



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)

mΩ 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	lbin	2.95
max	lbin	3.69

Tightening torque for coil terminal

min	Nm	0.8
max	Nm	1
min	lbin	0.8
max	lbin	0.74

Max number of wires simultaneously connectable

Nr. 2

Conductor section

AWG/Kcmil

max 2

Flexible w/o lug conductor section

min mm² 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	1240
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			V	110
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	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
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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	-50
max	°C	70

Storage temperature

min	°C	-60
max	°C	80

Max altitude

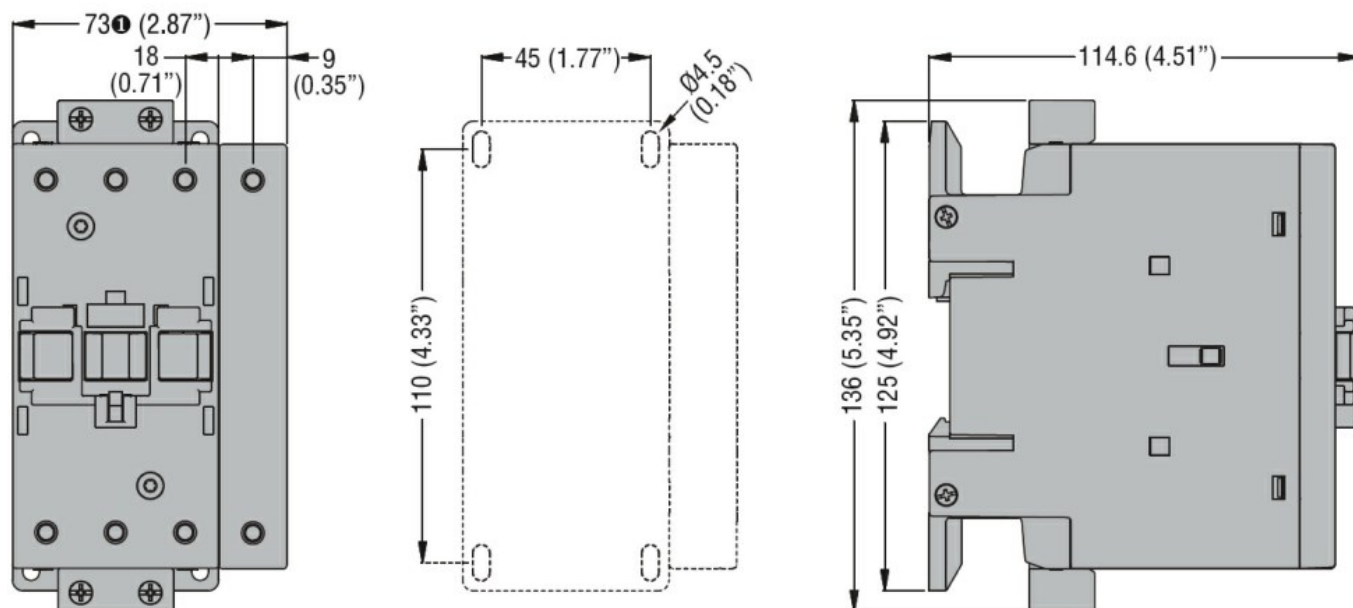
m	3000
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Resistance & Protection

Pollution degree

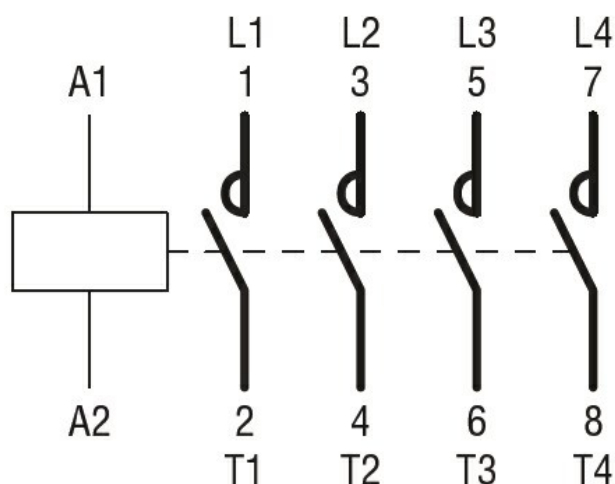
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Dimensions



① BF80T2 82mm/3.23"

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