



Product designation				Power contactor
Product type designation				BF94
Contact characteristics				
Number of poles	Nr.			3
Rated insulation voltage U_i IEC/EN	V			1000
Rated impulse withstand voltage U_{imp}	kV			8
Operational frequency	min	Hz	25	
	max	Hz	400	
IEC Conventional free air thermal current I_{th}	A			115
Operational current I_e	AC-1 ($\leq 40^\circ\text{C}$)	A	115	
	AC-1 ($\leq 55^\circ\text{C}$)	A	95	
	AC-1 ($\leq 70^\circ\text{C}$)	A	80	
	AC-3 ($\leq 440\text{V} \leq 55^\circ\text{C}$)	A	95	
	AC-4 (400V)	A	45	
Rated operational power AC-3 ($T \leq 55^\circ\text{C}$)	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 ($T \leq 55^\circ\text{C}$)	230V	A	94	
	400V	A	94	
	415V	A	94	
	440V	A	94	
	500V	A	78	
	690V	A	57	
	1000V	A	28	
IEC max current I_e in DC1 with $L/R \leq 1\text{ms}$ with 1 poles in series	$\leq 24\text{V}$	A	77	
	48V	A	66	
	75V	A	66	
	110V	A	8	
	220V	A	-	
	IEC max current I_e in DC1 with $L/R \leq 1\text{ms}$ with 2 poles in series	$\leq 24\text{V}$	A	110
48V		A	110	
75V		A	110	
110V		A	90	
220V		A	9	
IEC max current I_e in DC1 with $L/R \leq 1\text{ms}$ with 3 poles in series				

	≤24V	A	110
	48V	A	110
	75V	A	110
	110V	A	93
	220V	A	95
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IEC max current I _e 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
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IEC max current I _e 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	–
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IEC max current I _e 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
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IEC max current I _e 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
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IEC max current I _e 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
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Short-time allowable current for 10s (IEC/EN60947-1)		A	640
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Protection fuse	gG (IEC)	A	125
	aM (IEC)	A	100
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Making capacity (RMS value)		A	950
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Breaking capacity at voltage	440V	A	640
	500V	A	625
	690V	A	456
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Resistance per pole (average value)		mΩ	0.6
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Power dissipation per pole (average value)	I _{th}	W	7.9
	AC-3	W	5.4
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Tightening torque for terminals	min	Nm	4
	max	Nm	5
	min	I _{bin}	3
	max	I _{bin}	3.7

Tightening torque for coil terminal

min	Nm	0.8
max	Nm	1
min	Ibin	0.59
max	Ibin	0.74

Max number of wires simultaneously connectable

Nr. 2

Conductor section

Flexible w/o lug conductor section

min	mm ²	1.5
max	mm ²	35

Power terminal protection according to IEC/EN 60529

IP20

Mechanical features

Operating position

normal allowable Vertical plan
±30°

Fixing

Screw / DIN rail
35mm

Weight

g 1

Operations

Mechanical life

cycles 15000000

Electrical life

cycles 1100000

Safety related data

Mirror contacts according to IEC/EN 60947-4-1

YES

EMC compatibility

yes

AC coil operating

Rated AC voltage at 50/60Hz, 60Hz

min	V	100
max	V	250

AC operating voltage

of 50/60Hz coil powered at 50Hz
pick-up

min	%Us	80 Us min
max	%Us	110 Us max

drop-out

min	%Us	20
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

min	%Us	40
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	100
		max	V	250
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
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Operating times

Average time for Us control				
	in AC			
		Closing NO		
			min	ms
			max	ms
		Opening NO		
			min	ms
			max	ms
	in DC			
		Closing NO		
			min	ms
			max	ms
		Opening NO		
			min	ms
			max	ms

