

# FOUR-POLE CONTACTOR, IEC OPERATING CURRENT ITH (AC1) = 56A, AC COIL 50/60HZ, 400VAC



Product designation		Power contactor
Product type designation		BF38
Contact characteristics		
Number of poles	nr.	3
Rated insulation voltage Ui	V	690
Rated impulse withstand voltage Uimp	kV	6
Operating frequency		<del>-</del>
Operational frequency min	Hz	25
Operational frequency max	Hz	400
Conventional free air thermal current Ith	A	56
Operating current		
Operational current AC3 (≤440V ≤55°C)	Α	38
Operational current AC4 (400V)	Α	15.5
Short-time allowable current for 10s (IEC/EN60947-1)	Α	320
Protection fuse		
gG (IEC)	Α	63
aM (IEC)	Α	40
Making capacity (RMS value)	Α	380
Breaking capacity at voltage		
Breaking capacity 440V	Α	304
Breaking capacity 500V	Α	240
Breaking capacity 690V	Α	192
Resistance per pole (average value)	mΩ	2
Power dissipation per pole (average value)		
Power dissipation pole (average value) Ith	W	6
AC3	W	2.9
Tightening torque for terminals		
min	Nm	2.5
max	Nm	3
min	lbft	1.8
max	lbft	2.2
Tightening torque for coil terminal		
min	Nm	0.8
max	Nm	1
min	lbft	0.59
max	lbft	0.74
max number of wires simultaneously connectable	nr.	2
Conductor section		
AWG		
min		14
max		6
Flexible w/o lug conductor section		
min	mm²	2.5
max	mm²	16
Flexible c/w lug conductor section		





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		min	mm²	1
		max	mm²	10
	Flexible with insulated spade lug conductor section		•	
		min	mm²	1
D	"	max	mm²	10
	tion according to IEC/EN 60529			IP20
Ambient conditions				
Temperature				
	Operating temperature	min	°C	-50
		max	°C	70
	Storage temperature	IIIdx		70
	Otorage temperature	min	°C	-60
		max	°C	80
Max altitude		max	<u>_</u>	3,000
Operating position				0,000
Operating position		normal		Vertical plan
		allowable		±30°
		anowabie		Screw / DIN rail
Mounting				35mm
Weight			g	0.432
Operations			9	01.02
Mechanical life			Cycles	20,000,000
Electrical life			Cycles	1400000
Safety related data			- ,	
	ng to IEC/EN 609474-4-1			Yes
EMC compatibility	5			Yes
AC coil operating				
AC coll operating				
Rated AC voltage at 50	0/60Hz, 60Hz			
	0/60Hz, 60Hz	min	V	12
	0/60Hz, 60Hz	min max	V V	12 600
	0/60Hz, 60Hz			
Rated AC voltage at 5	0/60Hz, 60Hz of 50/60Hz coil powered at 50Hz			
Rated AC voltage at 5				
Rated AC voltage at 5	of 50/60Hz coil powered at 50Hz			
Rated AC voltage at 5	of 50/60Hz coil powered at 50Hz	max	V	600
Rated AC voltage at 5	of 50/60Hz coil powered at 50Hz	max	V %Us	80 110
Rated AC voltage at 5	of 50/60Hz coil powered at 50Hz pick-up	max	V %Us %Us %Us	80 110 20
Rated AC voltage at 5	of 50/60Hz coil powered at 50Hz pick-up drop-out	max min max	V %Us %Us	80 110
Rated AC voltage at 5	of 50/60Hz coil powered at 50Hz pick-up drop-out  of 50/60Hz coil powered at 60Hz	max min max min	V %Us %Us %Us	80 110 20
Rated AC voltage at 5	of 50/60Hz coil powered at 50Hz pick-up drop-out	min max min max	V %Us %Us %Us %Us	80 110 20 55
Rated AC voltage at 5	of 50/60Hz coil powered at 50Hz pick-up drop-out  of 50/60Hz coil powered at 60Hz	min max min max	%Us %Us %Us %Us	80 110 20 55
Rated AC voltage at 5	of 50/60Hz coil powered at 50Hz pick-up  drop-out  of 50/60Hz coil powered at 60Hz pick-up	min max min max	V %Us %Us %Us %Us	80 110 20 55
Rated AC voltage at 5	of 50/60Hz coil powered at 50Hz pick-up drop-out  of 50/60Hz coil powered at 60Hz	min max min max min max	%Us %Us %Us %Us %Us	80 110 20 55 85 110
Rated AC voltage at 5	of 50/60Hz coil powered at 50Hz pick-up  drop-out  of 50/60Hz coil powered at 60Hz pick-up	min max min max min max min max	%Us %Us %Us %Us %Us %Us	80 110 20 55 85 110
Rated AC voltage at 5	of 50/60Hz coil powered at 50Hz pick-up  drop-out  of 50/60Hz coil powered at 60Hz pick-up  drop-out	min max min max min max	%Us %Us %Us %Us %Us	80 110 20 55 85 110
Rated AC voltage at 5	of 50/60Hz coil powered at 50Hz pick-up  drop-out  of 50/60Hz coil powered at 60Hz pick-up  drop-out  of 60Hz coil powered at 60Hz	min max min max min max min max	%Us %Us %Us %Us %Us %Us	80 110 20 55 85 110
Rated AC voltage at 5	of 50/60Hz coil powered at 50Hz pick-up  drop-out  of 50/60Hz coil powered at 60Hz pick-up  drop-out	min max min max min max min max	%Us %Us %Us %Us %Us %Us %Us	80 110 20 55 85 110 20 55
Rated AC voltage at 5	of 50/60Hz coil powered at 50Hz pick-up  drop-out  of 50/60Hz coil powered at 60Hz pick-up  drop-out  of 60Hz coil powered at 60Hz	min max min max min max min max min max	%Us %Us %Us %Us %Us %Us %Us	80 110 20 55 85 110 20 55
Rated AC voltage at 5	of 50/60Hz coil powered at 50Hz pick-up  drop-out  of 50/60Hz coil powered at 60Hz pick-up  drop-out  of 60Hz coil powered at 60Hz pick-up	min max min max min max min max	%Us %Us %Us %Us %Us %Us %Us	80 110 20 55 85 110 20 55
Rated AC voltage at 5	of 50/60Hz coil powered at 50Hz pick-up  drop-out  of 50/60Hz coil powered at 60Hz pick-up  drop-out  of 60Hz coil powered at 60Hz	min max min max min max min max min max	%Us %Us %Us %Us %Us %Us %Us %Us	80 110 20 55 85 110 20 55
Rated AC voltage at 5	of 50/60Hz coil powered at 50Hz pick-up  drop-out  of 50/60Hz coil powered at 60Hz pick-up  drop-out  of 60Hz coil powered at 60Hz pick-up	min max min max min max min max min max min max	%Us %Us %Us %Us %Us %Us %Us %Us	80 110 20 55 85 110 20 55 80 110
Rated AC voltage at 5	of 50/60Hz coil powered at 50Hz pick-up  drop-out  of 50/60Hz coil powered at 60Hz pick-up  drop-out  of 60Hz coil powered at 60Hz pick-up	min max min max min max min max min max	%Us %Us %Us %Us %Us %Us %Us %Us	80 110 20 55 85 110 20 55



