

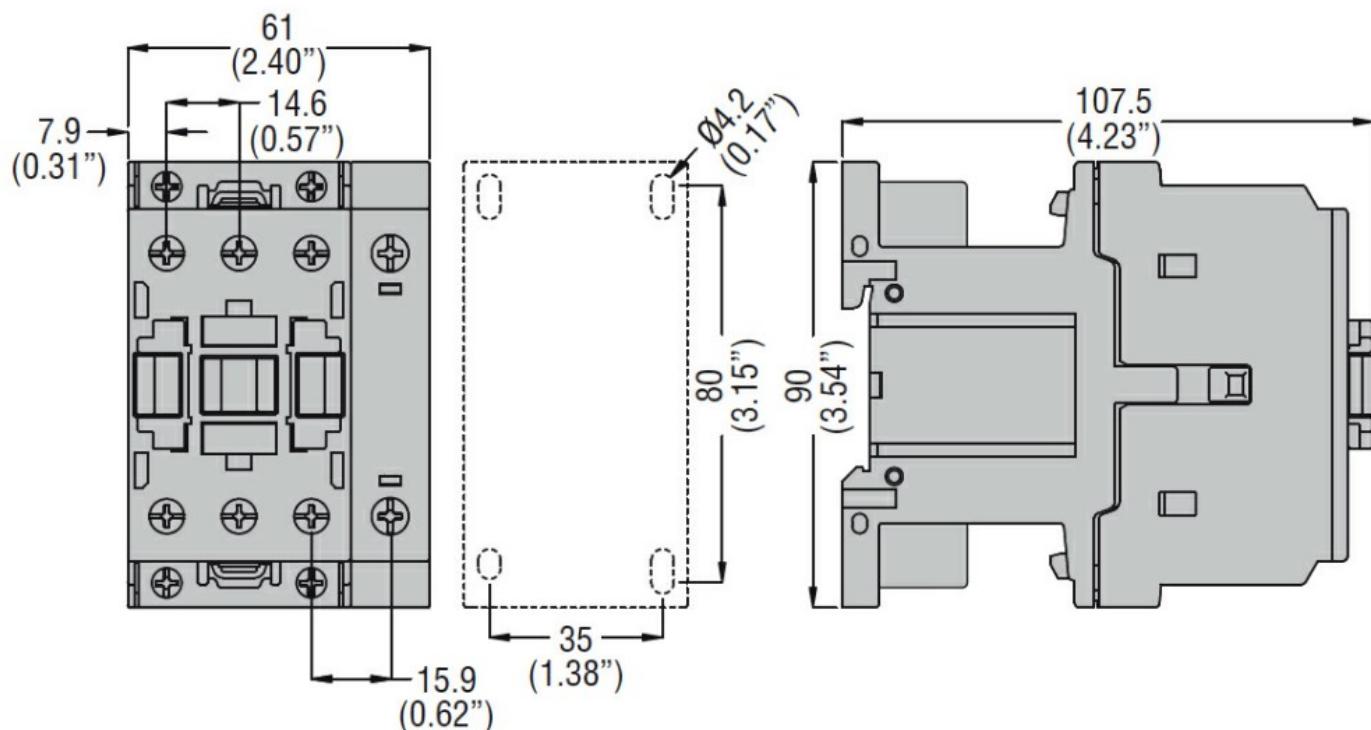


Product designation	Power contactor		
Product type designation	BF38		
<b>Contact characteristics</b>			
Number of poles	Nr.	4	
Rated insulation voltage $U_i$ IEC/EN	V	690	
Rated impulse withstand voltage $U_{imp}$	kV	6	
Operational frequency	min	Hz	25
	max	Hz	400
IEC Conventional free air thermal current $I_{th}$		A	56
Operational current $I_e$			
AC-1 ( $\leq 40^\circ C$ )	A	56	
AC-1 ( $\leq 40^\circ C$ ) with 16mm <sup>2</sup> wire and fork end lug	A	60	
AC-1 ( $\leq 55^\circ C$ )	A	45	
AC-1 ( $\leq 55^\circ C$ ) with 16mm <sup>2</sup> wire and fork end lug	A	48	
AC-1 ( $\leq 70^\circ C$ )	A	40	
AC-1 ( $\leq 70^\circ C$ ) with 16mm <sup>2</sup> 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-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 $I_e$ in DC1 with $L/R \leq 1ms$ with 4 poles in series	$\leq 24V$	A	36
	48V	A	34

