11BG09T4A024

FOUR-POLE CONTACTOR, AC COIL 50/60HZ, 24VAC

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
	AC3	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	178
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 50/60Hz			V	24
AC operating voltage				
	of 50/60Hz coil powered at 50Hz			
	pick-up			
		min	%Us	75
		max	%Us	115
	drop-out			
		min	%Us	20
		max	%Us	55
	of 50/60Hz coil powered at 60Hz			
	pick-up			
		min	%Us	80
		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

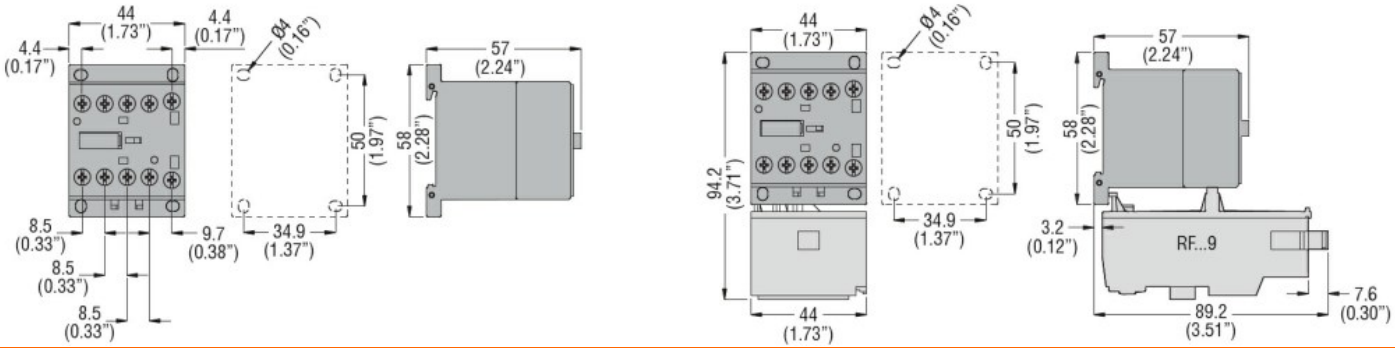
Ambient conditions

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

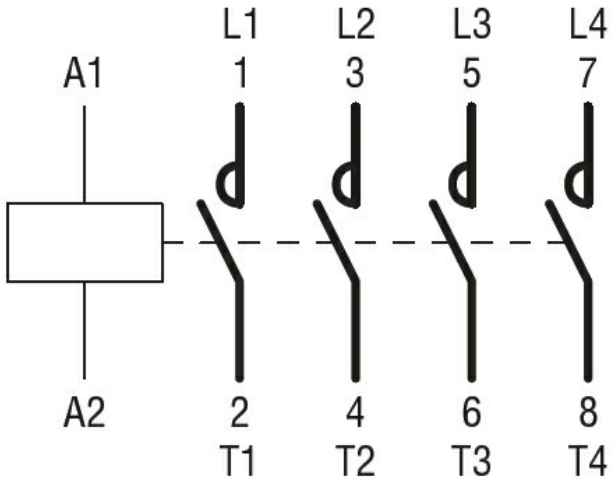
Resistance & Protection

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

11BG09T4A048

FOUR-POLE CONTACTOR, AC COIL 50/60HZ, 48VAC

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
	AC3	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	175
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 50/60Hz			V	48
AC operating voltage				
	of 50/60Hz coil powered at 50Hz			
	pick-up			
		min	%Us	75
		max	%Us	115
	drop-out			
		min	%Us	20
		max	%Us	55
	of 50/60Hz coil powered at 60Hz			
	pick-up			
		min	%Us	80
		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

