



Product designation				Power contactor
Product type designation				BF38
<b>Contact characteristics</b>				
Number of poles	Nr.			4
Rated insulation voltage U <sub>i</sub> IEC/EN	V			690
Rated impulse withstand voltage U <sub>imp</sub>	kV			6
Operational frequency	min	Hz		25
	max	Hz		400
IEC Conventional free air thermal current I <sub>th</sub>	A			56
Operational current I <sub>e</sub>	AC-1 (≤40°C)	A		56
	AC-1 (≤40°C) with 16mm <sup>2</sup> wire and fork end lug	A		60
	AC-1 (≤55°C)	A		45
	AC-1 (≤55°C) with 16mm <sup>2</sup> wire and fork end lug	A		48
	AC-1 (≤70°C)	A		40
	AC-1 (≤70°C) with 16mm <sup>2</sup> wire and fork end lug	A		42
	AC-3 (≤440V ≤55°C)	A		38
Rated operational power AC-1 (T≤40°C)	AC-4 (400V)	A		15.5
	230V	kW		21
	400V	kW		36
	500V	kW		45
	690V	kW		62
IEC max current I <sub>e</sub> 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 I <sub>e</sub> in DC1 with L/R ≤ 1ms with 2 poles in series	≤24V	A	
48V		A		34
75V		A		29
110V		A		32
220V		A		4
IEC max current I <sub>e</sub> in DC1 with L/R ≤ 1ms with 3 poles in series		≤24V	A	
	48V	A		34
	75V	A		33
	110V	A		34
	220V	A		30
	IEC max current I <sub>e</sub> in DC1 with L/R ≤ 1ms with 4 poles in series	≤24V	A	
48V		A		34

	75V	A	33
	110V	A	34
	220V	A	38
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IEC max current I <sub>e</sub> in DC3-DC5 with L/R ≤ 15ms with 1 poles in series	≤24V	A	24
	48V	A	20
	75V	A	17
	110V	A	2,5
	220V	A	–
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IEC max current I <sub>e</sub> in DC3-DC5 with L/R ≤ 15ms with 2 poles in series	≤24V	A	28
	48V	A	25
	75V	A	22
	110V	A	18
	220V	A	3
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IEC max current I <sub>e</sub> in DC3-DC5 with L/R ≤ 15ms with 3 poles in series	≤24V	A	32
	48V	A	28
	75V	A	28
	110V	A	23
	220V	A	25
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IEC max current I <sub>e</sub> in DC3-DC5 with L/R ≤ 15ms with 4 poles in series	≤24V	A	32
	48V	A	28
	75V	A	28
	110V	A	23
	220V	A	15
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Short-time allowable current for 10s (IEC/EN60947-1)		A	320
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Protection fuse	gG (IEC)	A	63
	aM (IEC)	A	40
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Making capacity (RMS value)		A	380
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Breaking capacity at voltage	440V	A	304
	500V	A	240
	690V	A	192
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Resistance per pole (average value)		mΩ	2
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Power dissipation per pole (average value)	I <sub>th</sub>	W	6
	AC3	W	2.9
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Tightening torque for terminals	min	Nm	2.5
	max	Nm	3
	min	lbin	1.8
	max	lbin	2.2
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Tightening torque for coil terminal	min	Nm	0.8
	max	Nm	1
	min	lbin	0.8
	max	lbin	0.74
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Max number of wires simultaneously connectable		Nr.	2
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Conductor section	AWG/Kcmil		

			max	6
Flexible w/o lug conductor section			min	mm <sup>2</sup> 2.5
			max	mm <sup>2</sup> 16
Flexible c/w lug conductor section			min	mm <sup>2</sup> 1
			max	mm <sup>2</sup> 10
Flexible with insulated spade lug conductor section			min	mm <sup>2</sup> 1
			max	mm <sup>2</sup> 10
Power terminal protection according to IEC/EN 60529				IP20 when properly wired

**Mechanical features**

Operating position			normal allowable	Vertical plan ±30°
Fixing				Screw / DIN rail 35mm
Weight				g 660
Conductor section				
	AWG/kcmil conductor section		max	6

**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	cycles 1400000
				cycles 20000000
Mirror contacts according to IEC/EN 60947-4-1				yes
EMC compatibility				yes

**DC coil operating**

DC rated control voltage			V	12
DC operating voltage				
	pick-up		min	%Us 80
			max	%Us 125
	drop-out		min	%Us 10
			max	%Us 40

Average coil consumption ≤20°C

	in-rush	W	5.4
	holding	W	5.4

**Max cycles frequency**

Mechanical operation			cycles/h	3600
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**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

in DC	Closing NC	min	ms	9
		max	ms	20
	Opening NC	min	ms	9
		max	ms	17
	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
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Short-circuit protection 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	A	150

