



Product designation

Power contactor

Product type designation

BF80

**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 80
	AC-4 (400V)	A 38
Rated operational power AC-3 (T=55°C)	230V	kW 22
	400V	kW 45
	415V	kW 45
	440V	kW 45
	500V	kW 55
	690V	kW 55
	1000V	kW 37
Rated operational power AC-1 (T=40°C)	230V	kW 43
	400V	kW 76
	500V	kW 95
	690V	kW 120
IEC max current $I_e$ in DC1 with L/R = 1ms with 1 poles in series	=24V	A 70
	48V	A 60
	75V	A 60
	110V	A 8
	220V	A –
IEC max current $I_e$ in DC1 with L/R = 1ms with 2 poles in series	=24V	A 100
	48V	A 100
	75V	A 100
	110V	A 80
	220V	A 9
IEC max current $I_e$ in DC1 with L/R = 1ms with 3 poles in series	=24V	A 100
	48V	A 100
	75V	A 100

	110V	A	85
	220V	A	95
IEC max current Ie in DC1 with L/R = 1ms with 4 poles in series			
	=24V	A	100
	48V	A	100
	75V	A	100
	110V	A	100
	220V	A	115
IEC max current Ie in DC3-DC5 with L/R = 15ms with 1 poles in series			
	=24V	A	40
	48V	A	30
	75V	A	30
	110V	A	3
	220V	A	–
IEC max current Ie in DC3-DC5 with L/R = 15ms with 2 poles in series			
	=24V	A	60
	48V	A	50
	75V	A	50
	110V	A	40
	220V	A	5
IEC max current Ie in DC3-DC5 with L/R = 15ms with 3 poles in series			
	=24V	A	80
	48V	A	70
	75V	A	70
	110V	A	60
	220V	A	64
IEC max current Ie in DC3-DC5 with L/R = 15ms with 4 poles in series			
	=24V	A	90
	48V	A	90
	75V	A	90
	110V	A	75
	220V	A	80
Short-time allowable current for 10s (IEC/EN60947-1)		A	640
Protection fuse			
	gG (IEC)	A	125
	aM (IEC)	A	80
Making capacity (RMS value)		A	800
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	3.8
Tightening torque for terminals			
	min	Nm	4
	max	Nm	5
	min	lbin	2.95
	max	lbin	3.69
Tightening torque for coil terminal			
	min	Nm	0.8
	max	Nm	1

		min	lbin	0.8
		max	lbin	0.74
Max number of wires simultaneously connectable			Nr.	2
Conductor section	AWG/Kcmil			
		max		2
Flexible w/o lug conductor section		min	mm <sup>2</sup>	1.5
		max	mm <sup>2</sup>	35
Flexible c/w 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 front
<b>Mechanical features</b>				
Operating position		normal allowable		Vertical plan ±30°
Fixing				Screw / DIN rail 35mm
Weight			g	1020
Conductor section	AWG/kcmil conductor section			
		max		2
<b>Operations</b>				
Mechanical life			cycles	15000000
Electrical life			cycles	1300000
<b>Safety related data</b>				
Performance level B10d according to EN/ISO 13489-1		rated load	cycles	1300000
		mechanical load	cycles	15000000
Mirror contacts according to IEC/EN 60947-4-1				yes
EMC compatibility				yes
<b>AC coil operating</b>				
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	40
		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
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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

