

## FOUR-POLE CONTACTOR, IEC OPERATING CURRENT ITH (AC1) = 115A, AC COIL 50/60HZ, 400VAC, 2NO AND 2NC



Product designation Power contactor
Product type designation BF80

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Contact characteristics			
Number of poles		Nr.	4
Rated insulation voltage Ui IEC/EN		V	1000
Rated impulse withstand voltage Uimp		kV	8
Operational frequency			
	min	Hz	25
	max	Hz	400
IEC Conventional free air thermal current Ith		Α	115
Operational current le			
	AC-1 (≤40°C)	Α	115
	AC-1 (≤55°C)	Α	95
	AC-1 (≤70°C)	Α	80
	AC-3 (≤440V ≤55°C)	Α	80
	AC-4 (400V)	Α	38
Rated operational current AC-3 (T≤55°C)			
	230V	Α	80
	400V	Α	80
	415V	Α	80
	440V	Α	80
	500V	Α	78
	690V	Α	57
	1000V	Α	28
Rated operational power AC-1 (T≤40°C)			
	230V	kW	43
	400V	kW	76
	500V	kW	95
	690V	kW	120
Short-time allowable current for 10s (IEC/EN60947-1)		Α	640
Protection fuse			
	gG (IEC)	Α	125
	aM (IEC)	A	80
Making capacity (RMS value)		Α	800
Breaking capacity at voltage			
	440V	Α	640
	500V	Α	625
·	690V	Α	456
Resistance per pole (average value)		mΩ	0.6
Power dissipation per pole (average value)			
	Ith	W	7.9
	AC-3	W	3.8
Tightening torque for terminals			
	min	Nm	4
	max	Nm	5



