



Product designation Power contactor
Product type designation BF38

Contact characteristics

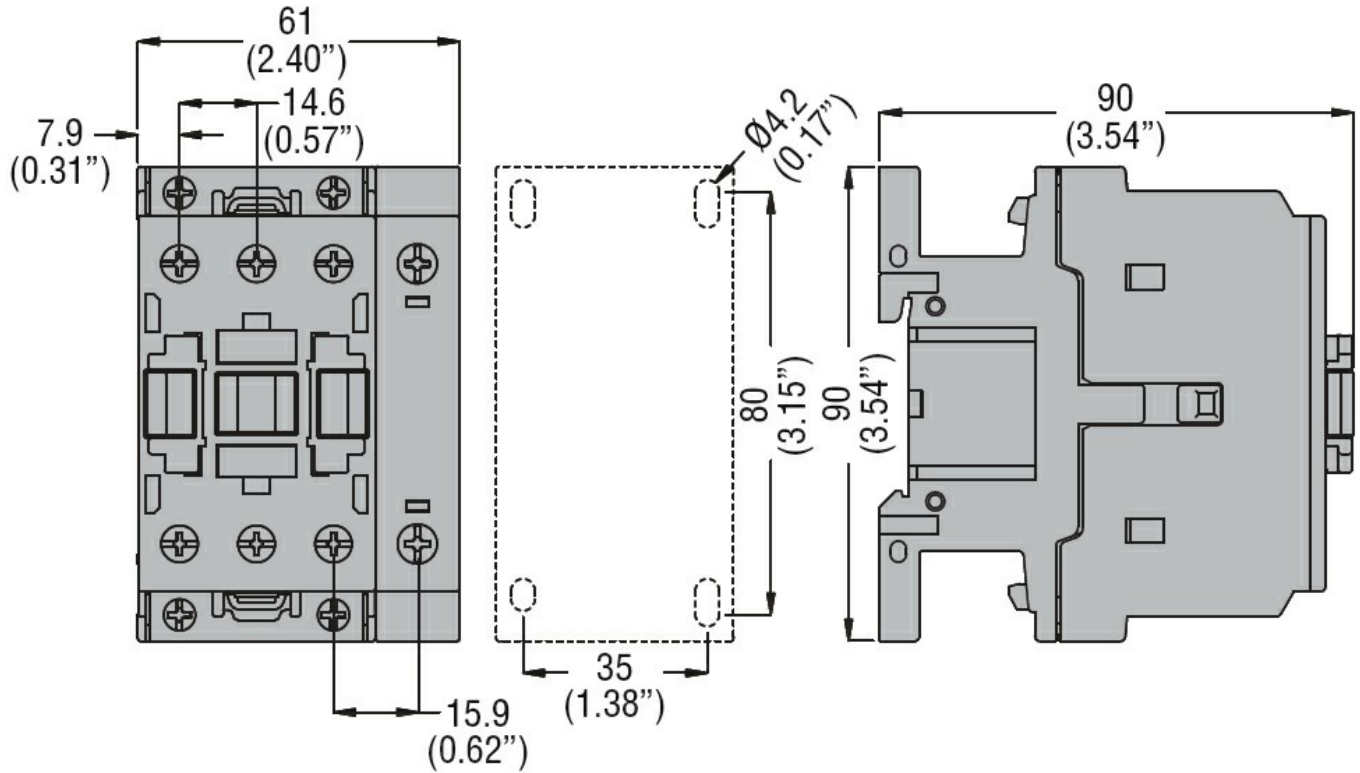
Number of poles	Nr.	4
Rated insulation voltage U_i IEC/EN	V	690
Rated impulse withstand voltage U_{imp}	kV	6
Operational frequency	min	Hz 25
	max	Hz 400
IEC Conventional free air thermal current I_{th}	A	56
Operational current I_e	AC-1 ($\leq 40^\circ\text{C}$)	A 56
	AC-1 ($\leq 40^\circ\text{C}$) with 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
Rated operational power AC-1 ($T \leq 40^\circ\text{C}$)	AC-4 (400V)	A 15.5
	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	$\leq 24\text{V}$
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		$\leq 24\text{V}$
	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	$\leq 24\text{V}$
48V		A 34

	75V	A	33
	110V	A	34
	220V	A	38
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IEC max current Ie 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	–
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IEC max current Ie 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
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IEC max current Ie 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
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IEC max current Ie 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
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Short-time allowable current for 10s (IEC/EN60947-1)		A	320
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Protection fuse			
	gG (IEC)	A	63
	aM (IEC)	A	40
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Making capacity (RMS value)		A	380
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Breaking capacity at voltage			
	440V	A	304
	500V	A	240
	690V	A	192
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Resistance per pole (average value)		mΩ	2
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Power dissipation per pole (average value)			
	Ith	W	6
	AC-3	W	2.9
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Tightening torque for terminals			
	min	Nm	2.5
	max	Nm	3
	min	lbin	1.8
	max	lbin	2.2
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Tightening torque for coil terminal			
	min	Nm	0.8
	max	Nm	1
	min	lbin	0.8
	max	lbin	0.74
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Max number of wires simultaneously connectable		Nr.	2
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Conductor section			
AWG/Kcmil			

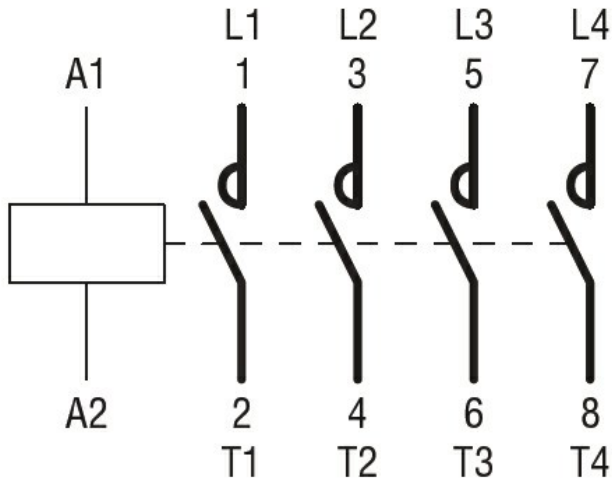
		max	6
Flexible w/o lug conductor section		min	mm ² 2.5
		max	mm ² 16
Flexible c/w lug conductor section		min	mm ² 1
		max	mm ² 10
Flexible with insulated spade lug conductor section		min	mm ² 1
		max	mm ² 10
Power terminal protection according to IEC/EN 60529			IP20 when properly wired
Mechanical features			
Operating position		normal allowable	Vertical plan ±30°
Fixing			Screw / DIN rail 35mm
Weight		g	514
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 mechanical load	cycles 1400000 cycles 20000000
Mirror contacts according to IEC/EN 60947-4-1			yes
EMC compatibility			yes
AC coil operating			
Rated AC voltage at 50/60Hz		V	24
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
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