



Product designation				Power contactor
Product type designation				BFD80
Contact characteristics				
Number of poles	Nr.			3
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 3 poles in series	400V	A	100	
	600V	A	80	
	800V	A	65	
	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 Ω			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}	0.8	
	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 ²	1.5	
	max	mm ²	35	
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	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 $\leq 20^\circ\text{C}$ 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
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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

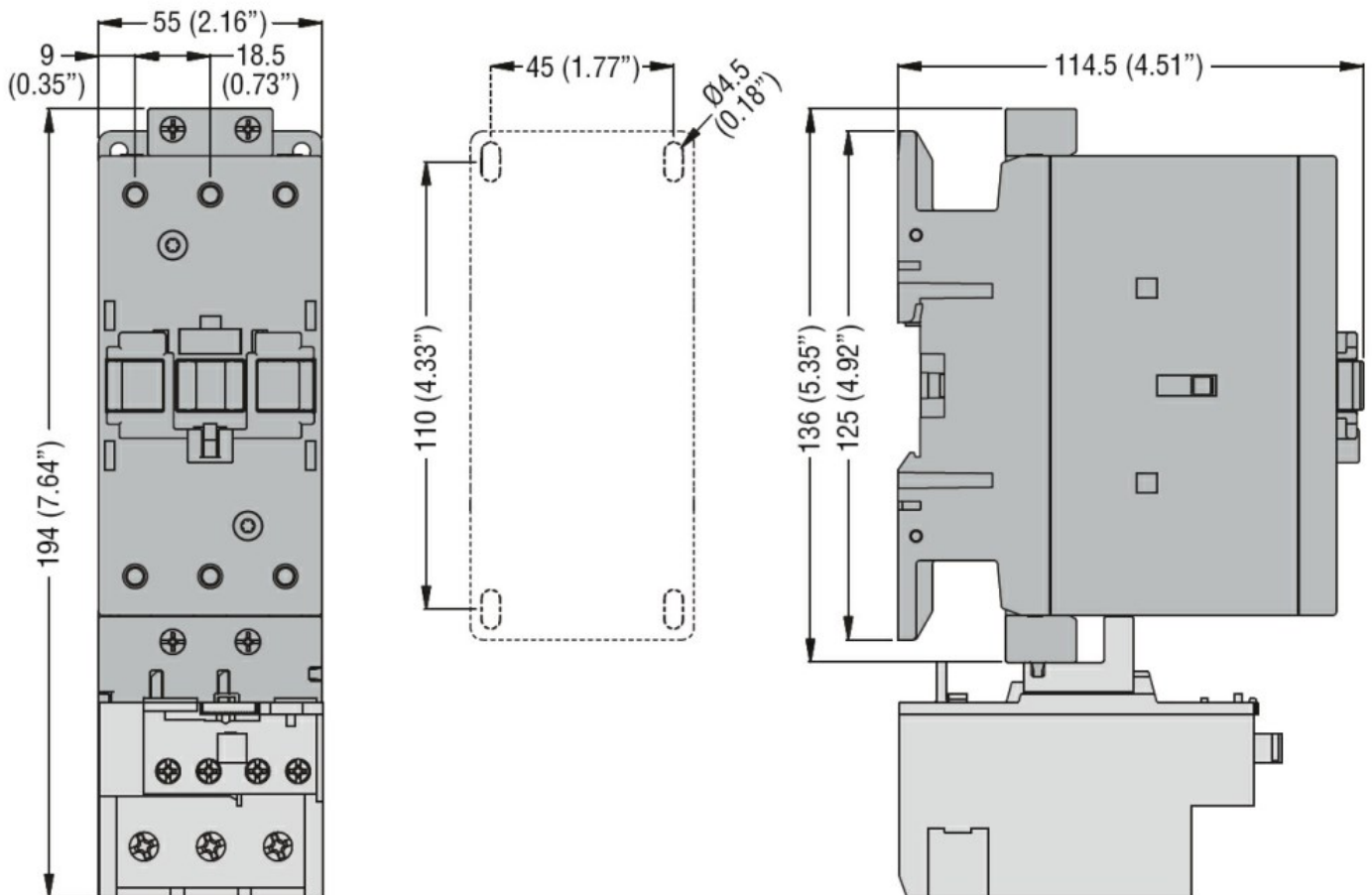
m 3000

Resistance & Protection

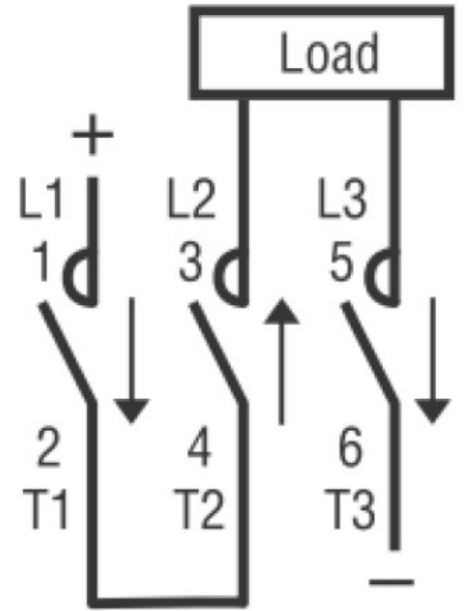
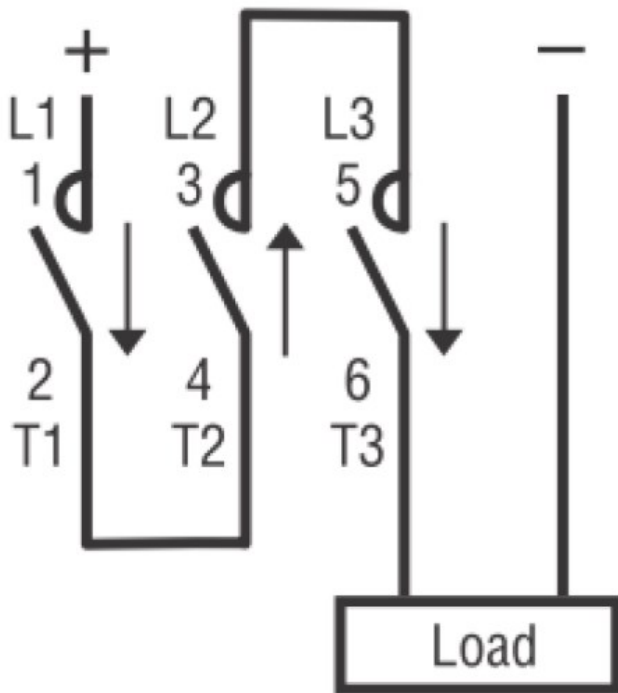
Pollution degree

3

Dimensions



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

ETIM classification

ETIM 8.0

EC002552 -
 Power contactor,
 DC switching