Lovato electric
ENERGY AND AUTOMATION

11BG09T4A12060

FOUR-POLE CONTACTOR, AC COIL 60HZ, 120VAC

Product designation			Power contactor
Product type designation			BG09
Contact characteristics			
Number of poles		Nr.	4
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-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	lbin	9
	max	lbin	9
Tightening torque for coil terminal			
	min	Nm	0.8
	max	Nm	1
	min	lbin	9
	max	lbin	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	180
Conductor section				
	AWG/kcmil conductor section			
		max		12
Auxiliary contact characteristics				
Thermal current Ith			A	10
IEC/EN 60947-5-1 designation				A600
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
AC coil operating				
Rated AC voltage at 60Hz			V	120
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
			Fuse class	RK5

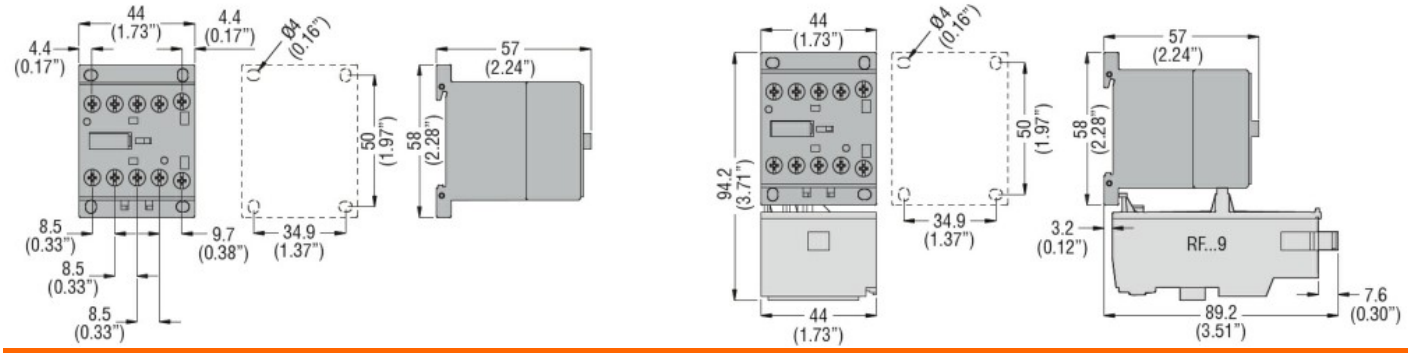
Ambient conditions

Temperature				
	Operating temperature			
		min	°C	-50
		max	°C	+70
	Storage temperature			
		min	°C	-60
		max	°C	+80
Max altitude			m	3000

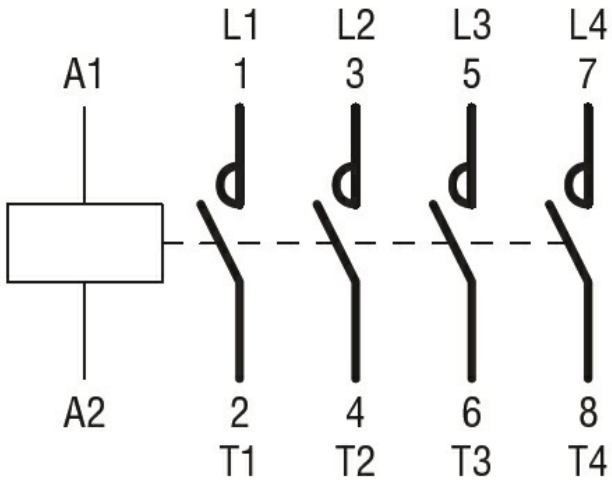
Resistance & Protection

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