



Draduat designation			Dower contactor
Product designation Product type designation			Power contactor BF38
Contact characteristics			DI 30
Number of poles		Nr.	3
Rated insulation voltage Ui IEC/EN		V	690
Rated impulse withstand voltage Uimp		kV	6
Operational frequency			0
	min	Hz	25
	max	Hz	400
IEC Conventional free air thermal current Ith		A	56
Operational current le			
	AC-1 (≤40°C)	А	56
	AC-1 (≤40°C) with 16mm² wire and fork end		60
	AC-1 (≤55°C)	Ă	45
	AC-1 (≤55°C) with 16mm² wire and fork end	lugA	48
	AC-1 (≤70°C)	Ă	40
	AC-1 (≤70°C) with 16mm² wire and fork end		42
	AC-3 (≤440V ≤55°C)	Ā	38
	AC-4 (400V)	А	15.5
Rated operational power AC-3 (T≤55°C)			
	230V	kW	11
	400V	kW	18.5
	415V	kW	18.5
	440V	kW	18.5
	500V	kW	20
	690V	kW	22
Rated operational power AC-1 (T≤40°C)			
	230V	kW	21
	400V	kW	36
	500V	kW	45
	690V	kW	62
IEC max current le in DC1 with $L/R \le 1$ ms with	•		
	≤24V	А	35
	48V	А	30
	75V	А	23
	110V	A	8
	220V	A	_
IEC max current le in DC1 with $L/R \le 1$ ms with			
	≤24V	Α	36
	48V	Α	34
	75V	A	29
	110V	A	32
	220V	A	4
IEC max current le in DC1 with $L/R \le 1$ ms with		-	
	≤24V	A	36



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	48V	А	34
	48V 75V	A	33
	110V	A	34
	220V		
IFC may automate to in DC1 with 1/D < 1 may with 1 males in series	2200	A	30
IEC max current le in DC1 with $L/R \le 1$ ms with 4 poles in series	(0.1) (
	≤24V	А	36
	48V	А	34
	75V	А	33
	110V	А	34
	220V	Α	38
IEC max current le in DC3-DC5 with L/R \leq 15ms with 1 poles in series			
	≤24V	А	24
	48V	А	20
	75V	А	17
	110V	А	2,5
	220V	А	_
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 2 poles in series			
	≤24V	А	28
	48V	A	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	~	5
The current is in DC3-DC5 with $L/R \le 15$ ms with 5 poles in series	<i>1</i> 0 0 /	•	
	≤24V	A	32
	48V	A	28
	75V	А	28
	110V	А	23
	220V	A	25
IEC max current le in DC3-DC5 with L/R \leq 15ms with 4 poles in series			
	≤24V	А	32
	48V	Α	28
	75V	А	28
	110V	А	23
	220V	А	15
Short-time allowable current for 10s (IEC/EN60947-1)		А	320
Protection fuse			
	gG (IEC)	А	63
	aM (IEC)	A	40
Making capacity (RMS value)		A	380
Breaking capacity at voltage		Λ	500
breaking capacity at voltage	440V	۸	304
		A	
	500V	A	240
	690V	A	192
Resistance per pole (average value)		mΩ	2
Power dissipation per pole (average value)			
	lth	W	6
	AC3	W	2.9
Tightening torque for terminals			
	min	Nm	2.5
	max	Nm	3
	min	Ibin	1.8
	max	Ibin	2.2

Tightening torque for coil terminal



BF3800D012

	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			
	AWG/Kcmil		
	max		6
	Flexible w/o lug conductor section		•
	min	mm²	2.5
	max	mm²	16
		111111	10
	Flexible c/w lug conductor section	····· 2	4
	min	mm²	1
	max	mm²	10
	Flexible with insulated spade lug conductor section	_	
	min	mm²	1
	max	mm²	10
Power terminal protec	tion according to IEC/EN 60529		IP20 when
-			properly wired
Mechanical features			
Operating position			
	normal		Vertical plan
	allowable		±30°
			Screw / DIN rai
Fixing			35mm
Weight		g	560
Conductor section		Ŭ	
	AWG/kcmil conductor section		
	max		6
Operations			-
Mechanical life			
		cycles	20000000
		cycles	20000000
Electrical life		cycles cycles	20000000 1400000
Electrical life Safety related data			
Electrical life Safety related data	0d according to EN/ISO 13489-1	cycles	1400000
Electrical life Safety related data	rated load	cycles cycles	1400000 1400000
Electrical life Safety related data Performance level B1	rated load mechanical load	cycles	1400000
Electrical life Safety related data Performance level B1	rated load	cycles cycles	1400000 1400000
Electrical life Safety related data Performance level B1 Mirror contats accordi	rated load mechanical load	cycles cycles	1400000 1400000 20000000
Electrical life Safety related data Performance level B1 Mirror contats accordi EMC compatibility	rated load mechanical load	cycles cycles	1400000 1400000 20000000 yes
Electrical life Safety related data Performance level B1 Mirror contats accordi EMC compatibility DC coil operating	rated load mechanical load ng to IEC/EN 609474-4-1	cycles cycles	1400000 1400000 20000000 yes
Electrical life Safety related data Performance level B1 Mirror contats accordi EMC compatibility DC coil operating DC rated control volta	rated load mechanical load ng to IEC/EN 609474-4-1	cycles cycles cycles	1400000 1400000 20000000 yes yes
Electrical life Safety related data Performance level B1	rated load mechanical load ng to IEC/EN 609474-4-1 ge	cycles cycles cycles	1400000 1400000 20000000 yes yes
Electrical life Safety related data Performance level B1 Mirror contats accordi EMC compatibility DC coil operating DC rated control volta	rated load mechanical load ng to IEC/EN 609474-4-1 ge pick-up	cycles cycles cycles V	1400000 1400000 20000000 yes yes 12
Electrical life Safety related data Performance level B1 Mirror contats accordi EMC compatibility DC coil operating DC rated control volta	rated load mechanical load ng to IEC/EN 609474-4-1 ge pick-up min	cycles cycles cycles V V	1400000 1400000 20000000 yes yes 12 70
Electrical life Safety related data Performance level B1 Mirror contats accordi EMC compatibility DC coil operating DC rated control volta	rated load mechanical load ng to IEC/EN 609474-4-1 ge pick-up min max	cycles cycles cycles V	1400000 1400000 20000000 yes yes 12
Electrical life Safety related data Performance level B1 Mirror contats accordi EMC compatibility DC coil operating DC rated control volta	rated load mechanical load ng to IEC/EN 609474-4-1 ge pick-up min max drop-out	cycles cycles cycles V V %Us %Us	1400000 1400000 20000000 yes yes 12 70 125
Electrical life Safety related data Performance level B1 Mirror contats accordi EMC compatibility DC coil operating DC rated control volta	rated load mechanical load ng to IEC/EN 609474-4-1 ge pick-up min max drop-out min	cycles cycles cycles V V %Us %Us	1400000 1400000 20000000 yes yes 12 70 125 10
Electrical life Safety related data Performance level B1 Mirror contats accordi EMC compatibility DC coil operating DC rated control volta DC operating voltage	rated load mechanical load ng to IEC/EN 609474-4-1 ge pick-up min max drop-out min max	cycles cycles cycles V V %Us %Us	1400000 1400000 20000000 yes yes 12 70 125
Electrical life Safety related data Performance level B1 Mirror contats accordi EMC compatibility DC coil operating DC rated control volta DC operating voltage	rated load mechanical load ng to IEC/EN 609474-4-1 ge pick-up min max drop-out min max	cycles cycles cycles V V %Us %Us	1400000 1400000 20000000 yes yes 12 70 125 10
Electrical life Safety related data Performance level B1 Mirror contats accordi EMC compatibility DC coil operating DC rated control volta	rated load mechanical load ng to IEC/EN 609474-4-1 ge pick-up min max drop-out min max	cycles cycles cycles V V %Us %Us	1400000 1400000 20000000 yes yes 12 70 125 10
Electrical life Safety related data Performance level B1 Mirror contats accordi EMC compatibility DC coil operating DC rated control volta DC operating voltage	rated load mechanical load ng to IEC/EN 609474-4-1 ge pick-up min max drop-out min max	cycles cycles cycles V V %Us %Us %Us %Us	1400000 1400000 20000000 yes yes 12 70 125 10 40
Electrical life Safety related data Performance level B1 Mirror contats accordi EMC compatibility DC coil operating DC rated control volta DC operating voltage	rated load mechanical load ng to IEC/EN 609474-4-1 ge pick-up min max drop-out min max otion ≤20°C	cycles cycles cycles V V %Us %Us %Us %Us %Us %Us	1400000 1400000 20000000 yes yes 12 70 125 10 40 5.4
Electrical life Safety related data Performance level B1 Mirror contats accordi EMC compatibility DC coil operating DC rated control volta DC operating voltage	rated load mechanical load ng to IEC/EN 609474-4-1 ge pick-up min max drop-out min max otion ≤20°C	cycles cycles cycles V V %Us %Us %Us %Us %Us %Us	1400000 1400000 20000000 yes yes 12 70 125 10 40 5.4 5.4 5.4



