



Product designation				Power contactor
Product type designation				BFD80
<b>Contact characteristics</b>				
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 $\Omega$			0.6
Power dissipation per pole (average value)	$I_{th}$	W	7.9	
	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	$I_{bin}$	0.59	
	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	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	1280	
Conductor section	AWG/kcmil conductor section	max	2
<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 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 ≤20°C 50Hz			W 1...2.5
<b>DC coil operating</b>			
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 ≤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	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**

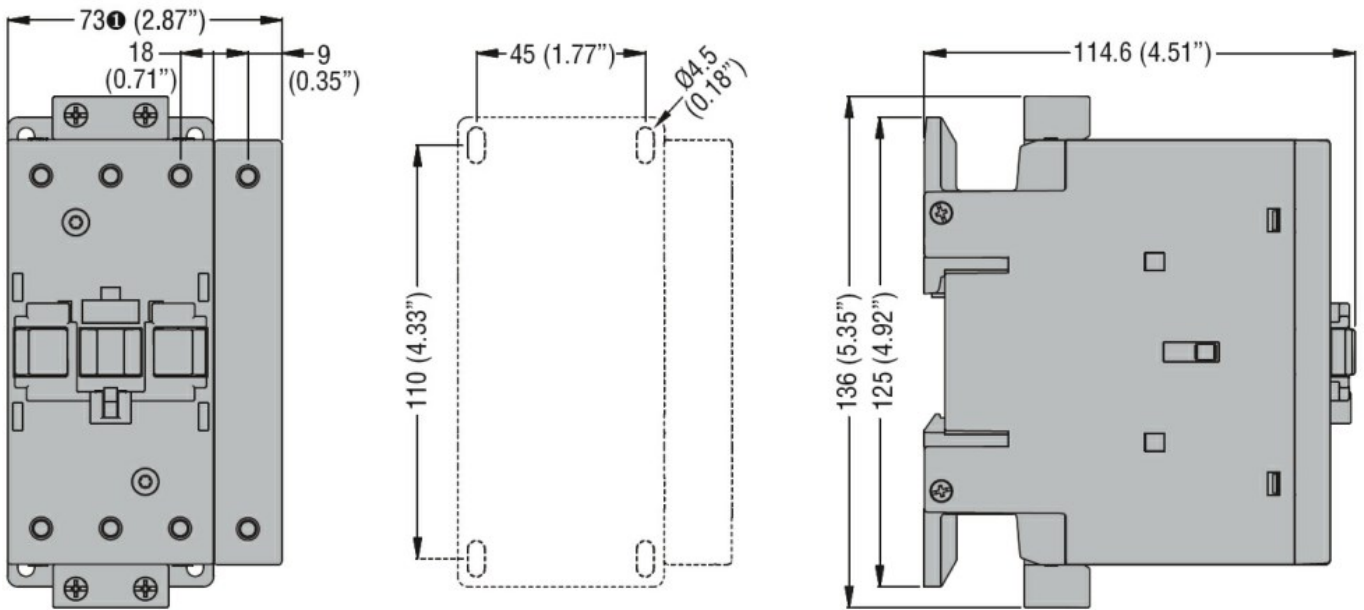
Temperature			
Operating temperature			
	min	°C	-40
	max	°C	70
Storage temperature			
	min	°C	-50
	max	°C	80

Max altitude	m	3000
--------------	---	------

**Resistance & Protection**

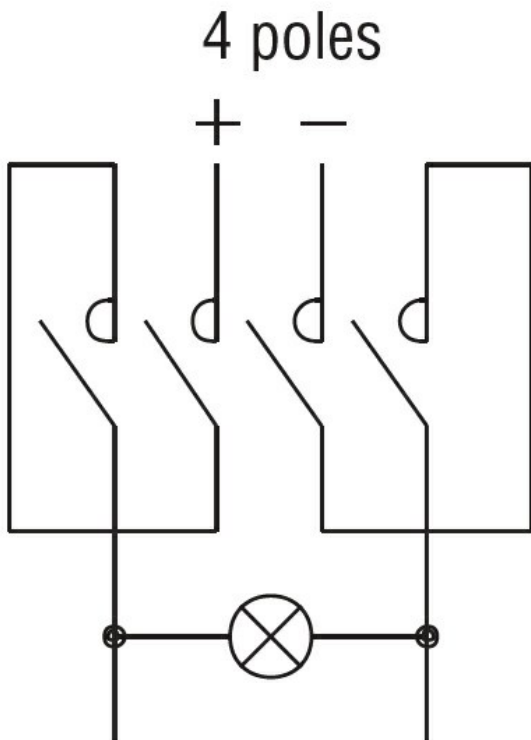
Pollution degree	3
------------------	---

**Dimensions [mm (in)]**



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