



Product designation	Power contactor		
Product type designation	BF65		
<b>Contact characteristics</b>			
Number of poles	Nr.	4	
Rated insulation voltage U <sub>i</sub> IEC/EN	V	1000	
Rated impulse withstand voltage U <sub>imp</sub>	kV	8	
Operational frequency	min	Hz	25
	max	Hz	400
IEC Conventional free air thermal current I <sub>th</sub>		A	100
Operational current I <sub>e</sub>			
	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 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 <sub>e</sub> 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 <sub>e</sub> 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 <sub>e</sub> 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 <sub>e</sub> 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

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	—

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

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

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

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) m? 0.8

Power dissipation per pole (average value)

I <sub>th</sub>	W	8
AC3	W	3.4

Tightening torque for terminals

min	Nm	4
max	Nm	5
min	lbin	2.95
max	lbin	3.69

Tightening torque for coil terminal

min	Nm	0.8
max	Nm	1
min	lbin	0.8
max	lbin	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

Flexible c/w lug conductor section	max	mm <sup>2</sup>	35		
	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	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 609474-4-1	yes				
EMC compatibility	yes				
<b>AC coil operating</b>					
Rated AC voltage at 50/60Hz	V	110			
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			
<b>Max cycles frequency</b>					
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**

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

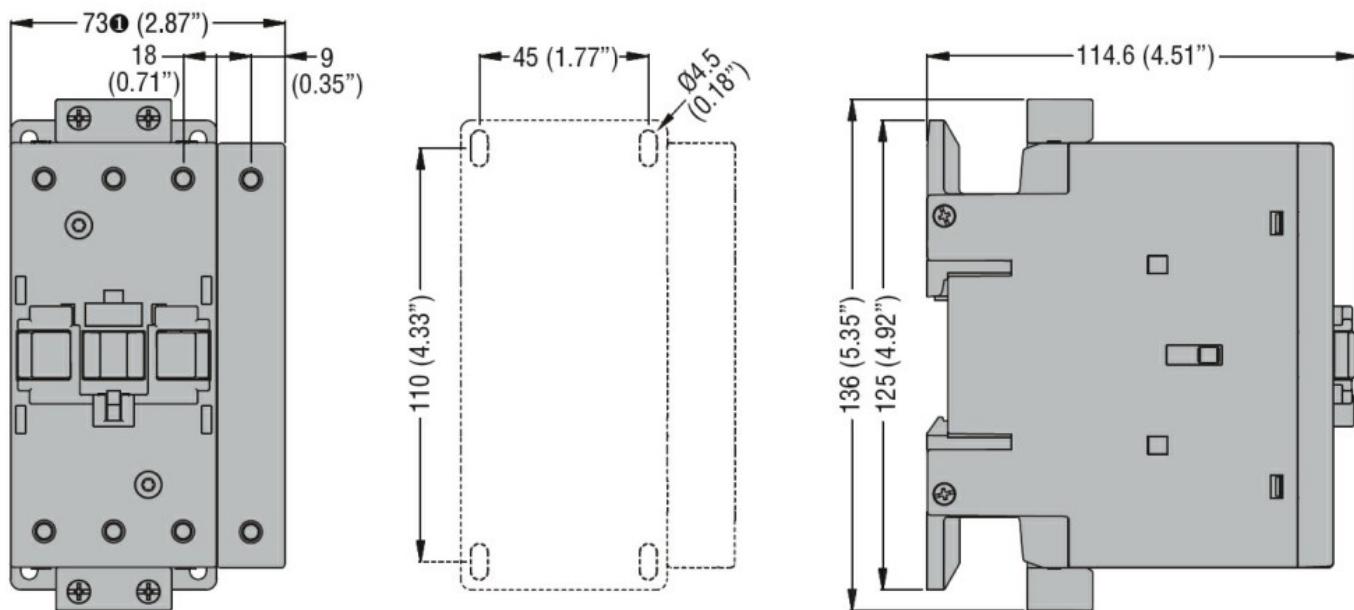
m	3000
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Resistance & Protection

Pollution degree

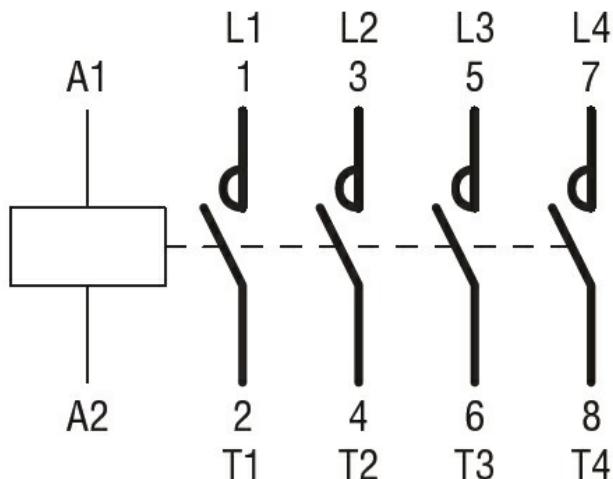
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Dimensions



### 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 60947-1

IEC/EN 60947-4-1

UL 60947-1

UL 60947-4-1

##### Certificates

CCC

cULus

#### ETIM classification

##### ETIM 8.0

EC000066 -  
Power contactor,  
AC switching