BF09T4D110

FOUR-POLE CONTACTOR, IEC OPERATING CURRENT ITH (AC1) = 25A, DC COIL, 110VDC



Product designation			Power contactor
Product type designation			BF09
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	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-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

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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
	AC3	W	0.2
Tightening torque for terminals			
	min	Nm	1.5
	max	Nm	1.8
	min	lbin	1.1
	max	lbin	1.5
Tightening torque for coil terminal			
	min	Nm	0.8
	max	Nm	1
	min	lbin	0.8
	max	lbin	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

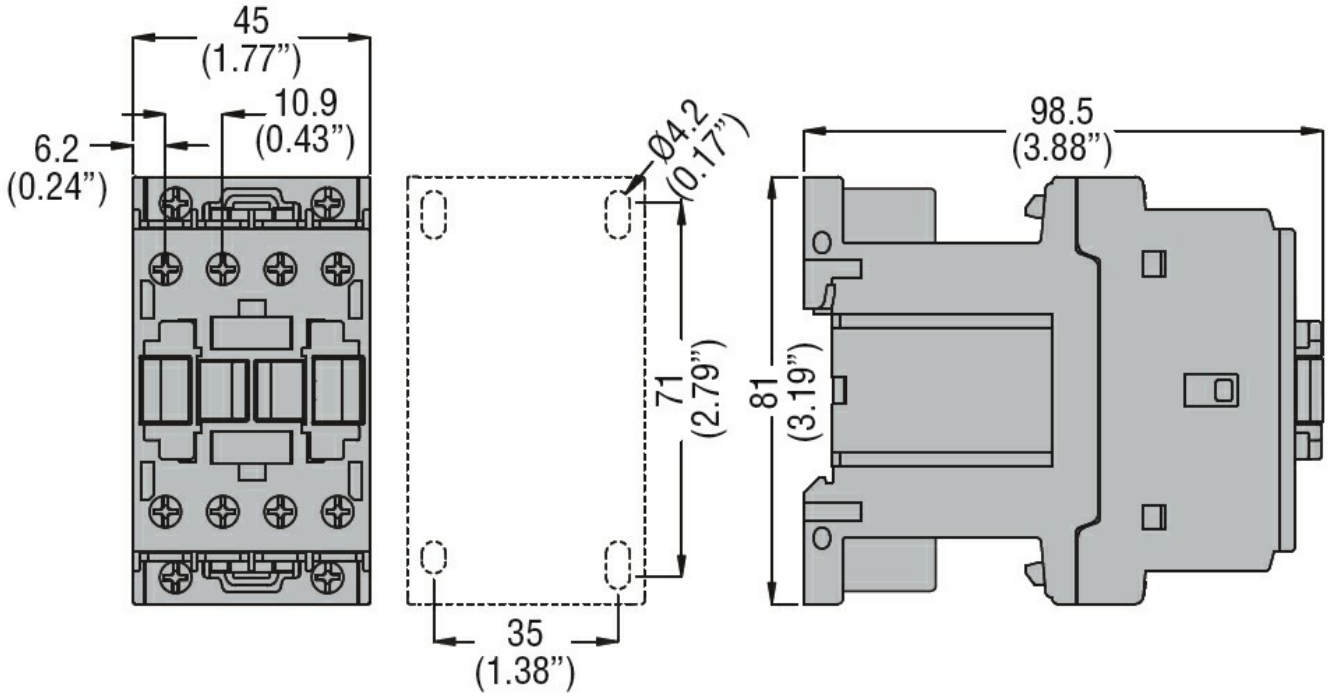
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		max	mm²	6
	Flexible c/w lug conductor section			
		min	mm²	1
		max	mm²	4
	Flexible with insulated spade lug conductor section			
		min	mm²	1
		max	mm²	4
Power terminal protection according to IEC/EN 60529				IP20 when properly wired
Mechanical features				
Operating position				
		normal		Vertical plan
		allowable		±30°
Fixing				Screw / DIN rail 35mm
Weight			g	492
Conductor section				
	AWG/kcmil conductor section			
		max		10
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
DC coil operating				
DC rated control voltage			V	110
DC operating voltage				
	pick-up			
		min	%Us	70
		max	%Us	125
	drop-out			
		min	%Us	10
		max	%Us	40
Average coil consumption ≤20°C				
		in-rush	W	5.4
		holding	W	5.4
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

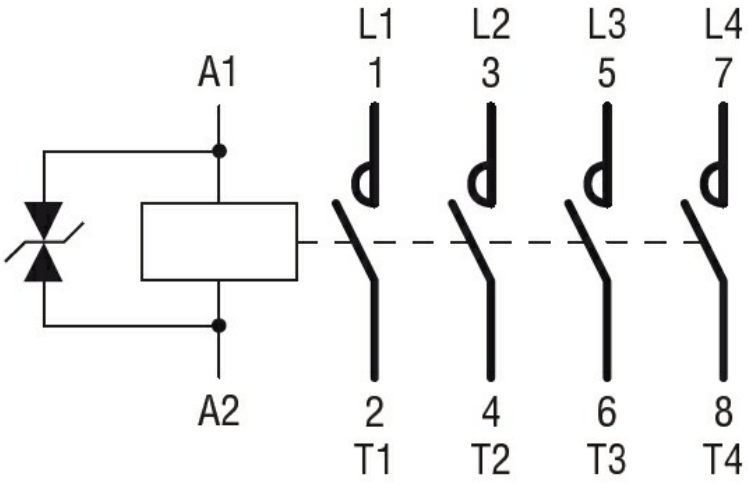
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		Opening NC		
			min	ms 7
			max	ms 18
	in DC			
		Closing NO		
			min	ms 54
			max	ms 66
		Opening NO		
			min	ms 14
			max	ms 17
UL technical data				
Full-load current (FLA) for three-phase AC motor				
			at 480V	A 7.6
			at 600V	A 0.375
Yielded 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
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
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				

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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

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