



Product designation				Power contactor
Product type designation				BF38
<b>Contact characteristics</b>				
Number of poles	Nr.			4
Rated insulation voltage $U_i$ IEC/EN	V			690
Rated impulse withstand voltage $U_{imp}$	kV			6
Operational frequency	min	Hz		25
	max	Hz		400
IEC Conventional free air thermal current $I_{th}$	A			56
Operational current $I_e$	AC-1 ( $\leq 40^\circ\text{C}$ )	A		56
	AC-1 ( $\leq 40^\circ\text{C}$ ) with 16mm <sup>2</sup> wire and fork end lug	A		60
	AC-1 ( $\leq 55^\circ\text{C}$ )	A		45
	AC-1 ( $\leq 55^\circ\text{C}$ ) with 16mm <sup>2</sup> wire and fork end lug	A		48
	AC-1 ( $\leq 70^\circ\text{C}$ )	A		40
	AC-1 ( $\leq 70^\circ\text{C}$ ) with 16mm <sup>2</sup> wire and fork end lug	A		42
	AC-3 ( $\leq 440\text{V}$ $\leq 55^\circ\text{C}$ )	A		38
Rated operational power AC-1 ( $T \leq 40^\circ\text{C}$ )	AC-4 (400V)	A		15.5
	230V	kW		21
	400V	kW		36
	500V	kW		45
	690V	kW		62
IEC max current $I_e$ in DC1 with $L/R \leq 1\text{ms}$ with 1 poles in series	$\leq 24\text{V}$	A		35
	48V	A		30
	75V	A		23
	110V	A		8
	220V	A		–
	IEC max current $I_e$ in DC1 with $L/R \leq 1\text{ms}$ with 2 poles in series	$\leq 24\text{V}$	A	
48V		A		34
75V		A		29
110V		A		32
220V		A		4
IEC max current $I_e$ in DC1 with $L/R \leq 1\text{ms}$ with 3 poles in series		$\leq 24\text{V}$	A	
	48V	A		34
	75V	A		33
	110V	A		34
	220V	A		30
	IEC max current $I_e$ in DC1 with $L/R \leq 1\text{ms}$ with 4 poles in series	$\leq 24\text{V}$	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
	AC-3	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
<b>Mechanical features</b>				
Operating position		normal allowable		Vertical plan ±30°
Fixing				Screw / DIN rail 35mm
Weight			g	508
Conductor section	AWG/kcmil conductor section			
		max		6
<b>Operations</b>				
Mechanical life			cycles	20000000
Electrical life			cycles	1400000
<b>Safety related data</b>				
Performance level B10d according to EN/ISO 13489-1		rated load	cycles	1400000
		mechanical load	cycles	20000000
Mirror contacts according to IEC/EN 60947-4-1				yes
EMC compatibility				yes
<b>AC coil operating</b>				
Rated AC voltage at 60Hz			V	230
AC operating voltage	of 60Hz coil powered at 60Hz			
	pick-up	min	%Us	80
		max	%Us	110
	drop-out	min	%Us	20
		max	%Us	55
AC average coil consumption at 20°C	of 60Hz coil powered at 60Hz			
		in-rush	VA	75
		holding	VA	9
Dissipation at holding ≤20°C 50Hz			W	2.5
<b>Max cycles frequency</b>				
Mechanical operation			cycles/h	3600
<b>Operating times</b>				
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	min	ms	9
	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

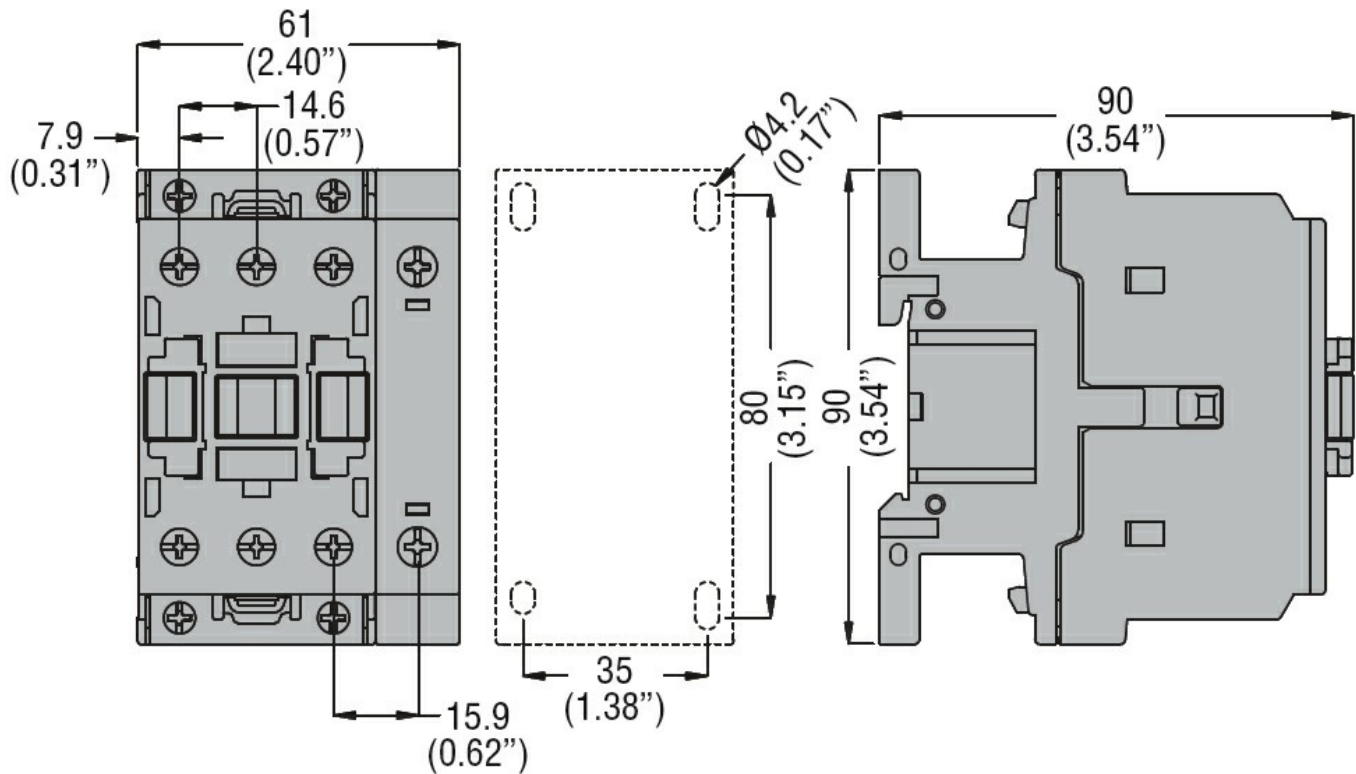
m	3000
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**Resistance & Protection**

Pollution degree

3

**Dimensions**



### Wiring diagrams



### Certifications and compliance

#### Compliance

CSA C22.2 n° 60947-1
CSA C22.2 n° 60947-4-1
IEC/EN/BS 60335-1
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