

Product designation				Power contactor
Product type designation				BGF09
Contact characteristics				
Number of poles	Nr.			3
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-1 ($\leq 55^\circ\text{C}$)	A	0	
	AC-3 ($\leq 440\text{V} \leq 55^\circ\text{C}$)	A	9	
	AC-4 (400V)	A	4	
Rated operational power AC-3 ($T \leq 55^\circ\text{C}$)	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 ($T \leq 40^\circ\text{C}$)	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	–
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IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 2 poles in series	≤24V	A	8
	48V	A	8
	75V	A	5
	110V	A	4
	220V	A	–
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IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 3 poles in series	≤24V	A	10
	48V	A	10
	75V	A	6
	110V	A	5
	220V	A	0,8
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IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 4 poles in series	≤24V	A	10
	48V	A	10
	75V	A	6
	110V	A	5
	220V	A	0,8
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Short-time allowable current for 10s (IEC/EN60947-1)		A	96
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Protection fuse	gG (IEC)	A	20
	aM (IEC)	A	10
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Making capacity (RMS value)		A	92
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Breaking capacity at voltage	440V	A	72
	500V	A	72
	690V	A	72
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Resistance per pole (average value)		mΩ	10
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Power dissipation per pole (average value)	Ith	W	4
	AC3	W	0.81
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Tightening torque for terminals	min	Nm	0.8
	max	Nm	1
	min	Ibin	0.6
	max	Ibin	0.7
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Tightening torque for coil terminal	min	Nm	0.8
	max	Nm	1
	min	Ibin	Prodotti finiti
	max	Ibin	Prodotti finiti
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Max number of wires simultaneously connectable		Nr.	2
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Conductor section	Flexible w/o lug conductor section		
	min	mm ²	0.75
	max	mm ²	2.5
	Flexible c/w lug conductor section		
	min	mm ²	1.5
	max	mm ²	2.5

Flexible with insulated spade lug conductor section

	min	mm ²	1.5
	max	mm ²	2.5
Power terminal protection according to IEC/EN 60529			IP20 when wired
Mechanical features			
Operating position	normal allowable		Vertical plan ±30°
Fixing			Screw / DIN rail 35mm
Weight		g	179
Auxiliary contact characteristics			
Type of contact			1 NC
Thermal current I _{th}		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
	48V	A	1.4
	60V	A	1.1
	125V	A	0.3
	220V	A	0.1
	600V	A	0.6
Operations			
Mechanical life		cycles	20000000
Electrical life		cycles	500000
Safety related data			
Performance level B10d according to EN/ISO 13489-1	rated load mechanical load	cycles	500000
		cycles	20000000
Mirror contacts according to IEC/EN 60947-4-1			Yes
EMC compatibility			Yes
Rated AC voltage at 60Hz		V	24
AC coil operating			
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
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 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
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
Contact rating of auxiliary contacts according to UL			A600 - Q600
Ambient conditions			
Temperature			
	Operating temperature		
	min	°C	-50
	max	°C	+70
	Storage temperature		
	min	°C	-60
	max	°C	+80
Max altitude		m	3000
Resistance & Protection			
Pollution degree			3
Dimensions			
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