



Product designation

Power contactor

Product type designation

BF40

**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	70
Operational current $I_e$	AC-1 ( $\leq 40^\circ\text{C}$ )	A 70
	AC-1 ( $\leq 55^\circ\text{C}$ )	A 60
	AC-1 ( $\leq 70^\circ\text{C}$ )	A 50
	AC-3 ( $\leq 440\text{V } \leq 55^\circ\text{C}$ )	A 40
	AC-4 (400V)	A 24
Rated operational power AC-1 ( $T \leq 40^\circ\text{C}$ )	230V	kW 26
	400V	kW 46
	500V	kW 58
	690V	kW 79
IEC max current $I_e$ in DC1 with $L/R \leq 1\text{ms}$ with 1 poles in series	$\leq 24\text{V}$	A 40
	48V	A 35
	75V	A 30
	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 48
	48V	A 48
	75V	A 45
	110V	A 42
	220V	A 5
IEC max current $I_e$ in DC1 with $L/R \leq 1\text{ms}$ with 3 poles in series	$\leq 24\text{V}$	A 48
	48V	A 48
	75V	A 48
	110V	A 44
	220V	A 56
IEC max current $I_e$ in DC1 with $L/R \leq 1\text{ms}$ with 4 poles in series	$\leq 24\text{V}$	A –
	48V	A –
	75V	A –
	110V	A –
	220V	A 70

IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 1 poles in series

≤24V	A	27
48V	A	23
75V	A	19
110V	A	3
220V	A	–

IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 2 poles in series

≤24V	A	32
48V	A	30
75V	A	27
110V	A	22
220V	A	5

IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 3 poles in series

≤24V	A	40
48V	A	40
75V	A	38
110V	A	27
220V	A	32

IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 4 poles in series

≤24V	A	–
48V	A	–
75V	A	–
110V	A	–
220V	A	40

Short-time allowable current for 10s (IEC/EN60947-1)

A	400
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Protection fuse

gG (IEC)	A	100
aM (IEC)	A	50

Making capacity (RMS value)

A	400
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Breaking capacity at voltage

440V	A	320
500V	A	265
690V	A	256

Resistance per pole (average value)

m?	0.8
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Power dissipation per pole (average value)

Ith	W	3.9
AC3	W	1.3

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
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Conductor section

AWG/Kcmil

max	2
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Flexible w/o lug conductor section

min	mm <sup>2</sup>	1.5
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		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	1500000
Safety related data				
Performance level B10d according to EN/ISO 13489-1		rated load mechanical load	cycles	1500000
			cycles	15000000
Mirror contacts according to IEC/EN 60947-4-1				yes
EMC compatibility				yes
AC coil operating				
Rated AC voltage at 60Hz			V	220
AC operating voltage		of 60Hz coil powered at 60Hz		
		pick-up		
		min	%Us	80
		max	%Us	110
		drop-out		
		min	%Us	20
		max	%Us	55
AC average coil consumption at 20°C		of 60Hz coil powered at 60Hz		
		in-rush holding	VA	210
			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	40
at 600V	A	32

Yielded mechanical performance

for single-phase AC motor

110/120V	HP	3
230V	HP	7.5

for three-phase AC motor

200/208V	HP	10
220/230V	HP	15
460/480V	HP	30
575/600V	HP	30

### General USE

Contactor

AC current	A	70
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Short-circuit protection fuse, 600V

High fault

Short circuit current	kA	100
Fuse rating	A	150
Fuse class		J

Standard fault

Short circuit current	kA	5
Fuse rating	A	150
Fuse class		RK5

### Ambient conditions

Temperature

Operating temperature

min	°C	-50
max	°C	70

Storage temperature

min	°C	-60
max	°C	80

Max altitude

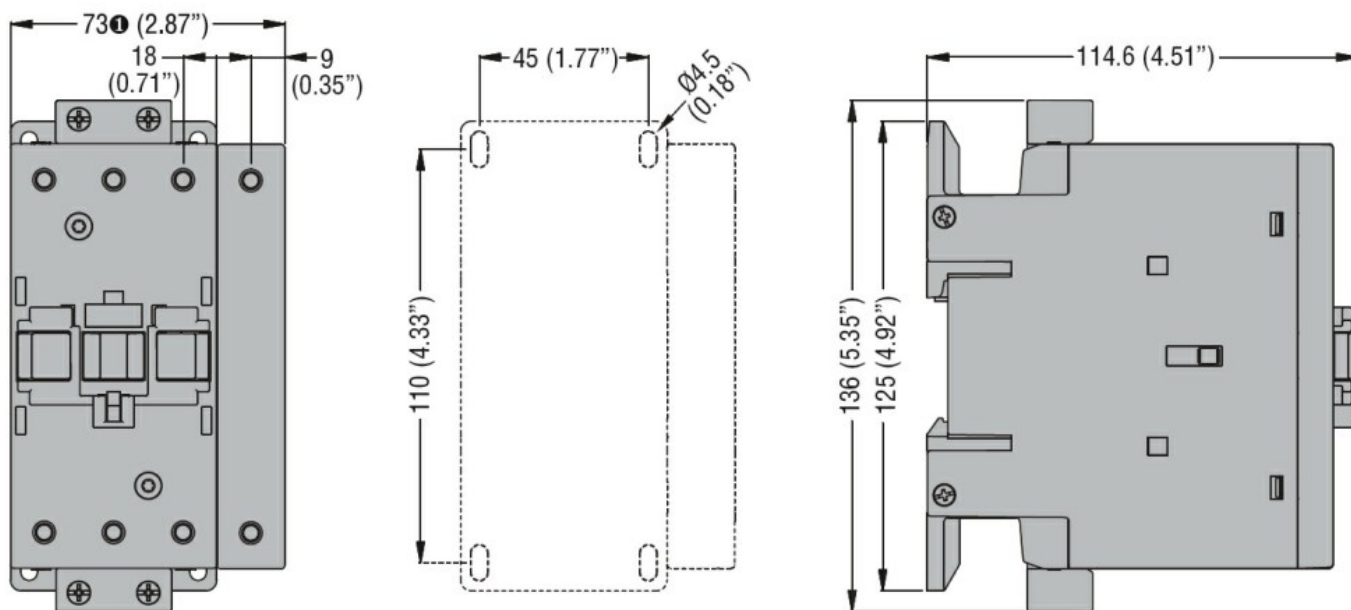
m	3000
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### Resistance & Protection

Pollution degree

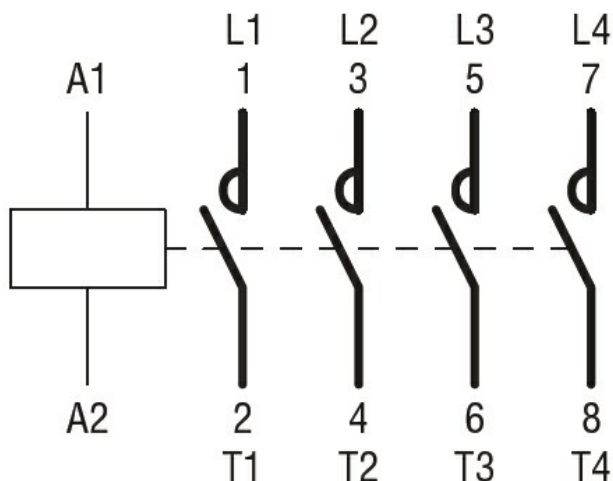
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### Dimensions



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