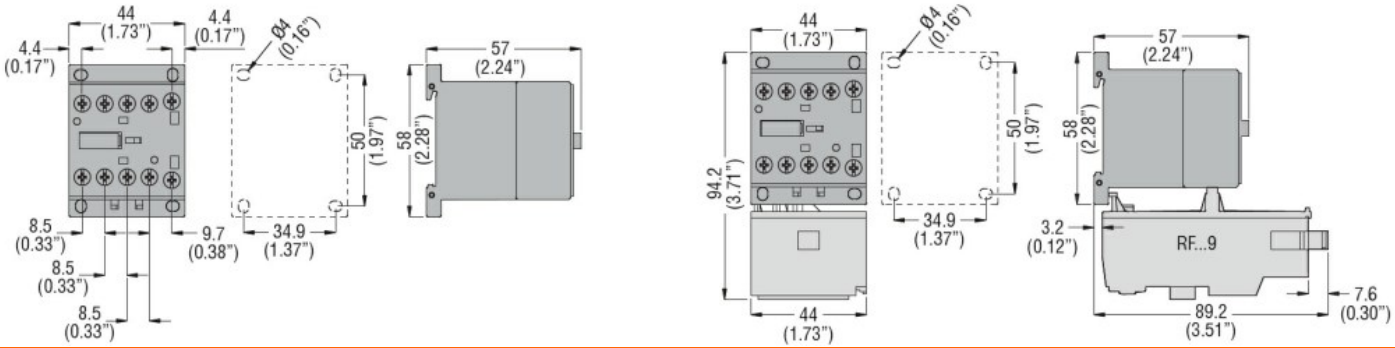
Ambient conditions

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

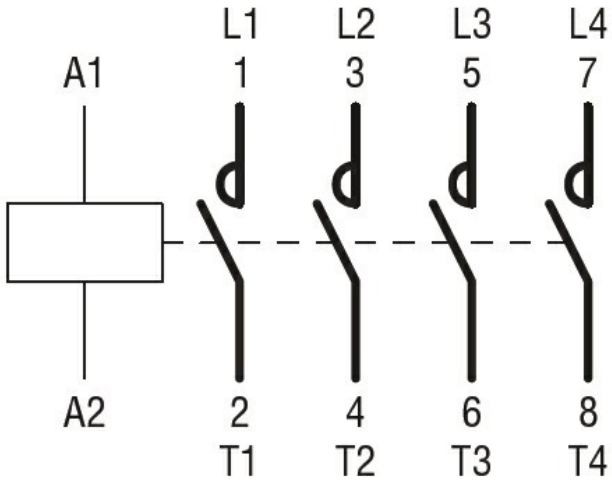
Resistance & Protection

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

11BG09T4A110

FOUR-POLE CONTACTOR, AC COIL 50/60HZ, 110VAC

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
	AC3	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	181
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 50/60Hz			V	110
AC operating voltage				
	of 50/60Hz coil powered at 50Hz			
	pick-up			
		min	%Us	75
		max	%Us	115
	drop-out			
		min	%Us	20
		max	%Us	55
	of 50/60Hz coil powered at 60Hz			
	pick-up			
		min	%Us	80
		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

