



Power contactor  
BFD80

Product designation

Product type designation

**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 ( $\leq 40^\circ\text{C}$ )	A 160	
	400V	A 100	
IEC max current $I_e$ in DC1 with $L/R \leq 1\text{ms}$ with 4 poles in series	600V	A 100	
	800V	A 76	
	1000V	A 60	
	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 $\Omega$	0.6	
Power dissipation per pole (average value)	$I_{th}$	W 7.9	
	min	Nm 4	
Tightening torque for terminals	max	Nm 5	
	min	lbin 2.95	
	max	lbin 3.69	
	min	Nm 0.8	
Tightening torque for coil terminal	max	Nm 1	
	min	lbft 0.59	
	max	lbft 0.74	
	Max number of wires simultaneously connectable	nr.	2
Conductor section	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	1280
<b>Operations</b>			
Mechanical life		cycles	15000000
<b>Safety related data</b>			
Performance level B10d according to EN/ISO 13489-1		mechanical load	cycles 15000000
EMC compatibility			yes
<b>AC coil operating</b>			
Rated AC voltage at 50/60Hz, 60Hz		min	V 20
		max	V 250
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 operating voltage 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 ≤20°C 50Hz		W	1...2.5
<b>DC coil operating</b>			
DC rated control voltage		min	V 20
DC operating voltage			
pick-up		min	%Us ≤80 Us min
		max	%Us ≤110 Us max
drop-out		max	%Us ≤70 Us min
Average coil consumption ≤20°C		in-rush	W 23...68
		holding	W 1.2...1.9
<b>Max cycles frequency</b>			
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
------------	---	-----

4 poles in series DC1

600V	A	100
------	---	-----

**Ambient conditions**

Temperature

Operating temperature

min	°C	-40
max	°C	70

Storage temperature

min	°C	-50
max	°C	80

Max altitude

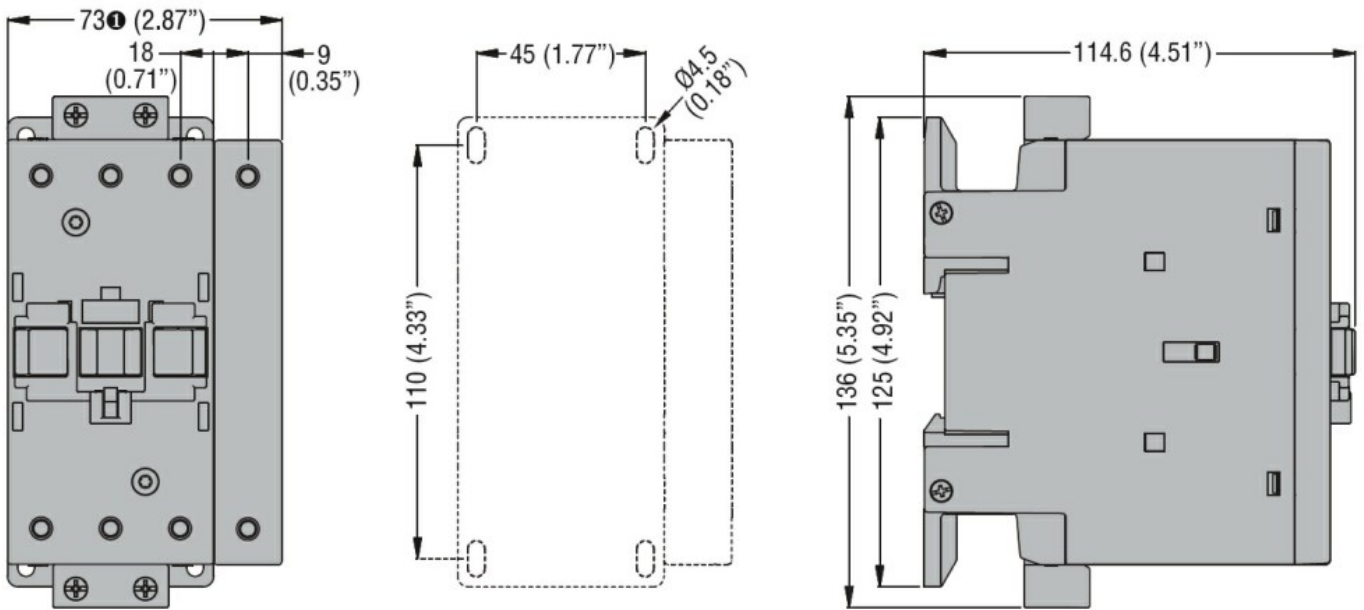
m	3000
---	------

**Resistance & Protection**

Pollution degree

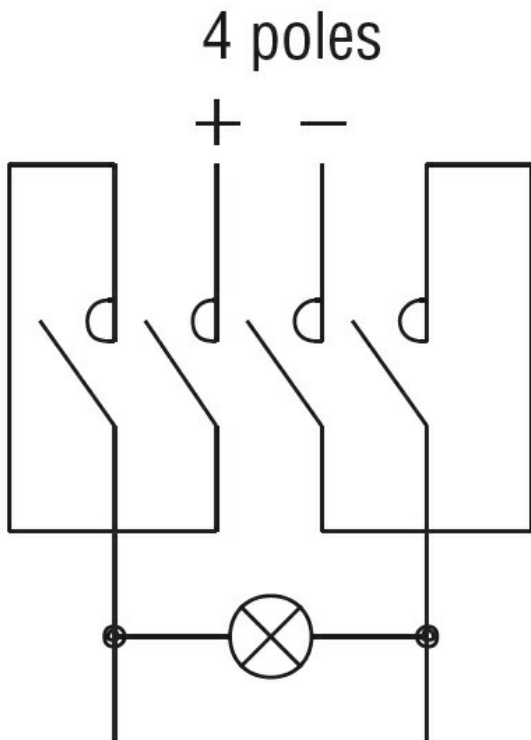
3

**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 60947-1  
IEC/EN 60947-4-1  
UL 60947-4-1

Certificates

cULus