



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} ≤ 40°C	A		90
Operational current I _e	AC-1 (≤40°C)	A	90
	AC-1 (≤55°C)	A	75
	AC-1 (≤70°C)	A	65
	AC-3 (≤440V ≤55°C)	A	50
	AC-4 (400V)	A	28
Rated operational current AC-3 (T≤55°C)	230V	A	50
	400V	A	50
	415V	A	50
	440V	A	50
	500V	A	44
	690V	A	39
	1000V	A	23
Rated operational power AC-1 (T≤40°C)	230V	kW	34
	400V	kW	59
	500V	kW	74
	690V	kW	102
IEC max current I _e in DC1 with L/R ≤ 1ms with 1 poles in series	≤24V	A	45
	48V	A	40
	75V	A	40
	110V	A	8
	220V	A	–
IEC max current I _e in DC1 with L/R ≤ 1ms with 2 poles in series	≤24V	A	60
	48V	A	60
	75V	A	60
	110V	A	50
	220V	A	7
IEC max current I _e in DC1 with L/R ≤ 1ms with 3 poles in series	≤24V	A	60
	48V	A	60
	75V	A	60
	110V	A	55
	220V	A	75

IEC max current I_e in DC1 with L/R ≤ 1ms with 4 poles in series

≤24V	A	60
48V	A	60
75V	A	60
110V	A	60
220V	A	90

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

≤24V	A	30
48V	A	25
75V	A	22
110V	A	3
220V	A	–

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

≤24V	A	35
48V	A	35
75V	A	30
110V	A	25
220V	A	5

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

≤24V	A	50
48V	A	50
75V	A	45
110V	A	30
220V	A	40

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

≤24V	A	55
48V	A	55
75V	A	55
110V	A	45
220V	A	50

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

A	400
---	-----

Protection fuse

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

Making capacity (RMS value)

A	500
---	-----

Breaking capacity at voltage

440V	A	400
500V	A	352
690V	A	312

Resistance per pole (average value)

mΩ	0.8
----	-----

Power dissipation per pole (average value)

I _{th}	W	6.5
AC-3	W	2

Tightening torque for terminals

min	Nm	4
max	Nm	5
min	I _{bin}	2.95
max	I _{bin}	3.69

Tightening torque for coil terminal

min	Nm	0.8
max	Nm	1
min	I _{bin}	0.8
max	I _{bin}	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	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°	
Fixing		Screw / DIN rail 35mm	
Weight	g	1240	
Operations			
Mechanical life	cycles	15000000	
Electrical life	cycles	1400000	
Safety related data			
Performance level B10d according to EN/ISO 13489-1	rated load mechanical load	cycles	1400000
		cycles	15000000
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

Rated operational voltage AC (UL)	V	600
Full-load current (FLA) for three-phase AC motor		
	at 480V	A 52
	at 600V	A 41
Yielded mechanical performance		
for single-phase AC motor		
	110/120V	HP 5
	230V	HP 10
for three-phase AC motor		
	200/208V	HP 15
	220/240V	HP 20
	460/480V	HP 40
	575/600V	HP 40

General USE

Contactor	AC current	A	90
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

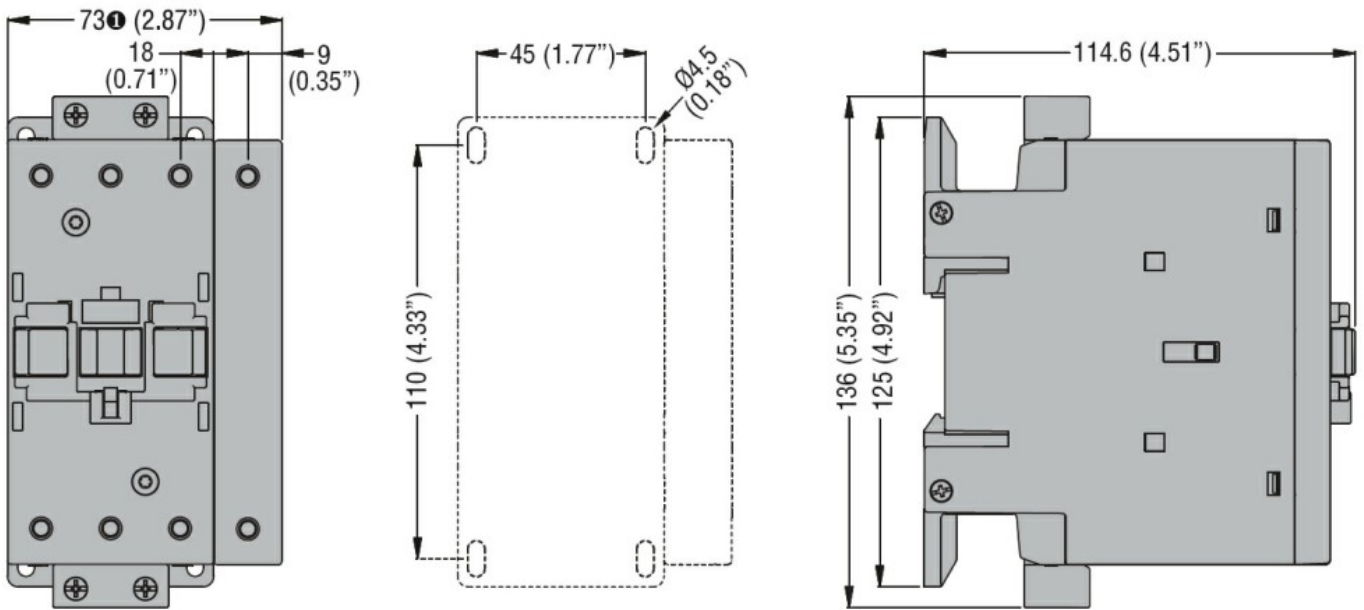
Temperature

Operating temperature			
	min	°C	-50
	max	°C	70
Storage temperature			
	min	°C	-60
	max	°C	80
Max altitude		m	3000

Resistance & Protection

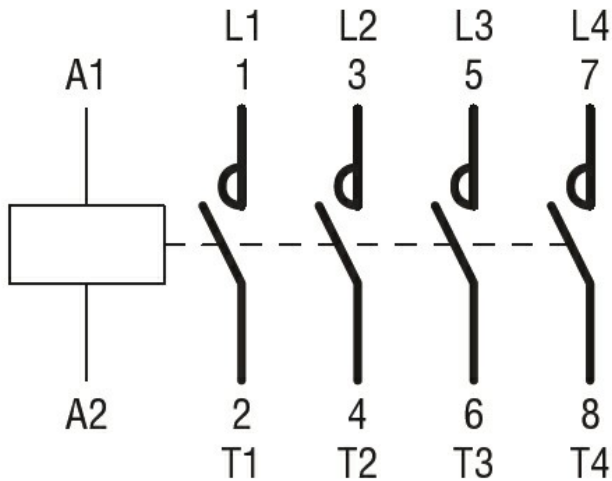
Pollution degree	3
------------------	---

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 60335-2-89

IEC/EN/BS 60947-1

IEC/EN/BS 60947-4-1

UL 60947-1

UL 60947-4-1

Certificates

CCC

CSA C22.2 n. 60335-2-40:22 LZGH A2L

CSA C22.2 No. 60335-2-89:21 LZGH A2L

cULus

UL 60335-2-40 LZGH A2L

UL 60335-2-89 LZGH A2L

ETIM classification

ETIM 8.0

EC000066 -
Power contactor,
AC switching