



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
IEC max current Ie 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 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)		mΩ	0.6
Power dissipation per pole (average value)			
	Ith	W	7.9
	AC-3	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

V 110

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

of 60Hz coil powered at 60Hz
pick-up

min	%Us	80
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

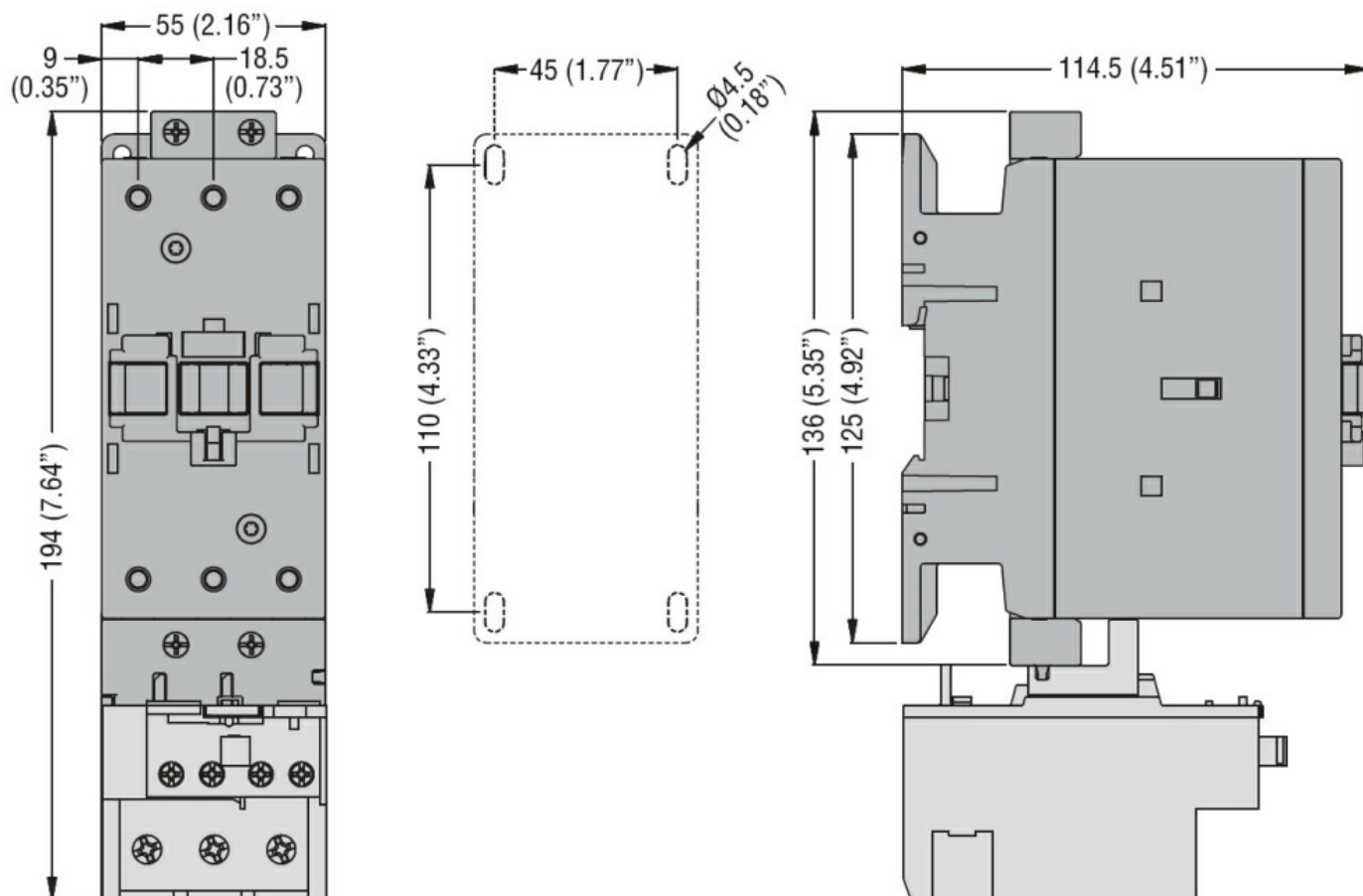
in-rush	VA	210
holding	VA	15

of 50/60Hz coil powered at 60Hz

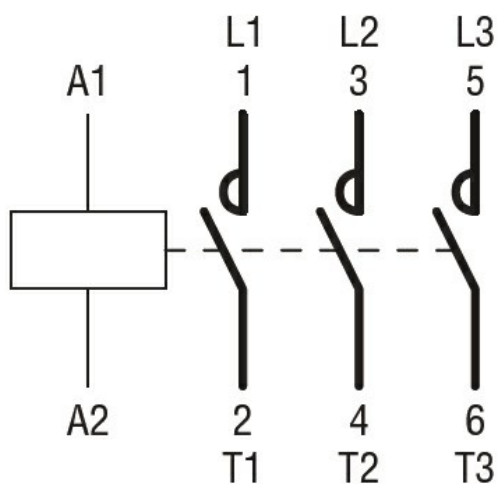
in-rush	VA	195
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		holding	VA	13
of 60Hz coil powered at 60Hz				
		in-rush	VA	210
		holding	VA	15
Dissipation at holding ≤20°C 50Hz			W	5
Max cycles frequency				
Mechanical operation			cycles/h	3600
Operating times				
Average time for Us control				
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
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