



Product designation				Power contactor	
Product type designation				BFD80	
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	
IEC max current I_e in DC1 with $L/R \leq 1$ ms with 4 poles in series	400V	A	115		
	600V	A	100		
	800V	A	90		
	1000V	A	80		
Short-time allowable current for 10s (IEC/EN60947-1)	A			640	
Protection fuse	gG (IEC)	A	125		
	aM (IEC)	A	80		
Resistance per pole (average value)	m Ω			0.6	
Power dissipation per pole (average value)	I_{th}	W	7.9		
	Tightening torque for terminals				
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			
Tightening torque for coil terminal	min	I_{bin}	0.59		
	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				
Flexible w/o lug conductor section	min	mm ²	1.5		
	max	mm ²	35		
Flexible c/w lug conductor section					
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 $\pm 30^\circ$	
Fixing		Screw / DIN rail 35mm	
Weight	g	1280	
Conductor section	AWG/kcmil conductor section	max	2
Operations			
Mechanical life		cycles	15000000
Safety related data			
Performance level B10d according to EN/ISO 13489-1		mechanical load	cycles 15000000
EMC compatibility			yes
AC coil operating			
Rated AC voltage at 50/60Hz, 60Hz		min	V 20
		max	V 48
AC operating voltage			
of 50/60Hz coil powered at 50Hz			
pick-up		min	%Us 80 Us min
		max	%Us 110 Us max
drop-out		max	%Us ≤ 70 Us min
of 50/60Hz coil powered at 60Hz			
pick-up		min	%Us 80 Us min
		max	%Us 110 Us max
drop-out		max	%Us ≤ 70 Us 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
of 60Hz coil powered at 60Hz		in-rush	VA 210
		holding	VA 15
Dissipation at holding $\leq 20^\circ\text{C}$ 50Hz			W 1...2.5
DC coil operating			
DC rated control voltage		min	V 20
		max	V 48
DC operating voltage			
pick-up		min	%Us 85 Us min
		max	%Us 110 Us max
drop-out		max	%Us ≤ 70 Us min
Average coil consumption $\leq 20^\circ\text{C}$			

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	40
max	ms	85

Opening NO

min	ms	20
max	ms	55

in DC

Closing NO

min	ms	40
max	ms	85

Opening NO

min	ms	20
max	ms	55

UL technical data

General USE

Contactor

AC current	A	115
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4 poles in series DC1

600V	A	100
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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

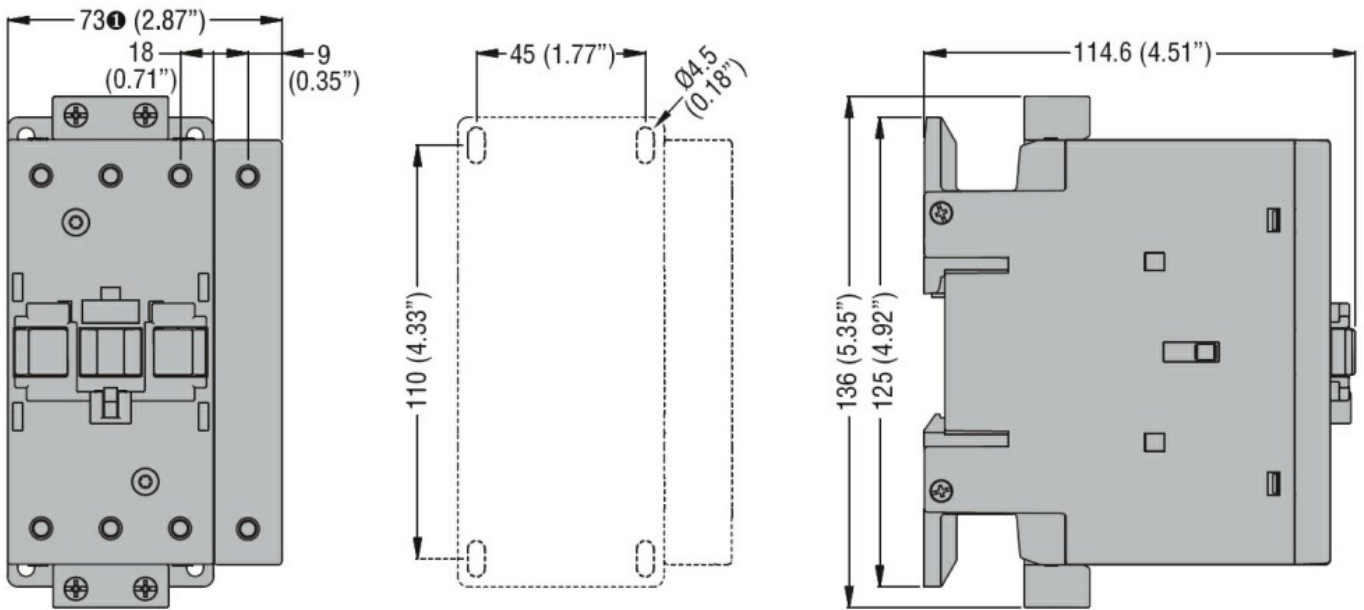
m	3000
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Resistance & Protection

Pollution degree

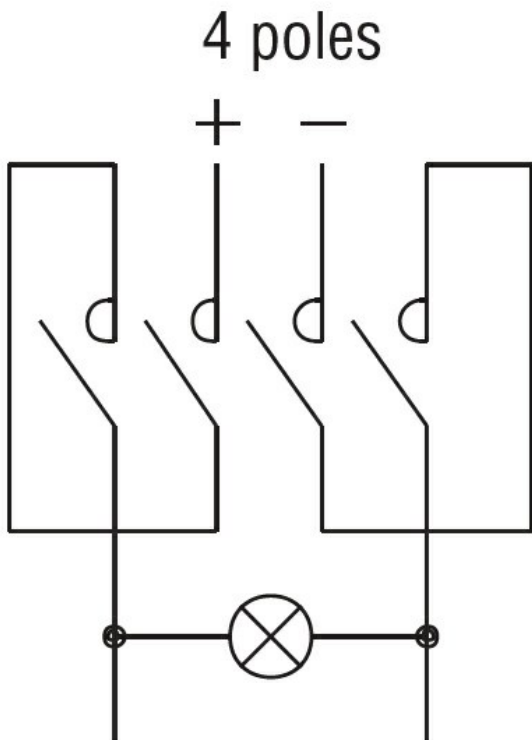
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Dimensions



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

cULus

ETIM classification

ETIM 8.0

EC002552 -
Power contactor,
DC switching