



Product designation

Power contactor

Product type designation

BGF09

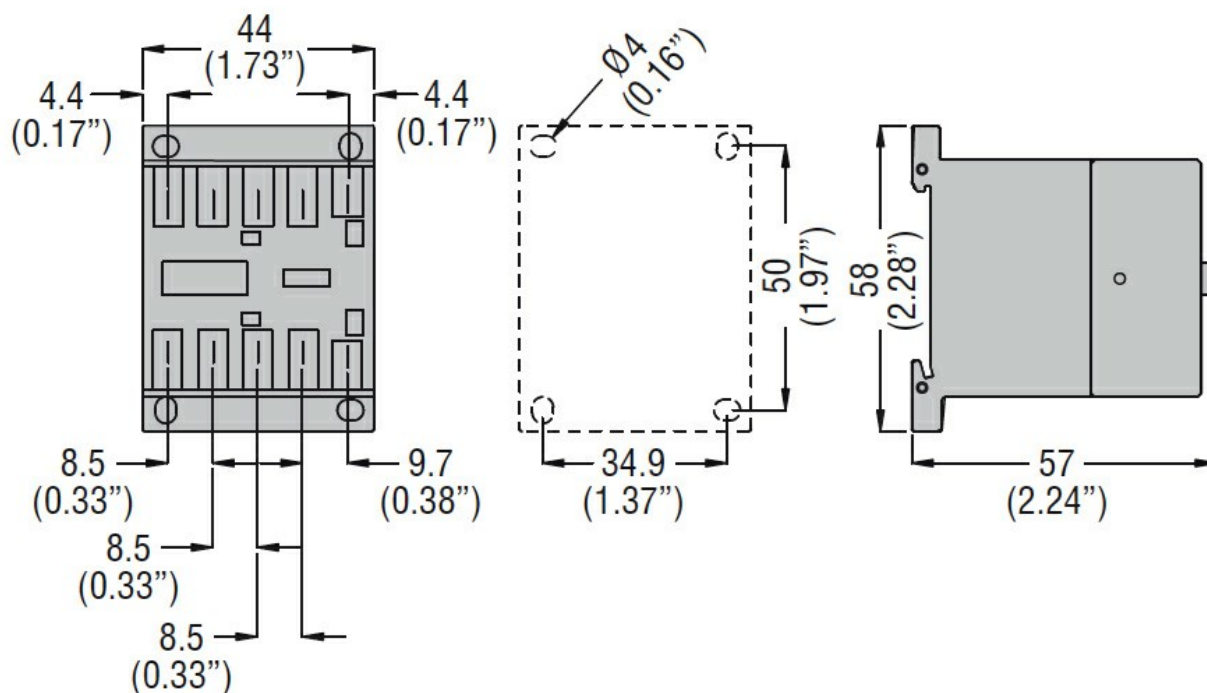
Contact characteristics

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-1 ($\leq 55^\circ\text{C}$)	A 18
	AC-1 ($\leq 70^\circ\text{C}$)	A 15
	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

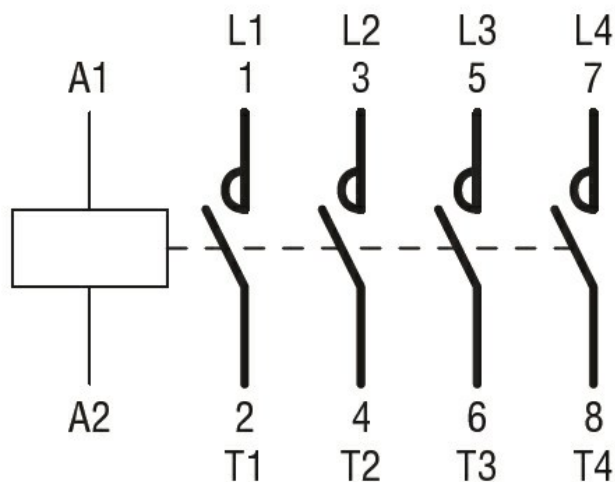
IEC max current I _e in DC3-DC5 with L/R ≤ 15ms with 1 poles in series			
≤24V	A	7	
48V	A	6	
75V	A	2	
110V	A	1	
220V	A	–	
IEC max current I _e in DC3-DC5 with L/R ≤ 15ms with 2 poles in series			
≤24V	A	8	
48V	A	8	
75V	A	5	
110V	A	4	
220V	A	–	
IEC max current I _e in DC3-DC5 with L/R ≤ 15ms with 3 poles in series			
≤24V	A	10	
48V	A	10	
75V	A	6	
110V	A	5	
220V	A	0,8	
IEC max current I _e 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	
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)		mΩ	10
Power dissipation per pole (average value)			
	I _{th}	W	4
	AC-3	W	0.81
Tightening torque for terminals			
	min	Nm	0.8
	max	Nm	1
	min	I _{bin}	9
	max	I _{bin}	9
Tightening torque for coil terminal			
	min	Nm	0.8
	max	Nm	1
	min	I _{bin}	9
	max	I _{bin}	9
Max number of wires simultaneously connectable		Nr.	2
Conductor section			
AWG/Kcmil			
	max		12
Flexible w/o lug conductor section			
	min	mm ²	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
		max	mm²	2.5
Power terminal protection according to IEC/EN 60529				IP20 when properly wired
Mechanical features				
Operating position		normal allowable	Vertical plan ±30°	
Fixing				Screw / DIN rail 35mm
Weight			g	210
Auxiliary contact characteristics				
Thermal current Ith			A	10
IEC/EN 60947-5-1 designation				Q600
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
EMC compatibility				yes
DC coil operating				
DC rated control voltage			V	12
DC operating voltage				
pick-up		min	%Us	75
		max	%Us	115
drop-out		min	%Us	10
		max	%Us	25
Average coil consumption ≤20°C				
		in-rush holding	W	3.2
			W	3.2
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				
Rated operational voltage AC (UL)			V	600
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
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