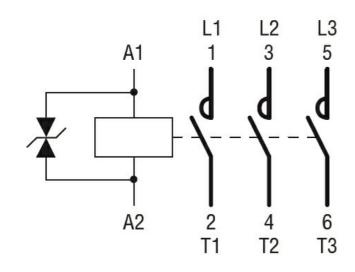
ENERGY AND AUTOMATION

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 in DC Closing NO min ms 54 max ms 17 in DC Closing NO min ms 14 max ms 15 Full-load current (FLA) for three-phase AC motor Full-load current (FLA) for three-phase AC motor for single-phase AC motor 110/120V HP 3 220/230V HP 15 460/480V HP 10 220/230V HP 15 460/480V HP 30 Short-circuit protection fuse, 600V High fault Short circuit current kA 100 Fuse rating A 100
Min ms 8 Opening NO min ms 5 Max ms 15 Closing NC min ms 9 Max ms 12 Opening NC min ms 9 Max ms 17 in DC Closing NO min ms 54 Opening NO min ms 9 Max ms 17 17 in DC Closing NO min ms 54 Opening NO min ms 54 Max ms 14 max ms 14 Max ms 14 max ms 14 UL technical data min ms 14 max 32 Yielded mechanical performance min ms 14 10 220/230V HP 32 Yielded mechanical performance for three-phase AC motor 20/208V HP 10 <td< td=""></td<>
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 in DC Closing NO min ms 54 Opening NO min ms 54 Max ms 54 66 Opening NO min ms 54 Max ms 14 max ms 17 UL technical data ms 14 max ms 17 UL technical data max ms 14 max ms 17 UL technical data for three-phase AC motor at 480V A 40 32 Yielded mechanical performance for single-phase AC motor 200/203V HP 7.5 for three-phase AC motor 200/203V HP 10 <t< td=""></t<>
Opening NO min ms 5 max ms 15 Closing NC min ms 9 Opening NC min ms 9 Opening NC min ms 9 max ms 17 In DC Closing NO min ms 66 Opening NO min ms 54 Max ms 54 max ms 66 Opening NO min ms 14 max ms 160 Ut technical data max ms 14 max 160 110/120V HP 3 Full-load current (FLA) for three-phase AC motor at 480V A 40 at 680V A 32 Yielded mechanical performance for three-phase AC motor 200/208V HP 3 220/230V HP 30 220/230V HP 30 32 30 32 30 32 30 32 30 32<
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max ms 20 min ms 9 max ms 17 in DC Closing NO min ms 54 Opening NO min ms 66 Opening NO min ms 14 max ms 14 max ms 17 UL technical data Full-load current (FLA) for three-phase AC motor at 480V A 40 at 600V HP 32 Yielded mechanical performance 110/120V HP 3 200/208V HP 10 220/230V HP 15 460/480V HP 30 30 30 30 General USE <t< td=""></t<>
Opening NC min ms 9 in DC Closing NO max ms 17 in DC Closing NO min ms 54 Opening NO max ms 54 Max ms 54 Opening NO max ms 54 Max ms 54 Opening NO max ms 14 Max ms 14 max ms 17 UL technical data max ms 14 max ms 14 Full-load current (FLA) for three-phase AC motor at 480V A 40 at 600V A 32 Yielded mechanical performance if or three-phase AC motor if or three-phase AC
min ms 9 max in DC Closing NO Closing NO min ms 54 max Opening NO min ms 14 max UL technical data min ms 14 max Full-load current (FLA) for three-phase AC motor at 480V A 40 at 600V A 32 Yielded mechanical performance 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 10 220/230V HP 10 220/230V HP 15 460/480V HP 30 30 General USE Contactor AC current A 55 Short-circuit protection fuse, 600V High fault KA 100
max ms 17 in DC Closing NO min ms 54 Max ms 66 66 Opening NO min ms 14 max ms 14 max ms 17 UL technical data Full-load current (FLA) for three-phase AC motor at 480V A 40 Yielded mechanical performance for single-phase AC motor 110/120V HP 3 Yielded mechanical performance 110/120V HP 3 for three-phase AC motor 200/208V HP 10 220/2030V HP 15 460/480V HP 30 General USE Contactor AC current A 55 Short-circuit protection fuse, 600V High fault KA 100
in DC Closing NO Min ms 54 max ms 66 Opening NO Min ms 14 max ms 17 UL technical data Full-load current (FLA) for three-phase AC motor at 480V A 40 at 600V A 32 Yielded mechanical performance 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 A 55 Short-circuit protection fuse, 600V High fault Short circuit current KA 100
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min ms 14 max min ms 17 UL technical data Full-load current (FLA) for three-phase AC motor at 480V A 40 at 600V A 32 Yielded mechanical performance 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 General USE Contactor AC current A 55 Short-circuit protection fuse, 600V High fault KA 100
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UL technical data Full-load current (FLA) for three-phase AC motor at 480V A 40 at 600V HP 3 Yielded mechanical performance for single-phase AC motor 110/120V HP 3 200/208V HP 10 220/230V HP 10 220/230V HP 15 460/480V HP 30 General USE Contactor AC current A 55 Short-circuit protection fuse, 600V High fault
Full-load current (FLA) for three-phase AC motor at 480V A 40 at 600V A 32 Yielded mechanical performance 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 10 220/230V HP 15 460/480V HP 30 General USE Contactor AC current A 55 Short-circuit protection fuse, 600V High fault Short circuit current kA 100
at 480V A 40 at 600V A 32 Yielded mechanical performance for single-phase AC motor 110/120V HP 3 230V HP 7.5 7.5 7.5 for three-phase AC motor 200/208V HP 10 220/230V HP 15 460/480V HP 30 General USE Contactor AC current A 55 Short-circuit protection fuse, 600V High fault KA 100
at 600V A 32 Yielded mechanical performance 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 General USE Contactor AC current A 55 Short-circuit protection fuse, 600V High fault Short circuit current KA 100
Yielded mechanical performance 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 A 55 Short-circuit protection fuse, 600V High fault Short circuit current kA 100
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 General USE Contactor AC current A 55 Short-circuit protection fuse, 600V High fault Short circuit current KA 100
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 General USE Contactor AC current A 55 Short-circuit protection fuse, 600V High fault Short circuit current KA 100
230V HP 7.5 for three-phase AC motor 200/208V HP 10 220/230V HP 15 460/480V HP 30 General USE Contactor AC current A 55 Short-circuit protection fuse, 600V High fault Short circuit current KA 100
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 A 55 Short-circuit protection fuse, 600V High fault Short circuit current KA 100
200/208V HP 10 220/230V HP 15 460/480V HP 30 575/600V HP 30 General USE Contactor AC current A 55 Short-circuit protection fuse, 600V High fault Short circuit current kA 100
220/230V HP 15 460/480V HP 30 575/600V HP 30 General USE Contactor AC current A 55 Short-circuit protection fuse, 600V High fault KA 100
460/480V HP 30 575/600V HP 30 General USE Contactor AC current A 55 Short-circuit protection fuse, 600V High fault Short circuit current kA 100
General USE Contactor AC current A 55 Short-circuit protection fuse, 600V High fault Short circuit current kA 100
Contactor AC current A 55 Short-circuit protection fuse, 600V High fault Short circuit current kA 100
AC current A 55 Short-circuit protection fuse, 600V High fault Short circuit current kA 100
Short-circuit protection fuse, 600V High fault Short circuit current kA 100
High fault Short circuit current kA 100
Short circuit current kA 100
Short circuit current kA 100
ruse raing A 100
Fuse class J
Standard fault
Short circuit current kA 5
Fuse rating A 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 Pollution degree 3 Dimensions [mm (in)] 45 -14.6 7.9 107.5 0 P/ 8 £7 0 0 80 06 П 7 134.8 67 ()8 41 35 Г RF...38 6 7.9-81.2 14.6

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	

BF3800D012



	UL 60947-4-1	
Certificates		
	CCC	
	cULus	
	EAC	
ETIM classificati	on	
		EC000066 -

ETIM 8.0

EC000066 -Power contactor, AC switching





Product designation			Power contactor
Product type designation			BF38
Contact characteristics Number of poles		Nr.	3
Rated insulation voltage Ui IEC/EN		V	<u> </u>
Rated impulse withstand voltage Uimp		kV	6
Operational frequency		ΓV	0
	min	Hz	25
	max	Hz	400
IEC Conventional free air thermal current Ith	Пах	A	56
Operational current le		71	
	AC-1 (≤40°C)	А	56
	AC-1 (≤40°C) with 16mm ² wire and fork end		60
	AC-1 (≤55°C)	A	45
	AC-1 (≤55°C) with 16mm ² 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)	Ă	38
	AC-4 (400V)	А	15.5
Rated operational power AC-3 (T≤55°C)			
	230V	kW	11
	400V	kW	18.5
	415V	kW	18.5
	440V	kW	18.5
	500V	kW	20
	690V	kW	22
Rated operational power AC-1 (T≤40°C)			
	230V	kW	21
	400V	kW	36
	500V	kW	45
	690V	kW	62
IEC max current le in DC1 with $L/R \le 1$ ms with			
	≤24V	A	35
	48V	Α	30
	75V	A	23
	110V	A	8
	220V	A	_
IEC max current le in DC1 with $L/R \le 1$ ms with		_	
	≤24V	A	36
	48V	A	34
	75V	A	29
	110V	A	32
	220V	A	4
IEC max current le in DC1 with $L/R \le 1$ ms with	•	^	20
	≤24V	A	36



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ENERGY AND AUTOMATION				
	48V	А	34	
	75V	А	33	
	110V	А	34	
	220V	Α	30	
IEC max current le in DC1 with $L/R \le 1$ ms with 4 poles in series				
	≤24V	А	36	
	48V	А	34	
	75V	А	33	
	110V	А	34	
	220V	А	38	
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 1 poles in series				
·	≤24V	А	24	
	48V	А	20	
	75V	A	17	
	110V	A	2,5	
	220V	A	_	
IEC max current le in DC3-DC5 with L/R \leq 15ms with 2 poles in series	220 V	/ `		
TEC max current le in DC3-DC3 with Err 3 15ms with 2 poles in series	<241/	٨	20	
	≤24V 48V	A	28	
		A	25	
	75V	A	22	
	110V	A	18	
	220V	A	3	
IEC max current le in DC3-DC5 with L/R \leq 15ms with 3 poles in series				
	≤24V	А	32	
	48V	А	28	
	75V	А	28	
	110V	А	23	
	220V	А	25	
IEC max current le in DC3-DC5 with $L/R \le 15$ ms with 4 poles in series				
	≤24V	А	32	
	48V	А	28	
	75V	А	28	
	110V	А	23	
	220V	А	15	
Short-time allowable current for 10s (IEC/EN60947-1)		А	320	
Protection fuse				
	gG (IEC)	А	63	
	aM (IEC)	A	40	
Making capacity (RMS value)		A	380	
		~	500	
Breaking capacity at voltage	44017	۸	204	
	440V	A	304	
	500V	A	240	
2	690V	<u>A</u>	192	
Resistance per pole (average value)		mΩ	2	
Power dissipation per pole (average value)				
	lth	W	6	
	AC3	W	2.9	
Tightening torque for terminals				
	min	Nm	2.5	
	max	Nm	3	
	min	Ibin	1.8	
	max	Ibin	2.2	

Tightening torque for coil terminal



R	F3	28	0	N	D	12	4

		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	,			
	AWG/Kcmil			
		max		6
	Flexible w/o lug conductor section			-
	5	min	mm²	2.5
		max	mm²	16
	Flexible c/w lug conductor section			-
		min	mm²	1
		max	mm²	10
	Flexible with insulated spade lug conductor section	тах		10
	The state with insulated space my conductor section	min	mm²	1
		max	mm²	10
		Πάλ	11111	IP20 when
Power terminal prote	ction according to IEC/EN 60529			properly wired
Mechanical features				
Operating position				
operating position		normal		Vertical plan
		allowable		Vertical plan ±30°
		allowable		Screw / DIN rai
Fixing				35mm
Waight			~	554
Weight			g	554
Conductor section				
	AWG/kcmil conductor section			0
		max		6
Operations				0000000
Mechanical life			cycles	2000000
Electrical life			cycles	1400000
Safety related data				
Performance level B1	10d according to EN/ISO 13489-1			
		rated load	cycles	1400000
		echanical load	cycles	2000000
	ling to IEC/EN 609474-4-1			yes
EMC compatibility				yes
DC coil operating				
DC rated control volta	age		V	24
DC operating voltage				
	pick-up			
		min	%Us	70
		max	%Us	125
	drop-out			
		min	%Us	10
		max	%Us	40
Average coil consum	ption ≤20°C			-
	F	in-rush	W	5.4
		holding	W	5.4 5.4
Max cycles frequency			vv	у. т
Max cycles nequency Mechanical operation			cycles/h	3600
			Cycles/11	3000
Operating times				



