



Product designation				Power contactor
Product type designation				BF80
<b>Contact characteristics</b>				
Number of poles	Nr.			3
Rated insulation voltage U <sub>i</sub> IEC/EN	V			1000
Rated impulse withstand voltage U <sub>imp</sub>	kV			8
Operational frequency	min	Hz	25	
	max	Hz	400	
IEC Conventional free air thermal current I <sub>th</sub>	A			115
Operational current I <sub>e</sub>	AC-1 (≤40°C)	A	115	
	AC-1 (≤55°C)	A	95	
	AC-1 (≤70°C)	A	80	
	AC-3 (≤440V ≤55°C)	A	80	
	AC-4 (400V)	A	38	
Rated operational power AC-3 (T≤55°C)	230V	kW	22	
	400V	kW	45	
	415V	kW	45	
	440V	kW	45	
	500V	kW	55	
	690V	kW	55	
	1000V	kW	37	
Rated operational current AC-3 (T≤55°C)	230V	A	80	
	400V	A	80	
	415V	A	80	
	440V	A	80	
	500V	A	78	
	690V	A	57	
	1000V	A	28	
Rated operational power AC-1 (T≤40°C)	230V	kW	43	
	400V	kW	76	
	500V	kW	95	
	690V	kW	120	
IEC max current I <sub>e</sub> in DC1 with L/R ≤ 1ms with 1 poles in series	≤24V	A	70	
	48V	A	60	
	75V	A	60	
	110V	A	8	
	220V	A	—	
IEC max current I <sub>e</sub> in DC1 with L/R ≤ 1ms with 2 poles in series	≤24V	A	100	

	48V	A	100
	75V	A	100
	110V	A	80
	220V	A	9
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IEC max current I <sub>e</sub> in DC1 with L/R ≤ 1ms with 3 poles in series	≤24V	A	100
	48V	A	100
	75V	A	100
	110V	A	85
	220V	A	95
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IEC max current I <sub>e</sub> in DC1 with L/R ≤ 1ms with 4 poles in series	≤24V	A	100
	48V	A	100
	75V	A	100
	110V	A	100
	220V	A	115
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IEC max current I <sub>e</sub> in DC3-DC5 with L/R ≤ 15ms with 1 poles in series	≤24V	A	40
	48V	A	30
	75V	A	30
	110V	A	3
	220V	A	–
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IEC max current I <sub>e</sub> in DC3-DC5 with L/R ≤ 15ms with 2 poles in series	≤24V	A	60
	48V	A	50
	75V	A	50
	110V	A	40
	220V	A	5
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IEC max current I <sub>e</sub> in DC3-DC5 with L/R ≤ 15ms with 3 poles in series	≤24V	A	80
	48V	A	70
	75V	A	70
	110V	A	60
	220V	A	64
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IEC max current I <sub>e</sub> in DC3-DC5 with L/R ≤ 15ms with 4 poles in series	≤24V	A	90
	48V	A	90
	75V	A	90
	110V	A	75
	220V	A	80
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Short-time allowable current for 10s (IEC/EN60947-1)		A	640
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Protection fuse	gG (IEC)	A	125
	aM (IEC)	A	80
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Making capacity (RMS value)		A	800
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Breaking capacity at voltage	440V	A	640
	500V	A	625
	690V	A	456
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Resistance per pole (average value)		mΩ	0.6
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Power dissipation per pole (average value)	I <sub>th</sub>	W	7.9
	AC-3	W	3.8
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Tightening torque for terminals			

