



Product designation

Power contactor

Product type designation

BF65

**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	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 Ie 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 Ie 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 Ie 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 Ie 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 Ie 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
Protection fuse			
	gG (IEC)	A	125
	aM (IEC)	A	80
Making capacity (RMS value)		A	650
Breaking capacity at voltage			
	440V	A	520
	500V	A	425
	690V	A	376
Resistance per pole (average value)		mΩ	0.8
Power dissipation per pole (average value)			
	Ith	W	8
	AC-3	W	3.4
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	I <sub>bin</sub>	0.8
	max	I <sub>bin</sub>	0.74
Max number of wires simultaneously connectable		Nr.	2
Conductor section			
AWG/Kcmil			
	max		2
Flexible w/o lug conductor section			
	min	mm <sup>2</sup>	1.5
	max	mm <sup>2</sup>	35
Flexible c/w lug conductor section			
	min	mm <sup>2</sup>	1.5
	max	mm <sup>2</sup>	35
Power terminal protection according to IEC/EN 60529			IP20 front
<b>Mechanical features</b>			
Operating position			
	normal allowable		Vertical plan ±30°
Fixing			Screw / DIN rail 35mm
Weight		g	1240
Conductor section			
AWG/kcmil conductor section			
	max		2
<b>Operations</b>			
Mechanical life		cycles	15000000
Electrical life		cycles	1400000
<b>Safety related data</b>			
Performance level B10d according to EN/ISO 13489-1			
	rated load	cycles	1400000
	mechanical load	cycles	15000000
Mirror contacts according to IEC/EN 60947-4-1			yes
EMC compatibility			yes
<b>AC coil operating</b>			
Rated AC voltage at 50/60Hz		V	230
AC operating voltage			
of 50/60Hz coil powered at 50Hz			
pick-up	min	%U <sub>s</sub>	80
	max	%U <sub>s</sub>	110
drop-out	min	%U <sub>s</sub>	20
	max	%U <sub>s</sub>	55
of 50/60Hz coil powered at 60Hz			
pick-up	min	%U <sub>s</sub>	85
	max	%U <sub>s</sub>	110
drop-out	min	%U <sub>s</sub>	40
	max	%U <sub>s</sub>	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  $\leq 20^{\circ}\text{C}$  50Hz

W	5
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Max cycles frequency

Mechanical operation

cycles/h	3600
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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	65
at 600V	A	62

Yielded mechanical performance

for three-phase AC motor

200/208V	HP	20
220/230V	HP	25
460/480V	HP	50
575/600V	HP	60

General USE

Contactor

AC current	A	100
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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

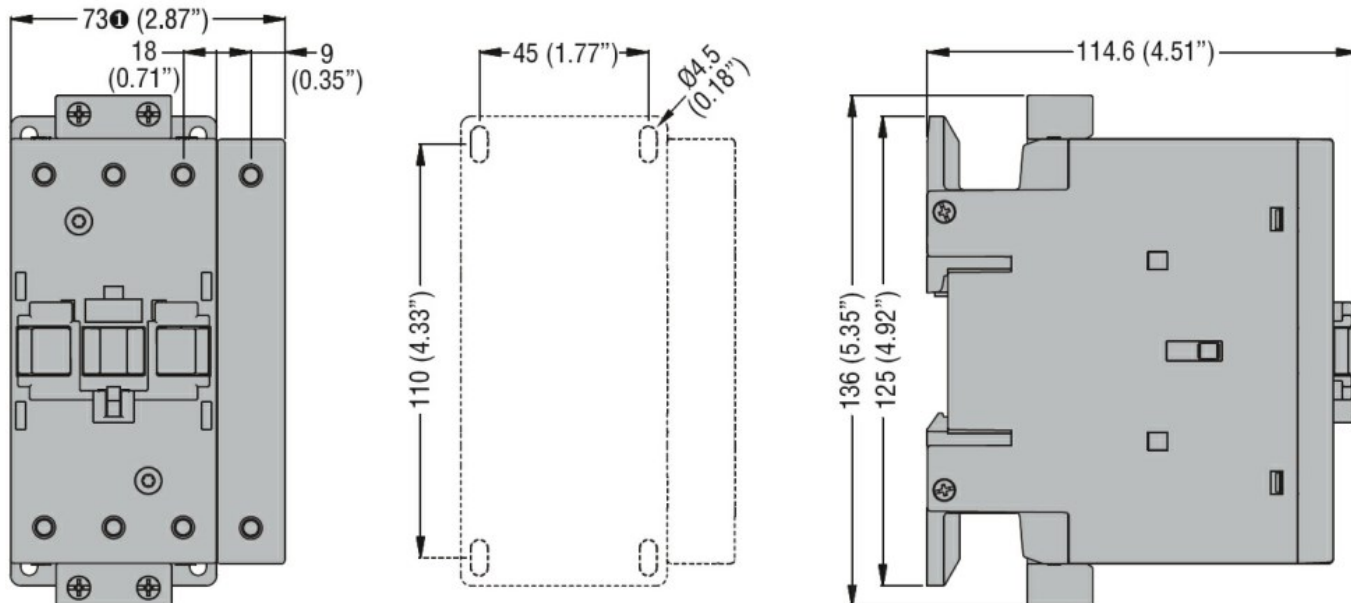
Operating temperature

min	$^{\circ}\text{C}$	-50
max	$^{\circ}\text{C}$	70

Storage temperature

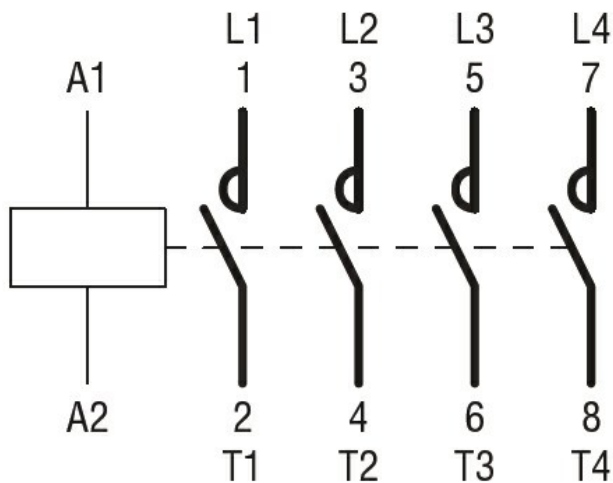
min	$^{\circ}\text{C}$	-60
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	max	°C	80
Max altitude		m	3000
Resistance & Protection			
Pollution degree			3
Dimensions			



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/BS 60947-1  
IEC/EN/BS 60947-4-1  
UL 60947-1  
UL 60947-4-1

##### Certificates

CCC  
cULus

#### ETIM classification

ETIM 8.0

EC000066 -  
Power contactor,  
AC switching