



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

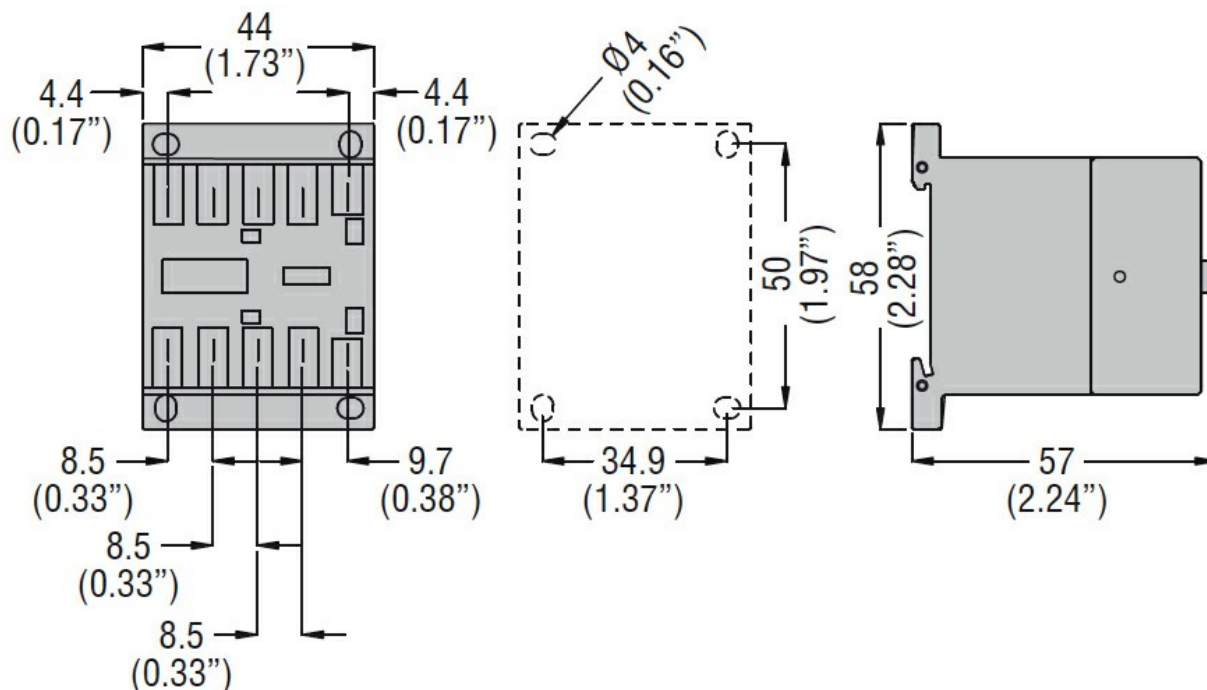
IEC max current I_e in DC1 with $L/R \leq 1\text{ms}$ with 4 poles in series			
$\leq 24\text{V}$	A	16	
48V	A	16	
75V	A	10	
110V	A	10	
220V	A	2	
IEC max current I_e in DC3-DC5 with $L/R \leq 15\text{ms}$ with 1 poles in series			
$\leq 24\text{V}$	A	7	
48V	A	6	
75V	A	2	
110V	A	1	
220V	A	–	
IEC max current 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 $L/R \leq 15\text{ms}$ with 3 poles in series			
$\leq 24\text{V}$	A	10	
48V	A	10	
75V	A	6	
110V	A	5	
220V	A	0.8	
IEC max current I_e in DC3-DC5 with $L/R \leq 15\text{ms}$ with 4 poles in series			
$\leq 24\text{V}$	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
	AC3	W	0.81
Tightening torque for terminals			
	min	Nm	0.8
	max	Nm	1
	min	lbin	0.6
	max	lbin	0.7
Tightening torque for coil terminal			
	min	Nm	0.8
	max	Nm	1
	min	lbft	0.59
	max	lbft	0.74

Max number of wires simultaneously connectable	nr.	2
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	%U _s 75
	max	%U _s 115
drop-out		

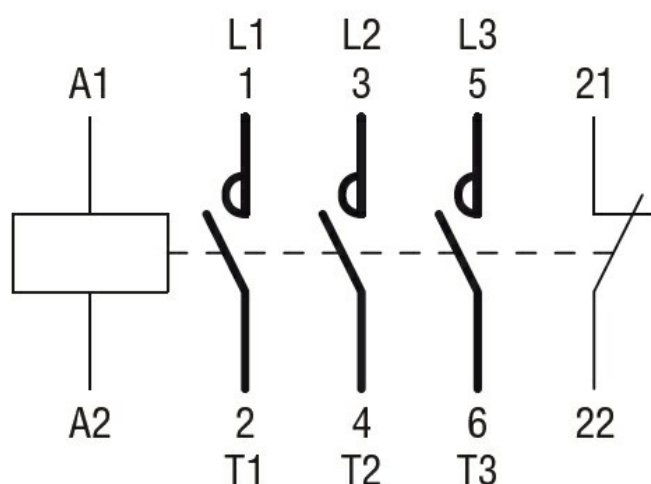
		min	%Us	20
		max	%Us	55
AC average coil consumption at 20°C				
of 50/60Hz coil powered at 50Hz				
	in-rush	VA		30
	holding	VA		4
of 50/60Hz coil powered at 60Hz				
	in-rush	VA		25
	holding	VA		3
of 60Hz coil powered at 60Hz				
	in-rush	VA		30
	holding	VA		4
Dissipation at holding ≤20°C 50Hz			W	0.95
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