BF0901L048

THREE-POLE CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 9A, DC COIL LOW CONSUMPTION, 48VDC, 1NC AUXILIARY CONTACT

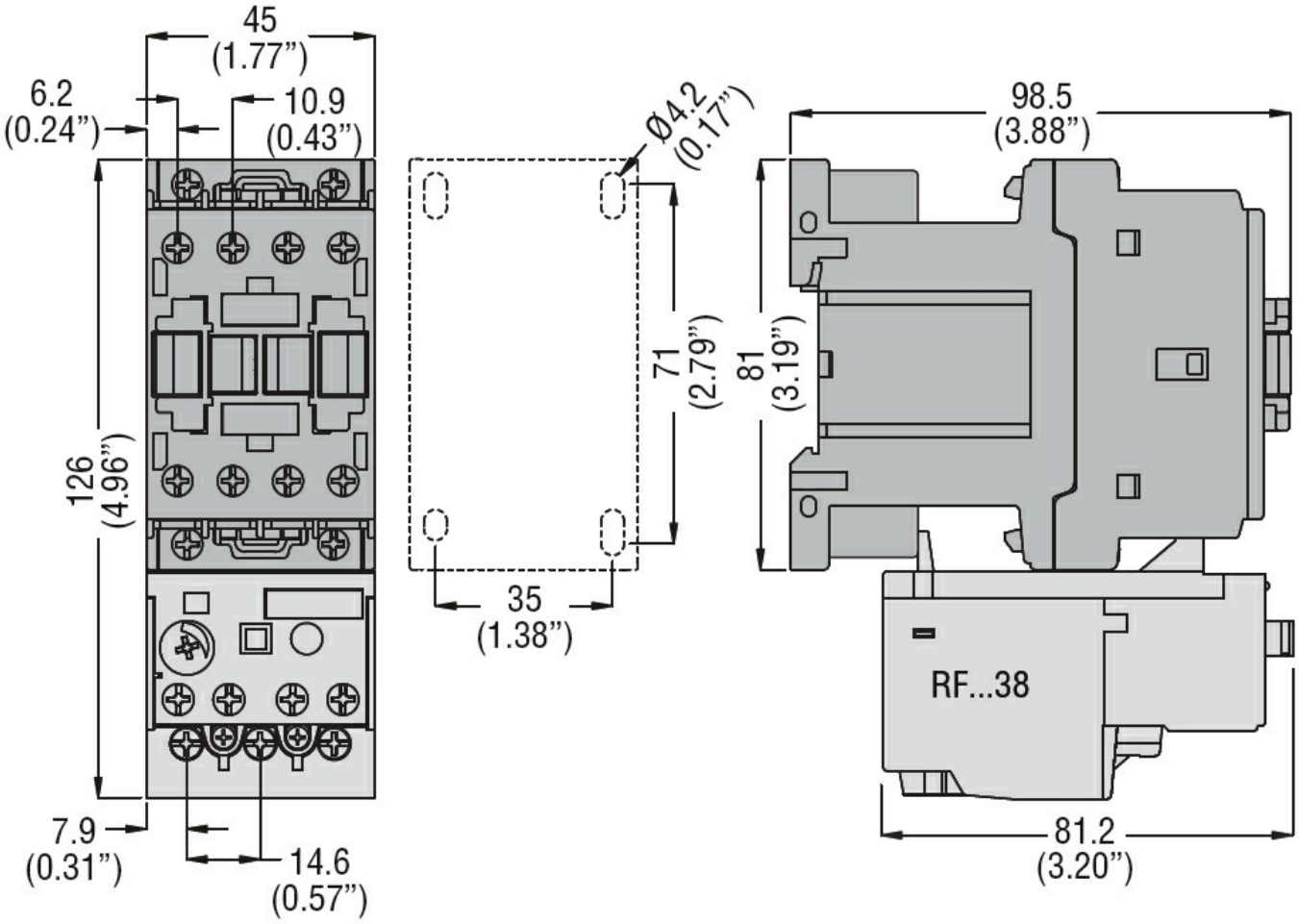
Product designation			Power contactor
Product type designation			BF09
Contact characteristics			
Number of poles		Nr.	3
Rated insulation voltage Ui IEC/EN		V	690
Rated impulse withstand voltage Uimp		kV	6
Operational frequency			
	min	Hz	25
	max	Hz	400
IEC Conventional free air thermal current Ith		A	25
Operational current Ie			
	AC-1 (≤40°C)	A	25
	AC-1 (≤55°C)	A	20
	AC-1 (≤70°C)	A	18
	AC-3 (≤440V ≤55°C)	A	9
	AC-4 (400V)	A	4.9
Rated operational power AC-3 (T≤55°C)			
	230V	kW	2.2
	400V	kW	4.2
	415V	kW	4.5
	440V	kW	4.8
	500V	kW	5.5
	690V	kW	7.5
Rated operational power AC-1 (T≤40°C)			
	230V	kW	9.5
	400V	kW	16
	500V	kW	21
	690V	kW	27
IEC max current Ie in DC1 with L/R ≤ 1ms with 1 poles in series			
	≤24V	A	15
	48V	A	13
	75V	A	12
	110V	A	6
	220V	A	–
IEC max current Ie in DC1 with L/R ≤ 1ms with 2 poles in series			
	≤24V	A	18
	48V	A	18
	75V	A	17
	110V	A	12
	220V	A	1
IEC max current Ie in DC1 with L/R ≤ 1ms with 3 poles in series			
	≤24V	A	20
	48V	A	20
	75V	A	20
	110V	A	15

