Lovato electric
ENERGY AND AUTOMATION

BFD80T4A048

FOUR-POLE CONTACTOR, 80A/1000V DC1, AC COIL, 48VAC 50/60HZ

Product designation			Power contactor
Product type designation			BFD80
Contact characteristics			
Number of poles		Nr.	4
Rated insulation voltage Ui IEC/EN		V	1000
Rated impulse withstand voltage Uimp		kV	8
Operational frequency			
	min	Hz	25
	max	Hz	400
IEC Conventional free air thermal current Ith		A	115
IEC max current Ie in DC1 with L/R ≤ 1ms 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)		mΩ	0.6
Power dissipation per pole (average value)			
	Ith	W	7.9
Tightening torque for terminals			
	min	Nm	4
	max	Nm	5
	min	lbin	2.95
	max	lbin	3.69
Tightening torque for coil terminal			
	min	Nm	0.8
	max	Nm	1
	min	lbin	0.8
	max	lbin	0.74
Max number of wires simultaneously connectable		Nr.	2
Conductor section			
AWG/Kcmil			
	max		2
Flexible w/o lug conductor section			
	min	mm²	1.5
	max	mm²	35
Flexible c/w lug conductor section			
	min	mm²	1.5
	max	mm²	35
Power terminal protection according to IEC/EN 60529			IP20 front
Mechanical features			
Operating position			

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		normal allowable		Vertical plan ±30°
Fixing				Screw / DIN rail 35mm
Weight			g	1240
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			V	48
AC operating voltage				
	of 50/60Hz coil powered at 50Hz			
	pick-up			
		min	%Us	80
		max	%Us	110
	drop-out			
		min	%Us	20
		max	%Us	55
	of 50/60Hz coil powered at 60Hz			
	pick-up			
		min	%Us	85
		max	%Us	110
	drop-out			
		min	%Us	20
		max	%Us	55
AC average coil consumption at 20°C				
	of 50/60Hz coil powered at 50Hz			
		in-rush	VA	210
		holding	VA	15
	of 50/60Hz coil powered at 60Hz			
		in-rush	VA	195
		holding	VA	13
	of 60Hz coil powered at 60Hz			
		in-rush	VA	210
		holding	VA	15
Dissipation at holding ≤20°C 50Hz			W	5
Max cycles frequency				
Mechanical operation			cycles/h	3600
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

General USE				
	Contactor			
		AC current	A	115
	4 poles in series DC1			
		600V	A	100

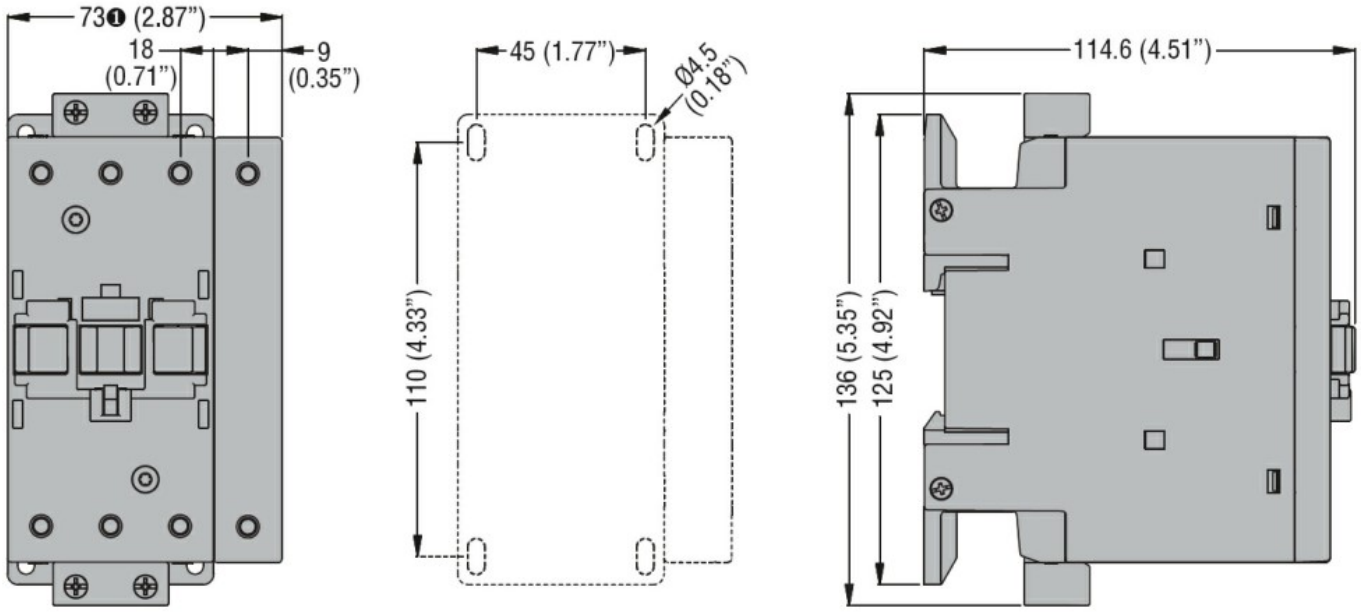
Ambient conditions

Temperature				
	Operating temperature			
		min	°C	-50
		max	°C	70
	Storage temperature			
		min	°C	-60
		max	°C	80
Max altitude			m	3000

Resistance & Protection

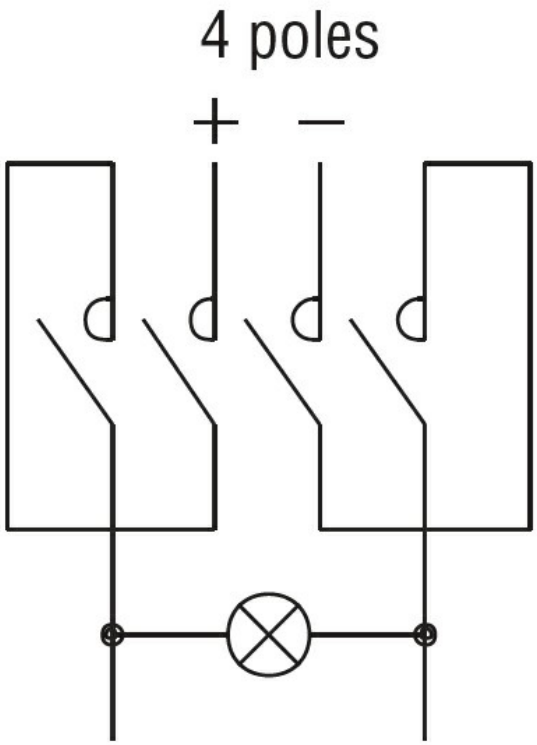
Pollution degree				3

Dimensions



❶ 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