



Product designation
Product type designation

Power contactor
BF80

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	

Operational current I _e	AC-1 (≤40°C)	A	115
	AC-1 (≤55°C)	A	95
	AC-1 (≤55°C) with 16mm ² wire and fork end lug	A	80
	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 _e 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 _e in DC1 with L/R ≤ 1ms with 2 poles in series			
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	≤24V	A	100
	48V	A	100
	75V	A	100
	110V	A	80
	220V	A	9
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IEC max current Ie 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 Ie 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 Ie 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 Ie 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 Ie 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 Ie 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)	Ith	W	7.9
	AC-3	W	3.8

Tightening torque for terminals

min	Nm	4
max	Nm	5
min	Ibin	2.95
max	Ibin	3.69

Tightening torque for coil terminal

min	Nm	0.8
max	Nm	1
min	Ibin	0.8
max	Ibin	0.74

Max number of wires simultaneously connectable

Nr.	2
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Conductor section

AWG/Kcmil

max	2
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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 ±30°
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Fixing

Screw / DIN rail
35mm

Weight

g	1020
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Conductor section

AWG/kcmil conductor section

max	2
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Operations

Mechanical life

cycles	15000000
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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	cycles	1300000
mechanical load	cycles	15000000

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

yes

EMC compatibility

yes

AC coil operating

Rated AC voltage at 50/60Hz

V	110
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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
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		max	%Us	110
drop-out		min	%Us	40
		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				
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			
		200/208V	HP	25
		220/230V	HP	30
		460/480V	HP	60
		575/600V	HP	75
General USE				
	Contactor			
		AC current	A	115
Short-circuit protection fuse, 600V				
	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

Ambient conditions

Temperature

Operating temperature

min °C -50
max °C 70

Storage temperature

min °C -60
max °C 80

Max altitude

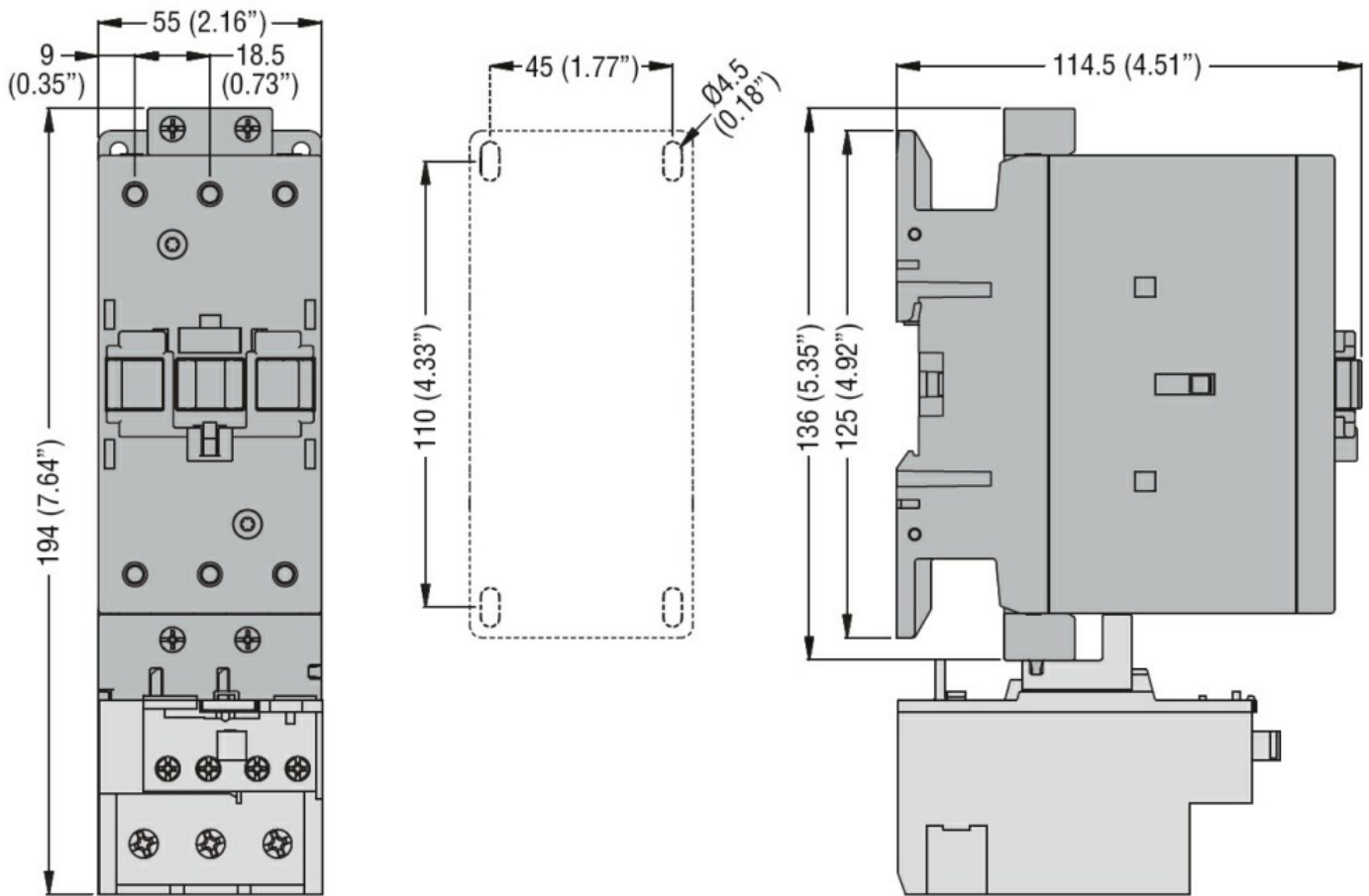
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Resistance & Protection

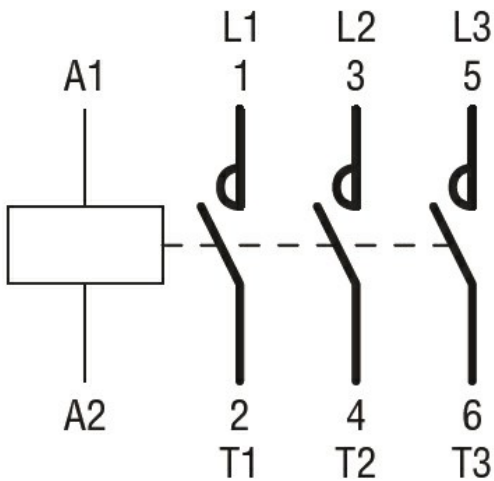
Pollution degree

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

Certificates

CCC

cULus

ETIM classification

ETIM 8.0

EC000066 -
Power contactor,
AC switching