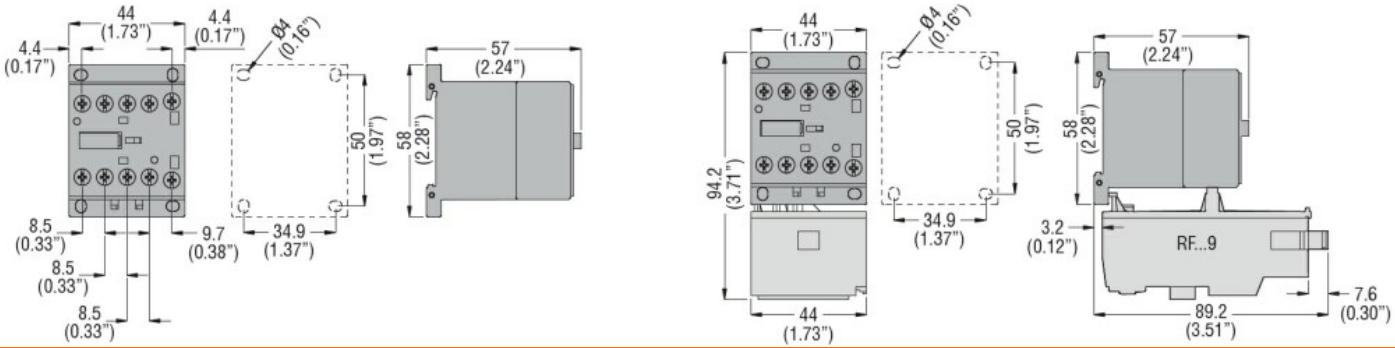
Ambient conditions

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

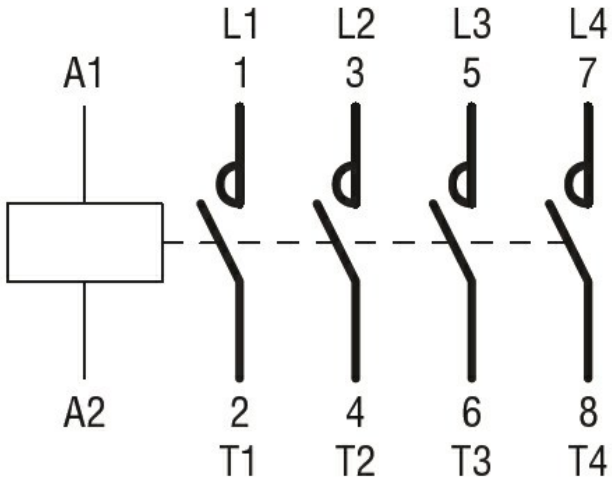
Resistance & Protection

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

11BG09T4A230

FOUR-POLE CONTACTOR, AC COIL 50/60HZ, 230VAC

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
	AC3	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	183
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 50/60Hz			V	230
AC operating voltage				
	of 50/60Hz coil powered at 50Hz			
	pick-up			
		min	%Us	75
		max	%Us	115
	drop-out			
		min	%Us	20
		max	%Us	55
	of 50/60Hz coil powered at 60Hz			
	pick-up			
		min	%Us	80
		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

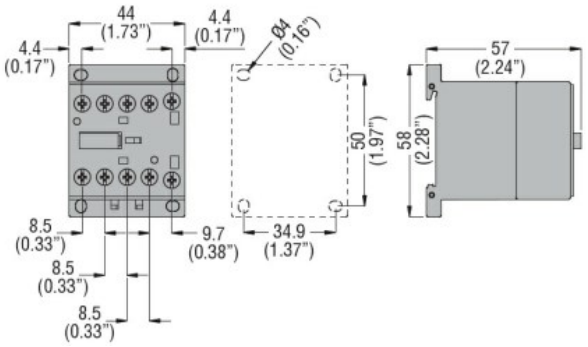
Ambient conditions

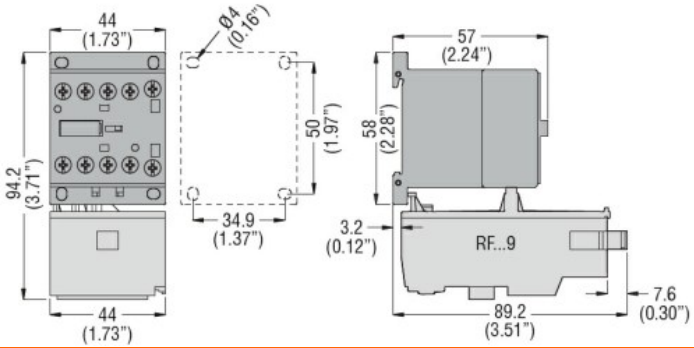
Temperature				
	Operating temperature			
		min	°C	-50
		max	°C	+70
	Storage temperature			
		min	°C	-60
		max	°C	+80
Max altitude			m	3000

