



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 (=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
IEC max current I_e 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 I_e 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 I_e 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 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
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	–
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
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
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
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)			
	I _{th}	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
Flexible c/w 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			
Performance level B10d according to EN/ISO 13489-1			
	rated load mechanical load	cycles	1000000
		cycles	15000000
Mirror contacts according to IEC/EN 60947-4-1			YES
EMC compatibility			yes
AC coil operating			
Rated AC voltage at 50/60Hz		V	230
AC operating voltage			
of 50/60Hz coil powered at 50Hz			
pick-up			
	min	%Us	80
	max	%Us	110
drop-out			
	min	%Us	20
	max	%Us	55
of 50/60Hz coil powered at 60Hz			
pick-up			
	min	%Us	85
	max	%Us	110
drop-out			
	min	%Us	20
	max	%Us	55
AC average coil consumption at 20°C			
of 50/60Hz coil powered at 50Hz			
	in-rush	VA	210
	holding	VA	15
of 50/60Hz coil powered at 60Hz			
	in-rush	VA	195
	holding	VA	13
of 60Hz coil powered at 60Hz			
	in-rush	VA	210
	holding	VA	15
Dissipation at holding =20°C 50Hz			W 5
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
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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

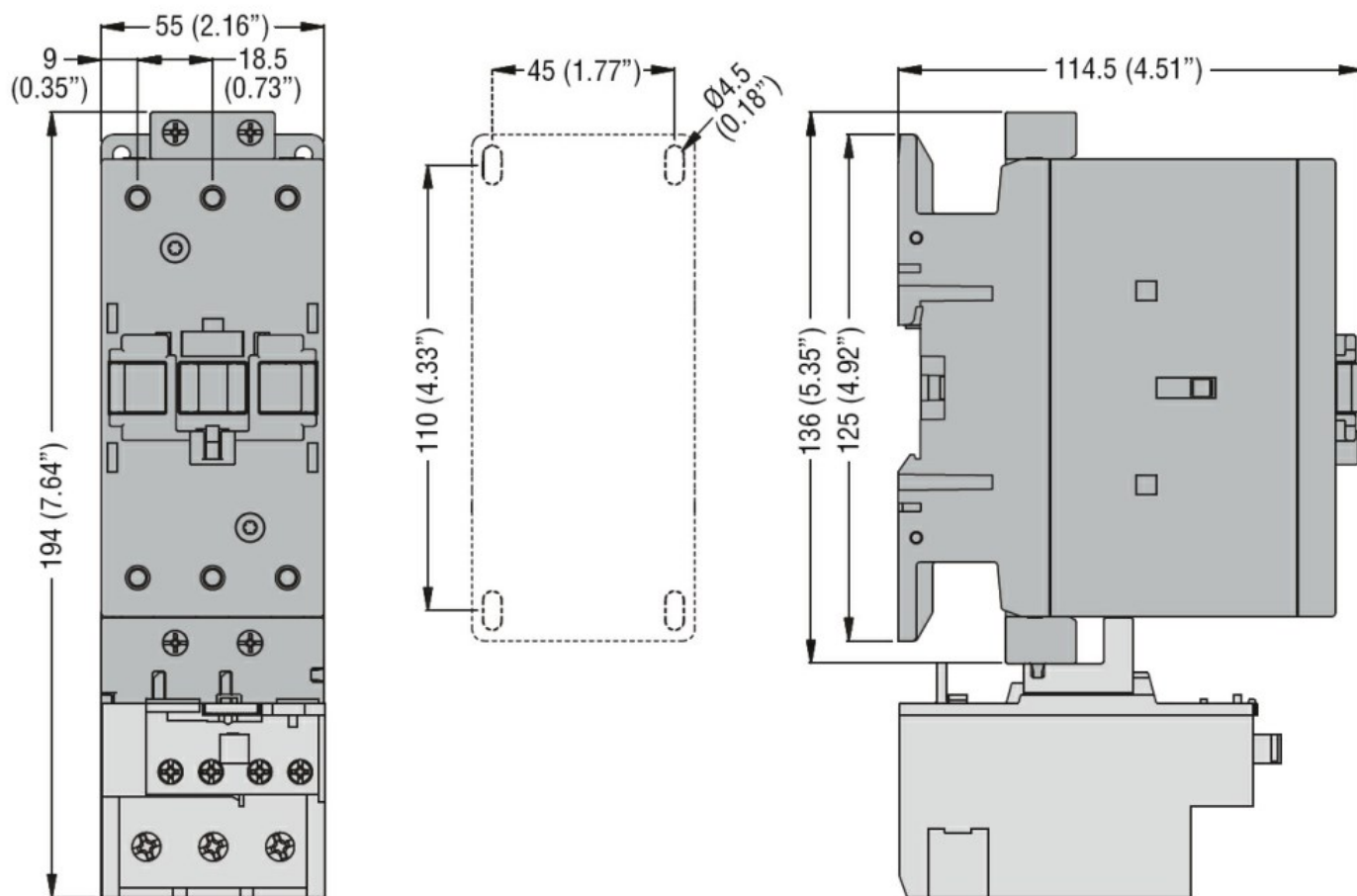
m	3000
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Resistance & Protection

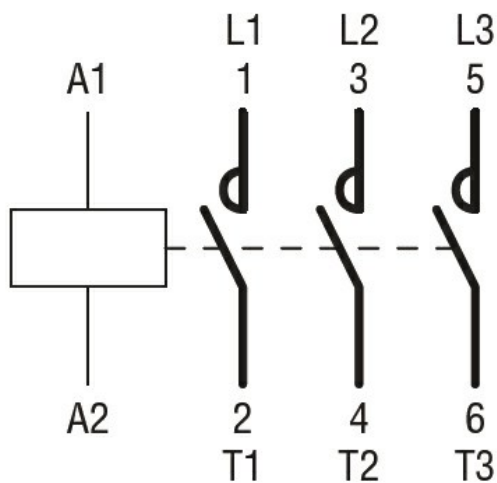
Pollution degree

3

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