating position		normal allowable	Vertical plan $\pm 30^\circ$

Fixing				Screw / DIN rail 35mm
Weight	g			180
<b>Auxiliary contact characteristics</b>				
Thermal current I <sub>th</sub>	A			10
IEC/EN 60947-5-1 designation				A600
<b>Operations</b>				
Mechanical life	cycles			20000000
Electrical life	cycles			500000
<b>Safety related data</b>				
Performance level B10d according to EN/ISO 13489-1				
	rated load mechanical load	cycles	cycles	500000 20000000
Mirror contacts according to IEC/EN 60947-4-1				Yes
EMC compatibility				Yes
Rated AC voltage at 60Hz	V			48
<b>AC coil operating</b>				
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
<b>Max cycles frequency</b>				
Mechanical operation	cycles/h			3600
<b>Operating times</b>				
Average time for U <sub>s</sub> 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
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**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

**Ambient conditions**

**Temperature**

Operating temperature	min	°C	-50
	max	°C	+70

Storage temperature	min	°C	-60
	max	°C	+80

Max altitude	m	3000
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**Resistance & Protection**

Pollution degree	3
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**Dimensions**

**Wiring diagrams**

**Certifications and compliance**

**Compliance**

CSA C22.2 n° 60947-1
CSA C22.2 n° 60947-4-1

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IEC/EN 60947-1

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IEC/EN 60947-4-1

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UL 60947-1

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UL 60947-4-1

Certificates

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CCC

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cULus

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EAC

ETIM classification

ETIM 8.0

EC000066 -  
Power contactor,  
AC switching