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

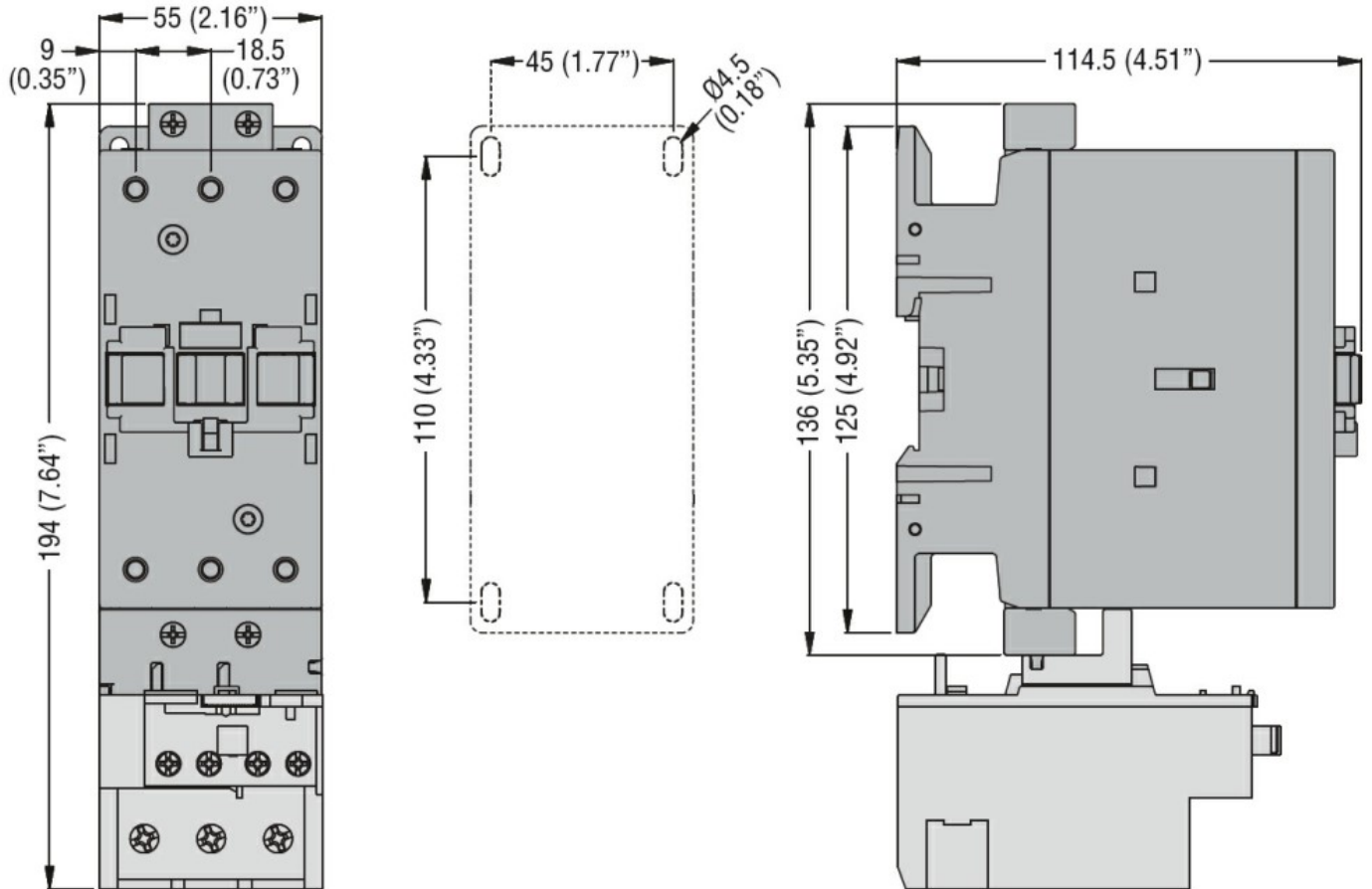
Storage temperature

min	°C	-60
max	°C	80

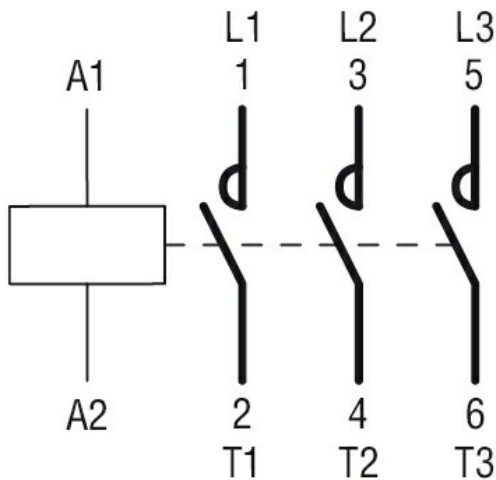
Max altitude

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