



Product designation				Power contactor
Product type designation				BF38
<b>Contact characteristics</b>				
Number of poles	Nr.			3
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-3 (T=55°C)	AC-4 (400V)	A		15.5
	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 I <sub>e</sub> in DC1 with L/R = 1ms with 1 poles in series	=24V	A	
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
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IEC max current I <sub>e</sub> in DC1 with L/R = 1ms with 4 poles in series			
	=24V	A	36
	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)		m <sup>2</sup>	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	I <sub>bin</sub>	1.8
	max	I <sub>bin</sub>	2.2
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Tightening torque for coil terminal			

	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	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 wired
<b>Mechanical features</b>			
Operating position		normal allowable	Vertical plan ±30°
Fixing			Screw / DIN rail 35mm
Weight		g	422
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
		mechanical load	cycles
			1400000
			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	460
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

**Operating times**

Average time for Us control  
in AC

Closing NO	min	ms	8
	max	ms	24
Opening NO	min	ms	5
	max	ms	15
Closing NC	min	ms	9
	max	ms	20
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

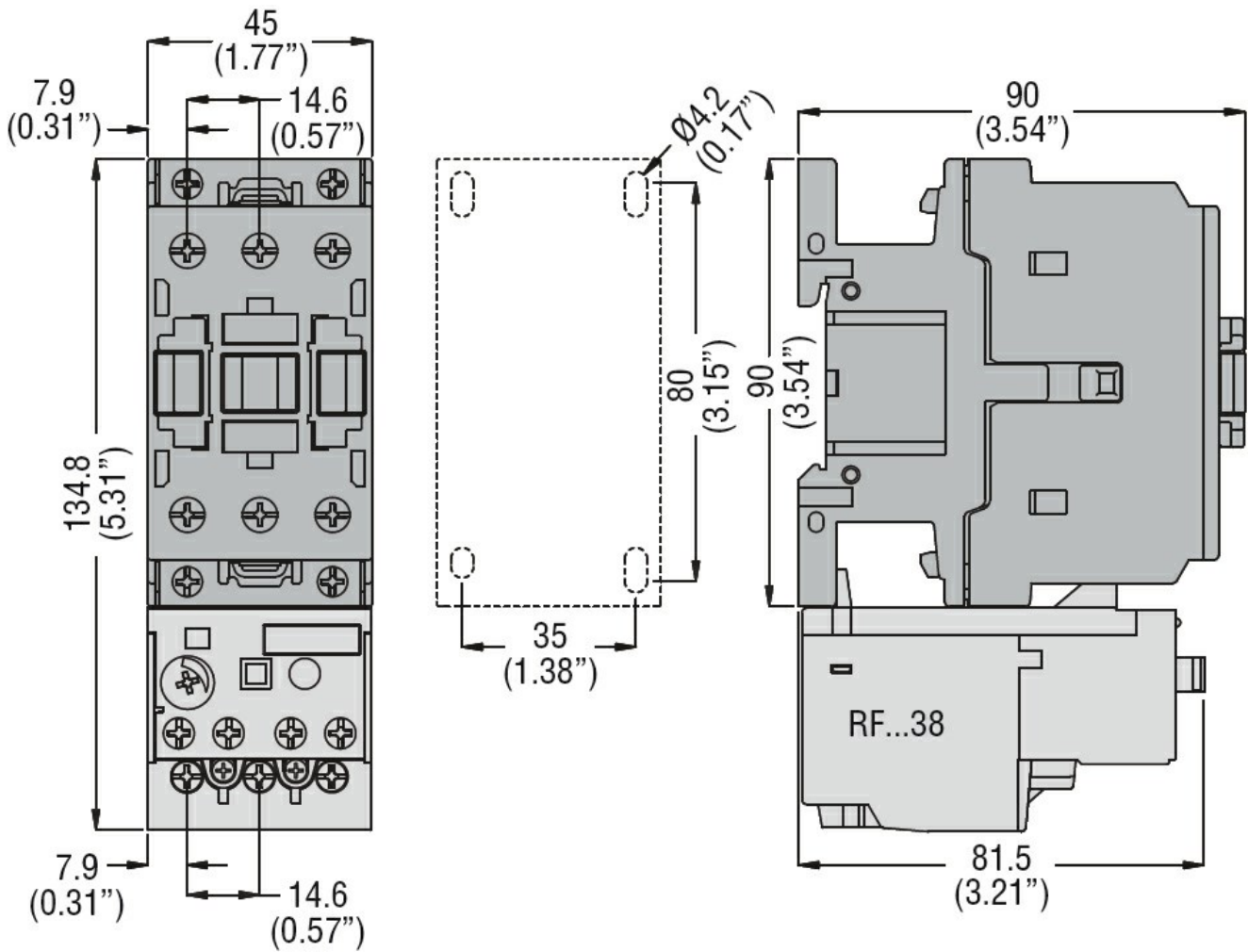
m	3000
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**Resistance & Protection**

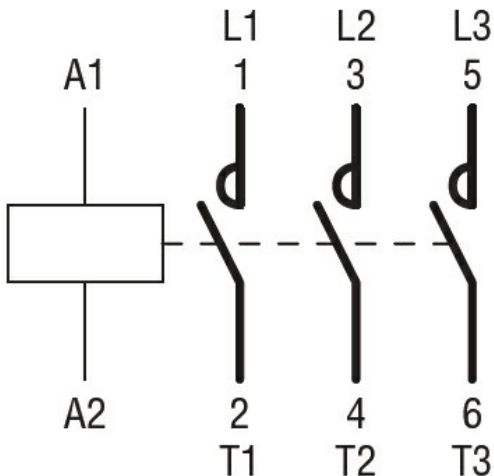
Pollution degree

3

**Dimensions**



### Wiring diagrams



### Certifications and compliance

#### Compliance

CSA C22.2 n° 60947-1

CSA C22.2 n° 60947-4-1

IEC/EN/BS 60947-1

IEC/EN/BS 60947-4-1

UL 60947-1

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UL 60947-4-1

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Certificates

CCC

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cULus

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EAC

ETIM classification

ETIM 8.0

EC000066 -  
Power contactor,  
AC switching