



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
Short-time allowable current for 10s (IEC/EN60947-1)	A			320
Protection fuse	gG (IEC)	A		63
	aM (IEC)	A		40
Making capacity (RMS value)	A			380
Breaking capacity at voltage	440V	A		304
	500V	A		240
	690V	A		192
Resistance per pole (average value)	mΩ			2
Power dissipation per pole (average value)	I _{th}	W		6
	AC-3	W		2.9
Tightening torque for terminals	min	Nm		2.5
	max	Nm		3
	min	I _{bin}		1.8
	max	I _{bin}		2.2
Tightening torque for coil terminal	min	Nm		0.8
	max	Nm		1

	min	lbin	0.8
	max	lbin	0.74
Max number of wires simultaneously connectable		Nr.	2
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 properly 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	220
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			
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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
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in DC			
Closing NO	min	ms	54
	max	ms	66
Opening NO	min	ms	14
	max	ms	17
Closing NC	min	ms	23
	max	ms	28
Opening NC	min	ms	46
	max	ms	56

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

Contactors

AC current	A	55
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Ambient conditions

Temperature

Operating temperature

min	°C	-50
max	°C	70

Storage temperature

min	°C	-60
max	°C	80

Max altitude

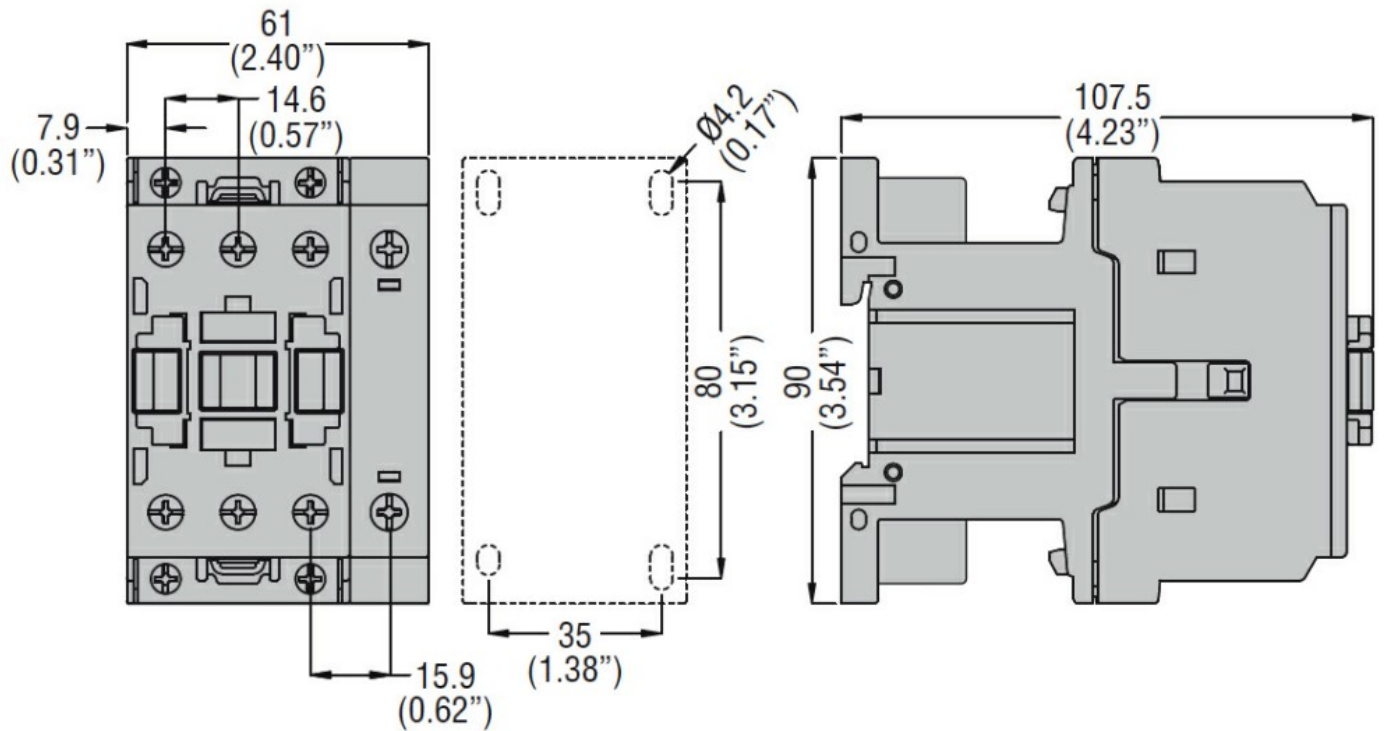
m	3000
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Resistance & Protection

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