

THREE-POLE CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 12A, DC COIL, 24VDC, **1NC AUXILIARY CONTACT**



Product designation		Power contactor
Product type designation		BF12
Contact characteristics		
Number of poles	nr.	3
Rated insulation voltage Ui	V	690
Rated impulse withstand voltage Uimp	kV	6
Operating frequency		
Operational frequency mir		25
Operational frequency max		400
Conventional free air thermal current Ith	Α	28
Operating current		
Operational current AC1 (≤40°C	•	28
Operational current AC3 (≤440V ≤55°C	•	12
Operational current AC4 (400V) A	7.9
Rated operational power AC1 (T≤40°C)	/ 1.387	10
230\		10
400\		18
500\		23
Poted energtional power AC2 (T<55°C)	/ kW	32
Rated operational power AC3 (T≤55°C) 230\	/ kW	3.2
400\		5.7
415\		6.2
440\		6.2
500\		7.5
690\		10
Short-time allowable current for 10s (IEC/EN60947-1)	A	150
Protection fuse		
gG (IEC) A	32
aM (IEC	•	12
Making capacity (RMS value)	A	120
Breaking capacity at voltage		
Breaking capacity 440\	/ A	96
Breaking capacity 500\	/ A	96
Breaking capacity 690\	/ A	94
Resistance per pole (average value)	mΩ	2.5
Power dissipation per pole (average value)		
Power dissipation pole (average value) Ith	n W	2
ACC	3 W	0.4
Tightening torque for terminals		
mir		1.5
max		1.8
mir		1.1
max	c lbft	1.5



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		min	Nm	0.8
		max	Nm	1
		min	lbft	0.8
may number of wires	nimultan aqualy agan agtable	max	Ibft	0.74
Conductor section	simultaneously connectable		nr.	
Conductor Section	AWG			
	AWG	min		16
		max		10
	Flexible w/o lug conductor section	Пах		10
	rioxisto in/o lag contactor cociton	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			
		min	mm²	1
		max	mm²	4
Power terminal protect	tion according to IEC/EN 60529			IP20 when wired
Auxiliary contact chara	acteristics			
Type of contact				1 NC
Thermal current Ith			Α	10
IEC/EN 60947-5-1 de				A600 - P600
Operational current A			Α	28
Operating current AC1	15			
		230V	Α	3
		400V	Α	1.9
		500V	Α	1.4
Operating current DC	12			
		110V	A	5.7
Operating current DC	13			
		24V	Α	5.7
		48V	Α	2.9
		60V	Α	2.3
		110V	Α	Screw / DIN rail 35mm
		125V	Α	0.6
		220V	Α	0.2
		600V	Α	1.2
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				Madala
		normal		Vertical plan
		allowable		±30°
Mounting				Screw / DIN rail
			~	35mm 0.49
Weight			g	U.49