Resistance & Protection

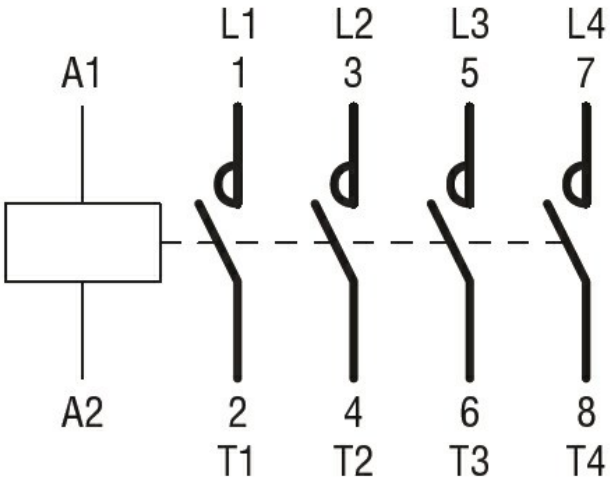
Pollution degree				3

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

11BG09T4A400

FOUR-POLE CONTACTOR, AC COIL 50/60HZ, 400VAC

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
	AC3	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 50/60Hz			V	400
AC operating voltage				
	of 50/60Hz coil powered at 50Hz			
	pick-up			
		min	%Us	75
		max	%Us	115
	drop-out			
		min	%Us	20
		max	%Us	55
	of 50/60Hz coil powered at 60Hz			
	pick-up			
		min	%Us	80
		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

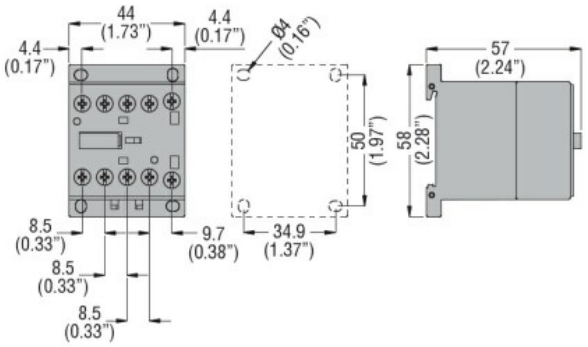
Ambient conditions

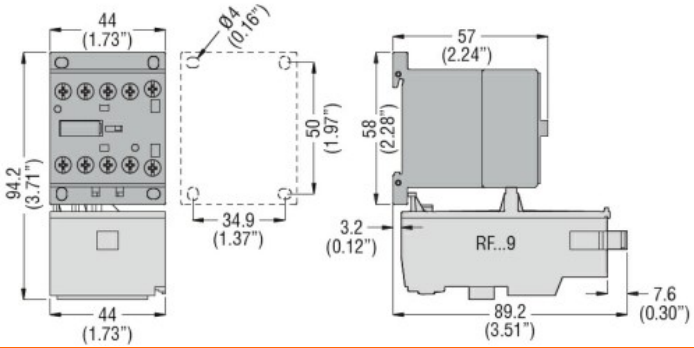
Temperature				
	Operating temperature			
		min	°C	-50
		max	°C	+70
	Storage temperature			
		min	°C	-60
		max	°C	+80
Max altitude			m	3000

