



Product designation				Power contactor
Product type designation				BF80
Contact characteristics				
Number of poles	nr.			3
Rated insulation voltage U_i	V			1000
Rated impulse withstand voltage U_{imp}	kV			8
Operating frequency	Operational frequency min	Hz	25	
	Operational frequency max	Hz	400	
	Conventional free air thermal current I_{th}	A	115	
Operating current	Operational current AC1 ($\leq 40^\circ\text{C}$)	A	115	
	Operational current AC3 ($\leq 440\text{V} \leq 55^\circ\text{C}$)	A	80	
	Operational current AC4 (400V)	A	38	
Rated operational power AC1 ($T \leq 40^\circ\text{C}$)	230V	kW	43	
	400V	kW	76	
	500V	kW	95	
	690V	kW	120	
Rated operational power AC3A ($T \leq 55^\circ\text{C}$)	Rated operational power AC3 ($T \leq 55^\circ\text{C}$) 230V	kW	22	
	Rated operational power AC3 ($T \leq 55^\circ\text{C}$) 400V	kW	45	
	Rated operational power AC3 ($T \leq 55^\circ\text{C}$) 415V	kW	45	
	Rated operational power AC3 ($T \leq 55^\circ\text{C}$) 440V	kW	45	
	Rated operational power AC3 ($T \leq 55^\circ\text{C}$) 500V	kW	55	
	Rated operational power AC3 ($T \leq 55^\circ\text{C}$) 690V	kW	55	
	Rated operational power AC3 ($T \leq 55^\circ\text{C}$) 1000V	kW	37	
Short-time allowable current for 10s (IEC/EN60947-1)	A	640		
Protection fuse	gG (IEC)	A	125	
	aM (IEC)	A	80	
Making capacity (RMS value)	A	800		
Breaking capacity at voltage	Breaking capacity 440V	A	640	
	Breaking capacity 500V	A	625	
	Breaking capacity 690V	A	456	
Resistance per pole (average value)	m Ω	0.6		
Power dissipation per pole (average value)	Power dissipation pole (average value) I_{th}	W	7.9	
	AC3	W	3.8	
Tightening torque for terminals	min	Nm	4	
	max	Nm	5	
	min	lbft	2.95	
	max	lbft	3.69	

Tightening torque for coil terminal

min	Nm	0.8
max	Nm	1
min	lbft	0.8
max	lbft	0.74

max number of wires simultaneously connectable

nr.	2
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Conductor section

AWG

min	14
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

Auxiliary contact characteristics

Operational current AC1 (≤40°C)

A	115
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Operating current DC13

110V	A	Screw / DIN rail 35mm
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Ambient conditions

Temperature

Operating temperature

min	°C	-40
max	°C	70

Storage temperature

min	°C	-50
max	°C	80

Max altitude

m	3000
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Operating position

normal allowable	Vertical plan ±30°
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Mounting

Screw / DIN rail
35mm

Weight

g	1.06
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Operations

Mechanical life

Cycles	1500000
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Electrical life

Cycles	1300000
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Safety related data

Performance level B10d according to EN/ISO 13489-1

rated load	Cicli	1300000
mechanical load	Cicli	15000000

Mirror contacts according to IEC/EN 60947-4-1

yes

EMC compatibility

yes

AC coil operating

AC operating voltage

of 50/60Hz coil powered at 50Hz
pick-up

min	%Us	0.8
max	%Us	1.1

drop-out

		max	%Us	≤0.75 Us min
of 50/60Hz coil powered at 60Hz	pick-up			
		min	%Us	0.8
		max	%Us	1.1
	drop-out			
		max	%Us	0.75
AC operating voltage				
of 50/60Hz coil powered at 50Hz		in-rush	VA	40...130
		holding	VA	1.3...4.4
of 50/60Hz coil powered at 60Hz		in-rush	VA	40...130
		holding	VA	1.3...4.4
Dissipation at holding ≤20°C 50Hz			W	1...2.5
DC coil operating				
DC rated control voltage		min	V	20
DC operating voltage				
pick-up		min	%Us	0.8
		max	%Us	1.10
drop-out		min	%Us	0.2
		max	%Us	0.55
Average coil consumption ≤20°C		in-rush	W	60...125
		holding	W	1.7...2.3
Max cycles frequency				
Mechanical operations			Cycles/h	1500
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				
Full-load current (FLA) for three-phase AC motor		at 480V	A	77
		at 600V	A	77
Yielded mechanical performance				
for three-phase AC motor		at 200/208V	hp	25
		at 220/230V	hp	30

