



Power contactor
BF12

Product designation

Product type designation

Contact characteristics

Number of poles	nr.	4
Rated insulation voltage U_i	V	690
Rated impulse withstand voltage U_{imp}	kV	6
Operating frequency	Operational frequency min	Hz 25
	Operational frequency max	Hz 400
	Conventional free air thermal current I_{th}	A 28
Operating current	Operational current AC1 ($\leq 40^\circ\text{C}$)	A 28
	Operational current AC3 ($\leq 440\text{V} \leq 55^\circ\text{C}$)	A 12
	Operational current AC4 (400V)	A 7.9
	Rated operational power AC1 ($T \leq 40^\circ\text{C}$)	230V
400V		kW 18
500V		kW 23
690V		kW 32
Rated operational power AC3 ($T \leq 55^\circ\text{C}$)		230V
	400V	kW 5.7
	415V	kW 6.2
	440V	kW 6.2
	500V	kW 7.5
	690V	kW 10
	Short-time allowable current for 10s (IEC/EN60947-1)	A
Protection fuse	gG (IEC)	A 32
	aM (IEC)	A 12
	Making capacity (RMS value)	A 120
Breaking capacity at voltage	Breaking capacity 440V	A 96
	Breaking capacity 500V	A 96
	Breaking capacity 690V	A 94
	Resistance per pole (average value)	m Ω
Power dissipation per pole (average value)	Power dissipation pole (average value) I_{th}	W 2
	AC3	W 0.4
	Tightening torque for terminals	min
max		Nm 1.8
min		lbft 1.1
max		lbft 1.5
Tightening torque for coil terminal		

		min	Nm	0.8
		max	Nm	1
		min	lbft	0.8
		max	lbft	0.74
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max number of wires simultaneously connectable			nr.	2
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Conductor section				
AWG				
		min		16
		max		10
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Flexible w/o lug conductor section				
		min	mm ²	1
		max	mm ²	6
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Flexible c/w lug conductor section				
		min	mm ²	1
		max	mm ²	4
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Flexible with insulated spade lug conductor section				
		min	mm ²	1
		max	mm ²	4
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Power terminal protection according to IEC/EN 60529				IP20 when wired
Auxiliary contact characteristics				
Operational current AC1 (≤40°C)				A 28
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Operating current DC13				110V A Screw / DIN rail 35mm
Ambient conditions				
Temperature				
Operating temperature				
		min	°C	-50
		max	°C	70
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Storage temperature				
		min	°C	-60
		max	°C	80
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Max altitude				m 3000
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Operating position				normal allowable Vertical plan ±30°
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Mounting				Screw / DIN rail 35mm
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Weight				g 0.36
Operations				
Mechanical life				Cycles 20000000
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Electrical life				Cycles 2000000
Safety related data				
Performance level B10d according to EN/ISO 13489-1				
		rated load	Cicli	2000000
		mechanical load	Cicli	20000000
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Mirror contacts according to IEC/EN 60947-4-1				yes
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EMC compatibility				yes
AC coil operating				
AC operating voltage				
of 50/60Hz coil powered at 50Hz pick-up				
		min	%Us	0.8

		max	%Us	1.1	
	drop-out	min	%Us	0.2	
		max	%Us	0.55	
of 50/60Hz coil powered at 60Hz					
	pick-up	min	%Us	0.85	
		max	%Us	1.1	
	drop-out	min	%Us	0.2	
		max	%Us	0.55	
of 60Hz coil powered at 60Hz					
	pick-up	min	%Us	0.8	
		max	%Us	1.1	
	drop-out	min	%Us	0.2	
		max	%Us	0.55	
AC operating voltage					
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 operations				Cycles/h	3600
Operating times					
Average time for Us control					
in AC					
Closing NO					
		min	ms	8	
		max	ms	24	
Opening NO					
		min	ms	10	
		max	ms	20	
Closing NC					
		min	ms	14	
		max	ms	28	
Opening NC					
		min	ms	7	
		max	ms	18	
UL technical data					
Full-load current (FLA) for three-phase AC motor					
		at 480V	A	11	
		at 600V	A	11	
Yielded mechanical performance					
for single-phase AC motor					
		at 110/120V	hp	1	
		at 230V	hp	2	

