



Product designation

Power contactor

Product type designation

BF80

Contact characteristics

Number of poles	Nr.	4
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 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 _{th}	W 7.9
	AC-3	W 3.8
Tightening torque for terminals		
	min	Nm 4
	max	Nm 5

		min	I _{bin}	2.95
		max	I _{bin}	3.69
Tightening torque for coil terminal				
		min	Nm	0.8
		max	Nm	1
		min	I _{bin}	0.8
		max	I _{bin}	0.74
Max number of wires simultaneously connectable			Nr.	2
Conductor section				
	AWG/Kcmil			
		max		2
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 front
Mechanical features				
Operating position				
		normal allowable		Vertical plan ±30°
Fixing				Screw / DIN rail 35mm
Weight			g	13429
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, 60Hz				
		min	V	100
		max	V	250
AC operating voltage				
	of 50/60Hz coil powered at 50Hz pick-up			
		min	%U _s	80 U _s min
		max	%U _s	110 U _s max
	drop-out			
		max	%U _s	≤70 U _s min
	of 50/60Hz coil powered at 60Hz pick-up			
		min	%U _s	80 U _s min
		max	%U _s	110 U _s max
	drop-out			
		max	%U _s	≤70 U _s 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	100
	max	V	250

DC operating voltage

pick-up

	min	%Us	80 Us min
	max	%Us	110 Us max

drop-out

	max	%Us	≤70 Us min
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Average coil consumption ≤20°C

	in-rush	W	23...68
	holding	W	1.2...1.9

Max cycles frequency

Mechanical operation

cycles/h 1500

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

Rated operational voltage AC (UL)

V 600

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	°C	-40
	max	°C	70

Storage temperature

min	°C	-50
max	°C	80

Max altitude

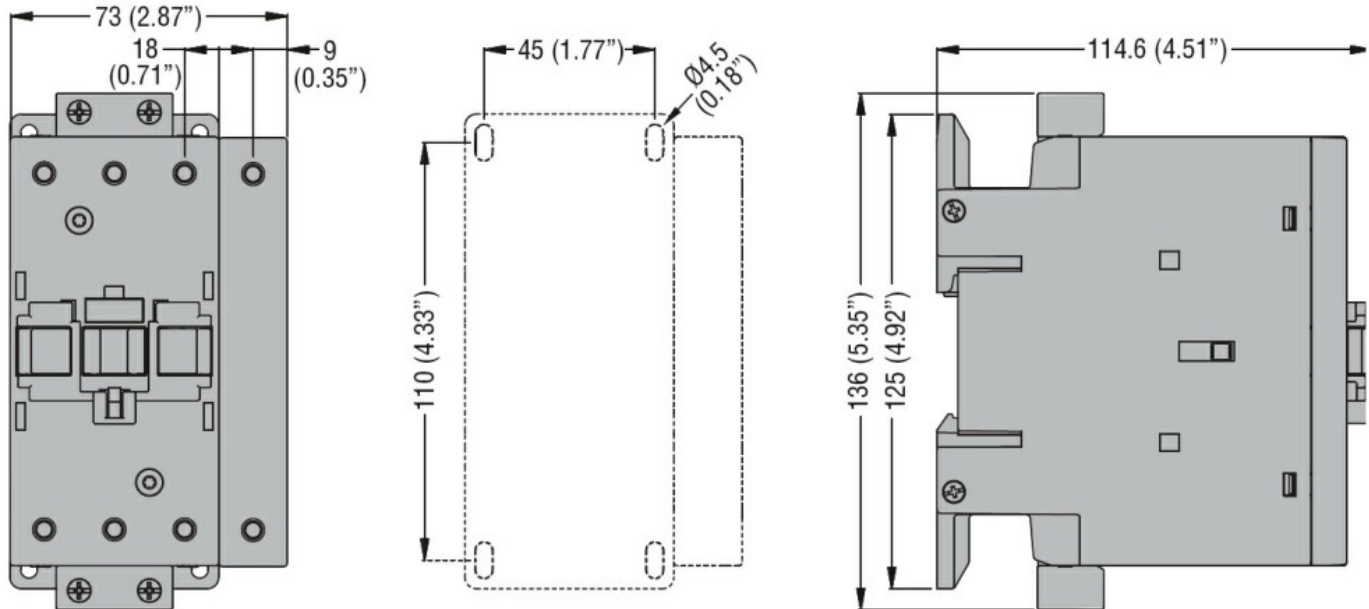
m	3000
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Resistance & Protection

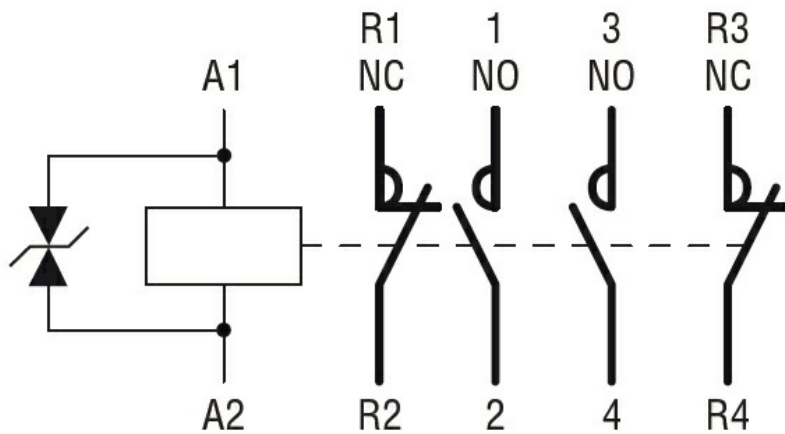
Pollution degree

3

Dimensions



Wiring diagrams



Certifications and compliance

Compliance

CSA C22.2 n° 60947-1

CSA C22.2 n° 60947-4-1

IEC/EN/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