



Product designation	Power contactor		
Product type designation	BF38		
Contact characteristics			
Number of poles	Nr.	3	
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 ($=40^\circ\text{C}$)	A	56	
AC-1 ($=40^\circ\text{C}$) with 16mm ² wire and fork end lugA	A	60	
AC-1 ($=55^\circ\text{C}$)	A	45	
AC-1 ($=55^\circ\text{C}$) with 16mm ² wire and fork end lugA	A	48	
AC-1 ($=70^\circ\text{C}$)	A	40	
AC-1 ($=70^\circ\text{C}$) with 16mm ² wire and fork end lugA	A	42	
AC-3 ($=440\text{V} = 55^\circ\text{C}$)	A	38	
AC-4 (400V)	A	15.5	
Rated operational power AC-3 ($T=55^\circ\text{C}$)			
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 ($T=40^\circ\text{C}$)			
230V	kW	21	
400V	kW	36	
500V	kW	45	
690V	kW	62	
IEC max current I_e in DC1 with $L/R = 1\text{ms}$ 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 $L/R = 1\text{ms}$ with 2 poles in series			
=24V	A	36	
48V	A	34	
75V	A	29	
110V	A	32	
220V	A	4	
IEC max current I_e in DC1 with $L/R = 1\text{ms}$ with 3 poles in series			
=24V	A	36	

	48V	A	34
	75V	A	33
	110V	A	34
	220V	A	30
IEC max current le 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
IEC max current le 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	—
IEC max current le 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
IEC max current le 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
IEC max current le 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
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)		m?	2
Power dissipation per pole (average value)	I _{th}	W	6
	AC3	W	2.9
Tightening torque for terminals	min	Nm	2.5
	max	Nm	3
	min	lbin	1.8
	max	lbin	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 wired				
Mechanical features					
Operating position	normal allowable	Vertical plan ±30°			
Fixing	Screw / DIN rail 35mm				
Weight	g	433			
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 609474-4-1	yes				
EMC compatibility	yes				
AC coil operating					
Rated AC voltage at 50/60Hz	V	400			
AC operating voltage					
of 50/60Hz coil powered at 50Hz					
pick-up	min	%Us	80		
	max	%Us	110		
drop-out	min	%Us	20		
	max	%Us	55		
of 50/60Hz coil powered at 60Hz					
pick-up	min	%Us	85		
	max	%Us	110		
drop-out	min	%Us	20		
	max	%Us	55		

AC average coil consumption at 20°C

of 50/60Hz coil powered at 50Hz

	in-rush	VA	75
	holding	VA	9
of 50/60Hz coil powered at 60Hz			
	in-rush	VA	70
	holding	VA	6.5
of 60Hz coil powered at 60Hz			
	in-rush	VA	75
	holding	VA	9