		min	Nm	4
		max	Nm	5
		min	Ibin	2.95
		max	Ibin	3.69
<b>Tightening torque for coil terminal</b>				
		min	Nm	0.8
		max	Nm	1
		min	Ibin	0.8
		max	Ibin	0.74
<b>Max number of wires simultaneously connectable</b>				
			Nr.	2
<b>Conductor section</b>				
	AWG/Kcmil			
		max		2
<b>Flexible w/o lug conductor section</b>				
		min	mm <sup>2</sup>	1.5
		max	mm <sup>2</sup>	35
<b>Flexible c/w lug conductor section</b>				
		min	mm <sup>2</sup>	1.5
		max	mm <sup>2</sup>	35
<b>Power terminal protection according to IEC/EN 60529</b>				
				IP20 front
<b>Mechanical features</b>				
<b>Operating position</b>				
		normal allowable		Vertical plan ±30°
<b>Fixing</b>				
				Screw / DIN rail 35mm
<b>Weight</b>				
			g	1020
<b>Conductor section</b>				
	AWG/kcmil conductor section			
		max		2
<b>Operations</b>				
<b>Mechanical life</b>				
			cycles	15000000
<b>Electrical life</b>				
			cycles	1300000
<b>Safety related data</b>				
<b>Performance level B10d according to EN/ISO 13489-1</b>				
		rated load	cycles	1300000
		mechanical load	cycles	15000000
<b>Mirror contacts according to IEC/EN 60947-4-1</b>				
				yes
<b>EMC compatibility</b>				
				yes
<b>AC coil operating</b>				
<b>Rated AC voltage at 60Hz</b>				
			V	120
<b>AC operating voltage</b>				
	of 60Hz coil powered at 60Hz			
	pick-up	min	%Us	80
		max	%Us	110
	drop-out	min	%Us	20
		max	%Us	55
<b>AC average coil consumption at 20°C</b>				
	of 60Hz coil powered at 60Hz			
		in-rush	VA	210
		holding	VA	15

Dissipation at holding ≤20°C 50Hz	W	5
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<b>Max cycles frequency</b>		
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Mechanical operation	cycles/h	3600
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<b>Operating times</b>		
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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		
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Closing NO	min	ms	40
	max	ms	85

Opening NO	min	ms	20
	max	ms	55

<b>UL technical data</b>		
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Full-load current (FLA) for three-phase AC motor	at 480V	A	77
	at 600V	A	77

Yielded mechanical performance		
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for three-phase AC motor	200/208V	HP	25
	220/230V	HP	30
	460/480V	HP	60
	575/600V	HP	75

General USE		
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Contactor	AC current	A	115
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Short-circuit protection fuse, 600V		
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High fault	Short circuit current	kA	100
	Fuse rating	A	200
	Fuse class		J

Standard fault	Short circuit current	kA	10
	Fuse rating	A	200
	Fuse class		RK5

<b>Ambient conditions</b>		
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Temperature		
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Operating temperature	min	°C	-50
	max	°C	70

