



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 $I_{th} \leq 40^{\circ}\text{C}$	A	90	
Operational current I_e	AC-1 ($\leq 40^{\circ}\text{C}$)	A	90
	AC-1 ($\leq 55^{\circ}\text{C}$)	A	75
	AC-1 ($\leq 70^{\circ}\text{C}$)	A	65
	AC-3 ($\leq 440\text{V} \leq 55^{\circ}\text{C}$)	A	50
	AC-4 (400V)	A	28
Rated operational current AC-3 ($T \leq 55^{\circ}\text{C}$)	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 ($T \leq 40^{\circ}\text{C}$)	230V	kW	34
	400V	kW	59
	500V	kW	74
	690V	kW	102
IEC max current I_e in DC1 with $L/R \leq 1\text{ms}$ with 1 poles in series	$\leq 24\text{V}$	A	45
	48V	A	40
	75V	A	40
	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	60
	48V	A	60
	75V	A	60
	110V	A	50
	220V	A	7
IEC max current I_e in DC1 with $L/R \leq 1\text{ms}$ with 3 poles in series	$\leq 24\text{V}$	A	60
	48V	A	60
	75V	A	60
	110V	A	55
	220V	A	75

IEC max current Ie 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 Ie 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 Ie 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 Ie 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 Ie 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)			
	Ith	W	6.5
	AC-3	W	2
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
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
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 50/60Hz			V	24
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

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
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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

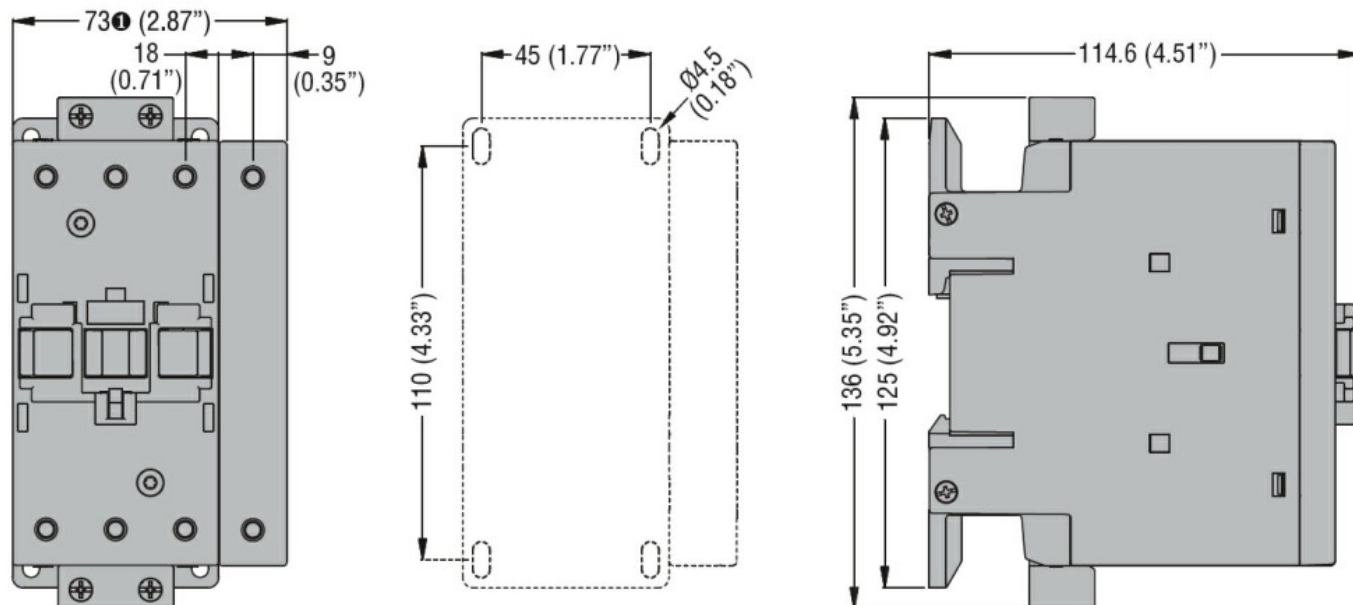
m	3000
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Resistance & Protection

Pollution degree

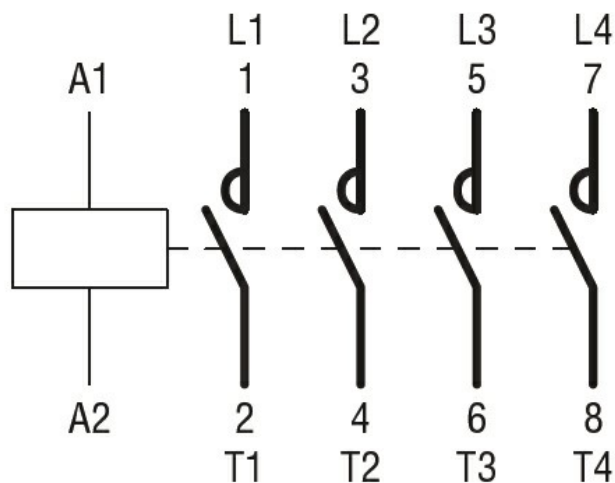
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Dimensions



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 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