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Product designation			Power contactor
Product type designation			BF38
Contact characteristics			
Number of poles		Nr.	4
Rated insulation voltage Ui IEC/EN		V	690
Rated impulse withstand voltage Uimp		kV	6
Operational frequency			
	min	Hz	25
	max	Hz	400
IEC Conventional free air thermal current Ith		Α	56
Operational current le			
	AC-1 (≤40°C)	Α	56
	AC-1 (≤40°C) with 16mm² wire and fork end		60
	AC-1 (≤55°C)	A	45
	AC-1 (≤55°C) with 16mm² wire and fork end		48
	AC-1 (≤70°C)	A	40
	AC-1 (≤70°C) with 16mm² wire and fork end		42
	AC-3 (≤440V ≤55°C)	A	38
	AC-4 (400V)	A	15.5
Rated operational power AC-1 (T≤40°C)	AC-4 (400V)		10.0
Nated operational power AC-1 (1540 C)	2201/	LAM	24
	230V	kW	21
	400V	kW	36
	500V	kW	45
IFO many assessment to be DOA with 1/D < 4mag with	690V	kW	62
IEC max current le in DC1 with L/R ≤ 1ms wi	•		
	≤24V	Α	35
	48V	A	30
	75V	A	23
	110V	Α	8
	220V	Α	-
IEC max current le in DC1 with L/R ≤ 1ms wi		_	
	≤24V	Α	36
	48V	Α	34
	75V	Α	29
	110V	Α	32
	220V	Α	4
IEC max current le in DC1 with L/R ≤ 1ms wi	•		
	≤24V	Α	36
	48V	Α	34
	75V	Α	33
	110V	Α	34
	220V	Α	30
IEC max current le in DC1 with L/R ≤ 1ms wi	ith 4 poles in series		
	≤24V	Α	36
	48V	Α	34



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	75V	Α	33
	110V	Α	34
	220V	Α	38
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 1 poles in series			
'	≤24V	Α	24
	48V	Α	20
	75V	Α	17
	110V	Α	2,5
	220V	Α	_
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 2 poles in series			
	≤24V	Α	28
	48V	Α	25
	75V	A	22
	110V	A	18
	220V	A	3
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 3 poles in series	220 V		3
TEO MAX GAMERICIE III DOG-DOG WILLI E/IX 2 10/115 WILLI 3 POIES III SELIES	≤24V	Α	32
	≥24 V 48 V		28
	48 V 75 V	A	28
		A	
	110V	A	23
IFO	220V	Α	25
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 4 poles in series	10.43.4	•	00
	≤24V	Α	32
	48V	Α	28
	75V	Α	28
	110V	Α	23
	220V	A	15
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		_	
	440V	Α	304
	500V	Α	240
	690V	A	192
Resistance per pole (average value)		mΩ	2
Power dissipation per pole (average value)			
	Ith	W	6
	AC-3	W	2.9
Tightening torque for terminals			
	min	Nm	2.5
	max	Nm	3
	min	lbin	1.8
	max	lbin	2.2
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			

