



Product designation				Power contactor
Product type designation				BF38
Contact characteristics				
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 (=40°C)	A		56
	AC-1 (=40°C) with 16mm ² wire and fork end lug	A		60
	AC-1 (=55°C)	A		45
	AC-1 (=55°C) with 16mm ² wire and fork end lug	A		48
	AC-1 (=70°C)	A		40
	AC-1 (=70°C) with 16mm ² 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 _e 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 _e 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 _e 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 _e 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 _e 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 _e 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 _e 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 _e 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?	2
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Power dissipation per pole (average value)			
	I _{th}	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 ²	2.5
		max	mm ²	16
Flexible c/w lug conductor section		min	mm ²	1
		max	mm ²	10
Flexible with insulated spade lug conductor section		min	mm ²	1
		max	mm ²	10
Power terminal protection according to IEC/EN 60529				IP20 when wired
Mechanical features				
Operating position		normal allowable		Vertical plan ±30°
Fixing				Screw / DIN rail 35mm
Weight			g	670
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	cycles	1400000
		mechanical load	cycles	20000000
Mirror contacts according to IEC/EN 60947-4-1				yes
EMC compatibility				yes
DC coil operating				
DC rated control voltage			V	24
DC operating voltage				
	pick-up	min	%Us	80
		max	%Us	110
	drop-out	min	%Us	10
		max	%Us	40
Average coil consumption =20°C		in-rush	W	2.4
		holding	W	2.4
Max cycles frequency				
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

in DC	Closing NC	min	ms	9
		max	ms	20
	Opening NC	min	ms	9
		max	ms	17
	Closing NO	min	ms	76
		max	ms	92
Opening NO	min	ms	16	
	max	ms	20	

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

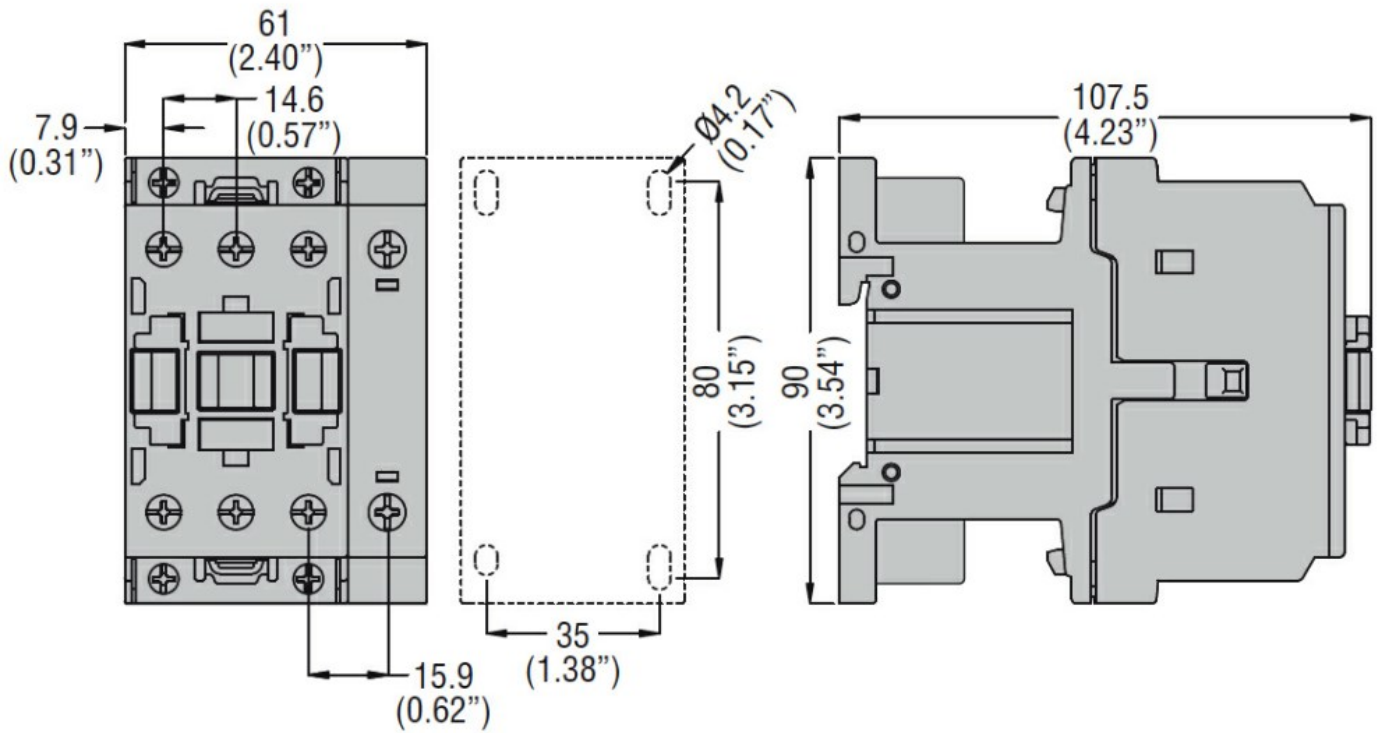
m	3000
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Resistance & Protection

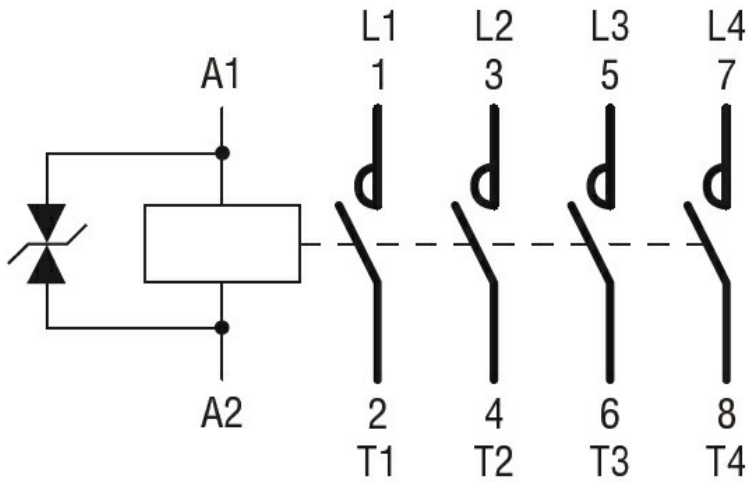
Pollution degree

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
 UL 60947-4-1

Certificates

CCC
 cULus
 EAC

ETIM classification

ETIM 8.0

EC000066 -
Power contactor,
AC switching