



Product designation				Power contactor
Product type designation				BF65
<b>Contact characteristics</b>				
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
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IEC max current $I_e$ in DC1 with $L/R \leq 1\text{ms}$ with 4 poles in series			
	$\leq 24\text{V}$	A	70
	48V	A	70
	75V	A	70
	110V	A	70
	220V	A	110
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IEC max current $I_e$ in DC3-DC5 with $L/R \leq 15\text{ms}$ with 1 poles in series			
	$\leq 24\text{V}$	A	35
	48V	A	25
	75V	A	25
	110V	A	3
	220V	A	–
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IEC max current $I_e$ in DC3-DC5 with $L/R \leq 15\text{ms}$ with 2 poles in series			
	$\leq 24\text{V}$	A	45
	48V	A	40
	75V	A	40
	110V	A	30
	220V	A	5
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IEC max current $I_e$ in DC3-DC5 with $L/R \leq 15\text{ms}$ with 3 poles in series			
	$\leq 24\text{V}$	A	55
	48V	A	50
	75V	A	50
	110V	A	35
	220V	A	52
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IEC max current $I_e$ in DC3-DC5 with $L/R \leq 15\text{ms}$ with 4 poles in series			
	$\leq 24\text{V}$	A	60
	48V	A	60
	75V	A	60
	110V	A	50
	220V	A	65
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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
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Making capacity (RMS value)		A	650
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Breaking capacity at voltage			
	440V	A	520
	500V	A	425
	690V	A	376
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Resistance per pole (average value)		m $\Omega$	0.8
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Power dissipation per pole (average value)			
	$I_{th}$	W	8
	AC-3	W	3.4
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Tightening torque for terminals			
	min	Nm	4
	max	Nm	5
	min	$I_{bin}$	2.95
	max	$I_{bin}$	3.69
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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	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 60Hz		V	460
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	VA	210
	holding	VA	15
Dissipation at holding ≤20°C 50Hz		W	5
<b>Max cycles frequency</b>			
Mechanical operation		cycles/h	3600
<b>Operating times</b>			
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	°C	-50
max	°C	70

Storage temperature

min	°C	-60
max	°C	80

Max altitude

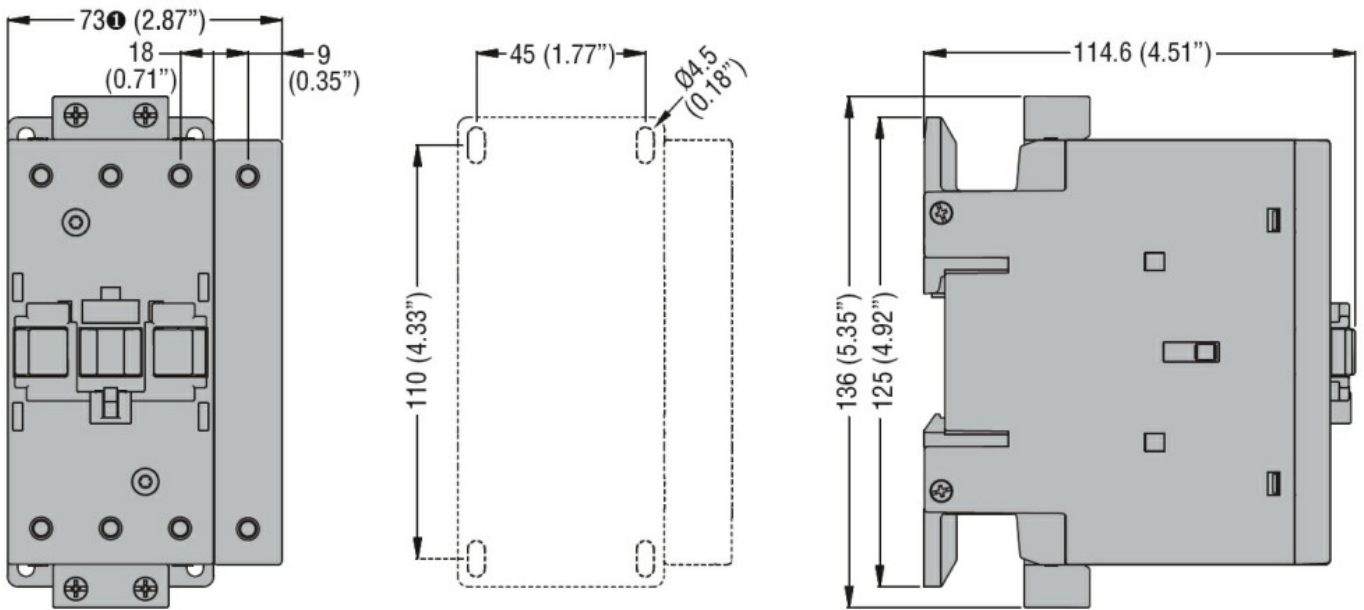
m	3000
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**Resistance & Protection**

Pollution degree

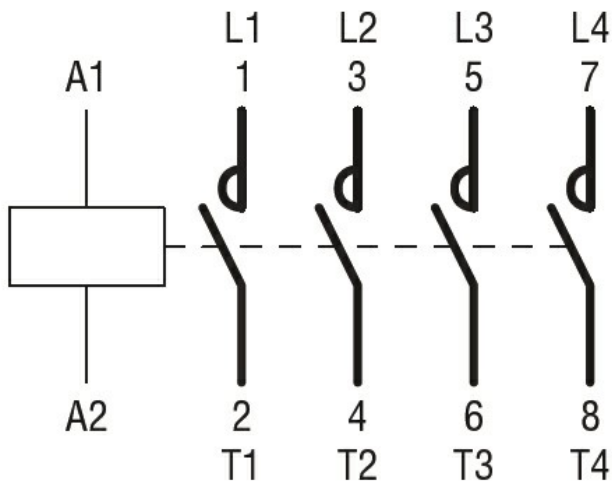
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**Dimensions**



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/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