ENERGY AND AUTOMATION

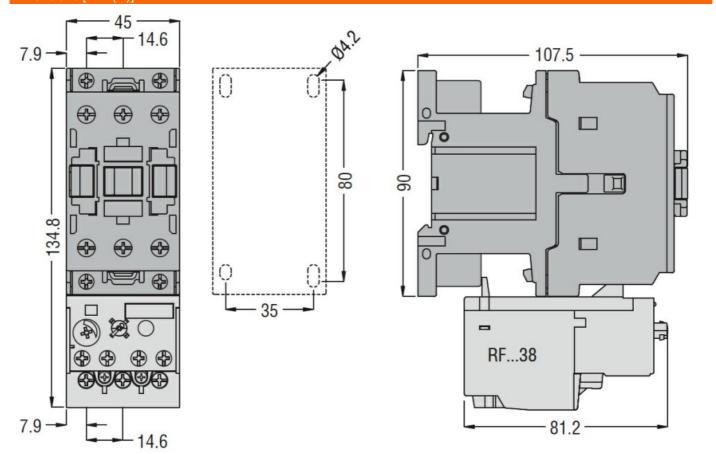
in AC Closing NO min ms 8 max ms 24 Opening NO min ms 5 max ms 15 Closing NC min ms 9 max ms 20 Opening NC min ms 9 max ms 17 in DC Closing NO min ms 54 max ms 17 in DC Closing NO min ms 14 max ms 15 Full-load current (FLA) for three-phase AC motor Full-load current (FLA) for three-phase AC motor for single-phase AC motor 110/120V HP 3 220/230V HP 15 460/480V HP 10 220/230V HP 15 460/480V HP 30 Short-circuit protection fuse, 600V High fault Short circuit current kA 100 Fuse rating A 100
Min ms 8 Opening NO min ms 5 Max ms 15 Closing NC min ms 9 Max ms 12 Opening NC min ms 9 Max ms 17 in DC Closing NO min ms 54 Opening NO min ms 9 Max ms 17 17 in DC Closing NO min ms 54 Opening NO min ms 54 Max ms 14 max ms 14 Max ms 14 max ms 14 UL technical data min ms 14 max 32 Yielded mechanical performance max 110/120V HP 3 200/200V HP 10 220/230V HP 10 220/230V HP 30 <t< td=""></t<>
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 in DC Closing NO min ms 54 Opening NO min ms 54 Max ms 54 66 Opening NO min ms 54 Max ms 14 max ms 17 UL technical data ms 14 max ms 17 UL technical data max ms 14 max ms 17 UL technical data for three-phase AC motor at 480V A 40 32 Yielded mechanical performance for single-phase AC motor 200/203V HP 7.5 for three-phase AC motor 200/203V HP 10 <t< td=""></t<>
Opening NO min ms 5 max ms 15 Closing NC min ms 9 Opening NC min ms 9 Opening NC min ms 9 max ms 17 In DC Closing NO min ms 66 Opening NO min ms 54 Max ms 54 max ms 66 Opening NO min ms 14 max ms 160 Ut technical data max ms 14 max 160 1 10 10 110 110 14 10 110 <
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max ms 20 min ms 9 max ms 17 in DC Closing NO min ms 54 Opening NO min ms 66 Opening NO min ms 14 max ms 14 max ms 17 UL technical data Full-load current (FLA) for three-phase AC motor at 480V A 40 at 600V HP 32 Yielded mechanical performance 110/120V HP 3 200/208V HP 10 220/230V HP 15 460/480V HP 30 30 30 30 General USE <t< td=""></t<>
Opening NC min ms 9 in DC Closing NO max ms 17 in DC Closing NO min ms 54 Opening NO max ms 54 Max ms 54 Opening NO max ms 54 Max ms 54 Opening NO max ms 14 Max ms 14 max ms 17 UL technical data max ms 14 max ms 14 Full-load current (FLA) for three-phase AC motor at 480V A 40 at 600V A 32 Yielded mechanical performance if or three-phase AC motor if or three-phase AC
min ms 9 max in DC Closing NO Closing NO min ms 54 max Opening NO min ms 14 max UL technical data min ms 14 max Full-load current (FLA) for three-phase AC motor at 480V A 40 at 600V A 32 Yielded mechanical performance 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 10 220/230V HP 10 220/230V HP 15 460/480V HP 30 30 General USE Contactor AC current A 55 Short-circuit protection fuse, 600V High fault KA 100
max ms 17 in DC Closing NO min ms 54 Max ms 66 66 Opening NO min ms 14 max ms 14 max ms 17 UL technical data Full-load current (FLA) for three-phase AC motor at 480V A 40 Yielded mechanical performance for single-phase AC motor 110/120V HP 3 Yielded mechanical performance 110/120V HP 3 for three-phase AC motor 200/208V HP 10 220/2030V HP 15 460/480V HP 30 General USE Contactor AC current A 55 Short-circuit protection fuse, 600V High fault KA 100
in DC Closing NO Min ms 54 max ms 66 Opening NO Min ms 14 max ms 17 UL technical data Full-load current (FLA) for three-phase AC motor at 480V A 40 at 600V A 32 Yielded mechanical performance 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 A 55 Short-circuit protection fuse, 600V High fault Short circuit current KA 100
$\begin{array}{c} \mbox{Closing NO} \\ & \mbox{max} & \mbox{ms} & \begin{subarray}{c} 54 \\ max & \mbox{ms} & \begin{subarray}{c} 56 \\ min & \mbox{ms} & \begin{subarray}{c} 14 \\ max & \mbox{ms} & \begin{subarray}{c} 17 \\ max & \mbox{ms} & \begin{subarray}{c} 16 \\ min & \mbox{ms} & \begin{subarray}{c} 16 \\ max & \begin{subarray}{c} 16$
$\begin{array}{c cccc} & & & & & & & & & & & & & & & & & $
$\begin{array}{c c c c c c } & max & ms & 66 \\ & min & ms & 14 \\ & max & ms & 17 \\ \hline \\ $
Opening NO min ms 14 max ms 17 UL technical data Full-load current (FLA) for three-phase AC motor at 480V A 40 at 600V A 32 Yielded mechanical performance for single-phase AC motor 110/120V HP 3 az 32 Yielded mechanical performance for three-phase AC motor 110/120V HP 3 az 32 General USE Contactor AC current A 55 Short-circuit protection fuse, 600V High fault Ac current KA 100
min ms 14 max min ms 17 UL technical data Full-load current (FLA) for three-phase AC motor at 480V A 40 at 600V A 32 Yielded mechanical performance 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 General USE Contactor AC current A 55 Short-circuit protection fuse, 600V High fault KA 100
max ms 17 UL technical data Full-load current (FLA) for three-phase AC motor at 480V A 40 at 600V A 32 Yielded mechanical performance for single-phase AC motor 110/120V HP 3 230V HP 7.5 110/120V HP 3 for three-phase AC motor 200/208V HP 10 220/230V HP 15 460/480V HP 30 General USE AC current A 55 Short-circuit protection fuse, 600V High fault Short circuit current KA 100
UL technical data Full-load current (FLA) for three-phase AC motor at 480V A 40 at 600V HP 3 Yielded mechanical performance for single-phase AC motor 110/120V HP 3 200/208V HP 10 220/230V HP 10 220/230V HP 15 460/480V HP 30 General USE Contactor AC current A 55 Short-circuit protection fuse, 600V High fault
Full-load current (FLA) for three-phase AC motor at 480V A 40 at 600V A 32 Yielded mechanical performance 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 10 220/230V HP 15 460/480V HP 30 General USE Contactor AC current A 55 Short-circuit protection fuse, 600V High fault Short circuit current kA 100
at 480V A 40 at 600V A 32 Yielded mechanical performance for single-phase AC motor 110/120V HP 3 230V HP 7.5 7.5 7.5 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 A 55 Short-circuit protection fuse, 600V High fault KA 100
at 600V A 32 Yielded mechanical performance 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 General USE Contactor AC current A 55 Short-circuit protection fuse, 600V High fault Short circuit current KA 100
Yielded mechanical performance 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 A 55 Short-circuit protection fuse, 600V High fault Short circuit current kA 100
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 General USE Contactor AC current A 55 Short-circuit protection fuse, 600V High fault Short circuit current KA 100
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 General USE Contactor AC current A 55 Short-circuit protection fuse, 600V High fault Short circuit current KA 100
230V HP 7.5 for three-phase AC motor 200/208V HP 10 220/230V HP 15 460/480V HP 30 General USE Contactor AC current A 55 Short-circuit protection fuse, 600V High fault Short circuit current KA 100
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 A 55 Short-circuit protection fuse, 600V High fault Short circuit current KA 100
200/208V HP 10 220/230V HP 15 460/480V HP 30 575/600V HP 30 General USE Contactor AC current A 55 Short-circuit protection fuse, 600V High fault Short circuit current kA 100
220/230V HP 15 460/480V HP 30 575/600V HP 30 General USE Contactor AC current A 55 Short-circuit protection fuse, 600V High fault Short circuit current kA 100
460/480V HP 30 575/600V HP 30 General USE Contactor AC current A 55 Short-circuit protection fuse, 600V High fault Kan and the second
General USE Contactor AC current A 55 Short-circuit protection fuse, 600V High fault Short circuit current kA 100
Contactor AC current A 55 Short-circuit protection fuse, 600V High fault Short circuit current kA 100
AC current A 55 Short-circuit protection fuse, 600V High fault Short circuit current kA 100
Short-circuit protection fuse, 600V High fault Short circuit current kA 100
High fault Short circuit current kA 100
Short circuit current kA 100
Short circuit current kA 100
ruse raing A 100
Fuse class J
Standard fault
Short circuit current kA 5
Fuse rating A 150
Ambient conditions
Temperature
Operating temperature
min °C -50
max °C 70
Storage temperature
min °C -60
max °C 80
Max altitude m 3000



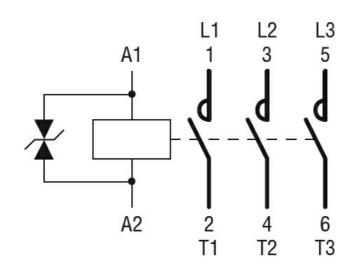
3

Resistance & Protection Pollution degree

Dimensions [mm (in)]



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		

BF3800D024



	UL 60947-4-1	
Certificates		
	CCC	
	cULus	
	EAC	
ETIM classificati	on	
		EC000066 -