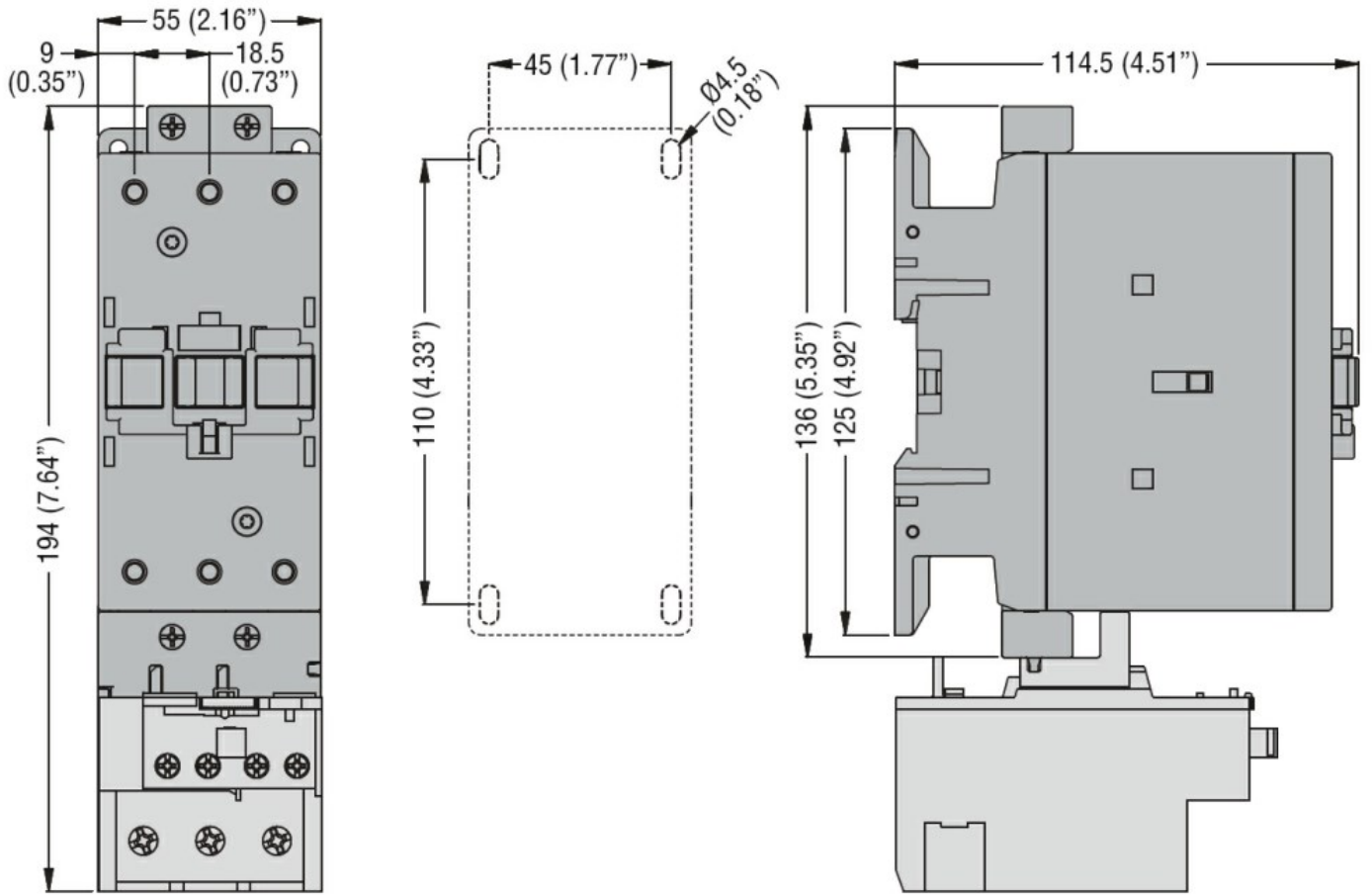
Storage temperature	min	°C	-60
	max	°C	80

Max altitude	m	3000
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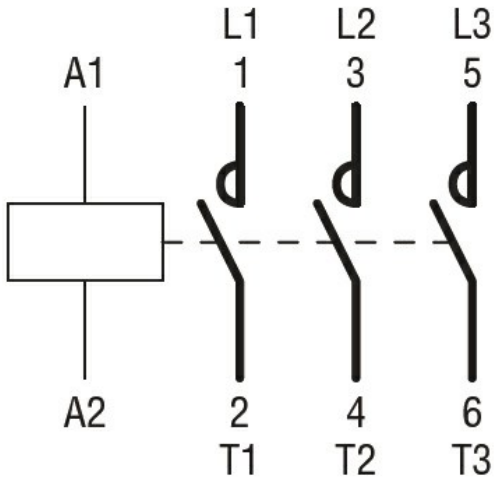
<b>Resistance &amp; Protection</b>		
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Pollution degree		3
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<b>Dimensions</b>		
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### Wiring diagrams



### 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

CCC

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cULus

ETIM classification

ETIM 8.0

EC000066 -  
Power contactor,  
AC switching