



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	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	36
	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	36

	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)		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	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	I <sub>bin</sub>	0.8
	max	I <sub>bin</sub>	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 properly wired
<b>Mechanical features</b>			
Operating position			
	normal allowable		Vertical plan ±30°
Fixing			Screw / DIN rail 35mm
Weight		g	564
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>DC coil operating</b>			
DC rated control voltage		V	220
DC operating voltage			
pick-up			
	min	%U <sub>s</sub>	70
	max	%U <sub>s</sub>	125
drop-out			
	min	%U <sub>s</sub>	10
	max	%U <sub>s</sub>	40
Average coil consumption ≤20°C			
	in-rush	W	5.4
	holding	W	5.4
<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

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
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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

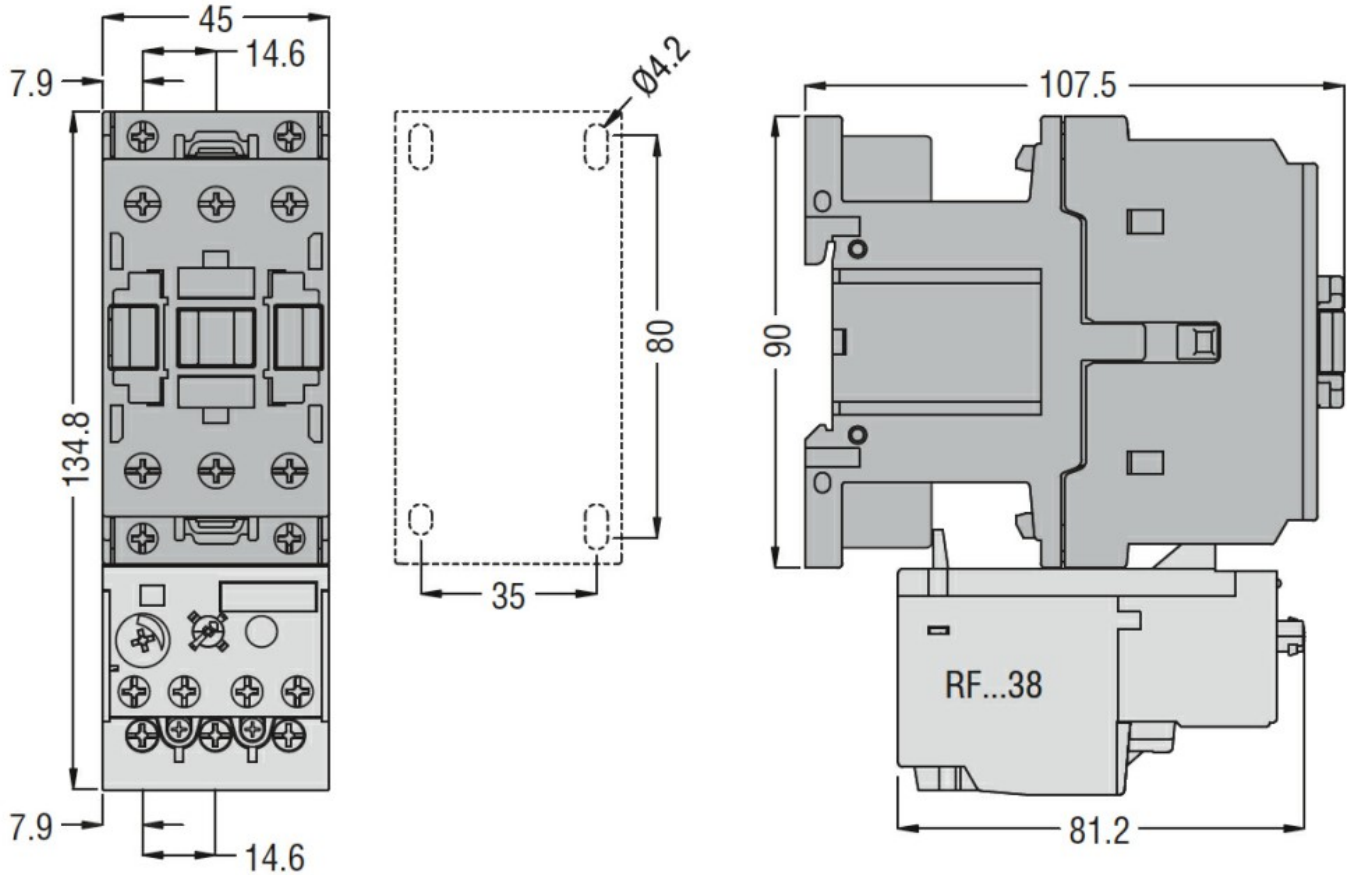
m	3000
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Resistance & Protection

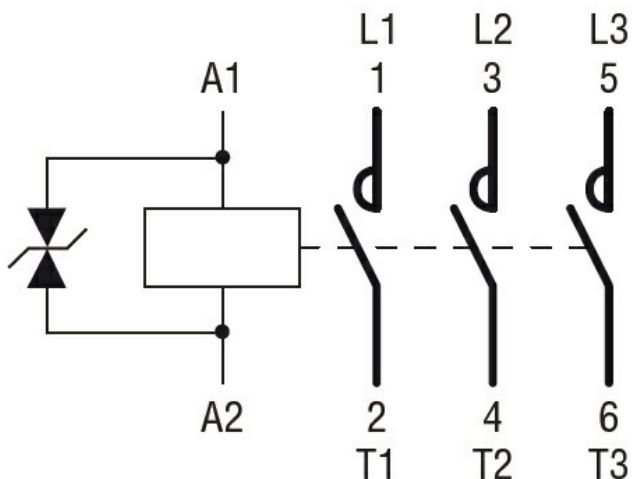
Pollution degree

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