

# FOUR-POLE CONTACTOR, IEC OPERATING CURRENT ITH (AC1) = 28A, AC COIL 50/60HZ, 230VAC



Product designation Product type designation			Power contactor BF12
Contact characteristics			
Number of poles		nr.	4
Rated insulation voltage Ui		V	690
Rated impulse withstand voltage Uimp		kV	6
Operating frequency			
	Operational frequency min	Hz	25
	Operational frequency max	Hz	400
Conventional free air thermal current Ith		Α	28
Operating current			
•	Operational current AC1 (≤40°C)	Α	28
0	perational current AC3 (≤440V ≤55°C)	Α	12
	Operational current AC4 (400V)	Α	7.9
Rated operational power AC1 (T≤40°C)	· · · · · · · · · · · · · · · · · · ·		
	230V	kW	10
	400V	kW	18
	500V	kW	23
	690V	kW	32
Rated operational power AC3 (T≤55°C)			
	230V	kW	3.2
	400V	kW	5.7
	415V	kW	6.2
	440V	kW	6.2
	500V	kW	7.5
	690V	kW	10
Short-time allowable current for 10s (IEC/EN60947-	1)	Α	150
Protection fuse			
	gG (IEC)	Α	32
	aM (IEC)	Α	12
Making capacity (RMS value)		Α	120
Breaking capacity at voltage			
· · · · · · ·	Breaking capacity 440V	Α	96
	Breaking capacity 500V	Α	96
	Breaking capacity 690V	Α	94
Resistance per pole (average value)	<u> </u>	mΩ	2.5
Power dissipation per pole (average value)			
	ver dissipation pole (average value) Ith	W	2
	AC3	W	0.4
Tightening torque for terminals			
	min	Nm	1.5
	max	Nm	1.8
	min	lbft	1.1
	max	lbft	1.5



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		min	Nm	0.8
		max	Nm	1
		min	lbft	0.8
		max	lbft	0.74
	simultaneously connectable		nr.	2
Conductor section				
	AWG			
		min		16
		max		10
	Flexible w/o lug conductor section			
		min	mm²	1
		max	mm²	6
	Flexible c/w lug conductor section			
		min	mm²	1
		max	mm²	4
	Flexible with insulated spade lug conductor section	n		
		min	mm²	1
		max	mm²	4
Power terminal protect	tion according to IEC/EN 60529			IP20 when wired
Auxiliary contact chara	acteristics			
Operational current AC	C1 (≤40°C)		Α	28
Operating current DC1	13			
		110V	Α	Screw / DIN rail
		1100	^	35mm
Ambient conditions				
Temperature				
	Operating temperature			
		min	°C	-50
		max	°C	70
	Storage temperature			_
		min	°C	-60
		max	°C	80
Max altitude			m	3000
Operating position				
		normal		Vertical plan
		allowable		±30°
Maria				Screw / DIN rail
Mounting				35mm
Weight			g	0.36
Operations				
Mechanical life			Cycles	20000000
Electrical life			Cycles	2000000
Safety related data			-	
•	0d according to EN/ISO 13489-1			
	•	rated load	Cicli	2000000
		mechanical load	Cicli	20000000
Mirror contats accordi	ng to IEC/EN 609474-4-1			yes
EMC compatibility	<u> </u>			yes
AC coil operating				
AC operating voltage				
operating voltage	of 50/60Hz coil powered at 50Hz			
	pick-up			
	ριοίς αρ	min	%Us	0.8
		111111	/003	0.0



