



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°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-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 _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	36
	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	36

	48V	A	34
	75V	A	33
	110V	A	34
	220V	A	30
<hr/>			
IEC max current I _e 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
<hr/>			
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	–
<hr/>			
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
<hr/>			
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
<hr/>			
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
<hr/>			
Short-time allowable current for 10s (IEC/EN60947-1)		A	320
<hr/>			
Protection fuse			
	gG (IEC)	A	63
	aM (IEC)	A	40
<hr/>			
Making capacity (RMS value)		A	380
<hr/>			
Breaking capacity at voltage			
	440V	A	304
	500V	A	240
	690V	A	192
<hr/>			
Resistance per pole (average value)		m Ω	2
<hr/>			
Power dissipation per pole (average value)			
	I _{th}	W	6
	AC3	W	2.9
<hr/>			
Tightening torque for terminals			
	min	Nm	2.5
	max	Nm	3
	min	I _{bin}	1.8
	max	I _{bin}	2.2
<hr/>			
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 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	424
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
		mechanical load	cycles
			1400000
			20000000
Mirror contacts according to IEC/EN 60947-4-1			yes
EMC compatibility			yes
AC coil operating			
Rated AC voltage at 60Hz		V	24
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
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
-------------	-----------	------------	---	----

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

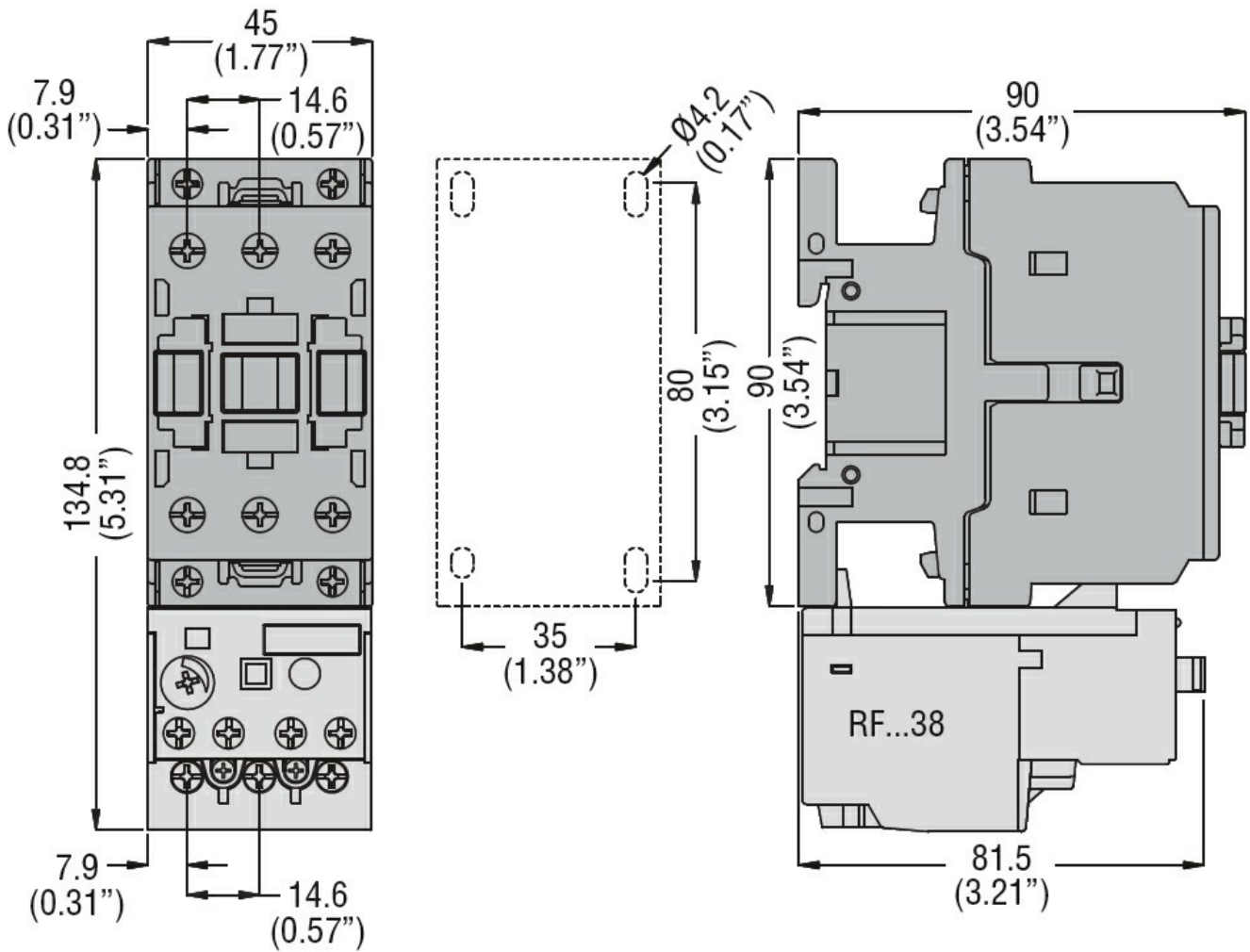
Temperature	Operating temperature	min	°C	-50
		max	°C	70
	Storage temperature	min	°C	-60
		max	°C	80

Max altitude		m	3000
--------------	--	---	------

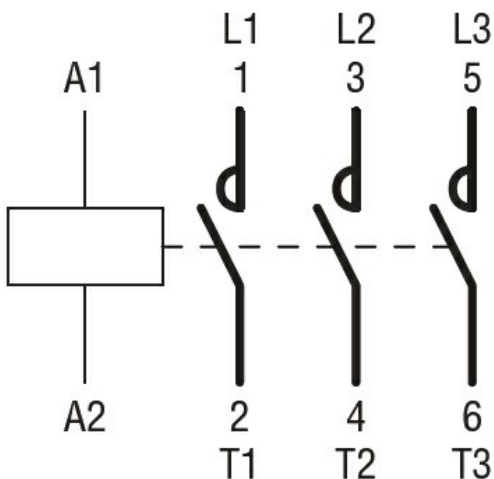
Resistance & Protection

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/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