Dissipation at holding =20°C 50Hz

W 2.5

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

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

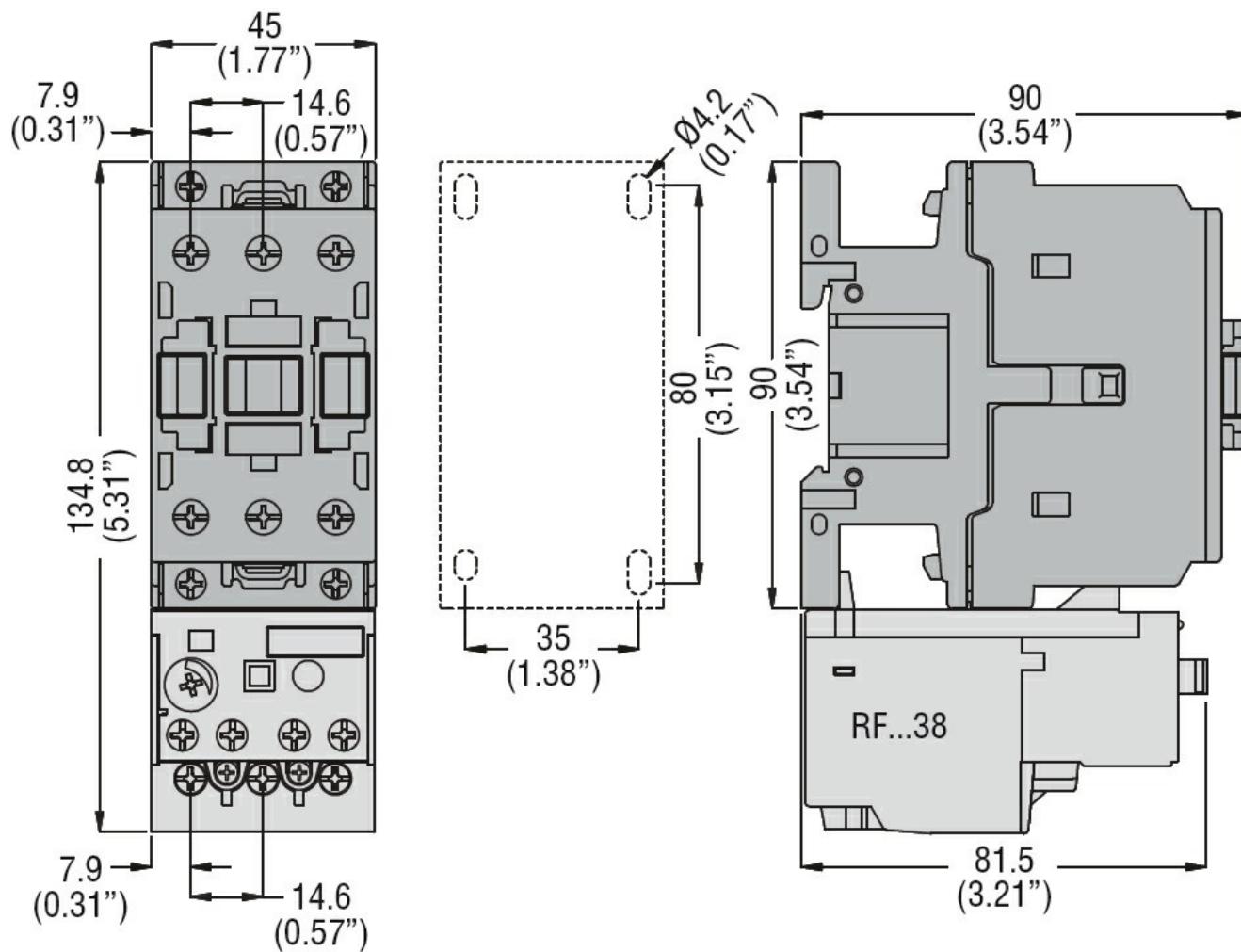
	min	°C	-60
	max	°C	80

Max altitude m 3000

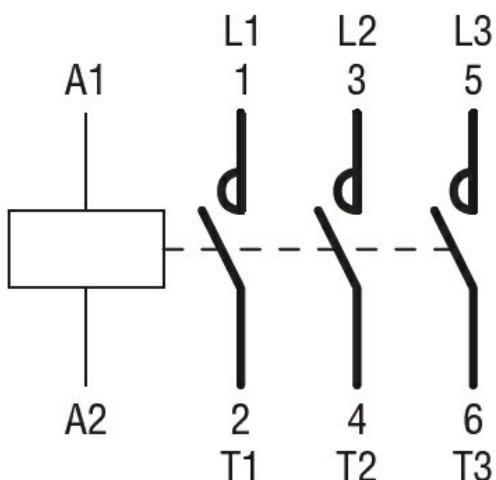
Resistance & Protection

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 60947-1

IEC/EN 60947-4-1

UL 60947-1

UL 60947-4-1

Certificates

CCC

cULus

EAC

ETIM classification

ETIM 8.0

EC000066 -
Power contactor,
AC switching