Conductor section

AWG/Kcmil





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Flexible w/o lug conductor section		max		6
Fiexible c/w lug conductor section				0
Flexible c/w lug conductor section			mm²	2.5
Private Pri		max	mm²	16
Pexible with insulated spade lug conductor section min mm² 1 mm		-		
Flexible with insulated spade lug conductor section				
Minimate			mm²	10
Power terminal protection according to IEC/EN 60529 P20 when properly wired		·	mm²	1
Power terminal protection according to IEC/EN 60529 IP20 when properly wired mechanical features IP20 when properly wired mechanical features IP20 when properly wired mechanical features IP20 when properly wired mechanical position IP20 when properly IP				
Mechanical features	Power terminal protect			IP20 when
Operating position Normal allowable Vertical plan allowable Screw / PIN real 30 Weight cycles Screw / PIN real 35mm Weight cycles 2000000 Electrical life cycles 2000000 Electrical life cycles 1400000 Say related data Cycles 1400000 Electrical life cycles 1400000 Electrical life cycles 1400000 Electrical life cycles 1400000 Electrical life cycles 1400000 cycles 1400000 cycles 1400000 Electrical life cycles 1400000 cycles				properly wired
Pixing				
Fixing 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30° 30	operating position	normal		Vertical plan
FixIng Weight g 65 Operations Mechanical life cycles 20000000 Electrical life cycles 1400000 Safety related data Performance level B10d according to EN/ISO 13489-1 FixIng rated load mechanical load cycles 1400000 EMC compatibility rated load mechanical load cycles 200000000 EMC compatibility yes C coil operating DC rated control voltage pick-up min %Us 80 max %Us 125 drop-out min %Us 10 max %Us 10 max %Us 40 drop-out min sylus 10 max %Us 40 drop-out min sylus 10 max %Us 10 max %				
Weight g 665 Operations Mechanical life cycles 20000000 Electrical life cycles 1400000 Safety related data Performance level B10d according to EN/ISO 13489-1 rated load mechanical load mechanical load cycles 1400000 cycles EMC compatibility yes DC coil operating DC rated control voltage V 60 DC operating voltage min %Us 80 Max %Us 125 drop-out min %Us 10 max %Us 10 Max cycles frequency w 5.4 Max cycles frequency w 5.4 Max cycles frequency min ms 8 Mechanical operation cycles/h 3600 Operating times Average time for Us control min ms 8	Fixing			Screw / DIN rail
Operations Mechanical life cycles 20000000 Electrical life cycles 1400000 Safety related data Performance level B10d according to EN/ISO 13489-1 EMC compatibility rated load mechanical load cycles 1400000 cycles 20000000 DC cared control voltage v 60 0 DC operating voltage min %Us 80 Average coil consumption ≤20°C in-rush holding W 5.4 Max cycles frequency w 5.4 Mechanical operation cycles /h 3600 Operating times min ms 8 Average time for Us control	Weight		g	
Electrical life				
Safety related data Performance level B10d according to EN/ISO 13489-1 rated load mechanical load voycles 1400000 mechanical load voycles 200000000 200000000000000000000000	•		cycles	20000000
Performance level B10d according to EN/ISO 13489-1 rated load mechanical load cycles 1400000 cycles 200000000 EMC compatibility yes yes DC coil operating V 60 DC operating voltage min %Us 80 pick-up min %Us 125 drop-out min %Us 125 drop-out max %Us 10 Average coil consumption ≤20°C in-rush holding W 5.4 Max cycles frequency w 5.4 5.4 Mechanical operation cycles/h 3600 3600 Operating times Closing NO min ms 8 Average time for Us control in AC min ms 8 Closing NO min ms 24 Opening NO min ms 5 max ms 15 Closing NC min ms 9 max ms 20			cycles	1400000
Rated load Rate Rated load Rate Rated load Rate Rated load Rated l				
EMC compatibility yes DC coil operating V 60 DC operating voltage V 60 DC operating voltage yu 60 min win will will will will will will wil	Performance level B10		_	
EMC compatibility yes DC coil operating				
DC coil operating V 60	EMC competibility	mechanicai load	cycles	
DC rated control voltage Pick-up Pick-up Min %Us 80 Max %Us 125 Min Mus 125 Min Mus				yes
DC operating voltage		ie	V	60
Pick-up min %Us 80 max %Us 125				
min max min max min max		pick-up		
drop-out min max %Us do words 40 Average coil consumption ≤20°C in-rush w 5.4 holding w 5.4 Max cycles frequency Mechanical operation cycles/h 3600 Operating times Average time for Us control 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			%Us	80
min max %Us 10 max %Us 40 Average coil consumption ≤20°C in-rush kolding W 5.4 in-rush kolding W 5.4 W 5.4 Max cycles frequency V 5.4 Mechanical operation Cycles/h 3600 Cycles/h 3600 Operating times V 5.4 Average time for Us control in AC V 5.4 Closing NO Min ms 8 ms 8 max ms 24 Opening NO Min ms 5 ms 5 max ms 15 Closing NC Min ms 9 ms 9 max ms 20		max	%Us	125
max%Us40Average coil consumption ≤20°Cin-rush holdingW5.4 holdingMax cycles frequencyw5.4Mechanical operationcycles/h3600Operating timesAverage time for Us controlin ACmin ms8 max msClosing NOmin ms8 max msmax ms24Opening NOmin ms5 max msClosing NCmin ms9 max msmin ms9 max ms20				
Average coil consumption ≤20°C in-rush W 5.4 holding W 5.4 Max cycles frequency Mechanical operation cycles/h 3600 Operating times Average time for Us control 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				
In-rush W 5.4 holding W 5.4	Avorage sail caracina		%Us	40
holding W 5.4 Max cycles frequency Mechanical operation cycles/h 3600 Operating times Average time for Us control 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	Average con consump		۱۸/	5.4
Max cycles frequency Mechanical operation cycles/h 3600 Operating times Average time for Us control In AC				
Mechanical operation cycles/h 3600 Operating times Average time for Us control Image: Closing NO min ms 8 max ms 24 Opening NO min ms 5 max ms 15 Closing NC min ms 9 max ms 20	Max cycles frequency	Tiolding	**	
Operating times Average time for Us control 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			cycles/h	3600
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				
Closing NO min ms 8 max ms 24 Opening NO min ms 5 max ms 15 Closing NC min ms 9 max ms 20	Average time for Us co			
min ms 8 max ms 24 Opening NO min ms 5 max ms 15 Closing NC min ms 9 max ms 20				
Opening NO min ms 5 max ms 24 Opening NO min ms 5 max ms 15 Closing NC min ms 9 max ms 20				
Opening NO min ms 5 max ms 15 Closing NC min ms 9 max ms 20				
min ms 5 max ms 15 Closing NC min ms 9 max ms 20			ms	∠4
max ms 15 Closing NC min ms 9 max ms 20			ms	5
Closing NC min ms 9 max ms 20				
min ms 9 max ms 20				-
		_	ms	9
Opening NC			ms	20
		Opening NC		