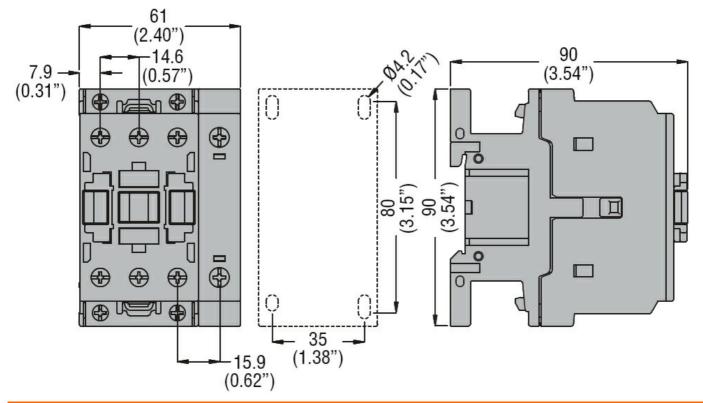


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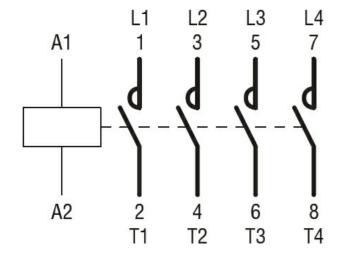
	of 50/60Hz coil powere	d at 50Hz			
	01 00/00112 0011 powere	a at 00112	in-rush	VA	75
			holding	VA	9
	of 50/60Hz coil powere	d at 60Hz	Holding	٧/١	
	of 30/00112 coll powere	a at 00112	in-rush	VA	70
			holding	VA	6.5
	of 60Hz coil powered a	+ 60∐-z	Holding	V/\	0.5
	or doriz con powered a	1 00112	in-rush	VA	75
			holding	VA VA	9
Dissinction at halding	-20°C E0U¬		Holding	W	2.5
Dissipation at holding ≤	20 C 50HZ			VV	2.5
Max cycles frequency				0	0.000
Mechanical operations				Cycles/h	3,600
Operating times					
Average time for Us co					
	in AC				
		Closing NO			_
			min	ms	8
		_	max	ms	24
		Opening NO			
			min	ms	5
			max	ms	15
		Closing NC			
			min	ms	9
			max	ms	20
		Opening NC			
			min	ms	9
			max	ms	17
UL technical data					
Full-load current (FLA)	for three-phase AC motor	or			
			at 480V	Α	40
			at 600V	Α	32
Yielded mechanical per	rformance				
	for single-phase AC me	otor			
			at 110/120V	hp	3
			at 230V	hp	7.5
	for three-phase AC mo	tor		-	
	-		at 200/208V	hp	10
			at 220/230V	hp	15
			at 460/480V	hp	30
			at 575/600V	hp	30
Contact rating of auxilia	ary contacts according to	UL		· · · · · · · · · · · · · · · · · · ·	SI - A600
General USE	, ,				
	Contactor				
			AC current	Α	32
	Auxiliary contacts			<u> </u>	
			AC voltage	V	600
			AC current	Å	10
			DC voltage	V	250
			DC voltage DC current	A	1
Dimensions			DO CONTONE	, \	•
DIMICHOIDHO					

**ENERGY AND AUTOMATION** 

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#### 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

UL 60947-1

UL 60947-4-1

Compliance

CCC

cULus

EAC

#### ETIM 6 classification

EC000066 - Power contactor, AC switching