11BGF0901D012

THREE-POLE CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 9A, DC COIL, 12VDC, 1NC AUXILIARY CONTACT, FASTON TERMINALS

Product designation			Power contactor
Product type designation			BGF09
Contact characteristics			
Number of poles		Nr.	3
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		A	20
Operational current Ie			
	AC-1 (≤40°C)	A	20
	AC-1 (≤55°C)	A	18
	AC-1 (≤70°C)	A	15
	AC-3 (≤440V ≤55°C)	A	9
	AC-4 (400V)	A	4
Rated operational power AC-3 (T≤55°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≤40°C)			
	230V	kW	8
	400V	kW	14
	500V	kW	16
	690V	kW	22
IEC max current Ie in DC1 with L/R ≤ 1ms with 1 poles in series			
	≤24V	A	12
	48V	A	10
	75V	A	4
	110V	A	3
	220V	A	–
IEC max current Ie in DC1 with L/R ≤ 1ms with 2 poles in series			
	≤24V	A	15
	48V	A	14
	75V	A	9
	110V	A	8
	220V	A	–
IEC max current Ie in DC1 with L/R ≤ 1ms with 3 poles in series			
	≤24V	A	16
	48V	A	16
	75V	A	10
	110V	A	10
	220V	A	2

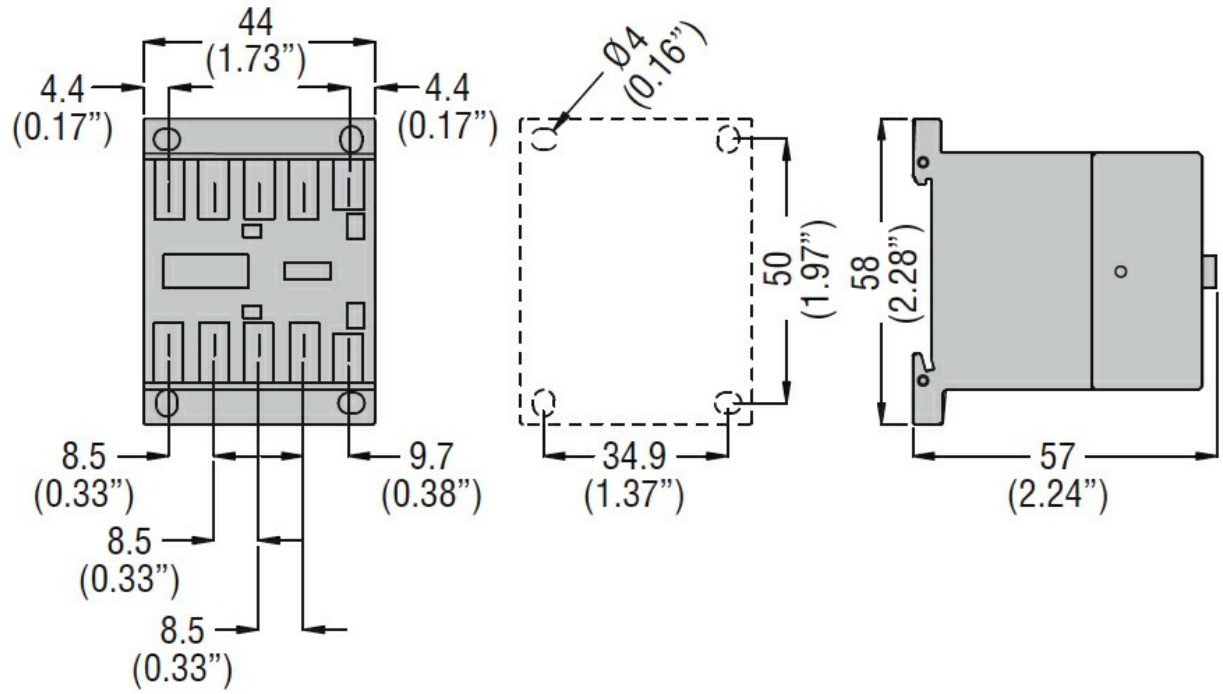
IEC max current Ie in DC1 with L/R ≤ 1ms with 4 poles in series			
	≤24V	A	16
	48V	A	16
	75V	A	10
	110V	A	10
	220V	A	2
IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 1 poles in series			
	≤24V	A	7
	48V	A	6
	75V	A	2
	110V	A	1
	220V	A	–
IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 2 poles in series			
	≤24V	A	8
	48V	A	8
	75V	A	5
	110V	A	4
	220V	A	–
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
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
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)			
	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	Ibin	9
	max	Ibin	9

Max number of wires simultaneously connectable		Nr.	2
Conductor section			
AWG/Kcmil			
	max		12
Flexible w/o lug conductor section			
	min	mm²	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		Vertical plan
	allowable		±30°
Fixing			Screw / DIN rail 35mm
Weight		g	224
Conductor section			
AWG/kcmil conductor section			
	max		12
Auxiliary contact characteristics			
Thermal current Ith		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	cycles	500000
	mechanical load	cycles	20000000
Mirror contats according to IEC/EN 609474-4-1			yes
EMC compatibility			yes
DC coil operating			
DC rated control voltage		V	12
DC operating voltage			

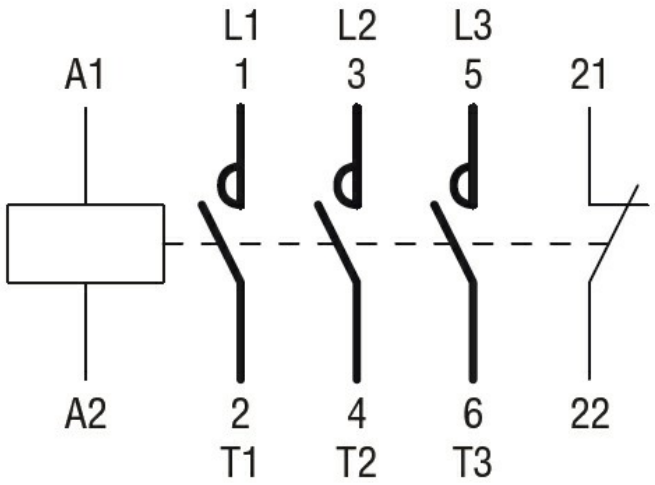
	pick-up				
			min	%Us	75
			max	%Us	115
	drop-out				
			min	%Us	10
			max	%Us	25
Average coil consumption ≤20°C					
			in-rush	W	3.2
			holding	W	3.2
Max cycles frequency					
Mechanical operation				cycles/h	3600
Operating times					
Average time for Us control					
	in AC				
		Closing NO			
			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					
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