



Product designation Product type designatio				
Product type designation SF38	Product designation			Power contactor
Number of poles	_			BF38
Rated insulation voltage Ui IEC/EN V 690 Rated impulse withstand voltage Uimp kV 6 Operational frequency min Hz 25 IEC Conventional free air thermal current lth A 56 56 Operational current le AC-1 (\$40°C) with 16mm² wire and fork end lugA 60 AC-1 (\$40°C) with 16mm² wire and fork end lugA 48 AC-1 (\$70°C) A 45 AC-1 (\$70°C) with 16mm² wire and fork end lugA 48 AC-1 (\$70°C) with 16mm² wire and fork end lugA 42 AC-1 (\$70°C) with 16mm² wire and fork end lugA 42 AC-1 (\$70°C) with 16mm² wire and fork end lugA 42 AC-1 (\$70°C) with 16mm² wire and fork end lugA 42 AC-1 (\$70°C) with 16mm² wire and fork end lugA 42 AC-1 (\$70°C) with 16mm² wire and fork end lugA 42 AC-1 (\$70°C) with 16mm² wire and fork end lugA 42 AC-1 (\$70°C) with 16mm² wire and fork end lugA 42 AC-1 (\$70°C) with 16mm² wire and fork end lugA 42 AC-1 (\$70°C) with 16mm² wire and fork end lugA 42 AC-1 (\$70°C) with 16mm² wire and fork end lugA AC-1 (\$70°C) with 16mm² wire and fork end lugA AC-1 (\$70°C) with 16mm² wire and fork end lugA AC-1 (\$70°C) with 16mm² wire and fork end lugA AC-1 (\$70°C) with 16mm² wire and fork end lugA <				
Rated insulation voltage Ui IEC/EN V 690 Rated impulse withstand voltage Uimp kV 6 Operational frequency min Hz 25 IEC Conventional freq air thermal current Ith A 56 Operational current le AC-1 (≤40°C) with 16mm² wire and fork end lugA 60 AC-1 (≤55°C) with 16mm² wire and fork end lugA 48 AC-1 (≤70°C) A 45 AC-1 (≤70°C) with 16mm² wire and fork end lugA 48 AC-1 (≤70°C) with 16mm² wire and fork end lugA 42 AC-1 (≤70°C) with 16mm² wire and fork end lugA 42 AC-1 (≤70°C) with 16mm² wire and fork end lugA 42 AC-1 (≤70°C) with 16mm² wire and fork end lugA 42 AC-1 (≤70°C) with 16mm² wire and fork end lugA 42 AC-1 (≤70°C) with 16mm² wire and fork end lugA 42 AC-1 (≤70°C) with 16mm² wire and fork end lugA 42 AC-1 (≤70°C) with 16mm² wire and fork end lugA 42 AC-1 (≤70°C) with 16mm² wire and fork end lugA 42 AC-1 (≤70°C) with 16mm² wire and fork end lugA 42 AC-1 (≤55°C) with 16mm² wire and fork end lugA AC-1 (≤0°C) with 16mm² wire and fork end lugA AC-1 (≤0°C) with 16mm² wire and fork end lugA AC-1 (≤0°C) with 16mm² wire and fork end lugA AC-1 (≤0°C) with 16mm² wire and fork end lugA AC-1	Number of poles		Nr.	4
Rated impulse withstand voltage Uimp			V	690
Operational frequency min max brack Hz man and the man and th			kV	6
EC Conventional free air thermal current lith	Operational frequency			
EC Conventional free air thermal current lth		min	Hz	25
Operational current le AC-1 (≤40°C) with 16mm² wire and fork end lugA AC-1 (≤55°C) A 45 AC-1 (≤55°C) with 16mm² wire and fork end lugA AC-1 (≤70°C) A 40 AC-1 (≤70°C) A 40 AC-1 (≤70°C) A 40 AC-1 (≤70°C) With 16mm² wire and fork end lugA 42 AC-3 (≤440V ≤55°C) A 38 AC-4 (400V) A 15.5 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 A 35 48V A 34 75V A 29 110V A 32 220V A - IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series ≤24V A 36 48V A 34 75V A 29 110V A 32 220V A 4 IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series ≤24V A 36 48V A 34 75V A 29 110V A 32 220V A 4 IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series ≤24V A 36 48V A 34 75V A 36 48V A 34 75V A 33 110V A 32 220V A 4 IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series ≤24V A 36 A 3		max	Hz	400