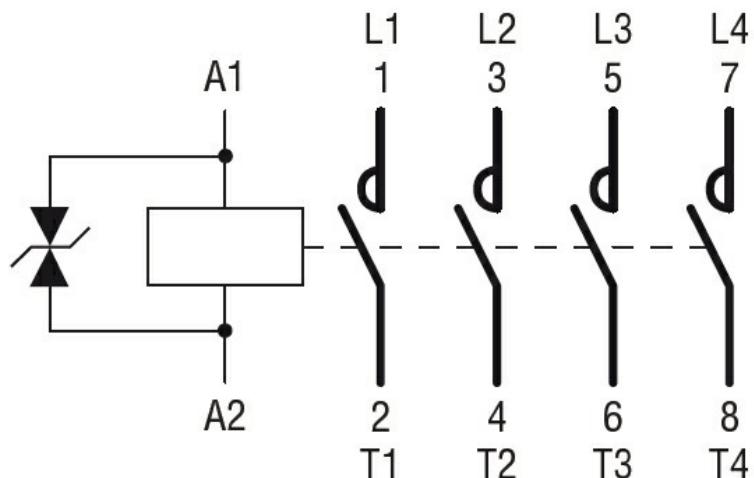
	75V	A	33
	110V	A	34
	220V	A	38
IEC max current $I_e$ in DC3-DC5 with $L/R \leq 15\text{ms}$ with 1 poles in series			
	$\leq 24\text{V}$	A	24
	48V	A	20
	75V	A	17
	110V	A	2,5
	220V	A	—
IEC max current $I_e$ in DC3-DC5 with $L/R \leq 15\text{ms}$ with 2 poles in series			
	$\leq 24\text{V}$	A	28
	48V	A	25
	75V	A	22
	110V	A	18
	220V	A	3
IEC max current $I_e$ in DC3-DC5 with $L/R \leq 15\text{ms}$ with 3 poles in series			
	$\leq 24\text{V}$	A	32
	48V	A	28
	75V	A	28
	110V	A	23
	220V	A	25
IEC max current $I_e$ in DC3-DC5 with $L/R \leq 15\text{ms}$ with 4 poles in series			
	$\leq 24\text{V}$	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)			$\text{m}\Omega$ 2
Power dissipation per pole (average value)			
	I <sub>th</sub>	W	6
	AC-3	W	2.9
Tightening torque for terminals			
	min	Nm	2.5
	max	Nm	3
	min	I <sub>bin</sub>	1.8
	max	I <sub>bin</sub>	2.2
Tightening torque for coil terminal			
	min	Nm	0.8
	max	Nm	1
	min	I <sub>bin</sub>	0.8
	max	I <sub>bin</sub>	0.74
Max number of wires simultaneously connectable			Nr. 2
Conductor section			
	AWG/Kcmil		

		max	6
Flexible w/o lug conductor section		min	mm <sup>2</sup> 2.5
		max	mm <sup>2</sup> 16
Flexible c/w lug conductor section		min	mm <sup>2</sup> 1
		max	mm <sup>2</sup> 10
Flexible with insulated spade lug conductor section		min	mm <sup>2</sup> 1
		max	mm <sup>2</sup> 10
Power terminal protection according to IEC/EN 60529			IP20 when properly wired
<b>Mechanical features</b>			
Operating position	normal	allowable	Vertical plan ±30°
Fixing			Screw / DIN rail 35mm
Weight	g	664	
<b>Operations</b>			
Mechanical life	cycles	20000000	
Electrical life	cycles	1400000	
<b>Safety related data</b>			
Performance level B10d according to EN/ISO 13489-1			
	rated load	cycles	1400000
	mechanical load	cycles	20000000
EMC compatibility			yes
<b>DC coil operating</b>			
DC rated control voltage	V	48	
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
<b>Max cycles frequency</b>			
Mechanical operation		cycles/h	3600
<b>Operating times</b>			
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