at 460/480V	hp	60
at 575/600V	hp	75

General USE

Contactor

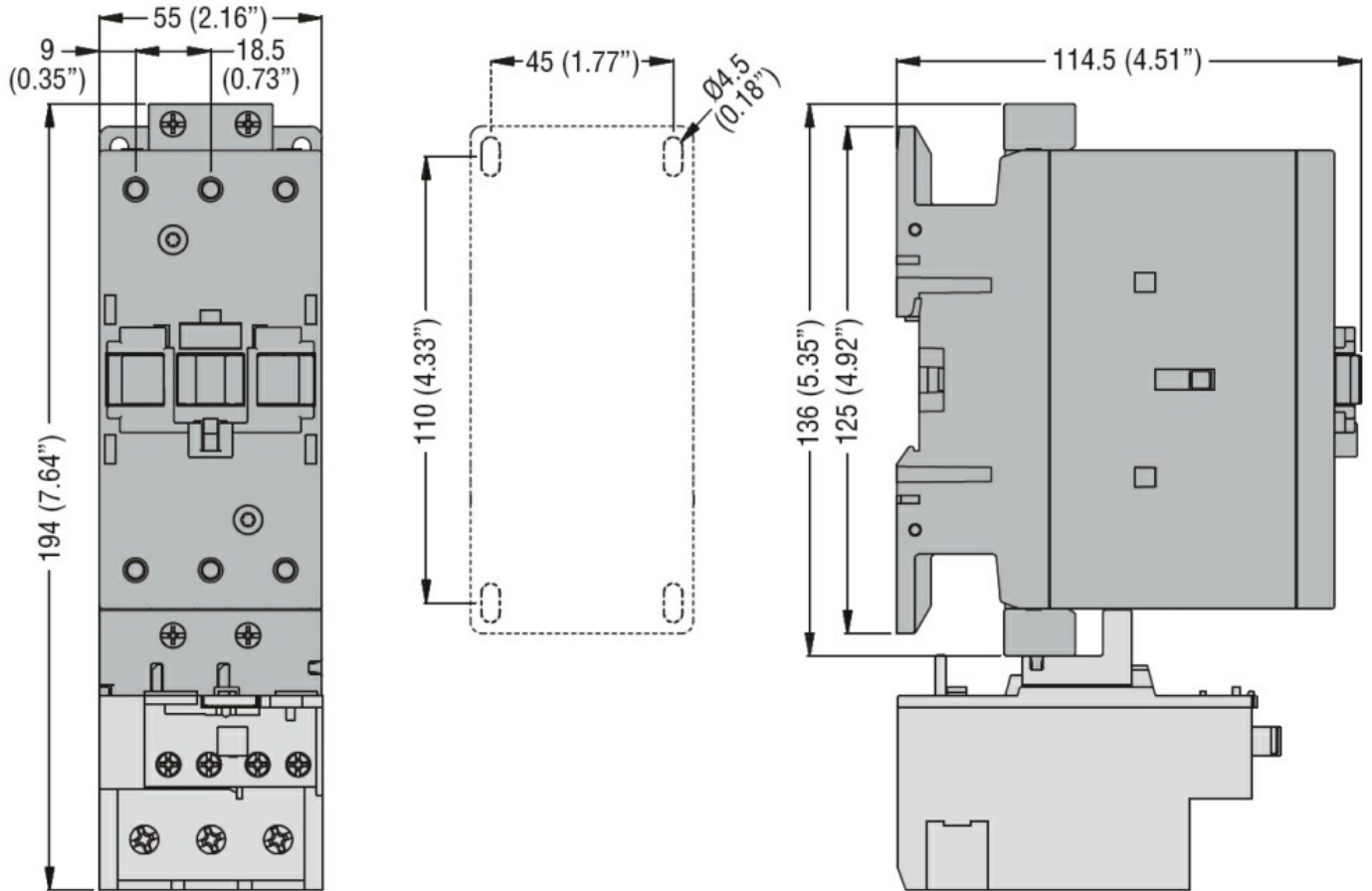
AC current	A	32
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Other features

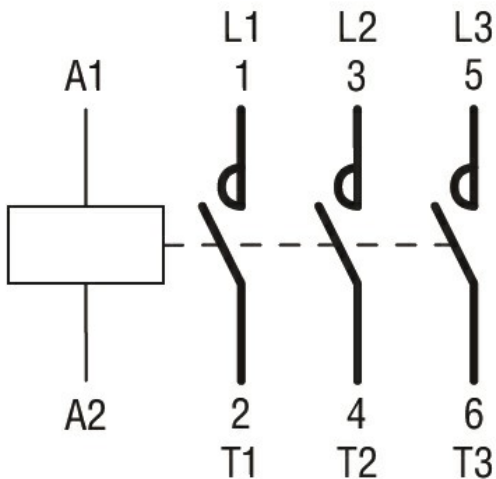
Pollution degree

3

Dimensions



Wiring diagrams



Certifications and compliance

Certifications

CSA C22.2 n° 60947-1

CSA C22.2 n° 60947-4-1

IEC/EN 60947-1

IEC/EN 60947-4-1

UL 60947-1

UL 60947-4-1

Compliance

CCC

cULus

ETIM 6 classification

EC000066 - Power contactor, AC switching