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Mechanical life Cycles 20000000 Electrical life Cycles 2000000 Salety related data rated load Cicil 20000000 mechanical load Cicil 20000000 mechanical load Cicil 200000000 mechanical load Cicil 20000000 mechanical load Cicil 20000000000000 mechanical load Cicil 2000000000000000000000000000000000000	Operations			
Electrical life	•		Cycles	20000000
Safety related data				
Performance level B10d according to EIN/ISO 13489-1 Interpretation of the properties			Cycles	2000000
Rated load Cicil 2000000 Mirror contats according to IEC/EN 609474-4-1 yes EMC compatibility	•			
Mirror contats according to IEC/EN 609474-4-1	T chomianoe level broa according to Envise 10400 1	rated load	Cicli	2000000
Mirror contats according to IEC/EN 609474-4-1 EMC compatibility DC cated control voltage min				
EMC compatibility DC rated control voltage min	Mirror contats according to IEC/EN 609474-4-1	moonamou road	O loli	
DC rated control voltage min V 6 max V 250 DC operating voltage pick-up min %Us 0.7 max %Us 1.25 drop-out min %Us 0.1 max %Us 0.40 Average coil consuption ≤20°C in-rush W 5.4 holding W 5.4 Max cycles frequency Machanical operations Cycles/h 3600 Operating times Operating t				
DC rated control voltage Min				jee
Min				
DC operating voltage pick-up pick-up min %Us 0.7 max %Us 0.1 max		min	V	6
DC operating voltage pick-up min %Us 0.7 max %Us 1.25				
Pick-up	DC operating voltage			
Min Wils 0.7 max Wils 0.7 max Wils 0.1 max				
Average coil consuption ≤20°C min min %Us 0.1 max %Us 0.40 Average coil consuption ≤20°C min-rush W 5.4 molding	• •	min	%Us	0.7
Main Mount Moun		max	%Us	1.25
Main Mount Moun	drop-out			
Average coil consuption ≤20°C in-rush W 5.4 holding W 5.4 Max cycles frequency	·	min	%Us	0.1
In-rush holding W 5.4 Max cycles frequency		max	%Us	0.40
Max cycles frequency	Average coil consuption ≤20°C			
Machanical operations Cycles/h 3600 Operating times Average time for Us control min ms 54 Closing NO min ms 54 Max ms 66 Opening NO Min ms 17 Closing NC min ms 24 max ms 30 Opening NC min ms 47 max ms 57 UL technical data Full-load current (FLA) for three-phase AC motor at 480V A 11 at 600V A 11 yielded mechanical performance for single-phase AC motor at 110/120V hp 1 at 230V hp 2 for three-phase AC motor at 200/208V hp 5		in-rush	W	5.4
Mechanical operations		holding	W	5.4
Average time for Us control In DC Closing NO Min Ms 54 Max Ms 66 Max Ms 66 Max Ms 17 Max Ms 18 Max Ms 18 Max Ms 19 Max Ms	Max cycles frequency			
Average time for Us control In DC Closing NO min ms 54 max ms 66 Opening NO min ms 14 max ms 17 Closing NC min ms 24 max ms 30 Opening NC min ms 47 max ms 30 Opening NC min ms 47 max ms 57 UL technical data Full-load current (FLA) for three-phase AC motor for single-phase AC motor at 480V A 11 at 600V A 11 Yielded mechanical performance for single-phase AC motor at 110/120V hp 1 at 230V hp 2 for three-phase AC motor at 220/230V hp 5 at 220/230V hp 5 at 460/480V hp 7.5 at 460/480V hp 7.5 at 460/480V hp 7.5 at 4575/600V hp 10	Mechanical operations		Cycles/h	3600
in DC Closing NO min ms 54 max ms 66 Opening NO min ms 14 max ms 17 Closing NC min ms 24 max ms 30 Opening NC min ms 24 max ms 30 Opening NC min ms 47 max ms 57 UL technical data Full-load current (FLA) for three-phase AC motor at 480V A 11 at 600V A 11 Yielded mechanical performance for single-phase AC motor at 110/120V hp 1 at 230V hp 2 for three-phase AC motor at 220/230V hp 5 at 460/480V hp 7.5 at 460/480V hp 7.5 at 460/480V hp 7.5 at 575/600V hp 10	Operating times			
Closing NO	Average time for Us control			
Min				
Opening NO Min Min	Closing NO			
Opening NO min ms 14 max ms 17		min	ms	
min ms 14 max ms 17		max	ms	66
Max Ms 17 Closing NC Min Ms 24 Max Ms 30 Ms Ms Ms 30 Ms Ms Ms Ms Ms Ms Ms M	Opening NO			
Closing NC				
Min ms 24 max ms 30	91 1 119	max	ms	17
Opening NC max ms 30	Closing NC			0.4
Opening NC min ms 47 max ms 57				
min ms 47 max ms 57	0.0000000000000000000000000000000000000	max	ms	30
Max ms 57	Opening NC		m. c	47
UL technical data Full-load current (FLA) for three-phase AC motor at 480V A 11 at 600V A 11 Yielded mechanical performance for single-phase AC motor at 110/120V hp 1 at 230V hp 2 for three-phase AC motor at 200/208V hp 5 at 220/230V hp 5 at 460/480V hp 7.5 at 460/480V hp 7.5 at 575/600V hp 10				
Full-load current (FLA) for three-phase AC motor at 480V A 11 at 600V A 11 Yielded mechanical performance for single-phase AC motor at 110/120V hp 1 at 230V hp 2 for three-phase AC motor at 200/208V hp 5 at 220/230V hp 5 at 460/480V hp 7.5 at 575/600V hp 10	III technical data	ıılax	1115	JI
At 480V A 11 At 600V A 11 Yielded mechanical performance for single-phase AC motor at 110/120V hp 1 at 230V hp 2 for three-phase AC motor at 200/208V hp 5 at 220/230V hp 5 at 460/480V hp 7.5 at 575/600V hp 10				
at 600V A 11 Yielded mechanical performance for single-phase AC motor at 110/120V hp 1 at 230V hp 2 for three-phase AC motor at 200/208V hp 5 at 220/230V hp 5 at 460/480V hp 7.5 at 575/600V hp 10	i dii load current (i LA) loi tillee-phase AC Motol	ot 490\/	۸	11
Yielded mechanical performance for single-phase AC motor at 110/120V hp 1 at 230V hp 2 for three-phase AC motor at 200/208V hp 5 at 220/230V hp 5 at 460/480V hp 7.5 at 575/600V hp 10				
for single-phase AC motor at 110/120V hp 1 at 230V hp 2 for three-phase AC motor at 200/208V hp 5 at 220/230V hp 5 at 460/480V hp 7.5 at 575/600V hp 10	Yielded mechanical performance	at 000 V	/ \	
at 110/120V hp 1 at 230V hp 2 for three-phase AC motor at 200/208V hp 5 at 220/230V hp 5 at 460/480V hp 7.5 at 575/600V hp 10				
at 230V hp 2 for three-phase AC motor at 200/208V hp 5 at 220/230V hp 5 at 460/480V hp 7.5 at 575/600V hp 10	ioi sirigio priaso no motor	at 110/120\/	hn	1
for three-phase AC motor at 200/208V hp 5 at 220/230V hp 5 at 460/480V hp 7.5 at 575/600V hp 10			•	
at 200/208V hp 5 at 220/230V hp 5 at 460/480V hp 7.5 at 575/600V hp 10	for three-phase AC motor	at 200 V	ייף	_
at 220/230V hp 5 at 460/480V hp 7.5 at 575/600V hp 10	ioi ando piddo no motor	at 200/208V	hp	5
at 460/480V hp 7.5 at 575/600V hp 10			-	
at 575/600V hp 10				
'			•	
AUCO - LOO	Contact rating of auxiliary contacts according to UL		г	A600 - P600