ETIM 8.0

EC000066 -Power contactor, AC switching

BF3800D024





Product designation			Power contactor
Product type designation			BF38
Contact characteristics Number of poles		Nr.	3
Rated insulation voltage Ui IEC/EN		V	<u> </u>
Rated impulse withstand voltage Uimp		kV	6
Operational frequency		ΓV	0
	min	Hz	25
	max	Hz	400
IEC Conventional free air thermal current Ith	Пах	A	56
Operational current le		71	
	AC-1 (≤40°C)	А	56
	AC-1 (≤40°C) with 16mm ² wire and fork end		60
	AC-1 (≤55°C)	A	45
	AC-1 (≤55°C) with 16mm ² 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)	Ă	38
	AC-4 (400V)	А	15.5
Rated operational power AC-3 (T≤55°C)			
	230V	kW	11
	400V	kW	18.5
	415V	kW	18.5
	440V	kW	18.5
	500V	kW	20
	690V	kW	22
Rated operational power AC-1 (T≤40°C)			
	230V	kW	21
	400V	kW	36
	500V	kW	45
	690V	kW	62
IEC max current le in DC1 with $L/R \le 1$ ms with			
	≤24V	A	35
	48V	Α	30
	75V	A	23
	110V	A	8
	220V	A	_
IEC max current le in DC1 with $L/R \le 1$ ms with		_	
	≤24V	A	36
	48V	A	34
	75V	A	29
	110V	A	32
	220V	A	4
IEC max current le in DC1 with $L/R \le 1$ ms with	•	^	20
	≤24V	A	36



	48V	А	34
	75V	A	33
	110V	A	34
	220V	A	30
IEC may aurrent to in DC1 with L/P < 1 ma with 4 pales in series	220 V	~	50
IEC max current le in DC1 with $L/R \le 1$ ms with 4 poles in series	<0.4) (۸	00
	≤24V	A	36
	48V	A	34
	75V	A	33
	110V	А	34
	220V	A	38
IEC max current le in DC3-DC5 with L/R \leq 15ms with 1 poles in series			
	≤24V	А	24
	48V	А	20
	75V	А	17
	110V	А	2,5
	220V	А	_
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 2 poles in series			
	≤24V	А	28
	48V	A	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	~	5
The max current le in DC3-DC3 with $L/R \leq 15$ ms with 5 poles in series	<0.4) (٨	20
	≤24V	A	32
	48V	A	28
	75V	А	28
	110V	А	23
	220V	A	25
IEC max current le in DC3-DC5 with L/R \leq 15ms with 4 poles in series			
	≤24V	А	32
	48V	Α	28
	75V	А	28
	110V	А	23
	220V	А	15
Short-time allowable current for 10s (IEC/EN60947-1)		А	320
Protection fuse			
	gG (IEC)	А	63
	aM (IEC)	A	40
Making capacity (RMS value)		A	380
Breaking capacity at voltage		~	500
Dieaning capacity at voltage	44017	۸	204
	440V	A	304
	500V	A	240
	690V	<u>A</u>	192
Resistance per pole (average value)		mΩ	2
Power dissipation per pole (average value)			
	lth	W	6
	AC3	W	2.9
Tightening torque for terminals			
	min	Nm	2.5
	max	Nm	3
	min	Ibin	1.8
	max	Ibin	2.2

Tightening torque for coil terminal



BF3800D048

	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			
	AWG/Kcmil		
	max		6
	Flexible w/o lug conductor section		
	min	mm²	2.5
	max	mm²	16
	Flexible c/w lug conductor section		
	min	mm²	1
	max	mm²	10
	Flexible with insulated spade lug conductor section		
	min	mm²	1
	max	mm²	10
	tion according to IEC/EN COESS		IP20 when
Power terminal protec	tion according to IEC/EN 60529		properly wired
Mechanical features			
Operating position			
	normal		Vertical plan
	allowable		±30°
			Screw / DIN rail
Fixing			35mm
Weight		g	560
Conductor section		•	
	AWG/kcmil conductor section		
	max		6
Operations			
Mechanical life		cycles	20000000
Electrical life		cycles	1400000
Safety related data		-,	
	0d according to EN/ISO 13489-1		
	rated load	cycles	1400000
	mechanical load	cycles	20000000
Mirror contats accordi	ng to IEC/EN 609474-4-1	- , 0.00	yes
EMC compatibility			yes
DC coil operating			,
DC rated control volta		V	48
DC operating voltage	<u>y</u> ~	v	<i>i</i> 0
	pick-up		
		%Us	70
	min	%Us %Us	125
	drop out	/005	120
	drop-out	0/11-	10
	min		10
	max	%Us	40
Average coil consump		1.4.7	F 4
	in-rush	W	5.4
	holding	W	5.4
Max cycles frequency			0.000
Mechanical operation		cycles/h	3600
Operating times			



ENERGY AND AUTOMATION

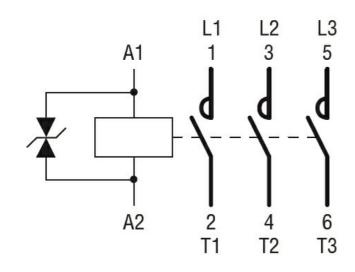
Average time for Us of	control				
Average time for US t	in AC				
		Closing NO			
		clocking ite	min	ms	8
			max	ms	24
		Opening NO			
			min	ms	5
			max	ms	15
		Closing NC			
			min	ms	9
			max	ms	20
		Opening NC			
			min	ms	9
			max	ms	17
	in DC				
		Closing NO			
			min	ms	54
		_	max	ms	66
		Opening NO			
			min	ms	14
			max	ms	17
UL technical data					
Full-load current (FLA	A) for three-phase AC r	notor			10
			at 480V	A	40
			at 600V	A	32
Yielded mechanical p					
	for single-phase AC	C motor			•
			110/120V	HP	3
			230V	HP	7.5
	for three-phase AC	motor	000/000)/		4.0
			200/208V	HP	10
			220/230V	HP	15
			460/480V	HP	30
General USE			575/600V	HP	30
General USE	Contactor				
	Contactor		AC current	А	55
Short-circuit protectio	n fuse 600V		AC current	А	55
	High fault				
	i ligit lault		Short circuit current	kA	100
			Fuse rating	A	100
			Fuse class	~	J
	Standard fault		1 430 01433		<u> </u>
			Short circuit current	kA	5
			Fuse rating	A	150
Ambient conditions					
Temperature					
	Operating temperat	ure			
	Shoresting combolide		min	°C	-50
			max	°Č	70
	Storage temperatur	е		~	-
	ge temperatur	-	min	°C	-60
			max	°Č	80
Max altitude				m	3000



ENERGY AND AUTOMATION

Resistance & Protection Pollution degree 3 Dimensions [mm (in)] 45 -14.6 7.9 107.5 0 P/ 8 £7 0 0 80 06 П 7 134.8 ()8 AL 35 Г -RF...38 8 7.9-81.2 14.6

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	

BF3800D048



	UL 60947-4-1	
Certificates		
	CCC	
	cULus	
	EAC	
ETIM classificati	on	
		EC000066 -

ETIM 8.0

EC000066 -Power contactor, AC switching





Product designation			Power contactor
Product type designation			BF38
Contact characteristics Number of poles		Nr.	3
Rated insulation voltage Ui IEC/EN		V	<u> </u>
Rated impulse withstand voltage Uimp		kV	6
Operational frequency		ΓV	0
	min	Hz	25
	max	Hz	400
IEC Conventional free air thermal current Ith	Пах	A	56
Operational current le		71	
	AC-1 (≤40°C)	А	56
	AC-1 (≤40°C) with 16mm ² wire and fork end		60
	AC-1 (≤55°C)	A	45
	AC-1 (≤55°C) with 16mm ² 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)	Ă	38
	AC-4 (400V)	А	15.5
Rated operational power AC-3 (T≤55°C)			
	230V	kW	11
	400V	kW	18.5
	415V	kW	18.5
	440V	kW	18.5
	500V	kW	20
	690V	kW	22
Rated operational power AC-1 (T≤40°C)			
	230V	kW	21
	400V	kW	36
	500V	kW	45
	690V	kW	62
IEC max current le in DC1 with $L/R \le 1$ ms with			
	≤24V	A	35
	48V	Α	30
	75V	A	23
	110V	A	8
	220V	A	_
IEC max current le in DC1 with $L/R \le 1$ ms with		_	
	≤24V	A	36
	48V	A	34
	75V	A	29
	110V	A	32
	220V	A	4
IEC max current le in DC1 with $L/R \le 1$ ms with	•	^	20
	≤24V	A	36



	48V	А	34
	75V	А	33
	110V	А	34
	220V	A	30
IEC max current le in DC1 with L/R ≤ 1ms with 4 poles in series			
	≤24V	А	36
	48V	A	34
	48V 75V	A	33
	110V	A	34
	220V		38
IFC may summant to in DC2 DC5 with 1/D < 15 may with 1 males in series	2200	A	30
IEC max current le in DC3-DC5 with $L/R \le 15$ ms with 1 poles in series	(0.1)	•	0.4
	≤24V	A	24
	48V	A	20
	75V	А	17
	110V	А	2,5
	220V	Α	-
IEC max current le in DC3-DC5 with L/R \leq 15ms with 2 poles in series			
	≤24V	А	28
	48V	А	25
	75V	А	22
	110V	А	18
	220V	А	3
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 3 poles in series			
	≤24V	А	32
	48V	A	28
	48V 75V	A	28
	110V	A	23
	220V	A	25
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 4 poles in series	220 V	A	25
The contrast current is in DC3-DC5 with $L/R \le 15$ ms with 4 poiss in series	(0.1)	•	00
	≤24V	A	32
	48V	A	28
	75V	А	28
	110V	А	23
	220V	A	15
Short-time allowable current for 10s (IEC/EN60947-1)		А	320
Protection fuse			
	gG (IEC)	А	63
	aM (IEC)	А	40
Making capacity (RMS value)		А	380
Breaking capacity at voltage			
	440V	А	304
	500V	A	240
	690V	A	192
Resistance per pole (average value)	0300	mΩ	2
		11122	۷
Power dissipation per pole (average value)	141	1.47	C
	lth	W	6
	AC3	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



