BF9400E110

THREE-POLE CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 94A, AC/DC COIL, 60...110VAC/DC

Product designation			Power contactor
Product type designation			BF94
Contact characteristics			
Number of poles		Nr.	3
Rated insulation voltage Ui IEC/EN		V	1000
Rated impulse withstand voltage Uimp		kV	8
Operational frequency			
	min	Hz	25
	max	Hz	400
IEC Conventional free air thermal current Ith		A	115
Operational current Ie			
	AC-1 (≤40°C)	A	115
	AC-1 (≤55°C)	A	95
	AC-1 (≤70°C)	A	80
	AC-3 (≤440V ≤55°C)	A	95
	AC-4 (400V)	A	45
Rated operational power AC-3 (T≤55°C)			
	230V	kW	30
	400V	kW	55
	415V	kW	55
	440V	kW	55
	500V	kW	55
	690V	kW	55
	1000V	kW	37
Rated operational current AC-3 (T≤55°C)			
	230V	A	94
	400V	A	94
	415V	A	94
	440V	A	94
	500V	A	78
	690V	A	57
	1000V	A	28
IEC max current Ie in DC1 with L/R ≤ 1ms with 1 poles in series			
	≤24V	A	77
	48V	A	66
	75V	A	66
	110V	A	8
	220V	A	–
IEC max current Ie in DC1 with L/R ≤ 1ms with 2 poles in series			
	≤24V	A	110
	48V	A	110
	75V	A	110
	110V	A	90
	220V	A	9
IEC max current Ie in DC1 with L/R ≤ 1ms with 3 poles in series			

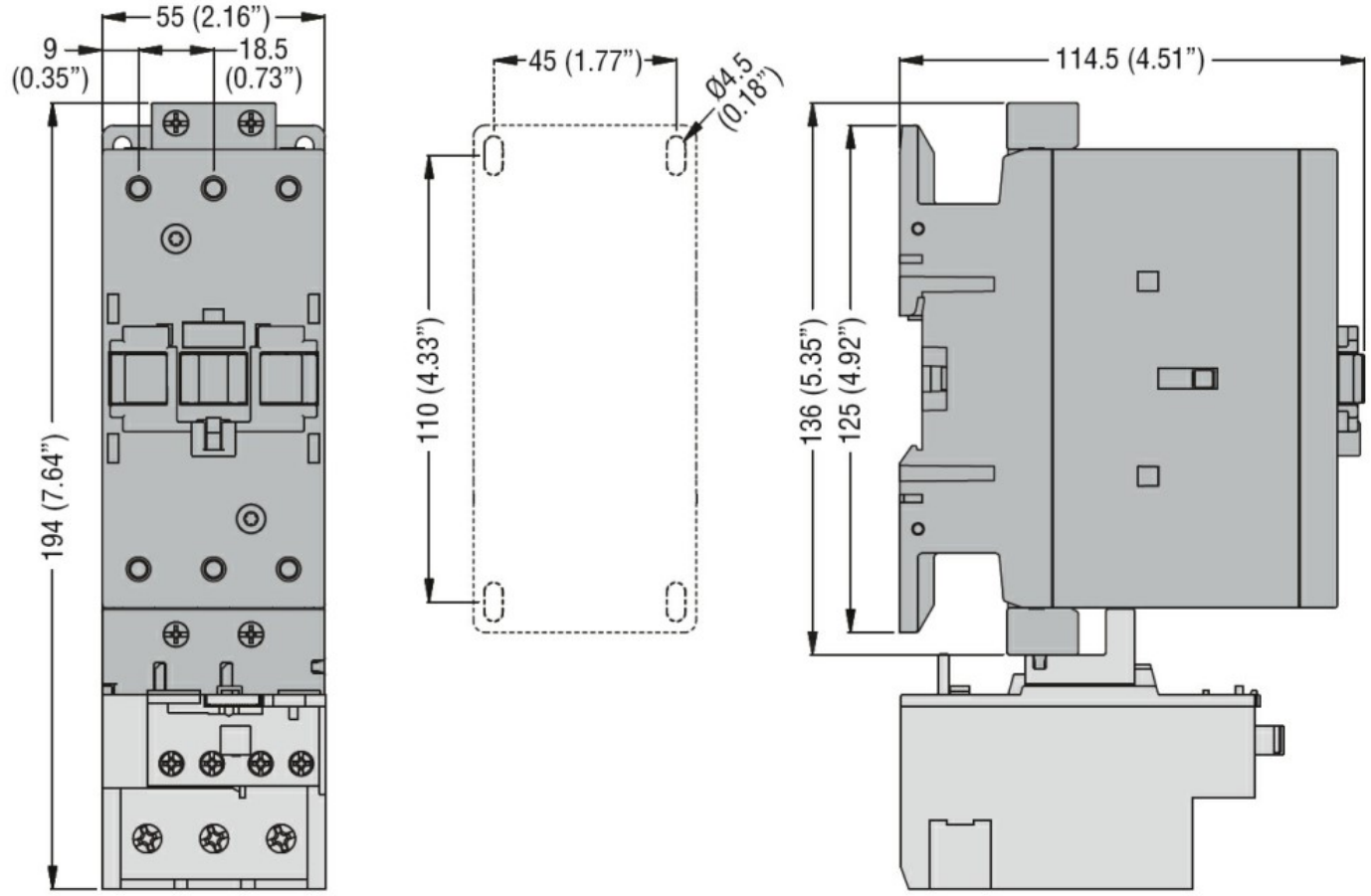
	≤24V	A	110
	48V	A	110
	75V	A	110
	110V	A	93
	220V	A	95
IEC max current Ie in DC1 with L/R ≤ 1ms with 4 poles in series			
	≤24V	A	115
	48V	A	115
	75V	A	115
	110V	A	110
	220V	A	115
IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 1 poles in series			
	≤24V	A	45
	48V	A	33
	75V	A	33
	110V	A	3
	220V	A	–
IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 2 poles in series			
	≤24V	A	65
	48V	A	55
	75V	A	55
	110V	A	43
	220V	A	5
IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 3 poles in series			
	≤24V	A	86
	48V	A	75
	75V	A	75
	110V	A	64
	220V	A	64
IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 4 poles in series			
	≤24V	A	96
	48V	A	95
	75V	A	95
	110V	A	80
	220V	A	80
Short-time allowable current for 10s (IEC/EN60947-1)		A	640
Protection fuse			
	gG (IEC)	A	125
	aM (IEC)	A	100
Making capacity (RMS value)		A	950
Breaking capacity at voltage			
	440V	A	640
	500V	A	625
	690V	A	456
Resistance per pole (average value)		mΩ	0.6
Power dissipation per pole (average value)			
	Ith	W	7.9
	AC-3	W	5.4
Tightening torque for terminals			
	min	Nm	4
	max	Nm	5
	min	lbin	3
	max	lbin	3.7

