



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 <sub>e</sub> 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 <sub>e</sub> 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 <sub>e</sub> 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 <sub>e</sub> 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 <sub>e</sub> 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 <sub>th</sub>	W	7.9
	AC-3	W	5.4
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Tightening torque for terminals	min	Nm	4
	max	Nm	5
	min	I <sub>bin</sub>	3
	max	I <sub>bin</sub>	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 <sup>2</sup>	1.5
max	mm <sup>2</sup>	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 609474-4-1

YES

EMC compatibility

yes

**AC coil operating**

Rated AC voltage at 50/60Hz, 60Hz

min	V	20
max	V	48

AC operating voltage

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

min	%Us	85 Us min
max	%Us	110 Us max

drop-out

max	%Us	≤70 Us min
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of 50/60Hz coil powered at 60Hz  
pick-up

min	%Us	85 Us min
max	%Us	110 Us max

drop-out

max	%Us	≤70 Us min
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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	20
max	V	48

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
<b>Max cycles frequency</b>			
Mechanical operation		cycles/h	3600
<b>Operating times</b>			
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
<b>UL technical data</b>			
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
<b>Ambient conditions</b>			
Temperature			
Operating temperature			
	min	°C	-50
	max	°C	70

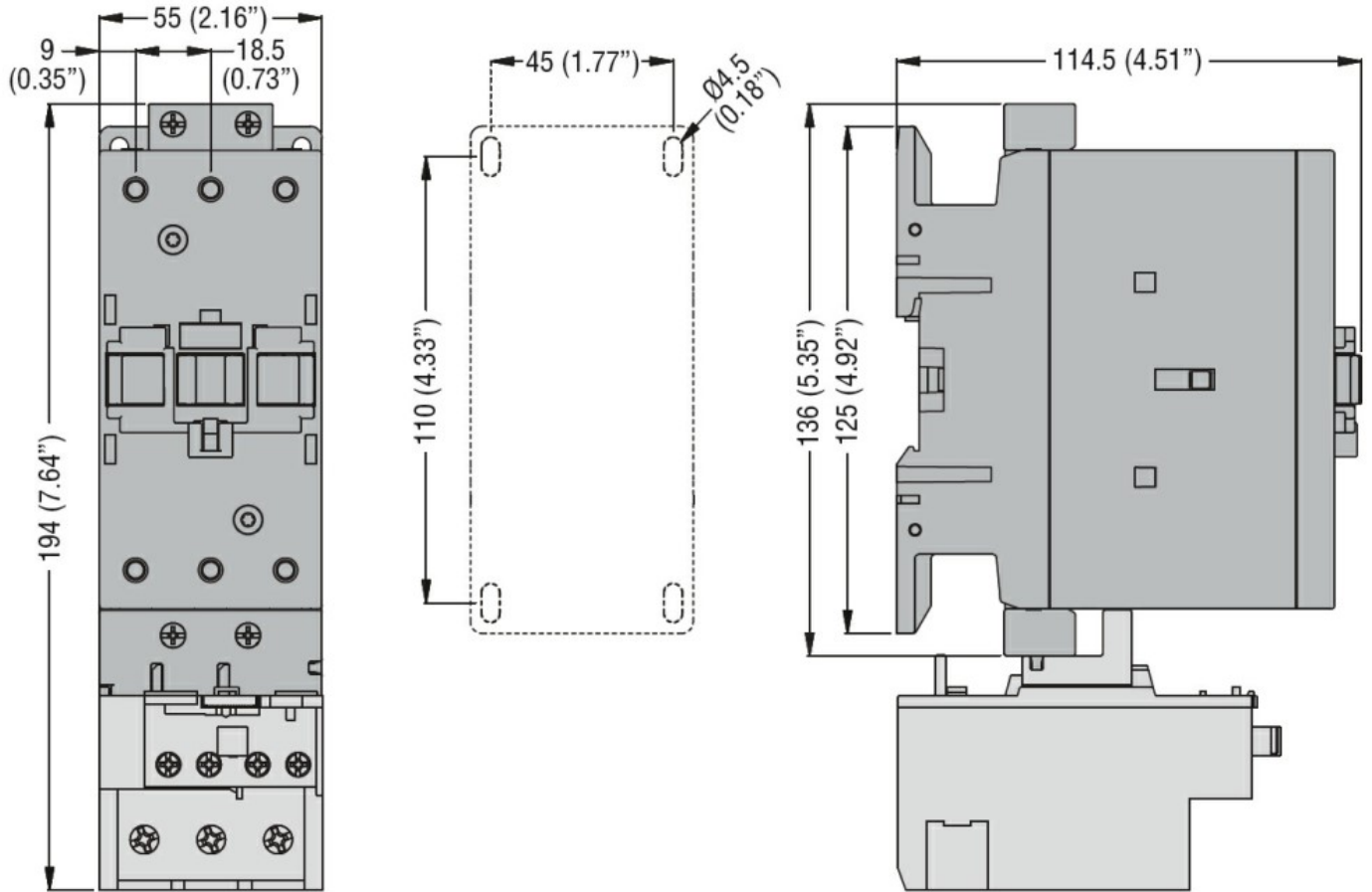
Storage temperature

min	°C	-60
max	°C	80

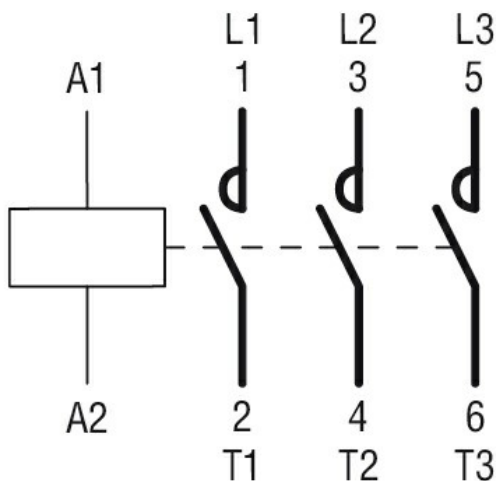
Max altitude

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

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UL 60947-1

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UL 60947-4-1

Certificates

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CCC

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cULus

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EAC

ETIM classification

ETIM 8.0

EC000066 -  
Power contactor,  
AC switching