_				
В	F38	00	D0	60

	mir		0.8
	ma		1
	mir		0.8
Max number of wires a	max	i Ibin Nr.	0.74
Conductor section	imultaneously connectable	INI.	2
Conductor Section	AWG/Kcmil		
	may		6
	Flexible w/o lug conductor section	·	•
	mir	mm²	2.5
	max	mm²	16
	Flexible c/w lug conductor section		
	mir	mm²	1
	max	mm²	10
	Flexible with insulated spade lug conductor section		
	mir	mm²	1
	max	mm²	10
Power terminal protect	tion according to IEC/EN 60529		IP20 when
· .			properly wired
Mechanical features			
Operating position		1	Vertical plan
	norma allowable		Vertical plan ±30°
	allowable		Screw / DIN rail
Fixing			35mm
Weight		g	560
Conductor section		9	
	AWG/kcmil conductor section		
	ma	,	6
Operations			
Mechanical life		cycles	20000000
Electrical life		cycles	1400000
Safety related data			
Performance level B10	Dd according to EN/ISO 13489-1		
	rated load	•	1400000
	mechanical load	cycles	2000000
	ng to IEC/EN 609474-4-1		yes
EMC compatibility			yes
DC coil operating			
DC rated control voltage	ge	V	60
DC operating voltage			
	pick-up	0/11	
	mir		70
	max	%Us	125
	drop-out	0/11-	10
	mir		10
	tion <20°C	%Us	40
Average coil consump	tion ≤20°C in-rusł	W	5.4
	holding		5.4 5.4
Max cycles frequency		٧٧	J.T
Max cycles nequency Mechanical operation		cycles/h	3600
Operating times		0,000,11	
operating-times			



ENERGY AND AUTOMATION

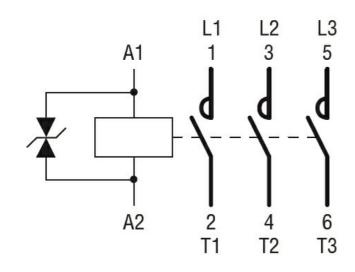
Average time for Us of	control				
	in AC				
		Closing NO			
			min	ms	8
			max	ms	24
		Opening NO			_
			min	ms	5
		Closing NC	max	ms	15
		Closing NC	min	me	9
			max	ms ms	9 20
		Opening NC	max	1113	20
		oponing ro	min	ms	9
			max	ms	17
	in DC				
		Closing NO			
			min	ms	54
			max	ms	66
		Opening NO			
			min	ms	14
			max	ms	17
UL technical data					
Full-load current (FLA	 A) for three-phase AC 	C motor			
			at 480V	А	40
			at 600V	Α	32
Yielded mechanical p	performance				
	for single-phase A	AC motor			
			110/120V	HP	3
			230V	HP	7.5
	for three-phase A	C motor			
			200/208V	HP	10
			220/230V	HP	15
			460/480V	HP	30
			575/600V	HP	30
General USE	Contactor				
	Contactor		AC current	А	55
Short-circuit protectio	n fuse 600V		AU CUITEIIL	А	55
	High fault				
			Short circuit current	kA	100
			Fuse rating	A	100
			Fuse class		J
	Standard fault				
			Short circuit current	kA	5
			Fuse rating	А	150
Ambient conditions					
Temperature					
	Operating temper	ature			
			min	°C	-50
			max	°C	70
	Storage temperat	ure			
			min	°C	-60
			max	°C	80
Max altitude				m	3000



ENERGY AND AUTOMATION

Resistance & Protection Pollution degree 3 Dimensions [mm (in)] 45 -14.6 7.9 107.5 0 P/ 8 £7 0 0 80 06 П 7 134.8 ()8 41 35 Г -RF...38 8 7.9-81.2 14.6

Wiring diagrams



Certifications and compliance

Compliance

CSA C22.2 n° 60947-1	
CSA C22.2 n° 60947-1	
IEC/EN/BS 60947-1	
IEC/EN/BS 60947-4-1	
UL 60947-1	

BF3800D060



	UL 60947-4-1	
Certificates		
	CCC	
	cULus	
	EAC	
ETIM classificati	on	
		EC000066 -

ETIM 8.0

EC000066 -Power contactor, AC switching

BF3800D060





Product designation			Power contactor
Product type designation			BF38
Contact characteristics			
Number of poles		Nr.	3
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		А	56
Operational current le			
	AC-1 (≤40°C)	А	56
	AC-1 (≤40°C) with 16mm² wire and fork end	lugA	60
	AC-1 (≤55°C)	A	45
	AC-1 (≤55°C) with 16mm² wire and fork end	lugA	48
	AC-1 (≤70°C)	Â	40
	AC-1 (≤70°C) with 16mm² wire and fork end	lugA	42
	AC-3 (≤440V ≤55°C)	A	38
	AC-4 (400V)	А	15.5
Rated operational power AC-3 (T≤55°C)			
	230V	kW	11
	400V	kW	18.5
	415V	kW	18.5
	440V	kW	18.5
	500V	kW	20
	690V	kW	22
Rated operational power AC-1 (T≤40°C)			
	230V	kW	21
	400V	kW	36
	500V	kW	45
	690V	kW	62
IEC max current le in DC1 with $L/R \le 1$ ms with	h 1 poles in series		
	≤24V	А	35
	48V	А	30
	75V	А	23
	110V	А	8
	220V	А	_
IEC max current le in DC1 with $L/R \le 1$ ms with	•		
	≤24V	А	36
	48V	А	34
	75V	А	29
	110V	А	32
	220V	Α	4
IEC max current le in DC1 with $L/R \le 1$ ms with			
	≤24V	А	36



	BF38(00D110
RENT IE (AC3) = 38A,	DC COIL,	110VDC

	48V	А	34
	75V	А	33
	110V	А	34
	220V	А	30
IEC max current le in DC1 with L/R ≤ 1ms with 4 poles in series			
	≤24V	А	36
	48V	A	34
	48V 75V	A	33
	110V	A	34
	220V		
IFC may summant to in DC2 DC5 with 1/D < 15 may with 1 males in series	2200	A	38
IEC max current le in DC3-DC5 with $L/R \le 15$ ms with 1 poles in series	10 A V	•	0.4
	≤24V	A	24
	48V	A	20
	75V	А	17
	110V	А	2,5
	220V	A	-
IEC max current le in DC3-DC5 with L/R \leq 15ms with 2 poles in series			
	≤24V	А	28
	48V	А	25
	75V	А	22
	110V	А	18
	220V	А	3
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 3 poles in series			
·	≤24V	А	32
	48V	A	28
	75V	A	28
	110V	A	23
	220V	A	25
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 4 poles in series	2201	~~~~	20
	≤24V	А	32
	≤24V 48V	A	
			28
	75V	A	28
	110V	A	23
	220V	A	15
Short-time allowable current for 10s (IEC/EN60947-1)		A	320
Protection fuse			
	gG (IEC)	А	63
	aM (IEC)	Α	40
Making capacity (RMS value)		А	380
Breaking capacity at voltage			
	440V	А	304
	500V	A	240
	690V	A	192
Resistance per pole (average value)		mΩ	2
Power dissipation per pole (average value)			_
	lth	W	6
	AC3	W	2.9
Tightoning torque for terminele	AUS	٧V	2.3
Tightening torque for terminals		Nies	0.5
	min	Nm	2.5
	max	Nm	3
	min	Ibin	1.8
	max	Ibin	2.2
Tightening torque for coil terminal			

Tightening torque for coil terminal



		min	Nm	0.8
		max	Nm	1
		min	Ibin	0.8
	in the second second stabils	max	Ibin	0.74
Conductor section	imultaneously connectable		Nr.	2
Conductor section	AWG/Kcmil			
		max		6
	Flexible w/o lug conductor section	Шах		0
		min	mm²	2.5
		max	mm²	16
	Flexible c/w lug conductor section			
	C	min	mm²	1
		max	mm²	10
	Flexible with insulated spade lug conducto	r section		
		min	mm²	1
		max	mm²	10
Power terminal protect	tion according to IEC/EN 60529			IP20 when
				properly wired
Mechanical features				
Operating position				<i></i>
		normal		Vertical plan ±30°
		allowable		
Fixing				Screw / DIN rail 35mm
Weight			g	560
Conductor section			9	
	AWG/kcmil conductor section			
		max		6
Operations				-
Mechanical life			cycles	2000000
Electrical life			cycles	1400000
Safety related data				
Performance level B10	Dd according to EN/ISO 13489-1			
		rated load	cycles	1400000
		mechanical load	cycles	2000000
	ng to IEC/EN 609474-4-1			yes
EMC compatibility				yes
AC coil operating				
AC operating voltage				
	of 60Hz coil powered at 60Hz			
	drop-out		0/17	0.54
	mation at 20°C	min	%Us	2.E1
AC average coil consu	•			
	of 50/60Hz coil powered at 50Hz	in-rush	VA	75
		holding	VA VA	75 9
	of 50/60Hz coil powered at 60Hz	noiuing	٧A	3
	or soluting compowered at ourig	in-rush	VA	70
		holding	VA VA	70
	of 60Hz coil powered at 60Hz	Totality		·
		in-rush	VA	75
		holding	VA	9
		0		



ENERGY AND AUTOMATION

BF3800D110

Dissipation at holding :	≤20°C 50Hz			W	2.5
DC coil operating					
DC rated control voltag	ge			V	110
DC operating voltage					
	pick-up				
			min	%Us	70
			max	%Us	125
	drop-out			0/11-	4.0
			min	%Us %Us	10 40
Average coil consump	tion <20°C		max	/005	40
werage con consump			in-rush	W	5.4
			holding	W	5.4
Max cycles frequency					
Mechanical operation				cycles/h	3600
Operating times				-	
Average time for Us co					
	in AC				
		Closing NO			
			min	ms	8
			max	ms	24
		Opening NO			F
			min	ms	5 15
		Closing NC	max	ms	15
			min	ms	9
			max	ms	20
		Opening NC			
			min	ms	9
			max	ms	17
	in DC				
		Closing NO			
			min	ms	54
			max	ms	66
		Opening NO	min	me	14
			max	ms ms	17
UL technical data			Шах	mo	17
Full-load current (FLA)	for three-phase	AC motor			
× ,	,		at 480V	А	40
			at 600V	А	32
Yielded mechanical pe	erformance				
	for single-phas	se AC motor			
			110/120V	HP	3
			230V	HP	7.5
	for three-phase	e AC motor	000/0000		4.0
			200/208V	HP	10
			220/230V	HP up	15
			460/480V 575/600V	HP HP	30 30
General USE			575/000V	Π Γ	50
	Contactor				
	Contactor			٨	EE
			AC current	Α	55



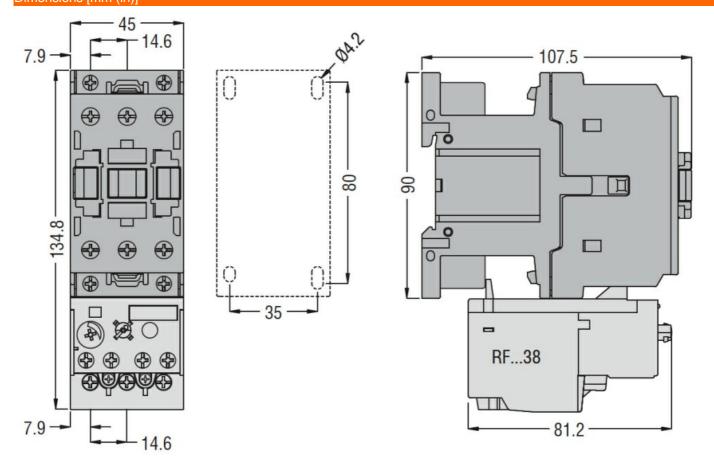
BF3800D110

	High fault			
		Short circuit current	kA	100
		Fuse rating	А	100
		Fuse class		J
	Standard fault			
		Short circuit current	kA	5
		Fuse rating	А	150
ient conditions				
perature				

