



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 max	Hz Hz 25 400
IEC Conventional free air thermal current I_{th}	A	115
Operational current I_e	AC-1 ($\leq 40^\circ\text{C}$) A	160
IEC max current I_e in DC1 with $L/R \leq 1\text{ms}$ with 4 poles in series	400V 600V 800V 1000V	A A A A 115 100 90 80
Short-time allowable current for 10s (IEC/EN60947-1)	A	640
Protection fuse	gG (IEC) aM (IEC)	A A 125 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	min max min max	Nm Nm lbin lbin 4 5 2.95 3.69
Tightening torque for coil terminal	min max min max	Nm Nm lbin lbin 0.8 1 0.59 0.74
Max number of wires simultaneously connectable	Nr.	2
Conductor section	AWG/Kcmil	
	max	2
Flexible w/o lug conductor section	min max	mm ² mm ² 1.5 35
Flexible c/w lug conductor section	min max	mm ² mm ² 1.5 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
Conductor section	AWG/kcmil conductor section	
	max	2

Operations

Mechanical life	cycles	15000000
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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	100
	max	V	250
Rated AC voltage at 50/60Hz		V	230

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
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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
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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
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DC coil operating

DC rated control voltage

min	V	100
max	V	250

DC rated control voltage

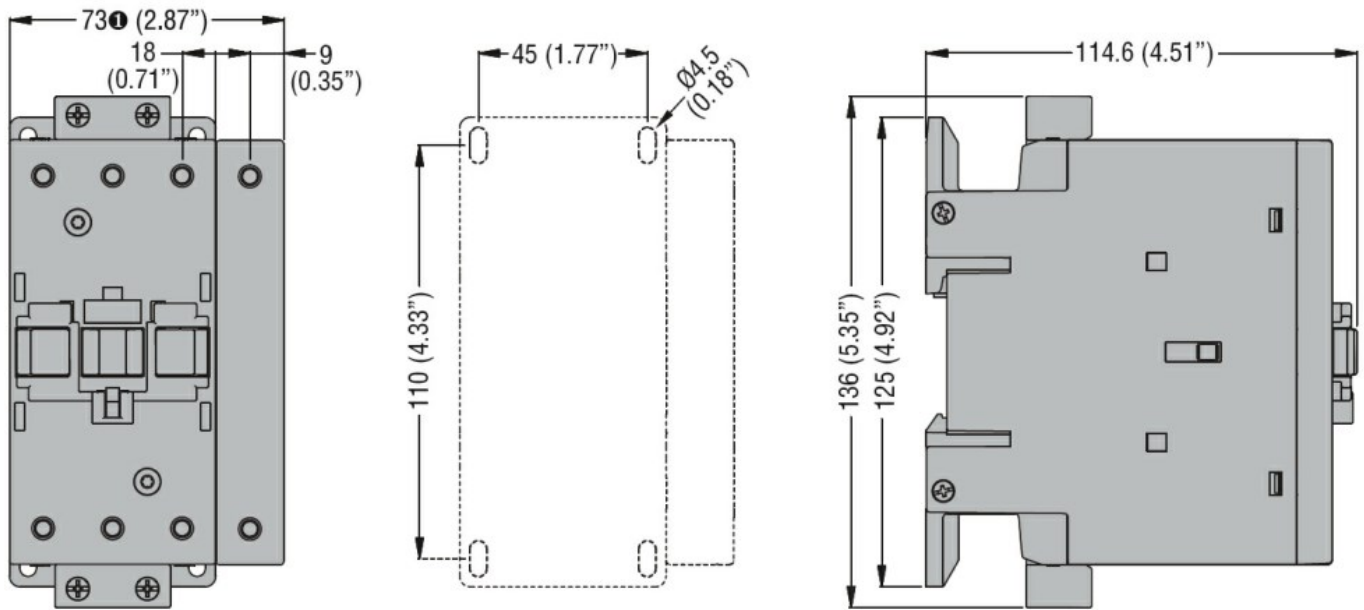
V	230
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DC operating voltage

pick-up

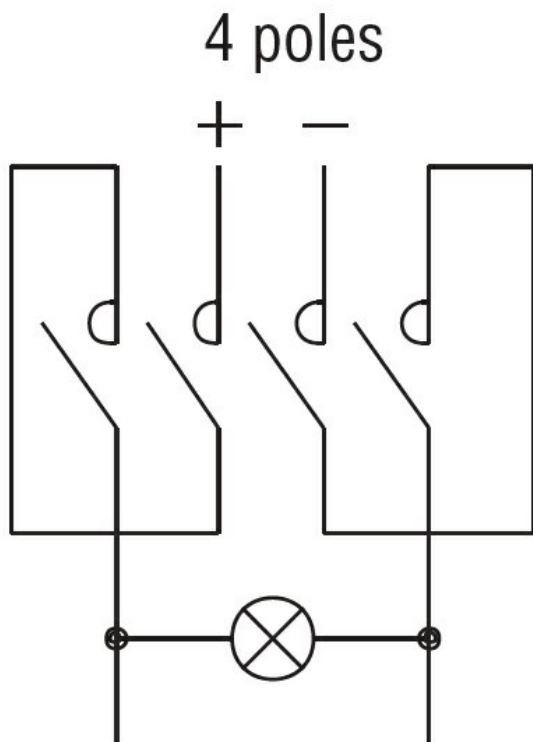
min	%Us	≤80 Us min
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		max	%Us	≤110 Us max
drop-out				
		max	%Us	≤70 Us min
Average coil consumption ≤20°C				
		in-rush	W	23...68
		holding	W	1.2...1.9
Max cycles frequency				
Mechanical operation			cycles/h	1500
Operating times				
Average time for 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				



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

ETIM classification

ETIM 8.0

EC002552 -
Power contactor,
DC switching