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

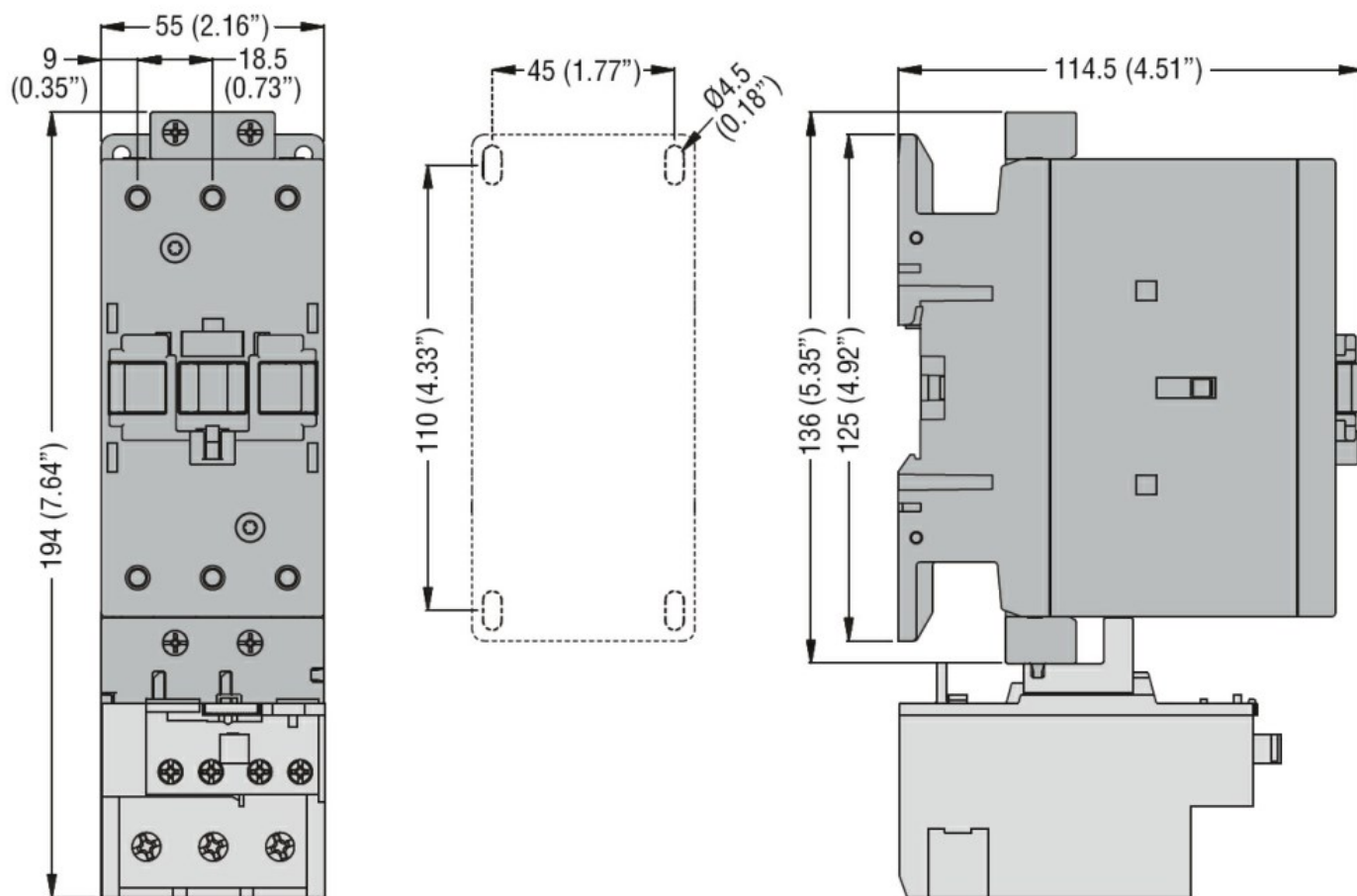
m	3000
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Resistance & Protection

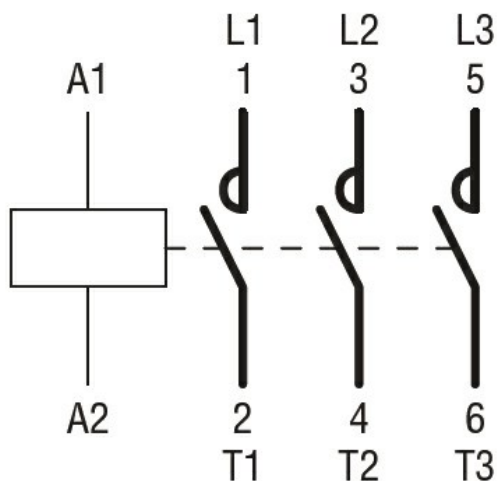
Pollution degree

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

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cULus

ETIM classification

ETIM 8.0

EC000066 -  
Power contactor,  
AC switching