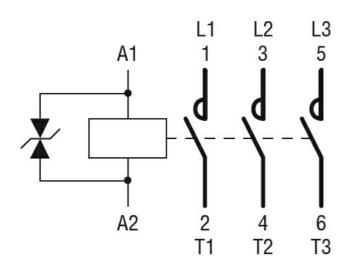
Operating temperature			
	min	°C	-50
	max	°C	70
Storage temperature			
	min	°C	-60
	max	°C	80
Max altitude		m	3000
Resistance & Protection			
Pollution degree			3

Dimensions [mm (in)]

Ambie Temp



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	

ETIM 8.0

EC000066 -Power contactor, AC switching





Product designation			Power contactor
Product type designation			BF38
Contact characteristics			
Number of poles		Nr.	3
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)	А	56
	AC-1 (≤40°C) with 16mm² wire and fork end		60
	AC-1 (≤55°C)	Ă	45
	AC-1 (≤55°C) with 16mm² wire and fork end	lugA	48
	AC-1 (≤70°C)	Ă	40
	AC-1 (≤70°C) with 16mm² wire and fork end		42
	AC-3 (≤440V ≤55°C)	Ă	38
	AC-4 (400V)	А	15.5
Rated operational power AC-3 (T≤55°C)			
	230V	kW	11
	400V	kW	18.5
	415V	kW	18.5
	440V	kW	18.5
	500V	kW	20
	690V	kW	22
Rated operational power AC-1 (T≤40°C)			
	230V	kW	21
	400V	kW	36
	500V	kW	45
	690V	kW	62
IEC max current le in DC1 with L/R ≤ 1ms with	1 poles in series		
	≤24V	А	35
	48V	А	30
	75V	А	23
	110V	А	8
	220V	А	_
IEC max current le in DC1 with L/R ≤ 1ms with			
	' ≤24V	А	36
	48V	A	34
	75V	A	29
	110V	A	32
	220V	A	4
IEC max current le in DC1 with L/R ≤ 1ms with		-	
	≤24V	А	36
	-211		



	48V	А	34
	75V	А	33
	110V	A	34
	220V	A	30
IEC max current le in DC1 with L/R ≤ 1ms with 4 poles in series	2201		
	≤24V	А	36
	48V	A	34
	75V	A	33
	110V	A	34
	220V	A	38
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 1 poles in series			
	≤24V	А	24
	48V	A	20
	75V	A	17
	110V	A	2,5
	220V	A	_
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 2 poles in series	2201	7.	
	≤24V	А	28
	48V	A	25
	40V 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	2201	7	0
	≤24V	А	32
	48V	A	28
	40V 75V	A	28
	110V	A	23
	220V	A	25
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 4 poles in series	2201	7	20
	≤24V	А	32
	48V	A	28
	75V	A	28
	110V	A	23
	220V	A	15
Short-time allowable current for 10s (IEC/EN60947-1)	2201	A	320
Protection fuse		~	520
	gG (IEC)	А	63
	aM (IEC)	A	40
Making capacity (RMS value)		A	380
Breaking capacity at voltage		7.	
	440V	А	304
	500V	A	240
	690V	A	192
Resistance per pole (average value)	0001	mΩ	2
Power dissipation per pole (average value)			
	Ith	W	6
	AC3	W	2.9
Tightening torque for terminals			
	min	Nm	2.5
	max	Nm	3
	min	Ibin	1.8
	max	Ibin	2.2

Tightening torque for coil terminal



BF3800D125 THREE-POLE CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 38A, DC COIL, 125VDC

ENERGY AND AUTOMATION				
		min	Nm	0.8
		min	Nm	1
		max		
		min	Ibin	0.8
		max	Ibin	0.74
	simultaneously connectable		Nr.	2
Conductor section				
	AWG/Kcmil			
		max		6
	Flexible w/o lug conductor section			
		min	mm²	2.5
		max	mm²	16
	Flexible c/w lug conductor section			
	C C	min	mm²	1
		max	mm²	10
	Flexible with insulated spade lug conductor			
		min	mm²	1
		max	mm²	10
		IIIdA		IP20 when
Power terminal prote	ction according to IEC/EN 60529			properly wired
Mechanical features				property when
Operating position				
Operating position				\/ anti-al-al-a
		normal		Vertical plan
		allowable		±30°
Fixing				Screw / DIN rail
				35mm
Weight			g	560
Conductor section				
	AWG/kcmil conductor section			
		max		6
Operations				
Mechanical life			cycles	2000000
Electrical life			cycles	1400000
Safety related data				
Performance level B1	0d according to EN/ISO 13489-1			
	-	rated load	cycles	1400000
		mechanical load	cycles	20000000
Mirror contats accord	ing to IEC/EN 609474-4-1		-,0.00	yes
EMC compatibility				yes
DC coil operating				y03
DC coll operating DC rated control volta			V	125
			V	120
DC operating voltage				
	pick-up			
		min	%Us	70
		max	%Us	125
	drop-out			
		min	%Us	10
		max	%Us	40
Average coil consum	ption ≤20°C			
-	-	in-rush	W	5.4
		holding	W	5.4
		noiding	* *	

Max cycles frequency	
Mechanical operation	cycles/h 3600
Operating times	

BF3800D125



Average time for Us control in AC **Closing NO** min ms 8

			[1]][1]	1115	0	
			max	ms	24	
			тах			
		Opening NO				
			min	ms	5	
					15	
			max	ms	15	
		Closing NC				
			min	ms	9	
			max	ms	20	
		Opening NC				
			min	ms	9	
			max	ms	17	
	in DC					
		Closing NO				
			min	ms	54	
			max	ms	66	
		Opening NO				
			min	ms	14	
			max	ms	17	
LIL to choice l dete						
UL technical data						
Full-load current (FL/	A) for three-phase AC	; motor				
·	-		at 480V	А	40	
			at 600V	Α	32	
Yielded mechanical p	performance					
		C motor				
	for single-phase A					
			110/120V	HP	3	
			230V	HP	7.5	
	<u> </u>		2001		1.0	
	for three-phase A	C motor				
			200/208V	HP	10	
			220/230V	HP	15	
			460/480V	HP	30	
			575/600V	HP	30	
General USE						
General USE						
	Contactor					
			AC current	А	55	
	(000) (AO CUITEIII	Λ	00	
Short-circuit protection	on fuse, 600V					
	High fault					
			Chart singuit surrent	LΛ	100	
			Short circuit current	kA	100	
			Fuse rating	Α	100	
			Fuse class		J	
	0(1 450 51455		~	
	Standard fault					
			Short circuit current	kA	5	
			Fuse rating	А	150	
A				Л	100	
Ambient conditions						
Temperature						
•	Operating towner	atura				
	Operating temperating	aluie				
			min	°C	-50	
			max	°C	70	
	0.0		max	0		
	Storage temperate	ure				
			min	°C	-60	
			max	°C	80	
			Παλ			
Max altitude				m	3000	

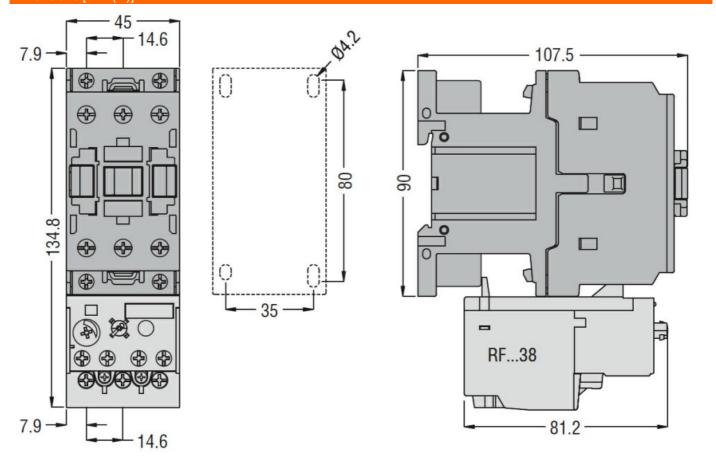


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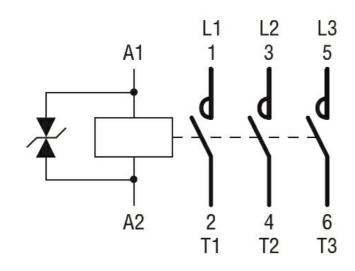
ENERGY AND AUTOMATION

Resistance & Protection Pollution degree

Dimensions [mm (in)]



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		

BF3800D125



	UL 60947-4-1	
Certificates		
	CCC	
	cULus	
	EAC	
ETIM classification	on	
		EC000066 -

ETIM 8.0

EC000066 -Power contactor, AC switching





Product designation			Power contactor
Product type designation			BF38
Contact characteristics			
Number of poles		Nr.	3
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)	А	56
	AC-1 (≤40°C) with 16mm ² wire and fork end	lugA	60
	AC-1 (≤55°C)	А	45
	AC-1 (≤55°C) with 16mm² wire and fork end	lugA	48
	AC-1 (≤70°C)	Α	40
	AC-1 (≤70°C) with 16mm ² wire and fork end	lugA	42
	AC-3 (≤440V ≤55°C)	А	38
	AC-4 (400V)	Α	15.5
Rated operational power AC-3 (T≤55°C)			
	230V	kW	11
	400V	kW	18.5
	415V	kW	18.5
	440V	kW	18.5
	500V	kW	20
	690V	kW	22
Rated operational power AC-1 (T≤40°C)			
	230V	kW	21
	400V	kW	36
	500V	kW	45
	690V	kW	62
IEC max current le in DC1 with L/R ≤ 1ms wi	th 1 poles in series		
	≤24V	А	35
	48V	А	30
	75V	А	23
	110V	А	8
	220V	А	_
IEC max current le in DC1 with L/R ≤ 1ms wi			
	' ≤24V	А	36
	48V	A	34
	75V	A	29
	110V	A	32
	220V	A	4
IEC max current le in DC1 with L/R ≤ 1ms wi		-	
	≤24V	А	36



