



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 ($\leq 40^\circ C$)	A	56	
AC-1 ($\leq 40^\circ C$) with 16mm ² wire and fork end lug	A	60	
AC-1 ($\leq 55^\circ C$)	A	45	
AC-1 ($\leq 55^\circ C$) with 16mm ² wire and fork end lug	A	48	
AC-1 ($\leq 70^\circ C$)	A	40	
AC-1 ($\leq 70^\circ C$) with 16mm ² wire and fork end lug	A	42	
AC-3 ($\leq 440V \leq 55^\circ C$)	A	38	
AC-4 (400V)	A	15.5	
Rated operational power AC-3 ($T \leq 55^\circ C$)	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 ($T \leq 40^\circ C$)	230V	kW	21
	400V	kW	36
	500V	kW	45
	690V	kW	62
IEC max current I_e in DC1 with $L/R \leq 1ms$ with 1 poles in series	$\leq 24V$	A	35
	48V	A	30
	75V	A	23
	110V	A	8
	220V	A	—
IEC max current I_e in DC1 with $L/R \leq 1ms$ with 2 poles in series	$\leq 24V$	A	36
	48V	A	34
	75V	A	29
	110V	A	32
	220V	A	4
IEC max current I_e in DC1 with $L/R \leq 1ms$ with 3 poles in series	$\leq 24V$	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)		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	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 properly wired				
Mechanical features					
Operating position	normal allowable	Vertical plan ±30°			
Fixing	Screw / DIN rail 35mm				
Weight	g	560			
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		
EMC compatibility	yes				
DC coil operating					
DC rated control voltage	V	48			
DC operating voltage					
pick-up	min	%Us	70		
	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			
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

in DC

Closing NO	min	ms	54
	max	ms	66
Opening NO	min	ms	14
	max	ms	17

UL technical data

Rated operational voltage AC (UL)	V	600
Full-load current (FLA) for three-phase AC motor		
at 480V	A	40
at 600V	A	32

Yielded mechanical performance

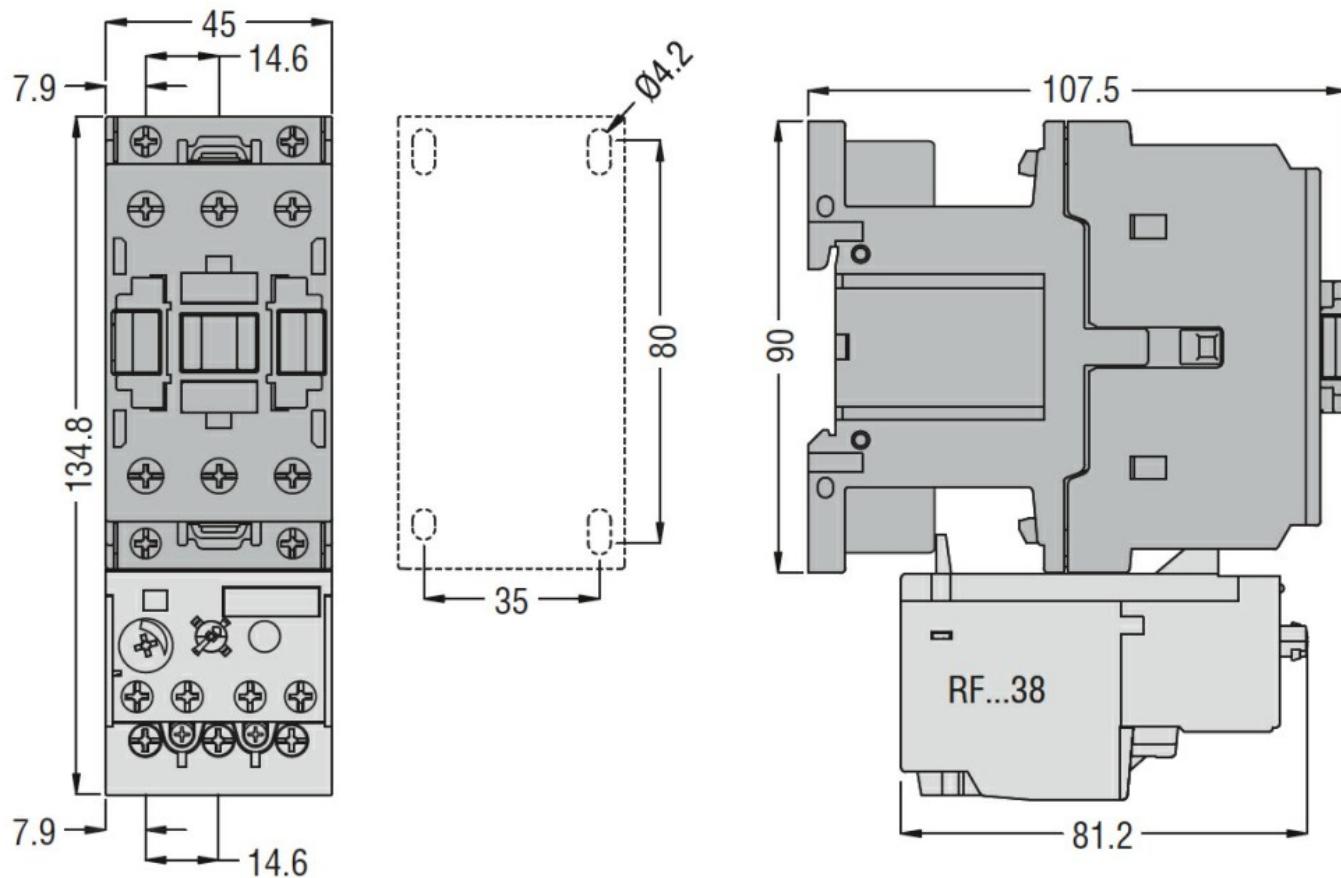
for single-phase AC motor	110/120V	HP	3
	230V	HP	7.5
for three-phase AC motor			
	200/208V	HP	10
	220/230V	HP	15
	460/480V	HP	30
	575/600V	HP	30

General USE

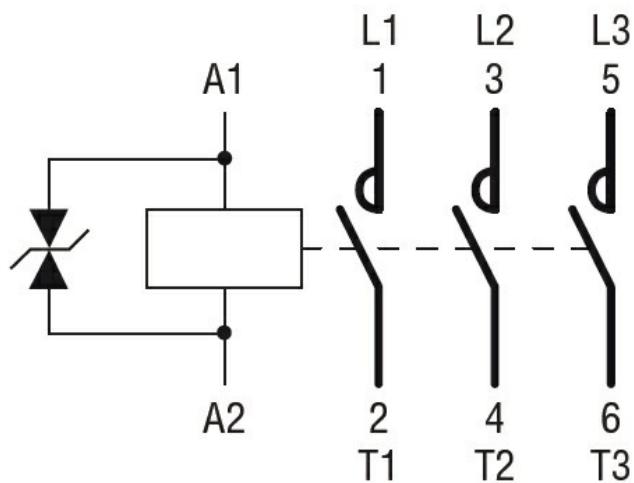
Contactor	AC current	A	55
Short-circuit protection fuse, 600V			
High fault	Short circuit current	kA	100
	Fuse rating	A	100
	Fuse class		J
Standard fault	Short circuit current	kA	5
	Fuse rating	A	150

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