Resistance & Protection

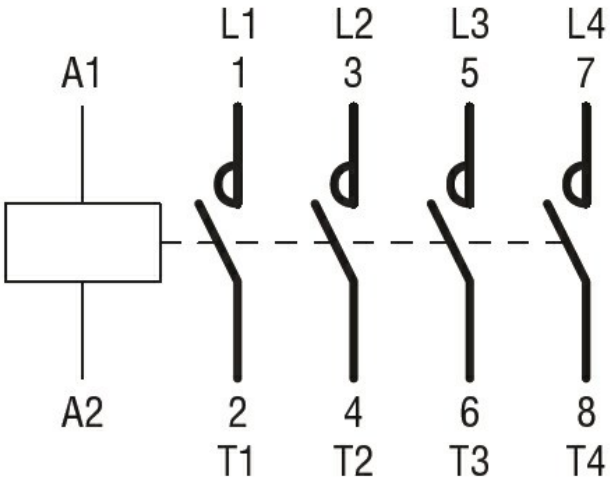
Pollution degree				3

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

11BG09T4A02460

FOUR-POLE CONTACTOR, AC COIL 60HZ, 24VAC

Product designation			Auxiliary 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
	AC3	W	0.8
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	0.8

		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
Mechanical features				
Operating position				
		normal		Vertical plan
		allowable		±30°
Fixing				Screw / DIN rail 35mm
Weight			g	200
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	24
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	0.9
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

Ambient conditions

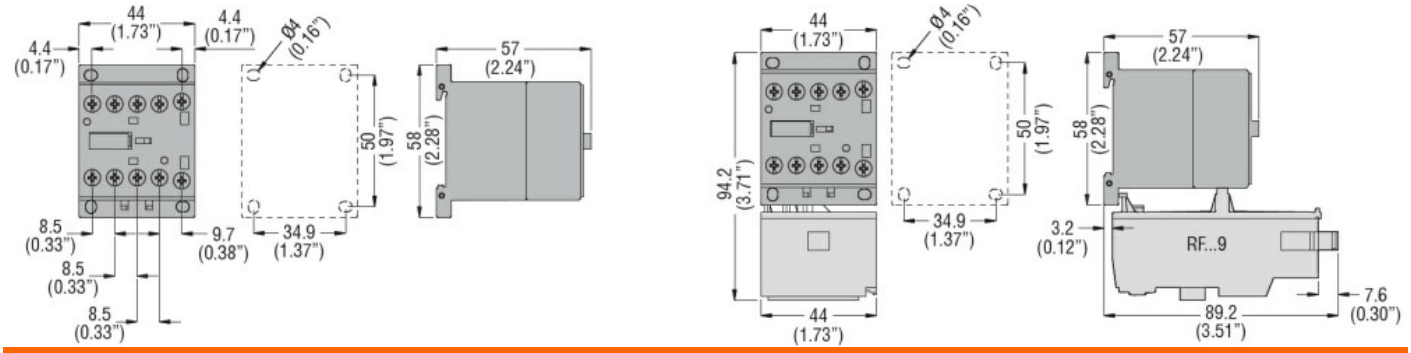
Temperature

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

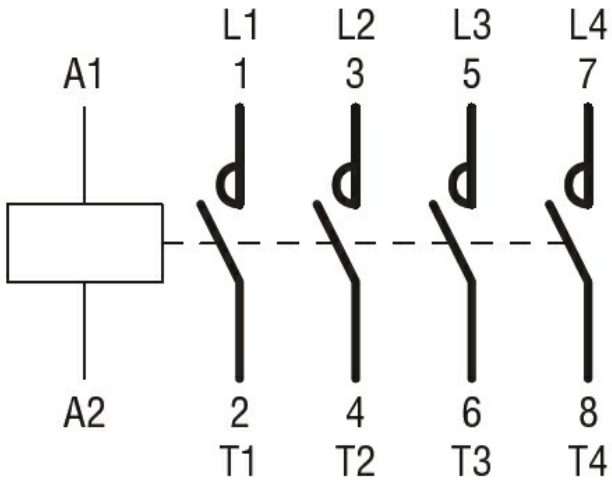
Resistance & Protection

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

Lovato electric
ENERGY AND AUTOMATION

11BG09T4A04860

FOUR-POLE CONTACTOR, AC COIL 60HZ, 48VAC

Product designation			Auxiliary 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
	AC3	W	0.8
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	0.8

		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
Mechanical features				
Operating position				
		normal		Vertical plan
		allowable		±30°
Fixing				Screw / DIN rail 35mm
Weight			g	200
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	48
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	0.9
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