AC-1 (≤40°C) A 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) with 16mm² wire and fork end lugA 42 AC-1 (≤70°C) with 16mm² wire and fork end lugA 42 AC-3 (≤440V ≤55°C) A 38 AC-4 (400V) A 15.5 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 A 35 48V A 36 75V A 23 110V A 8 220V A - IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series ≤24V A 36 48V A 34 75V A 29 110V A 32 220V A 4 IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series ≤24V A 36 48V A 34 75V A 29 110V A 32 220V A 4 IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series ≤24V A 36 48V A 34 75V A 39 110V A 32 220V A 4 IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series	IEC Conventional free air thermal current Ith		Α	56
AC-1 (≤40°C) with 16mm² wire and fork end lugA	Operational current le			
AC-1 (≤55°C) A 45 AC-1 (≤55°C) with 16mm² wire and fork end lugA AC-1 (≤70°C) with 16mm² wire and fork end lugA AC-1 (≤70°C) with 16mm² wire and fork end lugA AC-1 (≤70°C) with 16mm² wire and fork end lugA AC-1 (≤70°C) with 16mm² wire and fork end lugA AC-3 (≤440V ≤55°C) A 38 AC-4 (400V) A 15.5 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 A 35 48V A 30 75V A 23 110V A 8 220V A - IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series ≤24V A 36 48V A 36 48V A 34 75V A 29 110V A 32 220V A - IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series ≤24V A 36 48V A 36 48V A 34 75V A 29 110V A 32 220V A 4 IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series ≤24V A 36 48V A 36 48V A 34 75V A 33 110V A 32 220V A 4 IEC max current le in DC1 with L/R ≤ 1ms with 4 poles in series ≤24V A 36 48V A 36 48V A 34 75V A 33 110V A 34 220V A 36 IEC max current le in DC1 with L/R ≤ 1ms with 4 poles in series		AC-1 (≤40°C)	Α	56
AC-1 (≤55°C) A 45 AC-1 (≤55°C) with 16mm² wire and fork end lugA AC-1 (≤70°C) with 16mm² wire and fork end lugA AC-1 (≤70°C) with 16mm² wire and fork end lugA AC-1 (≤70°C) with 16mm² wire and fork end lugA AC-1 (≤70°C) with 16mm² wire and fork end lugA AC-3 (≤440V ≤55°C) A 38 AC-4 (400V) A 15.5 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 A 35 48V A 30 75V A 23 110V A 8 220V A - IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series ≤24V A 36 48V A 36 48V A 34 75V A 29 110V A 32 220V A - IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series ≤24V A 36 48V A 36 48V A 34 75V A 29 110V A 32 220V A 4 IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series ≤24V A 36 48V A 36 48V A 34 75V A 33 110V A 32 220V A 4 IEC max current le in DC1 with L/R ≤ 1ms with 4 poles in series ≤24V A 36 48V A 36 48V A 34 75V A 33 110V A 34 220V A 36 IEC max current le in DC1 with L/R ≤ 1ms with 4 poles in series			lugA	60