for three-phase AC motor

at 200/208V	hp	5
at 220/230V	hp	5
at 460/480V	hp	7.5
at 575/600V	hp	10

General USE

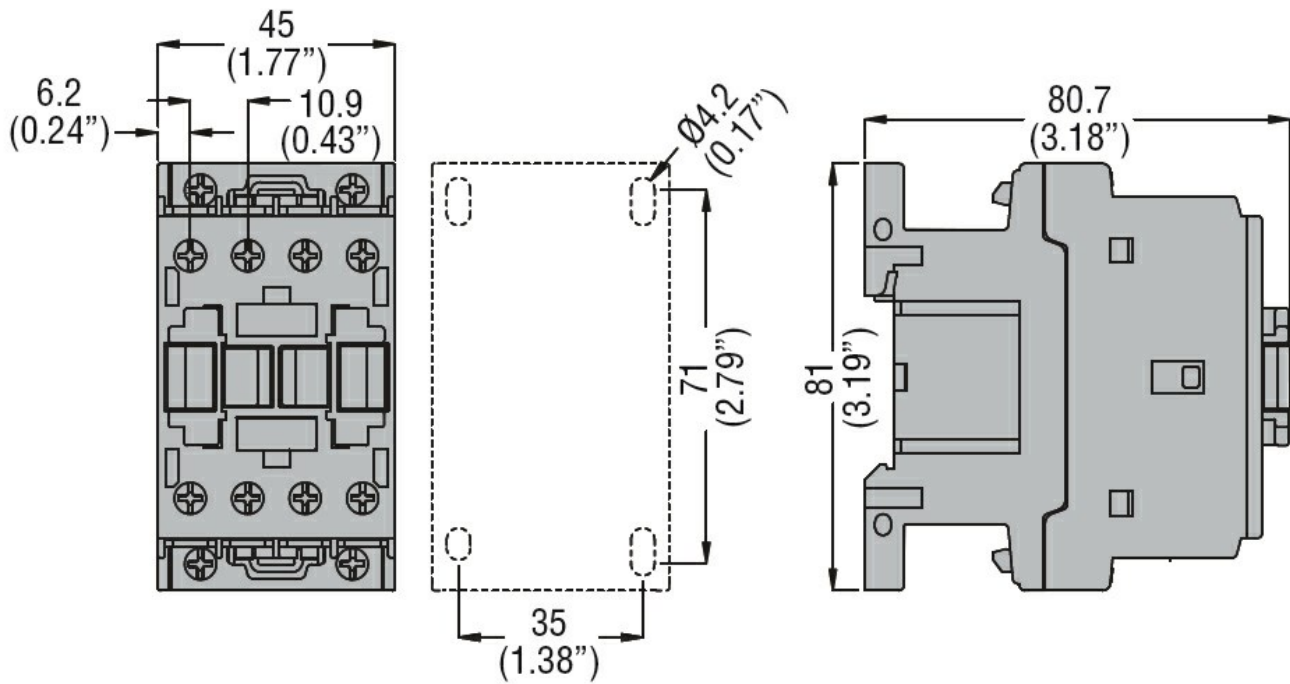
Contactor

AC current A 28

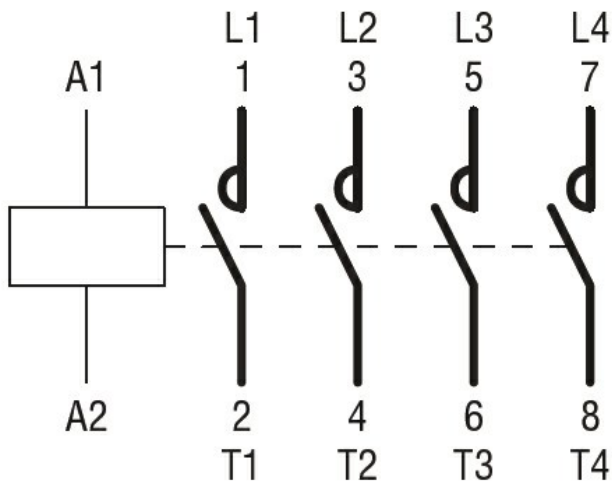
Other features

Pollution degree 3

Dimensions



Wiring diagrams



Certifications and compliance

Certifications

- 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

Compliance

CCC

cULus

EAC

ETIM 6 classification

EC000066 - Power contactor, AC switching