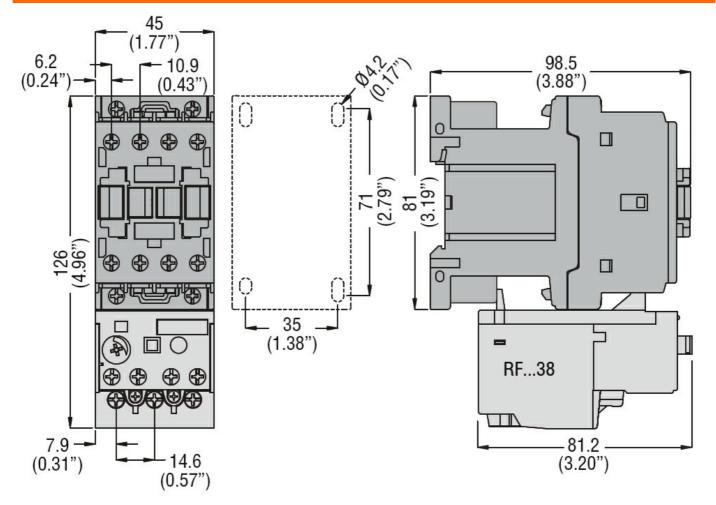
ENERGY AND AUTOMATION

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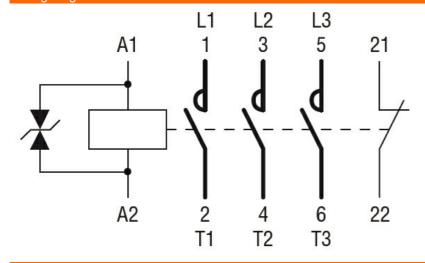
General USE

Contactor

	AC current	А	28
Other features			
Pollution degree			3
Dimensions			



Wiring diagrams



Certifications and compliance

Certifications

CSA C22.2 n° 60947-1



ENERGY AND AUTOMATION

BF1201D024

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	CSA C22.2 n° 60947-4-1
	IEC/EN 60947-1
	IEC/EN 60947-4-1
	UL 60947-1
	UL 60947-4-1
Compliance	
-	CCC
	cULus
	FAC

ETIM 6 classification

EC000066 - Power contactor, AC switching