AC-1 (≤70°C) with 16mm² wire and fork end lugA 42 AC-3 (≤440V ≤55°C) A 38 AC-4 (400V) A 15.5 AC-4 (400V) AC				45
AC-1 (≤70°C) with 16mm² wire and fork end lugA AC-3 (≤440V ≤55°C) AC-3 (≤440V ≤55°C) AC-4 (400V) AC-3 (≤440V ≤55°C) AC-4 (400V) AC-4 (400V) AC-55°C AC-6 (400V) A		AC-1 (≤55°C) with 16mm² wire and fork end	lugA	48
AC-3 (≤440V ≤55°C) A 38 AC-4 (400V) A 15.5 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 A 35 48V A 30 75V A 23 110V A 8 220V A - IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series ≤24V A 36 48V A 34 75V A 29 110V A 32 220V A 4 IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series ≤24V A 36 48V A 34 75V A 39 110V A 32 220V A 4 IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series ≤24V A 36 48V A 34 75V A 32 220V A 4 IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series ≤24V A 36 48V A 34 75V A 33 110V A 34 220V A 30 IEC max current le in DC1 with L/R ≤ 1ms with 4 poles in series		AC-1 (≤70°C)	Α	40
AC-4 (400V)		AC-1 (≤70°C) with 16mm² wire and fork end	lugA	42
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 A 35 48V A 30 75V A 23 110V A 8 220V A − IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series ≤24V A 36 48V A 30 75V A 23 110V A 8 220V A − IEC max current le in DC1 with L/R ≤ 1ms with 2 poles in series ≤24V A 36 48V A 34 75V A 29 110V A 32 220V A 4 IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series ≤24V A 36 48V A 34 75V A 39 110V A 32 220V A 4 IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series ≤24V A 36 48V A 34 75V A 36 48V A 34 75V A 33 110V A 34 220V A 30 IEC max current le in DC1 with L/R ≤ 1ms with 4 poles in series ≤24V A 36		V kV kV kV kV kV kV kV		38
230V kW 21 400V kW 36 500V kW 45 690V kW 62		AC-4 (400V)	Α	15.5
A00V kW 36 500V kW 45 690V kW 62	Rated operational power AC-1 (T≤40°C)			
Soov kW 45 690V kW 62		230V	kW	21
EC max current le in DC1 with L/R ≤ 1ms with 1 poles in series		400V	kW	36
Section Sec		500V	kW	45
≤24V A 35 48V A 30 75V A 23 110V A 8 220V A −		690V	kW	62
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	IEC max current le in DC1 with L/R ≤ 1ms wi	th 1 poles in series		
T5V A 23 110V A 8 220V A −		≤24V	Α	35
110V		48V	Α	30
EC max current le in DC1 with L/R ≤ 1ms with 2 poles in series ≤24V		75V	Α	23
Section Sec		110V	Α	8
		220V	Α	_
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	IEC max current le in DC1 with L/R ≤ 1ms wi	th 2 poles in series		
T5V A 29 110V A 32 220V A 4		≤24V	Α	36
110V A 32 220V A 4		48V	Α	34
EC max current le in DC1 with L/R ≤ 1ms with 3 poles in series ≤24V			Α	
IEC max current le in DC1 with L/R ≤ 1ms with 3 poles in series ≤24V A 36 48V A 34 75V A 33 110V A 34 220V A 30 IEC max current le in DC1 with L/R ≤ 1ms with 4 poles in series ≤24V A 36		110V	Α	32
			Α	4
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	IEC max current le in DC1 with L/R ≤ 1ms wi			
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$			Α	
IEC max current le in DC1 with L/R ≤ 1ms with 4 poles in series ≤24V A 36				
≤24V A 36			Α	30
	IEC max current le in DC1 with L/R ≤ 1ms wi	·		
48V A 34				
		48V	Α	34