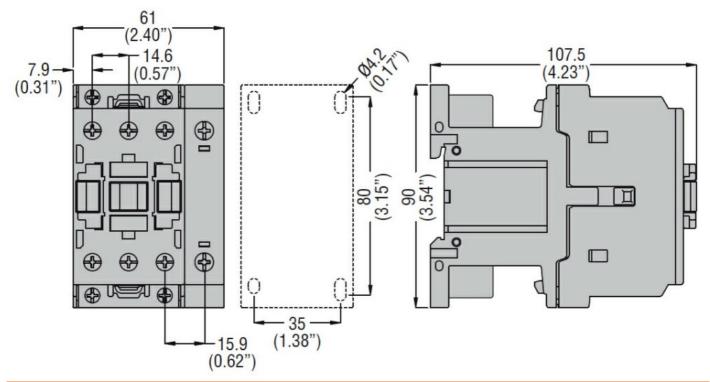




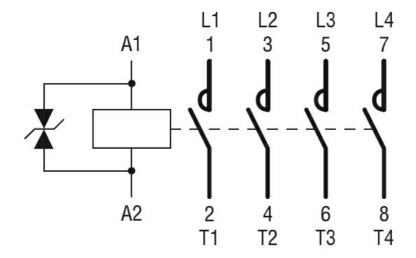
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		min	ms	9
		max	ms	17
	in DC			
	Closing NO			
		min	ms	54
		max	ms	66
	Opening NO			
	, ,	min	ms	14
		max	ms	17
UL technical data				
Rated operational volta	age AC (UL)		V	600
	for three-phase AC motor		<u> </u>	
r dii load carrent (i LA)	Tot tilled phase Ao motor	at 480V	Α	40
Vialdad sa alamaia da a		at 600V	Α	32
Yielded mechanical pe				
	for single-phase AC motor			•
		110/120V	HP	3
		230V	HP	7.5
	for three-phase AC motor			
		200/208V	HP	10
		220/230V	HP	15
		460/480V	HP	30
		575/600V	HP	30
General USE				
	Contactor			
		AC current	Α	55
Short-circuit protection	fuse 600V	710 carrein		
Onort on our protoction	High fault			
	i ligit ladit	Short circuit current	kA	100
			A	100
		Fuse rating	А	
	0(***1**16**16	Fuse class		J
	Standard fault	Object of the state of		-
		Short circuit current	kA	5
		Fuse rating	Α	150
Ambient conditions				
Temperature				
	Operating temperature			
		min	°C	-50
		max	°C	70
	Storage temperature			
		min	°C	-60
		max	°C	80
Max altitude			m	3000
Resistance & Protection	on			
Pollution degree				3
Dimensions				
Di monoiono				





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

EAC

ETIM classification



BF38T4D060

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ETIM 8.0

EC000066 -Power contactor, AC switching