



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 ($\leq 40^{\circ}\text{C}$)	A	56	
AC-1 ($\leq 40^{\circ}\text{C}$) with 16mm ² wire and fork end lug	A	60	
AC-1 ($\leq 55^{\circ}\text{C}$)	A	45	
AC-1 ($\leq 55^{\circ}\text{C}$) with 16mm ² wire and fork end lug	A	48	
AC-1 ($\leq 70^{\circ}\text{C}$)	A	40	
AC-1 ($\leq 70^{\circ}\text{C}$) with 16mm ² wire and fork end lug	A	42	
AC-3 ($\leq 440\text{V} \leq 55^{\circ}\text{C}$)	A	38	
AC-4 (400V)	A	15.5	
Rated operational power AC-1 ($T \leq 40^{\circ}\text{C}$)	230V	kW	21
	400V	kW	36
	500V	kW	45
	690V	kW	62
IEC max current I _e in DC1 with L/R $\leq 1\text{ms}$ with 1 poles in series			
$\leq 24\text{V}$	A	35	
48V	A	30	
75V	A	23	
110V	A	8	
220V	A	—	
IEC max current I _e in DC1 with L/R $\leq 1\text{ms}$ with 2 poles in series			
$\leq 24\text{V}$	A	36	
48V	A	34	
75V	A	29	
110V	A	32	
220V	A	4	
IEC max current I _e in DC1 with L/R $\leq 1\text{ms}$ with 3 poles in series			
$\leq 24\text{V}$	A	36	
48V	A	34	
75V	A	33	
110V	A	34	
220V	A	30	
IEC max current I _e in DC1 with L/R $\leq 1\text{ms}$ with 4 poles in series			
$\leq 24\text{V}$	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)			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	513	
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	48	
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	

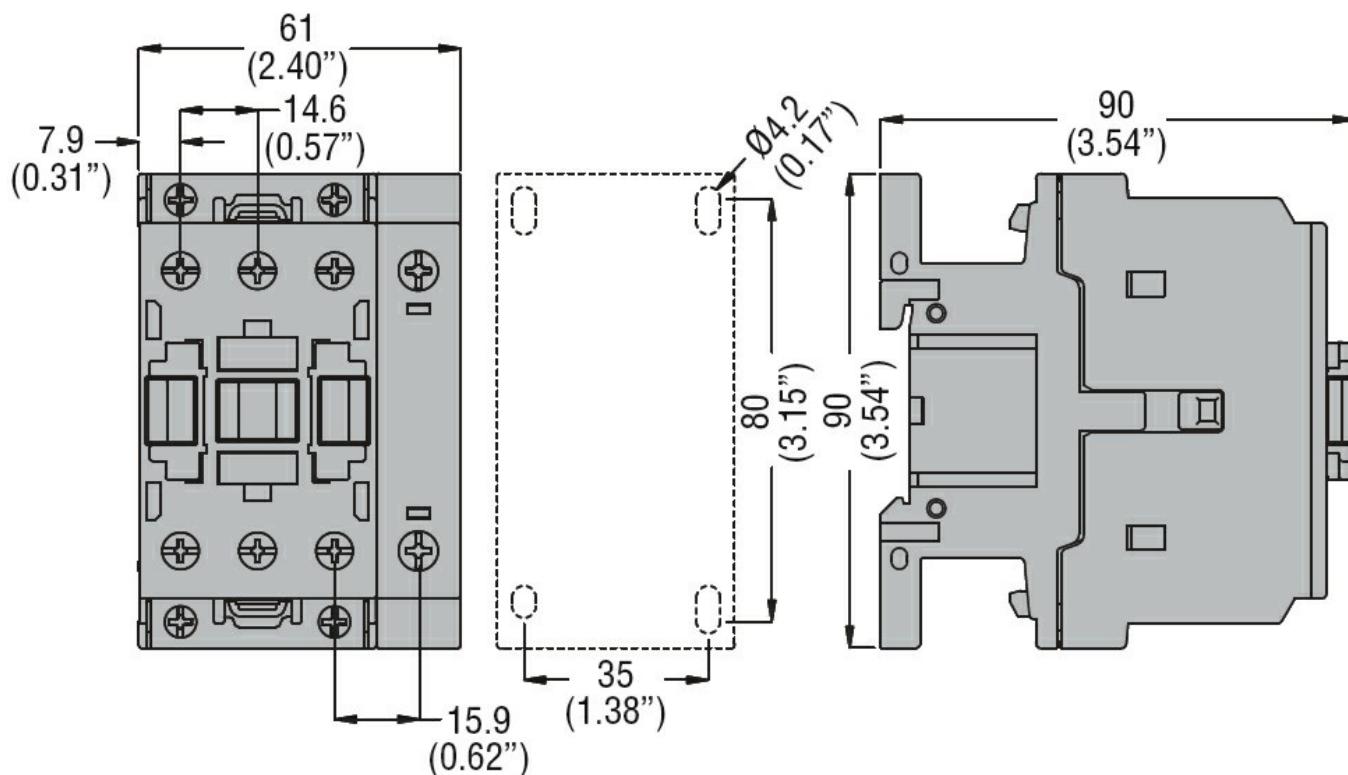
of 60Hz coil powered at 60Hz	in-rush	VA	75
	holding	VA	9
Dissipation at holding $\leq 20^{\circ}\text{C}$ 50Hz		W	2.5
Max cycles frequency			
Mechanical operation		cycles/h	3600
Operating times			
Average time for Us control in AC			
	Closing NO		
		min	ms 8
		max	ms 24
	Opening NO		
		min	ms 5
		max	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

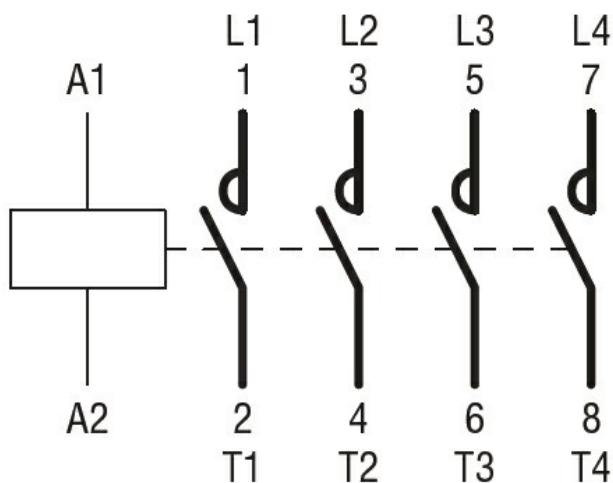
Pollution degree

3

Dimensions



Wiring diagrams



Certifications and compliance

Compliance

CSA C22.2 n° 60947-1

CSA C22.2 n° 60947-4-1

IEC/EN 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