Ambient conditions

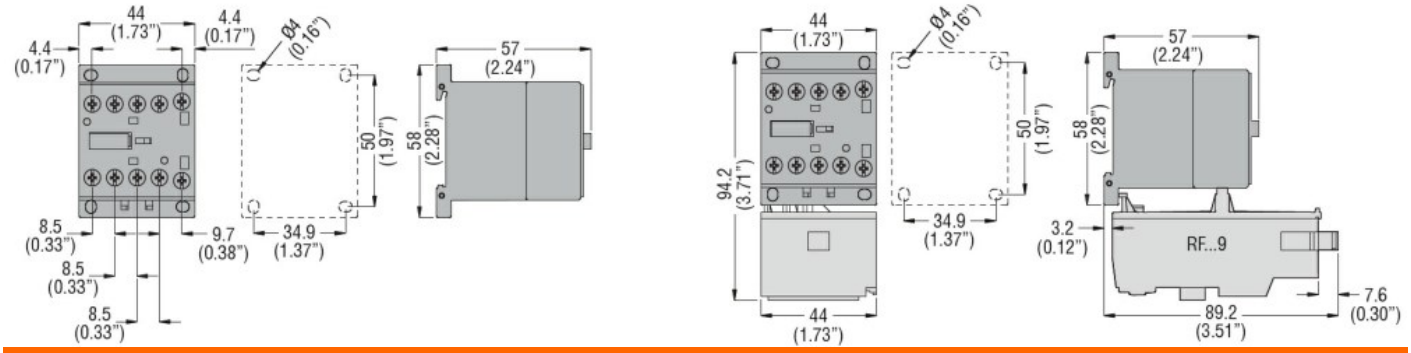
Temperature

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

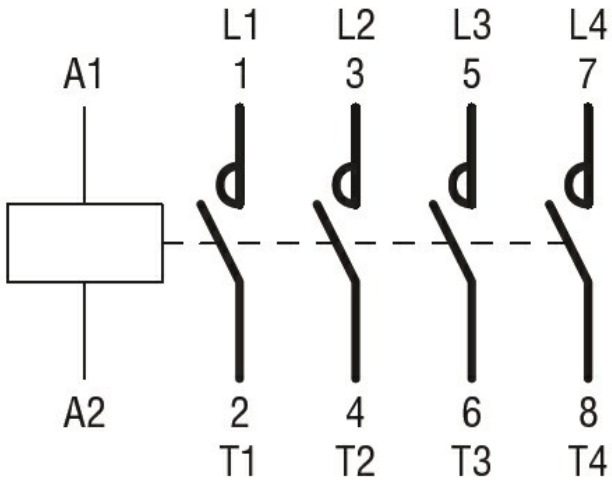
Resistance & Protection

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

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
	AC3	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