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		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	<u> </u>			
	AWG/Kcmil			
		max		2
	Flexible w/o lug conductor section			
	Ç	min	mm²	1.5
		max	mm²	35
	Flexible c/w lug conductor section			
		min	mm²	1.5
		max	mm²	35
Power terminal protect	ction according to IEC/EN 60529		-	IP20 front
Mechanical features				
Operating position				
operating position		normal		Vertical plan
		allowable		±30°
		allowable		Screw / DIN rail
Fixing				35mm
Weight			g	1360
Conductor section			9	1000
Conductor Section	AWG/kcmil conductor section			
	AVVG/Remiii conductor section	max		2
				_
Operations		· · · · · · · · · · · · · · · · · · ·		
•		max	cycles	15000000
Mechanical life		max	cycles	15000000
Mechanical life Electrical life		That t	cycles cycles	15000000 1300000
Mechanical life Electrical life Safety related data	Ind according to EN/ISO 12480 1	max		
Mechanical life Electrical life Safety related data	0d according to EN/ISO 13489-1		cycles	1300000
Mechanical life Electrical life Safety related data	l 0d according to EN/ISO 13489-1	rated load	cycles	1300000
Mechanical life Electrical life Safety related data Performance level B1			cycles	1300000 1300000 15000000
Mechanical life Electrical life Safety related data Performance level B1 Mirror contats accordi	I 0d according to EN/ISO 13489-1 ing to IEC/EN 609474-4-1	rated load	cycles	1300000 1300000 15000000 YES
Mechanical life Electrical life Safety related data Performance level B1 Mirror contats accordi		rated load	cycles	1300000 1300000 15000000
Mechanical life Electrical life Safety related data Performance level B1 Mirror contats accordi EMC compatibility AC coil operating	ing to IEC/EN 609474-4-1	rated load	cycles cycles cycles	1300000 1300000 15000000 YES yes
Mechanical life Electrical life Safety related data Performance level B1 Mirror contats accordi EMC compatibility AC coil operating Rated AC voltage at 5	ing to IEC/EN 609474-4-1	rated load	cycles	1300000 1300000 15000000 YES
Mechanical life Electrical life Safety related data Performance level B1 Mirror contats accordi EMC compatibility AC coil operating Rated AC voltage at 5	ing to IEC/EN 609474-4-1 50/60Hz	rated load	cycles cycles cycles	1300000 1300000 15000000 YES yes
Mechanical life Electrical life Safety related data Performance level B1 Mirror contats accordi EMC compatibility AC coil operating Rated AC voltage at 5	ing to IEC/EN 609474-4-1  50/60Hz  of 50/60Hz coil powered at 50Hz	rated load	cycles cycles cycles	1300000 1300000 15000000 YES yes
Mechanical life Electrical life Safety related data Performance level B1 Mirror contats accordi EMC compatibility AC coil operating Rated AC voltage at 5	ing to IEC/EN 609474-4-1 50/60Hz	rated load mechanical load	cycles cycles cycles	1300000 1300000 15000000 YES yes
Mechanical life Electrical life Safety related data Performance level B1 Mirror contats accordi EMC compatibility AC coil operating Rated AC voltage at 5	ing to IEC/EN 609474-4-1  50/60Hz  of 50/60Hz coil powered at 50Hz	rated load mechanical load min	cycles cycles cycles	1300000 1300000 15000000 YES yes 400
Mechanical life Electrical life Safety related data Performance level B1 Mirror contats accordi EMC compatibility AC coil operating Rated AC voltage at 5	ing to IEC/EN 609474-4-1  50/60Hz  of 50/60Hz coil powered at 50Hz pick-up	rated load mechanical load	cycles cycles cycles	1300000 1300000 15000000 YES yes
Mechanical life Electrical life Safety related data Performance level B1 Mirror contats accordi EMC compatibility AC coil operating Rated AC voltage at 5	ing to IEC/EN 609474-4-1  50/60Hz  of 50/60Hz coil powered at 50Hz	rated load mechanical load min max	cycles cycles cycles	1300000 1300000 15000000 YES yes 400
Mechanical life Electrical life Safety related data Performance level B1 Mirror contats accordi EMC compatibility AC coil operating Rated AC voltage at 5	ing to IEC/EN 609474-4-1  50/60Hz  of 50/60Hz coil powered at 50Hz pick-up	rated load mechanical load min	cycles cycles cycles V  %Us %Us %Us	1300000 1300000 15000000 YES yes 400 80 110 20
Mechanical life Electrical life Safety related data Performance level B1 Mirror contats accordi EMC compatibility AC coil operating Rated AC voltage at 5	of 50/60Hz coil powered at 50Hz pick-up	rated load mechanical load min max	cycles cycles cycles	1300000 1300000 15000000 YES yes 400
Mechanical life Electrical life Safety related data Performance level B1 Mirror contats accordi EMC compatibility AC coil operating Rated AC voltage at 5	of 50/60Hz coil powered at 50Hz pick-up  drop-out  of 50/60Hz coil powered at 60Hz	rated load mechanical load min max min	cycles cycles cycles V  %Us %Us %Us	1300000 1300000 15000000 YES yes 400 80 110 20
Mechanical life Electrical life Safety related data Performance level B1 Mirror contats accordi EMC compatibility AC coil operating Rated AC voltage at 5	of 50/60Hz coil powered at 50Hz pick-up	rated load mechanical load min max min	cycles cycles cycles V  %Us %Us %Us %Us %Us	1300000 1300000 15000000 YES yes 400 80 110 20 55
Mechanical life Electrical life Safety related data Performance level B1 Mirror contats accordi EMC compatibility AC coil operating Rated AC voltage at 5	of 50/60Hz coil powered at 50Hz pick-up  drop-out  of 50/60Hz coil powered at 60Hz	rated load mechanical load min max min	cycles cycles cycles V  %Us %Us %Us	1300000 1300000 15000000 YES yes 400 80 110 20
Mechanical life Electrical life Safety related data Performance level B1 Mirror contats accordi EMC compatibility AC coil operating Rated AC voltage at 5	of 50/60Hz coil powered at 50Hz pick-up  drop-out  of 50/60Hz coil powered at 60Hz	rated load mechanical load min max min max	cycles cycles cycles V  %Us %Us %Us %Us %Us	1300000 1300000 15000000 YES yes 400 80 110 20 55
Mechanical life Electrical life Safety related data Performance level B1 Mirror contats accordi EMC compatibility AC coil operating Rated AC voltage at 5	of 50/60Hz coil powered at 50Hz pick-up  drop-out  of 50/60Hz coil powered at 60Hz	rated load mechanical load  min max  min max  min max	cycles cycles cycles V  %Us %Us %Us %Us %Us	1300000 1300000 15000000 YES yes 400 80 110 20 55
Mechanical life Electrical life Safety related data Performance level B1 Mirror contats accordi EMC compatibility AC coil operating Rated AC voltage at 5	of 50/60Hz coil powered at 50Hz pick-up  of 50/60Hz coil powered at 60Hz pick-up	rated load mechanical load  min max  min max  min max	cycles cycles cycles V  %Us %Us %Us %Us %Us	1300000 1300000 15000000 YES yes 400 80 110 20 55
Performance level B1	of 50/60Hz coil powered at 50Hz pick-up  drop-out  of 50/60Hz coil powered at 60Hz	rated load mechanical load min max min	cycles cycles cycles V  %Us %Us %Us	1300000 1300000 15000000 YES yes 400
Mechanical life Electrical life Safety related data Performance level B1 Mirror contats accordi EMC compatibility AC coil operating Rated AC voltage at 5	of 50/60Hz coil powered at 50Hz pick-up  of 50/60Hz coil powered at 60Hz pick-up	rated load mechanical load  min max  min max  min max	cycles cycles cycles V  %Us %Us %Us %Us %Us %Us	1300000 1300000 15000000 YES yes 400 80 110 20 55



