



Product designation
Product type designation

Power contactor
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
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	$\leq 24\text{V}$ 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	$\leq 24\text{V}$ 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)		m?	0.6
Power dissipation per pole (average value)			
	Ith	W	7.9
	AC3	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	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	60
	max	V	110
Rated AC voltage at 50/60Hz		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 rated control voltage		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 $\leq 20^{\circ}\text{C}$

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 U_s 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
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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	$^{\circ}\text{C}$	-50
max	$^{\circ}\text{C}$	70

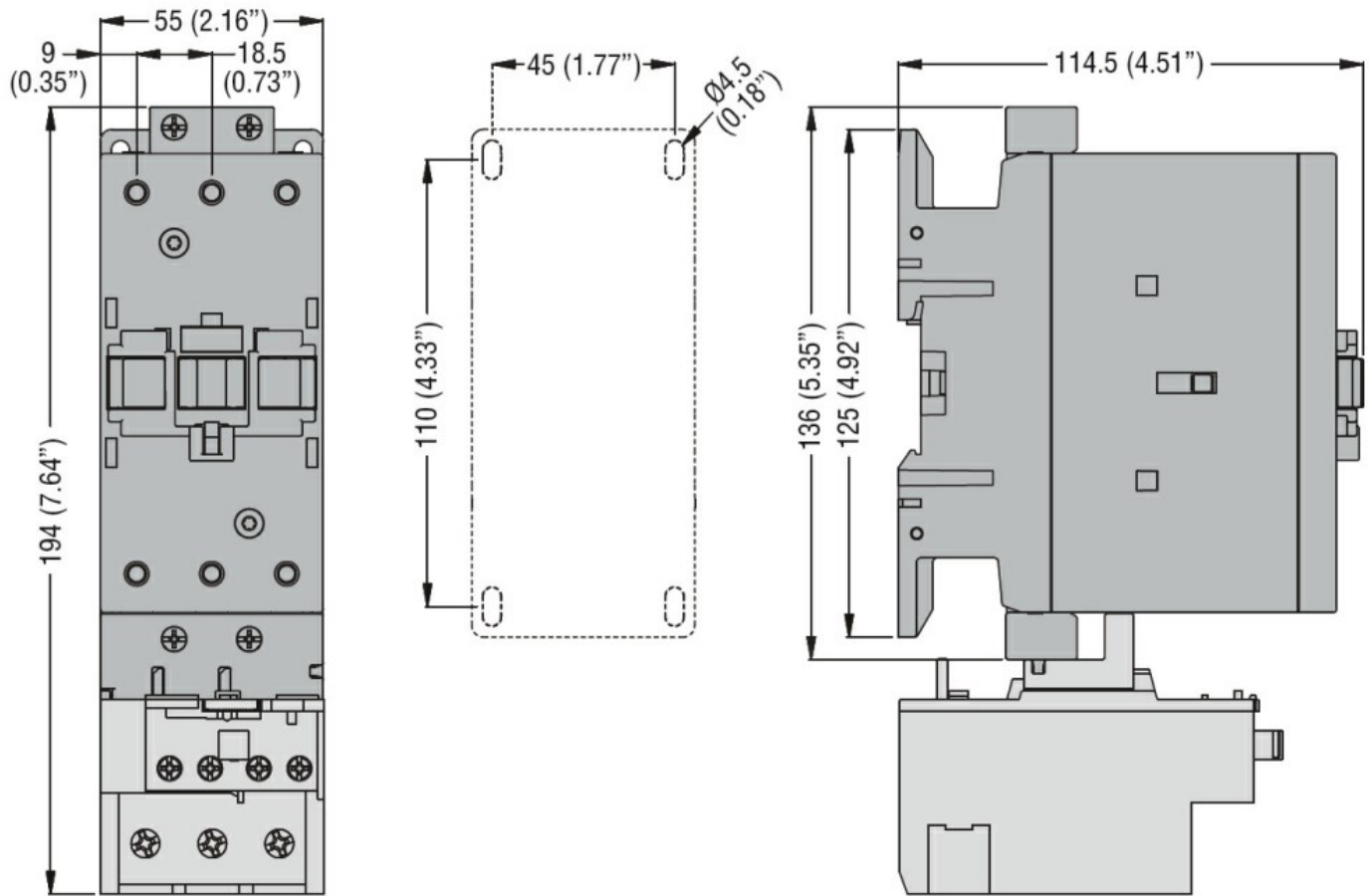
Storage temperature

min	$^{\circ}\text{C}$	-60
max	$^{\circ}\text{C}$	80

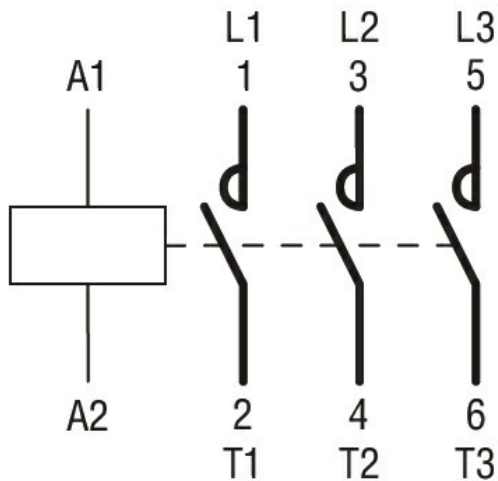
Max altitude

m	3000
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Dimensions



Wiring diagrams



Certifications and compliance

Compliance

CSA C22.2 n° 60947-1

CSA C22.2 n° 60947-4-1

IEC/EN 60947-1

IEC/EN 60947-4-1

UL 60947-1

UL 60947-4-1

Certificates

CCC

cULus

EAC

ETIM classification

ETIM 8.0

EC000066 -
Power contactor,
AC switching