Tightening torque for coil terminal				
		min	Nm	0.8
		max	Nm	1
		min	lbin	0.59
		max	lbin	0.74
Max number of wires simultaneously connectable			Nr.	2
Conductor section				
	Flexible w/o lug conductor section			
		min	mm²	1.5
		max	mm²	35
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	1
Operations				
Mechanical life			cycles	15000000
Electrical life			cycles	1100000
Safety related data				
Mirror contats according to IEC/EN 609474-4-1				YES
EMC compatibility				yes
AC coil operating				
Rated AC voltage at 50/60Hz, 60Hz				
		min	V	60
		max	V	110
AC operating voltage				
	of 50/60Hz coil powered at 50Hz			
	pick-up			
		min	%Us	80 Us min
		max	%Us	110 Us max
	drop-out			
		max	%Us	≤70 Us min
	of 50/60Hz coil powered at 60Hz			
	pick-up			
		min	%Us	80 Us min
		max	%Us	110 Us max
	drop-out			
		max	%Us	≤70 Us min
AC average coil consumption at 20°C				
	of 50/60Hz coil powered at 50Hz			
		in-rush	VA	35…120
		holding	VA	1.5…3.7
	of 50/60Hz coil powered at 60Hz			
		in-rush	VA	35…120
		holding	VA	1.5…3.7
Dissipation at holding ≤20°C 50Hz			W	1…2.5
DC coil operating				
DC rated control voltage				
		min	V	60
		max	V	110

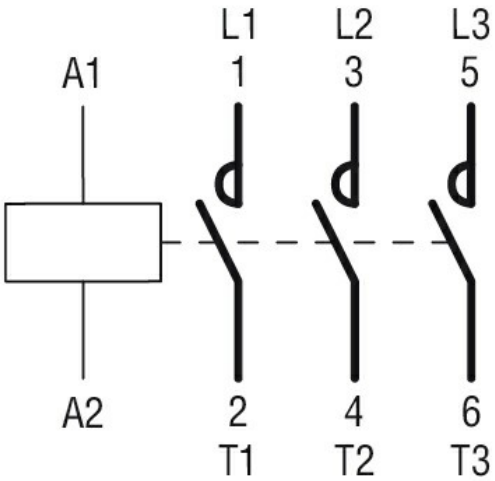
DC operating voltage					
	pick-up				
			min	%Us	80 Us min
			max	%Us	110 Us max
	drop-out				
			max	%Us	≤70 Us min
Average coil consumption ≤20°C					
			in-rush	W	23…68
			holding	W	1.2…1,9
Max cycles frequency					
Mechanical operation				cycles/h	3600
Operating times					
Average time for Us control					
	in AC				
		Closing NO			
			min	ms	12
			max	ms	28
		Opening NO			
			min	ms	8
			max	ms	22
	in DC				
		Closing NO			
			min	ms	40
			max	ms	85
		Opening NO			
			min	ms	20
			max	ms	55
UL technical data					
Full-load current (FLA) for three-phase AC motor					
			at 480V	A	77
			at 600V	A	77
Yielded mechanical performance					
	for three-phase AC motor				
			200/208V	HP	25
			220/230V	HP	30
			460/480V	HP	60
			575/600V	HP	75
General USE					
	Contactor				
			AC current	A	115
Short-circuit protection fuse, 600V					
	High fault				
			Short circuit current	kA	100
			Fuse rating	A	200
			Fuse class		J
	Standard fault				
			Short circuit current	kA	10
			Fuse rating	A	200
			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

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