$ \begin{array}{cccccccccccccccccccccccccccccccccccc$				
$\begin{array}{c c c c c c c c c c c c c c c c c c c $		48V	А	34
$\begin{array}{c c c c c c c c c c c c c c c c c c c $		75V	А	33
$\begin{array}{c c c c c c c c c c c c c c c c c c c $		110V	А	34
IEC max current le in DC1 with L/R ≤ 1ms with 4 poles in series\$24VA3648VA3475VA33110VA34220VA38IEC max current le in DC3-DC5 with L/R ≤ 15ms with 1 poles in series\$24VA2448VA2075VA17110VA2,5220VA-IEC max current le in DC3-DC5 with L/R ≤ 15ms with 2 poles in series\$24VA28200VA32575VA22110VA18220VA33IEC max current le in DC3-DC5 with L/R ≤ 15ms with 3 poles in series\$24VA32220VA32875VA22110VA18220VA33IEC max current le in DC3-DC5 with L/R ≤ 15ms with 3 poles in series\$24VA32220VA2875VA28110VA23220VA25IEC max current le in DC3-DC5 with L/R ≤ 15ms with 4 poles in series\$24VA32220VA23220VA25IEC max current le in DC3-DC5 with L/R ≤ 15ms with 4 poles in series\$24VA32220VA23220VA25IEC max current le in DC3-DC5 with L/R ≤ 15ms with 4 poles in series\$24VA3210VA23220VA48110		220V	А	
$\begin{aligned} & \begin{array}{c} & \end{array}{} & \begin{array}{c} & \end{array}{} & \begin{array}{c} & \end{array}{} & \begin{array}{c} & \end{array}{} & \begin{array}{c} & \begin{array}{c} & \begin{array}{c} & \end{array}{} & \end{array}{} & \begin{array}{c} & \end{array}{} & \end{array}{} & \begin{array}{c} & \end{array}{} & \end{array}{} & \end{array}{} \\ \hline & \begin{array}{c} & \begin{array}{c} & \end{array}{} & \end{array}{} & \end{array}{} & \begin{array}{c} & \end{array}{} & \end{array}{} & \end{array}{} & \end{array}{} & \end{array}{} & \begin{array}{c} & \end{array}{} & \end{array}{} & \end{array}{} & \end{array}{} & \end{array}{} & \end{array}{} \\ \hline & \begin{array}{c} & \end{array}{} \\ \hline & \begin{array}{c} & \end{array}{} & \end{array}{} & \end{array}{} & \end{array}{} \\ \hline & \begin{array}{c} & \end{array}{} & \end{array}{} & \end{array}{} & \end{array}{} \\ \hline & \begin{array}{c} & \end{array}{} & \end{array}{} & \end{array}{} & \end{array}{} \\ \hline & \end{array}{} \begin{array}{c} & \end{array}{} & \end{array}{} \\ \hline & \end{array}{} \end{array}{} \end{array}{} \end{array}{} \end{array}{} \end{array}{} \\ \hline \\ \hline & \begin{array}{c} & \end{array}{} \end{array}{} \end{array}{} \end{array}{} \end{array}{} \end{array}{} \end{array}{} \end{array}{} \end{array}{} \end{array}{}$	IEC max current le in DC1 with $L/R \le 1$ ms with 4 poles in series			
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $		<24\/	Δ	36
$\begin{array}{c c c c c c c c c c c c c c c c c c c $				
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IEC max current le in DC3-DC5 with L/R ≤ 15ms with 1 poles in series≤24VA2448VA2075VA17110VA2,5220VA-IEC max current le in DC3-DC5 with L/R ≤ 15ms with 2 poles in series≤24VA2848VA22110VA18220VA3IEC max current le in DC3-DC5 with L/R ≤ 15ms with 3 poles in series≤24VA3248VA2875VA22110VA18220VA2875VA2875VA2875VA2875VA2875VA2875VA25IEC max current le in DC3-DC5 with L/R ≤ 15ms with 4 poles in series≤24VA220VA25IEC max current le in DC3-DC5 with L/R ≤ 15ms with 4 poles in series≤24VA220VA25IEC max current le in DC3-DC5 with L/R ≤ 15ms with 4 poles in series≤24VA220VA25IEC max current le in DC3-DC5 with L/R ≤ 15ms with 4 poles in series≤24VA220VA25IEC max current le in DC3-DC5 with L/R ≤ 15ms with 4 poles in series≤24VA3220VA23220VA322448VA2875VA220VA155Short-t				
$ \begin{array}{c} \leq 24 \vee & A & 24 \\ 48 \vee & A & 20 \\ 75 \vee & A & 17 \\ 110 \vee & A & 2,5 \\ 220 \vee & A & - \end{array} \\ \hline IEC max current le in DC3\text{-}DC5 with L/R \leq 15ms with 2 poles in series \\ \leq 24 \vee & A & 28 \\ 48 \vee & A & 25 \\ 75 \vee & A & 22 \\ 110 \vee & A & 18 \\ 220 \vee & A & 3 \end{array} \\ \hline IEC max current le in DC3\text{-}DC5 with L/R \leq 15ms with 3 poles in series \\ \leq 24 \vee & A & 32 \\ 48 \vee & A & 28 \\ 75 \vee & A & 28 \\ 110 \vee & A & 33 \\ \hline IEC max current le in DC3\text{-}DC5 with L/R \leq 15ms with 3 poles in series \\ \leq 24 \vee & A & 32 \\ 48 \vee & A & 28 \\ 75 \vee & A & 28 \\ 110 \vee & A & 23 \\ 220 \vee & A & 23 \\ \hline IEC max current le in DC3\text{-}DC5 with L/R \leq 15ms with 4 poles in series \\ \hline IEC max current le in DC3\text{-}DC5 with L/R \leq 15ms with 4 poles in series \\ \hline IEC max current le in DC3\text{-}DC5 with L/R \leq 15ms with 4 poles in series \\ \hline Mak N & 23 \\ 220 \vee & A & 23 \\ 220 \vee & A & 32 \\ A & 24 \\ A \otimes 24 \\ CS N & A & 28 \\ 110 \vee A & 23 \\ 220 \vee A & 15 \\ \hline Short time allowable current for 10s (IEC/EN60947\text{-}1) \\ A & 320 \\ Protection fuse \\ \hline gG (IEC) & A & 63 \\ aM (IEC) & A & 63 \\ aM (IEC) & A & 40 \\ Adsing capacity tvoltage \\ \hline A & 40 \\ Ads A \\ 40 \vee A & 304 \\ 690 \vee A & 192 \\ Resistance per pole (average value) \\ \hline Mn & W & 6 \\ AC3 & W 2.9 \\ \hline Tightening torque for terminals \\ \hline min Nm & 3 \\ Nm \end{pmatrix} A \\ AC3 \vee A \\ AC3$	IFC may aureant to in DC2 DC5 with L/D < 15 ma with 1 nation in parise	220 V	A	30
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	The current is in DC3-DC5 with $L/R \le 15$ ms with 1 poles in series	-0.0.4	•	0.4
$\begin{array}{c c c c c c c c c c c c c c c c c c c $				
$\begin{array}{c c c c c c c c c c c c c c c c c c c $				
$\begin{array}{c c c c c c c c c c c c c c c c c c c $				
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 2 poles in series≤24VA28 48VA225 75VA222 110VA18 220VA3IEC max current le in DC3-DC5 with L/R ≤ 15ms with 3 poles in series≤24VA32 48VA22 220VA32 48VA22 220VA22 220VIEC max current le in DC3-DC5 with L/R ≤ 15ms with 4 poles in series≤24VA32 48VA28 75VA28 220VA23 220VA23 220VA23 220VA23 220VA15Short-time allowable current for 10s (IEC/EN60947-1)A320Breaking capacity (RMS value)A380Breaking capacity at voltageGGGGM(IEC)A40VA304 500VA240VA304 500VA240VA304 500VA240 690VA192Breaking capacity at voltageHW6AA304 500VA240VA304 500VA240VA304 500VA240VA304 500VA240VA304 500VA240VA304 500VA240VA304 500VA240VA304 500VA240VA304 500VA240VA304 500VA240VA304 500VA240VA304 500VA240VA304 500VA240V <td></td> <td></td> <td></td> <td>2,5</td>				2,5
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$		220V	A	_
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	IEC max current le in DC3-DC5 with L/R \leq 15ms with 2 poles in series			
$\begin{array}{c c c c c c c c c c c c c c c c c c c $		≤24V	А	28
$\begin{array}{c c c c c c c c c c c c c c c c c c c $		48V	А	25
$\begin{array}{c c c c c c c c c c c c c c c c c c c $		75V	А	22
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 3 poles in series≤24VA3248VA2875VA28110VA23220VA25IEC max current le in DC3-DC5 with L/R ≤ 15ms with 4 poles in series≤24VA48VA2875VA2875VA2875VA2875VA28110VA23220VA15Short-time allowable current for 10s (IEC/EN60947-1)A320Protection fusegG (IEC)A63adM (IEC)A40AMaking capacity (RMS value)A304Breaking capacity at voltage440VA304500VA240690VA690VA192mΩ2Power dissipation per pole (average value)mΩ2Power dissipation per pole (average value)mínNm2.5Tightening torque for terminalsminNm3minIbin1.81.8		110V	А	18
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 3 poles in series≤24VA3248VA2875VA28110VA23220VA25IEC max current le in DC3-DC5 with L/R ≤ 15ms with 4 poles in series≤24VA48VA2875VA2875VA2875VA2875VA28110VA23220VA15Short-time allowable current for 10s (IEC/EN60947-1)A320Protection fusegG (IEC)A63adM (IEC)A40AMaking capacity (RMS value)A304Breaking capacity at voltage440VA304500VA240690VA690VA192mΩ2Power dissipation per pole (average value)mΩ2Power dissipation per pole (average value)mínNm2.5Tightening torque for terminalsminNm3minIbin1.81.8		220V	А	
$\begin{aligned} & \leq 24 \forall A & 32 \\ & 48 \forall A & 28 \\ & 75 \forall A & 28 \\ & 110 \forall A & 23 \\ & 220 \forall A & 25 \end{aligned}$ $IEC \text{ max current le in DC3-DC5 with L/R \leq 15ms with 4 poles in series} \\ & \leq 24 \forall A & 32 \\ & 48 \forall A & 28 \\ & 75 \forall A & 28 \\ & 75 \forall A & 28 \\ & 110 \forall A & 23 \\ & 220 \forall A & 15 \\ \hline Short-time allowable current for 10s (IEC/EN60947-1) & A & 320 \\ \hline Protection fuse \\ & gG (IEC) A & 63 \\ & aM (IEC) A & 40 \\ \hline Making capacity (RMS value) & A & 380 \\ \hline Breaking capacity (RMS value) & A & 304 \\ & 500 \forall A & 240 \\ & 690 \forall A & 192 \\ \hline Power dissipation per pole (average value) & \hline m\Omega & 2 \\ \hline Power dissipation per pole (average value) & \hline m\Omega & 2.5 \\ \hline min & Nm & 2.5 \\ \hline max & Nm & 3 \\ \hline min & lbin & 1.8 \\ \hline \end{aligned}$	IEC max current le in DC3-DC5 with L/R \leq 15ms with 3 poles in series			
$\begin{array}{ccccc} & 48V & A & 28 \\ 75V & A & 28 \\ 110V & A & 23 \\ 220V & A & 25 \end{array}$ IEC max current le in DC3-DC5 with L/R < 15ms with 4 poles in series $\begin{array}{c} \leq 24V & A & 32 \\ 48V & A & 28 \\ 75V & A & 28 \\ 75V & A & 28 \\ 110V & A & 23 \\ 220V & A & 15 \end{array}$ Short-time allowable current for 10s (IEC/EN60947-1) & A & 320 \\ \end{array} Protection fuse $\begin{array}{c} gG (IEC) & A & 63 \\ aM (IEC) & A & 40 \\ \end{array}$ Making capacity (RMS value) Breaking capacity at voltage $\begin{array}{c} 440V & A & 304 \\ 500V & A & 240 \\ 690V & A & 192 \\ \end{array}$ Resistance per pole (average value) $\begin{array}{c} M\Omega & 2 \\ Power dissipation per pole (average value) \\ \end{array}$ Tightening torque for terminals $\begin{array}{c} min & Nm & 2.5 \\ max & Nm & 3 \\ min & Ibin & 1.8 \\ \end{array}$		<24\/	Δ	32
$\begin{array}{c cccc} 75 & A & 28 \\ 110 & A & 23 \\ 220 & A & 25 \\ \hline \\ $				
$\begin{array}{c c c c c c c c c c c c c c c c c c c $				
$\begin{array}{c c c c c c c c c c c c c c c c c c c $				
$\begin{tabular}{ c c c c c c c c c c c c c c c c c c c$				
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	IFC may summant to in DC2 DC5 with 1/D < 45 may with 4 males in parise	2200	A	20
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	IEC max current le in DC3-DC5 with L/R S 15ms with 4 poles in series	10 A) (
75V A 28 110V A 23 220V A 15 Short-time allowable current for 10s (IEC/EN60947-1) A 320 Protection fuse gG (IEC) A 63 add (IEC) A 40 A Making capacity (RMS value) A 380 Breaking capacity at voltage 440V A 304 500V A 240 690V A 192 Resistance per pole (average value) mΩ 2 Power dissipation per pole (average value) W 6 AC3 W 2.9 Tightening torque for terminals min Nm 3.1 min Ibin 1.8 1.8 1.8 1.8				
$\begin{array}{c cccc} 110 \end{tabular} & A & 23 \\ 220 \end{tabular} & A & 15 \\ \hline \hline Short-time allowable current for 10s (IEC/EN60947-1) & A & 320 \\ \hline Protection fuse & & & \\ \hline Protection fuse & & & \\ \hline & & & & \\ \hline & & & & \\ \hline & & & &$				
$\begin{array}{c c c c c c c c c c c c c c c c c c c $				
Short-time allowable current for 10s (IEC/EN60947-1) A 320 Protection fuse gG (IEC) A 63 aM (IEC) A 40 Making capacity (RMS value) A 380 Breaking capacity at voltage 440V A 304 500V A 240 690V A 192 Resistance per pole (average value) mΩ 2 Power dissipation per pole (average value) Ith W 6 AC3 W 2.9 Tightening torque for terminals min Nm 3 min 1bin 1.8				
Protection fuse gG (IEC) A 63 aM (IEC) A 40 Making capacity (RMS value) A 380 Breaking capacity at voltage 440V A 304 500V A 240 690V A 192 Resistance per pole (average value) mΩ 2 Power dissipation per pole (average value) Ith W 6 AC3 W 2.9 Tightening torque for terminals min Nm 2.5 max Nm 3 min 1bin 1.8		220V	Α	15
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	Short-time allowable current for 10s (IEC/EN60947-1)		А	320
aM (IEC)A40Making capacity (RMS value)A380Breaking capacity at voltage440VA304500VA240690VA192Resistance per pole (average value)mΩ2Power dissipation per pole (average value)IthW6AC3W2.9Tightening torque for terminalsminNm2.5maxNm3min1.8	Protection fuse			
aM (IEC)A40Making capacity (RMS value)A380Breaking capacity at voltage440VA304500VA240690VA192Resistance per pole (average value)mΩ2Power dissipation per pole (average value)IthW6AC3W2.9Tightening torque for terminalsminNm2.5maxNm3min1.8		gG (IEC)	А	63
Making capacity (RMS value)A380Breaking capacity at voltage440VA304440VA304500VA240690VA192Resistance per pole (average value)mΩ2Power dissipation per pole (average value)IthW6AC3W2.9Tightening torque for terminalsminNm2.5maxNm3minIbin1.8				
Breaking capacity at voltage 440V A 304 440V A 304 500V A 240 690V A 192 Resistance per pole (average value) mΩ 2 Power dissipation per pole (average value) Ith W 6 AC3 W 2.9 1 Tightening torque for terminals min Nm 2.5 max Nm 3 1.8	Making capacity (RMS value)	. ,		
440VA304500VA240690VA192Resistance per pole (average value)mΩ2Power dissipation per pole (average value)IthWAC3W2.9Tightening torque for terminalsminNmMinNm3.minIbin1.8				
500V 690VA240 192Resistance per pole (average value)mΩ2Power dissipation per pole (average value)IthW6 AC3IthW6 AC3W2.9Tightening torque for terminalsminNm2.5 maxminIbin1.8		440\/	А	304
690VA192Resistance per pole (average value)mΩ2Power dissipation per pole (average value)IthW6AC3W2.9Tightening torque for terminalsminNm2.5maxNm3minIbin1.8				
Resistance per pole (average value) mΩ 2 Power dissipation per pole (average value) Ith W 6 AC3 W 2.9 Tightening torque for terminals min Nm 2.5 max Nm 3 min Ibin 1.8				
Power dissipation per pole (average value) Ith W 6 AC3 W 2.9 Tightening torque for terminals min Nm 2.5 max Nm 3 min Ibin 1.8	Posistance per pole (average value)	090 v		
Ith W 6 AC3 W 2.9 Tightening torque for terminals min Nm 2.5 max Nm 3 min Ibin 1.8			11112	۷
AC3 W 2.9 Tightening torque for terminals min Nm 2.5 max Nm 3 min Ibin 1.8	rower dissipation per pole (average value)		1.4.7	0
Tightening torque for terminals min Nm 2.5 max Nm 3 min Ibin 1.8				
min Nm 2.5 max Nm 3 min Ibin 1.8		AC3	W	2.9
max Nm 3 min Ibin 1.8	Tightening torque for terminals			
min Ibin 1.8		min		
		max	Nm	
max Ibin 2.2		min	Ibin	1.8
		max	lbin	2.2