	220V	A	10
IEC max current Ie in DC1 with L/R ≤ 1ms with 4 poles in series			
	≤24V	A	20
	48V	A	20
	75V	A	20
	110V	A	16
	220V	A	12
IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 1 poles in series			
	≤24V	A	10
	48V	A	9
	75V	A	8
	110V	A	2
	220V	A	–
IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 2 poles in series			
	≤24V	A	13
	48V	A	11
	75V	A	10
	110V	A	7
	220V	A	2
IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 3 poles in series			
	≤24V	A	15
	48V	A	15
	75V	A	13
	110V	A	11
	220V	A	6
IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 4 poles in series			
	≤24V	A	15
	48V	A	15
	75V	A	15
	110V	A	12
	220V	A	7
Short-time allowable current for 10s (IEC/EN60947-1)		A	150
Protection fuse			
	gG (IEC)	A	25
	aM (IEC)	A	10
Making capacity (RMS value)		A	90
Breaking capacity at voltage			
	440V	A	72
	500V	A	72
	690V	A	71
Resistance per pole (average value)		mΩ	2.5
Power dissipation per pole (average value)			
	Ith	W	1.6
	AC-3	W	0.2
Tightening torque for terminals			
	min	Nm	1.5
	max	Nm	1.8
	min	Ibin	1.1
	max	Ibin	1.5
Tightening torque for coil terminal			
	min	Nm	0.8
	max	Nm	1
	min	Ibin	0.8

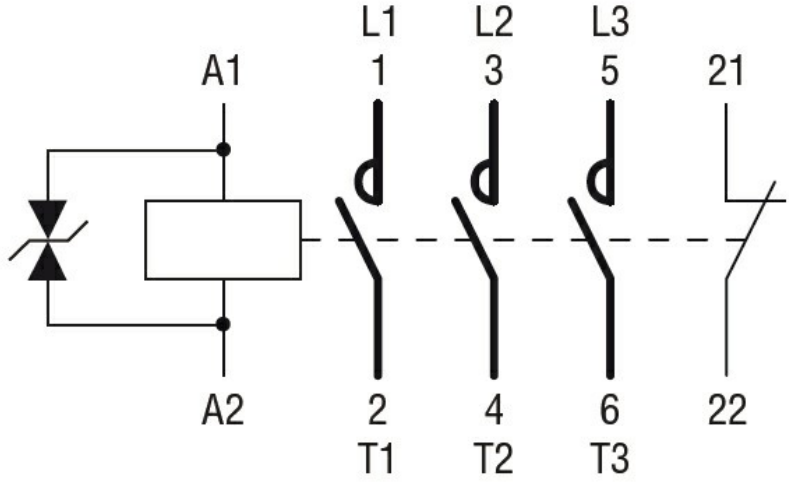
		max	Ibin	0.74
Max number of wires simultaneously connectable			Nr.	2
Conductor section				
	AWG/Kcmil			
		max		10
	Flexible w/o lug conductor section			
		min	mm²	1
		max	mm²	6
	Flexible c/w lug conductor section			
		min	mm²	1
		max	mm²	4
	Flexible with insulated spade lug conductor section			
		min	mm²	1
		max	mm²	4
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	494
Conductor section				
	AWG/kcmil conductor section			
		max		10
Auxiliary contact characteristics				
Thermal current Ith			A	10
IEC/EN 60947-5-1 designation				A600 - P600
Operating current AC15				
		230V	A	3
		400V	A	1.9
		500V	A	1.4
Operating current DC12				
		110V	A	5.7
Operating current DC13				
		24V	A	5.7
		48V	A	2.9
		60V	A	2.3
		110V	A	1.25
		125V	A	1.1
		220V	A	0.55
		600V	A	0.2
Operations				
Mechanical life			cycles	20000000
Electrical life			cycles	2000000
Safety related data				
Performance level B10d according to EN/ISO 13489-1				
		rated load	cycles	2000000
		mechanical load	cycles	20000000
Mirror contats according to IEC/EN 609474-4-1				yes
EMC compatibility				yes
AC coil operating				

AC operating voltage					
	of 50/60Hz coil powered at 50Hz				
		drop-out			
			max	%Us	55
DC coil operating					
DC rated control voltage				V	48
DC operating voltage					
	pick-up				
			min	%Us	80
			max	%Us	110
	drop-out				
			min	%Us	10
			max	%Us	40
Average coil consumption ≤20°C					
			in-rush	W	2.4
			holding	W	2.4
Max cycles frequency					
Mechanical operation				cycles/h	3600
Operating times					
Average time for Us control					
	in AC				
		Closing NO			
			min	ms	8
			max	ms	24
		Opening NO			
			min	ms	10
			max	ms	20
		Closing NC			
			min	ms	14
			max	ms	28
		Opening NC			
			min	ms	7
			max	ms	18
	in DC				
		Closing NO			
			min	ms	75
			max	ms	91
		Opening NO			
			min	ms	15
			max	ms	19
		Closing NC			
			min	ms	24
			max	ms	30
		Opening NC			
			min	ms	67
			max	ms	81
UL technical data					
Full-load current (FLA) for three-phase AC motor					
			at 480V	A	7.6
			at 600V	A	0.375
Yielded mechanical performance					
	for single-phase AC motor				
			110/120V	HP	0.75
			230V	HP	2

	for three-phase AC motor			
		200/208V	HP	3
		220/230V	HP	3
		460/480V	HP	5
		575/600V	HP	7.5
General USE				
	Contactor			
		AC current	A	25
	Auxiliary contacts			
		AC voltage	V	600
		AC current	A	10
		DC voltage	V	250
		DC current	A	1
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	60
Contact rating of auxiliary contacts according to UL				A600 - P600
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/BS 60947-1
IEC/EN/BS 60947-4-1
UL 60947-1
UL 60947-4-1

Certificates

	CCC
	cULus
	EAC

ETIM classification

ETIM 8.0	EC000066 - Power contactor, AC switching