**Ambient conditions**

Temperature

Operating temperature

min	°C	-50
max	°C	70

Storage temperature

min	°C	-60
max	°C	80

Max altitude

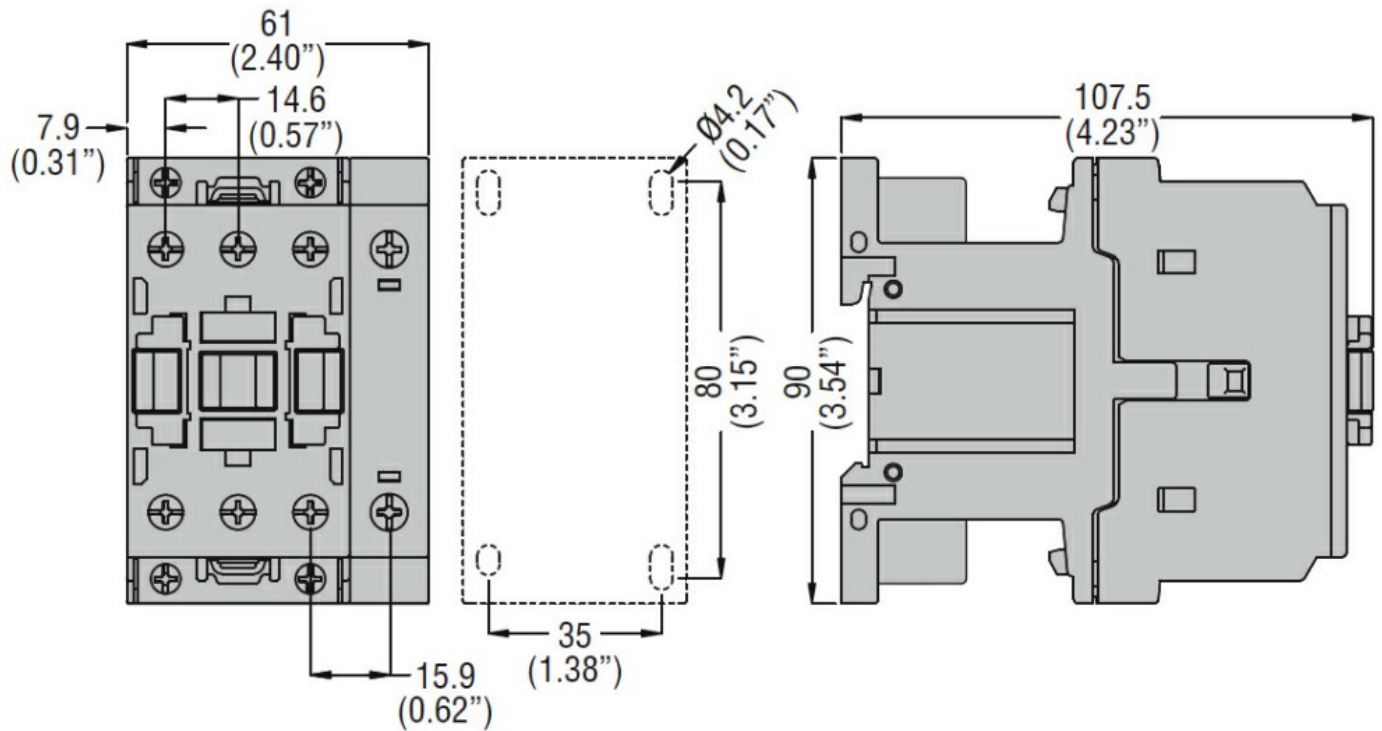
m	3000
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**Resistance & Protection**

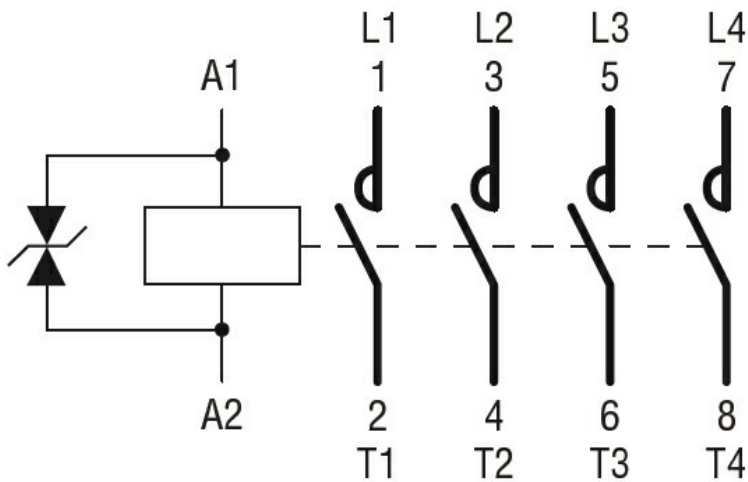
Pollution degree

3

**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**

ETIM 8.0

EC000066 -  
Power contactor,  
AC switching