



Product designation

Power contactor

Product type designation

BF80

Contact characteristics

Number of poles	Nr.	4
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 ($\leq 40^\circ\text{C}$)	A 115
	AC-1 ($\leq 55^\circ\text{C}$)	A 95
	AC-1 ($\leq 70^\circ\text{C}$)	A 80
	AC-3 ($\leq 440\text{V } \leq 55^\circ\text{C}$)	A 80
	AC-4 (400V)	A 38
Rated operational power AC-1 ($T \leq 40^\circ\text{C}$)	230V	kW 43
	400V	kW 76
	500V	kW 95
	690V	kW 120
IEC max current I_e in DC1 with $L/R \leq 1\text{ms}$ with 1 poles in series	$\leq 24\text{V}$	A 70
	48V	A 60
	75V	A 60
	110V	A 8
	220V	A –
IEC max current I_e in DC1 with $L/R \leq 1\text{ms}$ with 2 poles in series	$\leq 24\text{V}$	A 100
	48V	A 100
	75V	A 100
	110V	A 80
	220V	A 9
IEC max current I_e in DC1 with $L/R \leq 1\text{ms}$ with 3 poles in series	$\leq 24\text{V}$	A 100
	48V	A 100
	75V	A 100
	110V	A 85
	220V	A 95
IEC max current I_e in DC1 with $L/R \leq 1\text{ms}$ with 4 poles in series	$\leq 24\text{V}$	A 100
	48V	A 100
	75V	A 100
	110V	A 100
	220V	A 115

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	–	
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	
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	
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	
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			
	440V	A	640
	500V	A	625
	690V	A	456
Resistance per pole (average value)		m?	0.6
Power dissipation per pole (average value)			
	Ith	W	7.9
	AC3	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	0.59
	max	Ibin	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	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		normal allowable	Vertical plan ±30°	
Fixing				Screw / DIN rail 35mm
Weight			g	1280
Conductor section		AWG/kcmil conductor section		
		max	2	
Operations				
Mechanical life			cycles	15000000
Electrical life			cycles	1300000
Safety related data				
Performance level B10d according to EN/ISO 13489-1		rated load mechanical load	cycles	1300000
			cycles	15000000
Mirror contats according to IEC/EN 609474-4-1		yes		
EMC compatibility		yes		
AC coil operating				
Rated AC voltage at 50/60Hz, 60Hz		min	V	60
		max	V	110
Rated AC voltage at 50/60Hz			V	110
AC operating voltage		of 50/60Hz coil powered at 50Hz		
		pick-up		
		min	%Us	80 Us min
		max	%Us	110 Us max
		drop-out		
		max	%Us	≤70 Us min
		of 50/60Hz coil powered at 60Hz		
		pick-up		
		min	%Us	80 Us min
		max	%Us	110 Us max
		drop-out		
		max	%Us	≤70 Us min
AC average coil consumption at 20°C		of 50/60Hz coil powered at 50Hz		
		in-rush	VA	35...120
		holding	VA	1.5...3.7
		of 50/60Hz coil powered at 60Hz		
		in-rush	VA	35...120
		holding	VA	1.5...3.7
		of 60Hz coil powered at 60Hz		
		in-rush	VA	210
		holding	VA	15
Dissipation at holding ≤20°C 50Hz			W	1...2.5

DC coil operating

DC rated control voltage

min	V	60
max	V	110

DC rated control voltage

V 110

DC operating voltage

pick-up

min	%Us	80 Us min
max	%Us	110 Us max

drop-out

max	%Us	≤70 Us min
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Average coil consumption ≤20°C

in-rush	W	23...68
holding	W	1.2...1.9

Max cycles frequency

Mechanical operation

cycles/h 1500

Operating times

Average time for Us control

in AC

Closing NO

min	ms	40
max	ms	85

Opening NO

min	ms	20
max	ms	55

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
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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	-40
max	°C	70

Storage temperature

min	°C	-50
max	°C	80

Max altitude

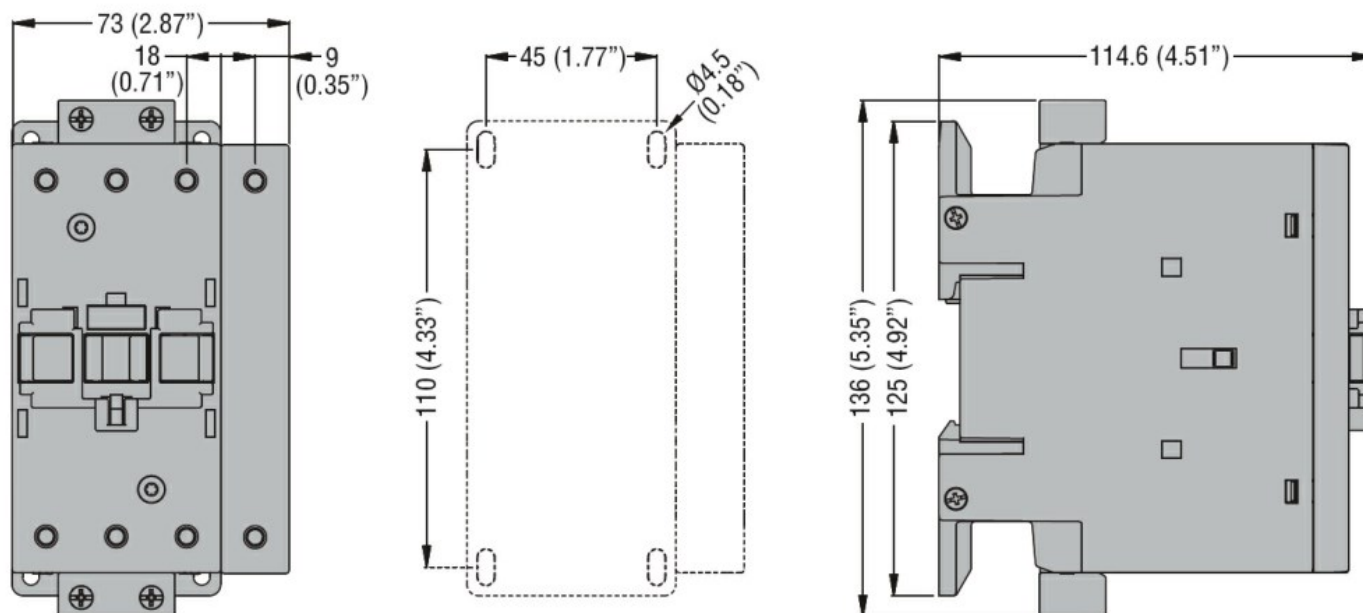
m	3000
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Resistance & Protection

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 60947-1
IEC/EN 60947-4-1
UL 60947-1
UL 60947-4-1

Certificates

CCC
cULus

ETIM classification

ETIM 8.0

EC000066 -
Power contactor,
AC switching