Ambient conditions

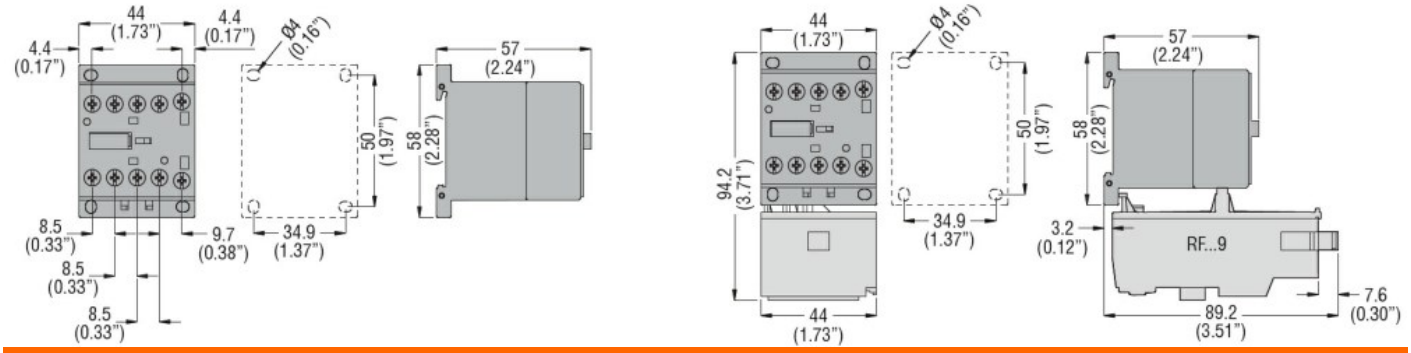
Temperature

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

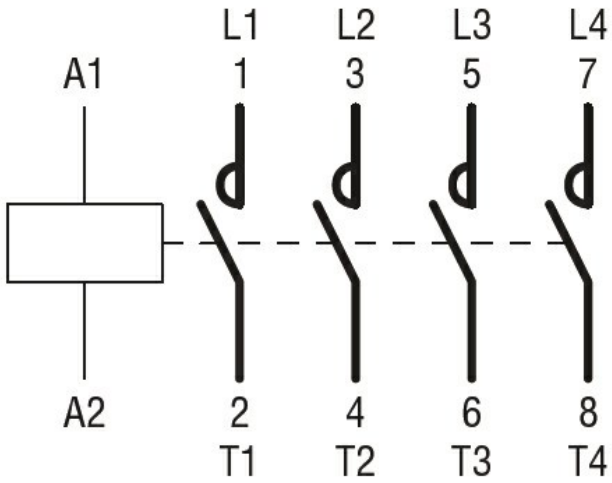
Resistance & Protection

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

11BG09T4A22060

FOUR-POLE CONTACTOR, AC COIL 60HZ, 220VAC

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
	AC3	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	185
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	220
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