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AC average coil consu	umption at 20°C				
Ū	of 50/60Hz coil power	ed at 50Hz			
	·		in-rush	VA	210
			holding	VA	15
	of 50/60Hz coil power	ed 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 of	ontrol				
	in AC				
		Closing NO			
			min	ms	12
			max	ms	28
		Opening NO			
			min	ms	8
			max	ms	22
		Closing NC			
			min	ms	11
			max	ms	29
		Opening NC			
			min	ms	6
			max	ms	14
	in DC				
		Closing NO			
			min	ms	40
			max	ms	85
		Opening NO			
			min	ms	20
			max	ms	55
UL technical data	\				
rull-load current (FLA	) for three-phase AC mo	DIOI	- ( 400) (	Δ.	77
			at 480V	A	77
Walle Land Landa la			at 600V	Α	77
Yielded mechanical pe		ata.			
	for three-phase AC m	otor	000/0001	LID.	0.5
			200/208V	HP	25
			220/230V	HP	30
			460/480V	HP	60 75
Canaral LICE			575/600V	HP	75
General USE	Contacto				
	Contactor		<b>A O D D D D D D D D D D</b>	^	445
Ambient conditions			AC current	Α	115
Ambient conditions					
Temperature	On another a trace and	_			
	Operating temperature	e		°C	FO.
			min	°C	-50 70
	Storage temperature		max	C	70
	Storage temperature				

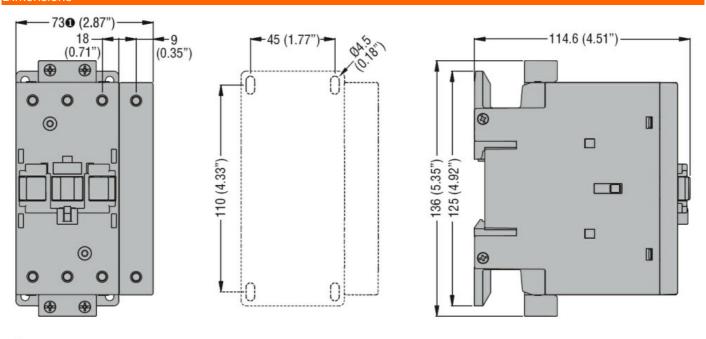


**ENERGY AND AUTOMATION** 

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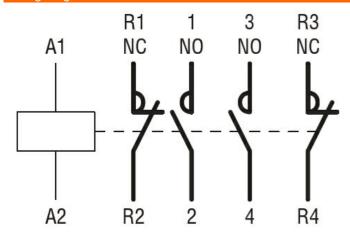
	min	°C	-60
	max	°C	80
Max altitude		m	3000
Resistance & Protection			
Pollution degree			3

#### **Dimensions**



### 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



### BF80T2A400

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**ETIM 8.0** 

EC000066 -Power contactor, AC switching