



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 ($\leq 40^\circ C$)	A	115
	AC-1 ($\leq 55^\circ C$)	A	95
	AC-1 ($\leq 70^\circ C$)	A	80
	AC-3 ($\leq 440V \leq 55^\circ C$)	A	95
	AC-4 (400V)	A	45
Rated operational power AC-3 ($T \leq 55^\circ C$)			
	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 ($T \leq 55^\circ C$)			
	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 $L/R \leq 1ms$ with 1 poles in series			
	$\leq 24V$	A	77
	48V	A	66
	75V	A	66
	110V	A	8
	220V	A	—
IEC max current I_e in DC1 with $L/R \leq 1ms$ with 2 poles in series			
	$\leq 24V$	A	110
	48V	A	110
	75V	A	110
	110V	A	90
	220V	A	9
IEC max current I_e in DC1 with $L/R \leq 1ms$ with 3 poles in series			

	≤24V	A	110
	48V	A	110
	75V	A	110
	110V	A	93
	220V	A	95
IEC max current I_e in DC1 with $L/R \leq 1\text{ms}$ with 4 poles in series	≤24V	A	115
	48V	A	115
	75V	A	115
	110V	A	110
	220V	A	115
IEC max current I_e in DC3-DC5 with $L/R \leq 15\text{ms}$ with 1 poles in series	≤24V	A	45
	48V	A	33
	75V	A	33
	110V	A	3
	220V	A	—
IEC max current I_e in DC3-DC5 with $L/R \leq 15\text{ms}$ with 2 poles in series	≤24V	A	65
	48V	A	55
	75V	A	55
	110V	A	43
	220V	A	5
IEC max current I_e in DC3-DC5 with $L/R \leq 15\text{ms}$ with 3 poles in series	≤24V	A	86
	48V	A	75
	75V	A	75
	110V	A	64
	220V	A	64
IEC max current I_e in DC3-DC5 with $L/R \leq 15\text{ms}$ 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)		$\text{m}\Omega$	0.6
Power dissipation per pole (average value)			
	I _{th}	W	7.9
	AC-3	W	5.4
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	lbin	0.59
max	lbin	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°
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Fixing

Screw / DIN rail
35mm

Weight

g 1

Operations

Mechanical life

cycles 15000000

Electrical life

cycles 1100000

Safety related data

Performance level B10d according to EN/ISO 13489-1

rated load	cycles	1100000
mechanical load	cycles	15000000

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	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

Rated operational voltage AC (UL)	V	600
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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
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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

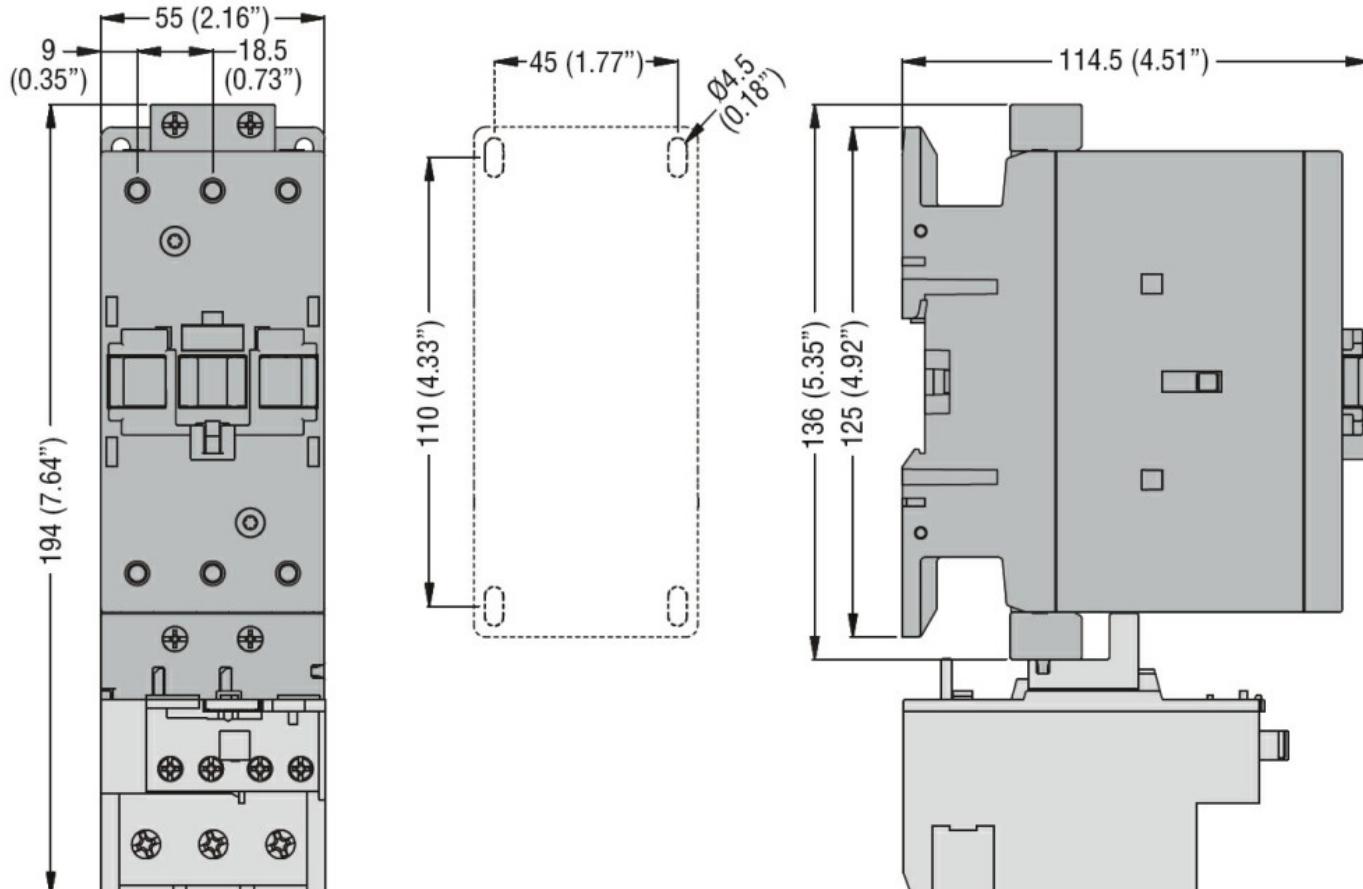
Storage temperature

	min	°C	-60
	max	°C	80

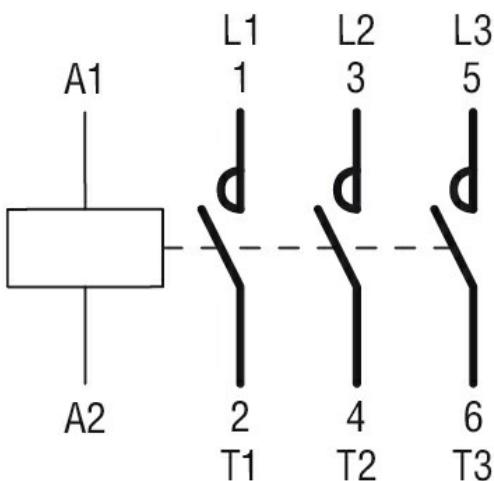
Max altitude

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