Ambient conditions

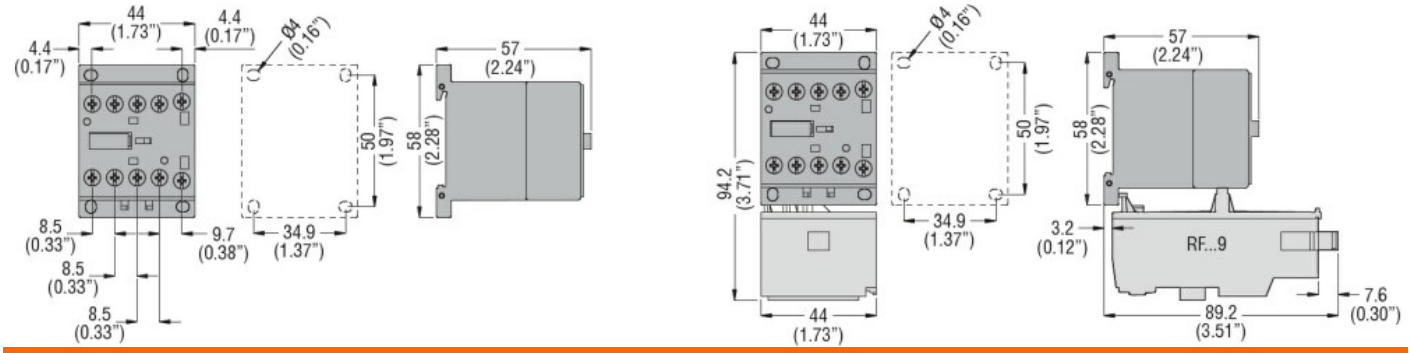
Temperature

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

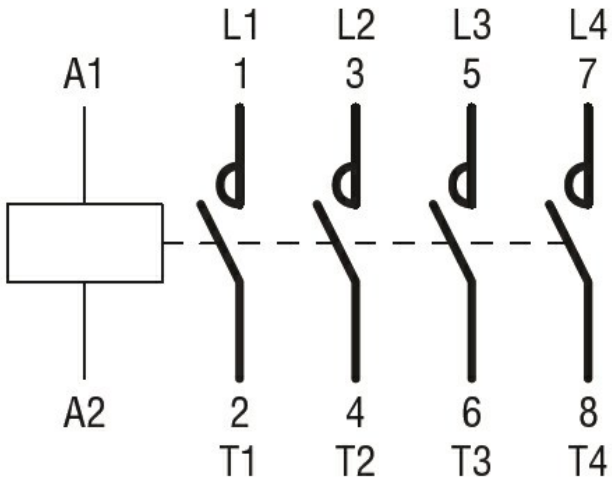
Resistance & Protection

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

Lovato electric
ENERGY AND AUTOMATION

11BG09T4A23060

FOUR-POLE CONTACTOR, AC COIL 60HZ, 230VAC

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
	AC3	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	190
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	230
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

Ambient conditions

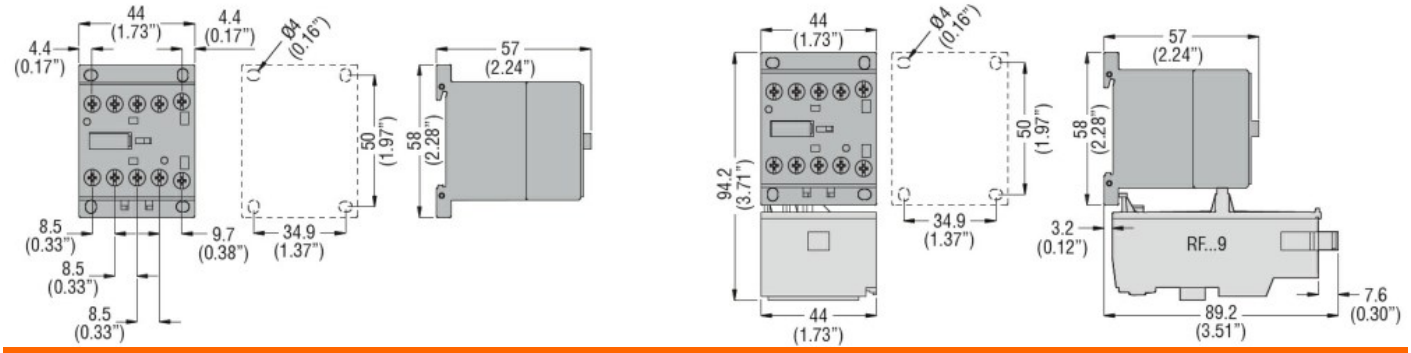
Temperature

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

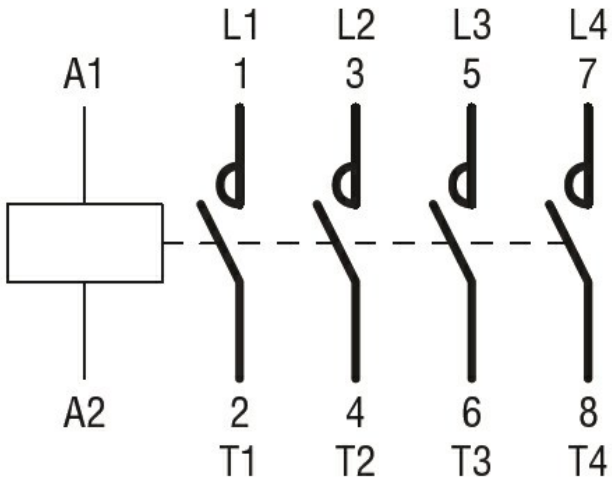
Resistance & Protection

Pollution degree	3

Dimensions



Wiring diagrams



Certifications and compliance

Compliance	
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	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

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
	AC3	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	183
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	460
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

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
ETIM classification			
ETIM 8.0			EC000066 - Power contactor, AC switching