



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		100
Operational current I_e	AC-1 ($\leq 40^\circ\text{C}$)	A	100
	AC-1 ($\leq 55^\circ\text{C}$)	A	80
	AC-1 ($\leq 70^\circ\text{C}$)	A	70
	AC-3 ($\leq 440\text{V} \leq 55^\circ\text{C}$)	A	65
	AC-4 (400V)	A	31
Rated operational current AC-3 ($T \leq 55^\circ\text{C}$)	230V	A	65
	400V	A	65
	415V	A	65
	440V	A	65
	500V	A	53
	690V	A	47
	1000V	A	25
Rated operational power AC-1 ($T \leq 40^\circ\text{C}$)	230V	kW	38
	400V	kW	65
	500V	kW	82
	690V	kW	114
IEC max current I_e in DC1 with $L/R \leq 1\text{ms}$ with 1 poles in series	$\leq 24\text{V}$	A	50
	48V	A	50
	75V	A	50
	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	70
	48V	A	70
	75V	A	70
	110V	A	60
	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	70
	48V	A	70
	75V	A	70
	110V	A	60
	220V	A	90

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

≤24V	A	70
48V	A	70
75V	A	70
110V	A	70
220V	A	110

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

≤24V	A	35
48V	A	25
75V	A	25
110V	A	3
220V	A	–

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

≤24V	A	45
48V	A	40
75V	A	40
110V	A	30
220V	A	5

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

≤24V	A	55
48V	A	50
75V	A	50
110V	A	35
220V	A	52

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

≤24V	A	60
48V	A	60
75V	A	60
110V	A	50
220V	A	65

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

A	640
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Protection fuse

gG (IEC)	A	125
aM (IEC)	A	80

Making capacity (RMS value)

A	650
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Breaking capacity at voltage

440V	A	520
500V	A	425
690V	A	376

Resistance per pole (average value)

mΩ	0.8
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Power dissipation per pole (average value)

I _{th}	W	8
AC-3	W	3.4

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 50/60Hz		V	230
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 holding	VA 210
			VA 15
of 50/60Hz coil powered at 60Hz		in-rush holding	VA 195
			VA 13
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	65
at 600V	A	62

Yielded mechanical performance

for three-phase AC motor

200/208V	HP	20
220/240V	HP	25
460/480V	HP	50
575/600V	HP	60

General USE

Contactor

AC current A 100

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

Resistance & Protection

Pollution degree

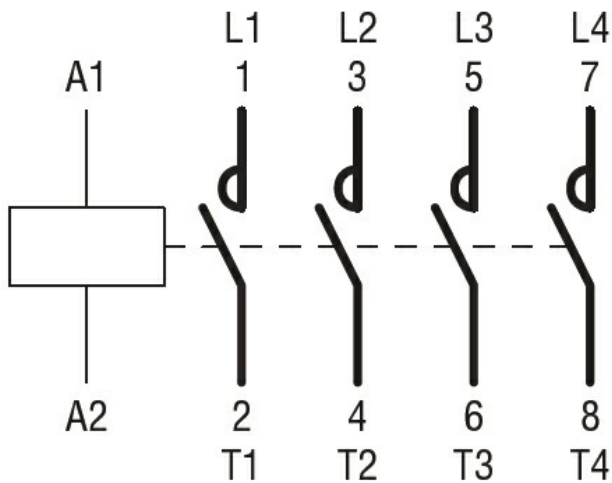
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Dimensions



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