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		max	%Us	1.1
	drop-out	max	7003	1.1
	diop out	min	%Us	0.2
		max	%Us	0.55
	of 50/60Hz coil powered at 60Hz	max	7003	0.00
	pick-up			
	ριοκ αρ	min	%Us	0.85
		max	%Us	1.1
	drop-out	max	7000	
	arop cut	min	%Us	0.2
		max	%Us	0.55
	of 60Hz coil powered at 60Hz	max	7000	0.00
	pick-up			
	pion up	min	%Us	0.8
		max	%Us	1.1
	drop-out		,,,,	
	2. Jp 04.	min	%Us	0.2
		max	%Us	0.55
AC operating voltage		iii an		
operating voltage	of 50/60Hz coil powered at 50Hz			
	of 30/00112 con powered at 30112	in-rush	VA	75
		holding	VA	9
	of 50/60Hz coil powered at 60Hz	Holding	٧, ١	
	of 30/00112 con powered at our iz	in-rush	VA	70
		holding	VA	6.5
	of 60Hz coil powered at 60Hz	Holding	٧, ١	0.0
	or our iz con powered at our iz	in male	VA	75
		in-riish		
		in-rush holding		
Dissination at holding	<20°C 50Hz	in-rush holding	VA	9
Dissipation at holding	≤20°C 50Hz			
Max cycles frequency		holding	VA W	9 2.5
Max cycles frequency Mechanical operations		holding	VA	9 2.5
Max cycles frequency Mechanical operations Operating times		holding	VA W	9 2.5
Max cycles frequency Mechanical operations	ontrol	holding	VA W	9 2.5
Max cycles frequency Mechanical operations Operating times	ontrol in AC	holding	VA W	9 2.5
Max cycles frequency Mechanical operations Operating times	ontrol	holding	VA W Cycles/h	9 2.5 3600
Max cycles frequency Mechanical operations Operating times	ontrol in AC	holding	VA W Cycles/h	9 2.5 3600
Max cycles frequency Mechanical operations Operating times	ontrol in AC Closing NO	holding	VA W Cycles/h	9 2.5 3600
Max cycles frequency Mechanical operations Operating times	ontrol in AC	holding min max	VA W Cycles/h ms ms	9 2.5 3600 8 24
Max cycles frequency Mechanical operations Operating times	ontrol in AC Closing NO	min max	VA W Cycles/h ms ms	9 2.5 3600 8 24 10
Max cycles frequency Mechanical operations Operating times	ontrol in AC Closing NO Opening NO	holding min max	VA W Cycles/h ms ms	9 2.5 3600 8 24
Max cycles frequency Mechanical operations Operating times	ontrol in AC Closing NO	min max min max	VA W Cycles/h ms ms	9 2.5 3600 8 24 10 20
Max cycles frequency Mechanical operations Operating times	ontrol in AC Closing NO Opening NO	min max min max	VA W Cycles/h ms ms ms ms	9 2.5 3600 8 24 10 20
Max cycles frequency Mechanical operations Operating times	ontrol in AC Closing NO Opening NO Closing NC	min max min max	VA W Cycles/h ms ms	9 2.5 3600 8 24 10 20
Max cycles frequency Mechanical operations Operating times	ontrol in AC Closing NO Opening NO	min max min max min max	VA W Cycles/h ms ms ms ms ms	9 2.5 3600 8 24 10 20 14 28
Max cycles frequency Mechanical operations Operating times	ontrol in AC Closing NO Opening NO Closing NC	min max min max min max min max	MS	9 2.5 3600 8 24 10 20 14 28
Max cycles frequency Mechanical operations Operating times Average time for Us of	ontrol in AC Closing NO Opening NO Closing NC	min max min max min max	VA W Cycles/h ms ms ms ms ms	9 2.5 3600 8 24 10 20 14 28
Max cycles frequency Mechanical operations Operating times Average time for Us of	ontrol in AC  Closing NO  Opening NO  Closing NC  Opening NC	min max min max min max min max	MS	9 2.5 3600 8 24 10 20 14 28
Max cycles frequency Mechanical operations Operating times Average time for Us of	ontrol in AC Closing NO Opening NO Closing NC	min max min max min max min max	W Cycles/h ms ms ms ms ms ms ms	9 2.5 3600 8 24 10 20 14 28 7 18
Max cycles frequency Mechanical operations Operating times Average time for Us of	ontrol in AC  Closing NO  Opening NO  Closing NC  Opening NC	min max min max min max at 480V	WCycles/h	9 2.5 3600 8 24 10 20 14 28 7 18
Max cycles frequency Mechanical operations Operating times Average time for Us of  UL technical data Full-load current (FLA)	ontrol in AC  Closing NO  Opening NO  Closing NC  Opening NC  Opening NC	min max min max min max min max	W Cycles/h ms ms ms ms ms ms ms	9 2.5 3600 8 24 10 20 14 28 7 18
Max cycles frequency Mechanical operations Operating times Average time for Us of	ontrol in AC  Closing NO  Opening NO  Closing NC  Opening NC  Opening NC	min max min max min max at 480V	WCycles/h	9 2.5 3600 8 24 10 20 14 28 7 18
Max cycles frequency Mechanical operations Operating times Average time for Us of  UL technical data Full-load current (FLA)	ontrol in AC  Closing NO  Opening NO  Closing NC  Opening NC  Opening NC	min max min max min max at 480V at 600V	W Cycles/h ms ms ms ms ms ms A A	9 2.5 3600 8 24 10 20 14 28 7 18
Max cycles frequency Mechanical operations Operating times Average time for Us of  UL technical data Full-load current (FLA)	ontrol in AC  Closing NO  Opening NO  Closing NC  Opening NC  Opening NC	min max min max min max at 480V	WCycles/h	9 2.5 3600 8 24 10 20 14 28 7 18

28

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for three phase AC motor			
for three-phase AC motor			
	at 200/208V	hp	5
	at 220/230V	hp	5
	at 460/480V	hp	7.5
	at 575/600V	ad	10

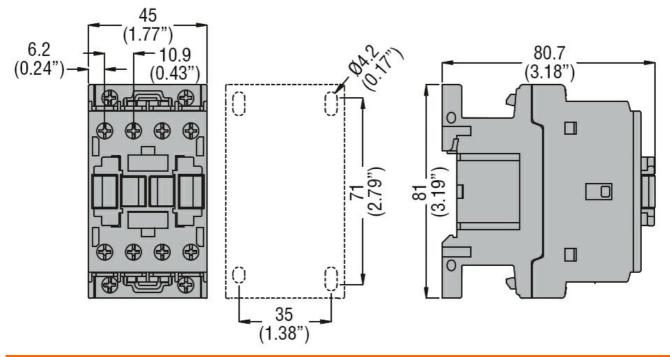
AC current

General USE

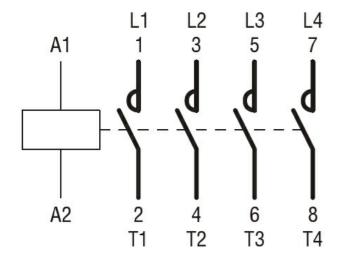
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	/ to ourrent	<i>,</i> ,	20
Other features			
Pollution degree			3

#### Dimensions



#### Wiring diagrams



#### Certifications and compliance

Certifications

CSA C22.2 n° 60947-1

CSA C22.2 n° 60947-4-1

IEC/EN 60947-1

IEC/EN 60947-4-1



**ENERGY AND AUTOMATION** 

### BF12T4A230

FOUR-POLE CONTACTOR, IEC OPERATING CURRENT ITH (AC1) = 28A, AC COIL 50/60HZ,

	UL 60947-1	
	UL 60947-4-1	
Compliance		
	CCC	
	cULus	
	EAC	

ETIM 6 classification

EC000066 - Power contactor, AC switching