	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		- , ,	
The max danger to the Boo Boo with Eff Tomo with 2 police in defice	≤24V	Α	28
	48V	Α	25
	75V	A	22
	110V		18
		A	
IFC many assessment to in DC2 DC5 with L/D < 45 may with 2 malos in agains	220V	Α	3
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 3 poles in series	40.4V		00
	≤24V	A	32
	48V	A	28
	75V	Α	28
	110V	Α	23
	220V	Α	25
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 4 poles in series			
	≤24V	Α	32
	48V	Α	28
	75V	Α	28
	110V	Α	23
	220V	Α	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)	0001	mΩ	2
Power dissipation per pole (average value)		11132	
rower dissipation per pole (average value)	lth	۱۸/	6
	Ith	W	6
Tinhtonia a tonnua fantamainala	AC-3	W	2.9
Tightening torque for terminals		N I.a.:	0.5
	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



		may		6
	Flexible w/o lug conductor section	max		6
	r lexible w/o lag corladetor 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 conduct			
		min	mm²	1
		max	mm²	10 IP20 when
Power terminal protect	tion according to IEC/EN 60529			properly wired
Mechanical features				property times
Operating position				
		normal		Vertical plan
		allowable		±30°
Fixing				Screw / DIN rail 35mm
Weight			g	508
Conductor section				
	AWG/kcmil conductor section			
0 "		max		6
Operations Machanical life			ovelee.	2000000
Mechanical life Electrical life			cycles	20000000
Safety related data			cycles	1400000
	0d according to EN/ISO 13489-1			
Tonormanoo lovol Di		rated load	cycles	1400000
		mechanical load	cycles	20000000
Mirror contats accordi	ng to IEC/EN 609474-4-1			yes
EMC compatibility				yes
AC coil operating				
Rated AC voltage at 5	0/60Hz		V	230
AC operating voltage	of 50/001 - ooil noward of 501 -			
	of 50/60Hz coil powered at 50Hz pick-up			
	ρισκ-αρ	min	%Us	80
		max	%Us	110
	drop-out		-	
	·	min	%Us	20
		max	%Us	55
	of 50/60Hz coil powered at 60Hz			
	pick-up		0/11	0.5
		min	%Us	85
	drop-out	max	%Us	110
	arop-out	min	%Us	20
		max	%Us	55
AC average coil consu	umption at 20°C			
Ŭ	of 50/60Hz coil powered at 50Hz			
	·	in-rush	VA	75
		holding	VA	9
	of 50/60Hz coil powered at 60Hz			
		in-rush	VA	70



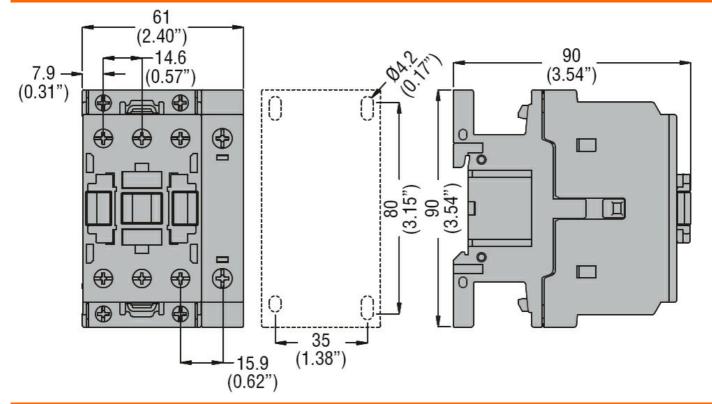
				0.5
	of COLLE and required of COLLE	holding	VA	6.5
	of 60Hz coil powered at 60Hz	in ruch	١/٨	75
		in-rush holding	VA VA	75 9
	220°C 50Hz	Holding	W	2.5
Max cycles frequency	20 0 00112		VV	2.0
Mechanical operation			cycles/h	3600
Operating times			0,0100/11	0000
Average time for Us co	ntrol			
3	in AC			
	Closing NO			
	_	min	ms	8
		max	ms	24
	Opening NO			
		min	ms	5
		max	ms	15
	Closing NC			
		min	ms	9
	0 : 110	max	ms	20
	Opening NC		,	0
		min	ms	9
UL technical data		max	ms	17
	for three-phase AC motor			
Tull-load culterit (TLA)	Tor tillee-priase AC motor	at 480V	Α	40
		at 400 V	A	32
Yielded mechanical per	rformance	ut 000 v		02
riolada ilidarianida pol	for single-phase AC motor			
	rer emigre prides into meter	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				
	High fault			400
		Short circuit current	kA	100
		Fuse rating	Α	100
	Standard fault	Fuse class		J
	Standard fault	Short circuit current	kA	5
		Fuse rating	KA A	150
Ambient conditions		i use railing		130
Temperature				
· simporataro	Operating temperature			
	Specialing temperature	min	°C	-50
		max	°C	70
	Storage temperature	max		
		min	°C	-60
		max	°C	80
				

ENERGY AND AUTOMATION

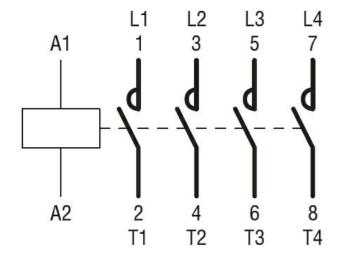
FOUR-POLE CONTACTOR, IEC OPERATING CURRENT ITH (AC1) = 56A, AC COIL 50/60HZ, 230VAC

Max altitude m 3000
Resistance & Protection
Pollution degree 3

Dimensions



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



BF38T4A230

FOUR-POLE CONTACTOR, IEC OPERATING CURRENT ITH (AC1) = 56A, AC COIL 50/60HZ, 230VAC

cULus			
EAC			

ETIM classification

ETIM 8.0

EC000066 -Power contactor, AC switching