



Product designation

Power contactor

Product type designation

BF80

**Contact characteristics**

Number of poles	Nr.	4
Rated insulation voltage U <sub>i</sub> IEC/EN	V	1000
Rated impulse withstand voltage U <sub>imp</sub>	kV	8
Operational frequency	min	Hz 25
	max	Hz 400
IEC Conventional free air thermal current I <sub>th</sub>	A	115
Operational current I <sub>e</sub>	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 current AC-3 (T≤55°C)	230V	A 80
	400V	A 80
	415V	A 80
	440V	A 80
	500V	A 78
	690V	A 57
	1000V	A 28
Rated operational power AC-1 (T≤40°C)	230V	kW 43
	400V	kW 76
	500V	kW 95
	690V	kW 120
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)	mΩ	0.6
Power dissipation per pole (average value)	I <sub>th</sub>	W 7.9
	AC-3	W 3.8
Tightening torque for terminals	min	Nm 4
	max	Nm 5

		min	I <sub>bin</sub>	2.95
		max	I <sub>bin</sub>	3.69
Tightening torque for coil terminal				
		min	Nm	0.8
		max	Nm	1
		min	I <sub>bin</sub>	0.8
		max	I <sub>bin</sub>	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
Mechanical features				
Operating position				
		normal allowable		Vertical plan ±30°
Fixing				Screw / DIN rail 35mm
Weight			g	1360
Operations				
Mechanical life			cycles	15000000
Electrical life			cycles	1300000
Safety related data				
Performance level B10d according to EN/ISO 13489-1				
		rated load	cycles	1300000
		mechanical load	cycles	15000000
EMC compatibility				yes
AC coil operating				
Rated AC voltage at 50/60Hz			V	24
AC operating voltage				
	of 50/60Hz coil powered at 50Hz			
	pick-up	min	%U <sub>s</sub>	80
		max	%U <sub>s</sub>	110
	drop-out	min	%U <sub>s</sub>	20
		max	%U <sub>s</sub>	55
	of 50/60Hz coil powered at 60Hz			
	pick-up	min	%U <sub>s</sub>	85
		max	%U <sub>s</sub>	110
	drop-out	min	%U <sub>s</sub>	40
		max	%U <sub>s</sub>	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  $\leq 20^{\circ}\text{C}$  50Hz

W	5
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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

Closing NC

min	ms	11
max	ms	29

Opening NC

min	ms	6
max	ms	14

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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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

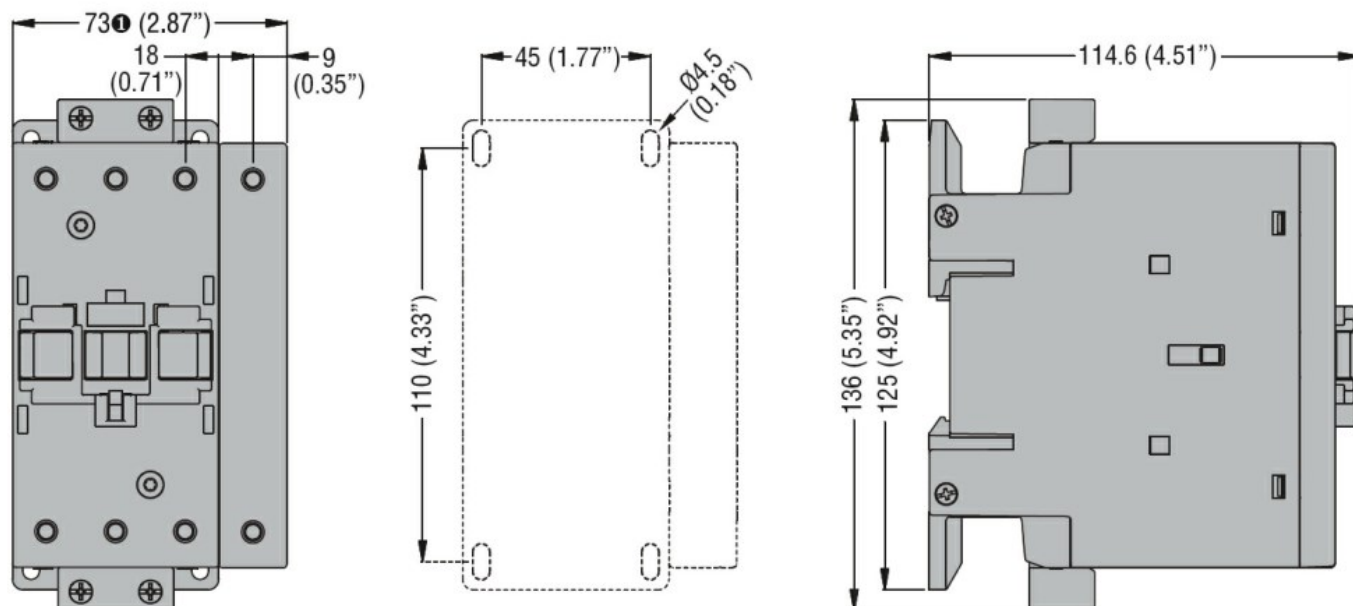
m	3000
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## Resistance & Protection

Pollution degree

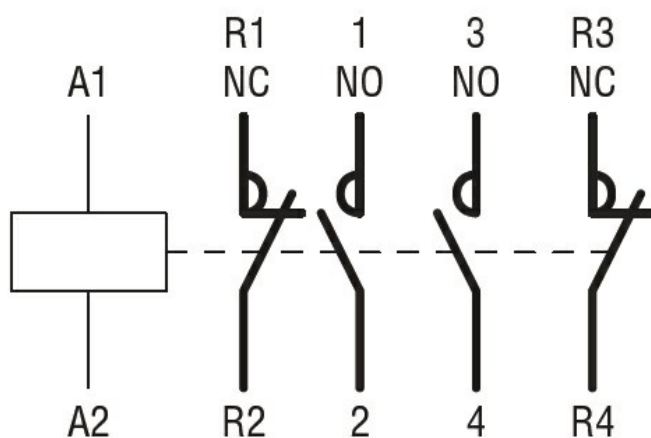
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## Dimensions



① BF80T2 82mm/3.23"

## 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

## ETIM classification

ETIM 8.0

EC000066 -  
Power contactor,  
AC switching