Tightening torque for coil terminal



BF3800D220

	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	,		
	AWG/Kcmil		
	max		6
	Flexible w/o lug conductor section		
	min	mm²	2.5
	max	mm²	16
	Flexible c/w lug conductor section		
	min	mm²	1
	max	mm²	10
	Flexible with insulated spade lug conductor section		
	min	mm²	1
	max	mm²	10
			IP20 when
Power terminal protect	ction according to IEC/EN 60529		properly wired
Mechanical features			propony whou
Operating position			
operating position	normal		Vertical plan
	allowable		±30°
	allowable		Screw / DIN rai
Fixing			35mm
Weight		a	564
Conductor section		g	504
	ANAC // consil conductor consticut		
	AWG/kcmil conductor section		C
Operationa	max		6
Operations		avalaa	20000000
Mechanical life		cycles	2000000
Electrical life		cycles	1400000
Safety related data			
Performance level B1	0d according to EN/ISO 13489-1		
	rated load	cycles	1400000
	mechanical load	cycles	2000000
	ing to IEC/EN 609474-4-1		yes
EMC compatibility			yes
DC coil operating			
DC rated control volta	ge	V	220
DC operating voltage			
- 0	pick-up		
	min	%Us	70
	max	%Us	125
	drop-out		
	min	%Us	10
	max	%Us	40
Average coil consum		,	
	in-rush	W	5.4
	holding	W	5.4 5.4
Nox ovelog frequeres		٧V	J.4
Max cycles frequency		o) (ol a a /l-	2600
Mechanical operation		cycles/h	3000
Operating times			

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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
		Opening NC			0
			min	ms	9
			max	ms	17
	in DC				
		Closing NO			Γ Λ
			min	ms	54
		Opening NO	max	ms	66
			min	me	14
			max	ms ms	14
UL technical data				1115	1 /
Full-load current (FL	A) for three-phase 4	AC motor			
			at 480V	А	40
			at 600V	A	32
Yielded mechanical	performance		41.0001	7	02
neided meenamear	for single-phase	AC motor			
	ior single-pride		110/120V	HP	3
			230V	HP	7.5
	for three-phase	AC motor	2007		1.0
			200/208V	HP	10
			220/230V	HP	15
			460/480V	HP	30
			575/600V	HP	30
General USE			0.0,000		
	Contactor				
			AC current	А	55
Short-circuit protecti	on fuse, 600V				
	High fault				
			Short circuit current	kA	100
			Fuse rating	A	100
			Fuse class		J
	Standard fault				
			Short circuit current	kA	5
			Fuse rating	А	150
Ambient conditions					
Temperature					
	Operating temp	erature			
			min	°C	-50
			max	°C	70
	Storage temper	ature			
	<u> </u>		min	°C	-60
			max	°C	80
Max altitude				m	3000

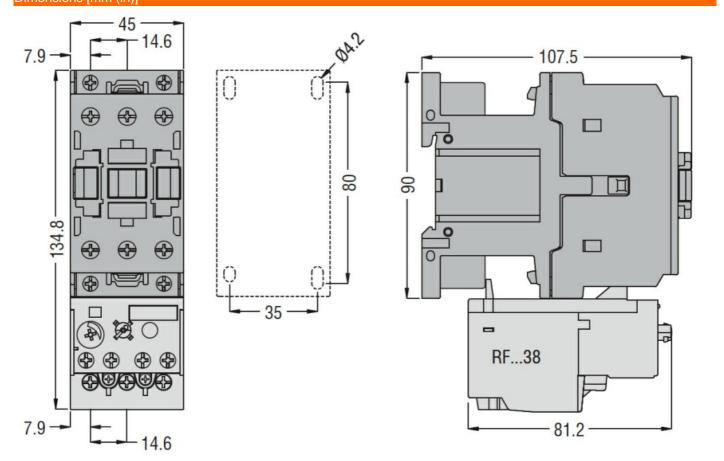


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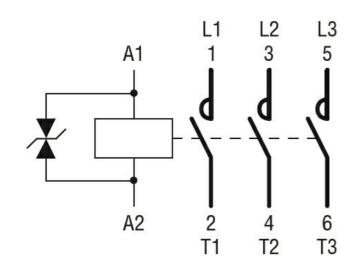
ENERGY AND AUTOMATION

Resistance & Protection Pollution degree

Dimensions [mm (in)]



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	n	
		EC000066 -

ETIM 8.0

EC000066 -Power contactor, AC switching

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