



Power contactor  
BF18

Product designation

Product type designation

**Contact characteristics**

Number of poles	nr.	3
Rated insulation voltage U <sub>i</sub> IEC/EN	V	690
Rated impulse withstand voltage U <sub>imp</sub>	kV	6
Operational frequency	min	Hz 25
	max	Hz 400
IEC Conventional free air thermal current I <sub>th</sub>	A	32
Operational current I <sub>e</sub>	AC-1 (≤40°C)	A 32
	AC-1 (≤55°C)	A 26
	AC-1 (≤70°C)	A 23
	AC-3 (≤440V ≤55°C)	A 18
	AC-4 (400V)	A 8.5
Rated operational power AC-3 (T≤55°C)	230V	kW 4
	400V	kW 7.5
	415V	kW 9
	440V	kW 9
	500V	kW 10
	690V	kW 10
Rated operational power AC-1 (T≤40°C)	230V	kW 12
	400V	kW 21
	500V	kW 26
	690V	kW 36
IEC max current I <sub>e</sub> in DC1 with L/R ≤ 1ms with 1 poles in series	≤24V	A 17
	48V	A 15
	75V	A 15
	110V	A 6
	220V	A –
IEC max current I <sub>e</sub> in DC1 with L/R ≤ 1ms with 2 poles in series	≤24V	A 20
	48V	A 20
	75V	A 20
	110V	A 13
	220V	A 1
IEC max current I <sub>e</sub> in DC1 with L/R ≤ 1ms with 3 poles in series	≤24V	A 22
	48V	A 22
	75V	A 20
	110V	A 16

	220V	A	11
IEC max current I <sub>e</sub> in DC1 with L/R ≤ 1ms with 4 poles in series	≤24V	A	22
	48V	A	22
	75V	A	20
	110V	A	18
	220V	A	13
IEC max current I <sub>e</sub> in DC3-DC5 with L/R ≤ 15ms with 1 poles in series	≤24V	A	12
	48V	A	11
	75V	A	11
	110V	A	2
	220V	A	–
IEC max current I <sub>e</sub> in DC3-DC5 with L/R ≤ 15ms with 2 poles in series	≤24V	A	15
	48V	A	13
	75V	A	13
	110V	A	8
	220V	A	2
IEC max current I <sub>e</sub> in DC3-DC5 with L/R ≤ 15ms with 3 poles in series	≤24V	A	18
	48V	A	18
	75V	A	16
	110V	A	12
	220V	A	6
IEC max current I <sub>e</sub> in DC3-DC5 with L/R ≤ 15ms with 4 poles in series	≤24V	A	18
	48V	A	18
	75V	A	16
	110V	A	13
	220V	A	8
Short-time allowable current for 10s (IEC/EN60947-1)		A	200
Protection fuse	gG (IEC)	A	32
	aM (IEC)	A	20
Making capacity (RMS value)		A	180
Breaking capacity at voltage	440V	A	144
	500V	A	120
	690V	A	94
Resistance per pole (average value)		mΩ	2.5
Power dissipation per pole (average value)	I <sub>th</sub>	W	2.6
	AC3	W	0.8
Tightening torque for terminals	min	Nm	1.5
	max	Nm	1.8
	min	I <sub>bin</sub>	1.1
	max	I <sub>bin</sub>	1.5
Tightening torque for coil terminal	min	Nm	0.8
	max	Nm	1
	min	I <sub>bft</sub>	0.8

	max	lbft	0.74
Max number of wires simultaneously connectable		nr.	2
Conductor section			
Flexible w/o lug conductor section	min	mm <sup>2</sup>	1
	max	mm <sup>2</sup>	6
Flexible c/w lug conductor section	min	mm <sup>2</sup>	1
	max	mm <sup>2</sup>	4
Flexible with insulated spade lug conductor section	min	mm <sup>2</sup>	1
	max	mm <sup>2</sup>	4
Power terminal protection according to IEC/EN 60529			IP20 when wired
<b>Mechanical features</b>			
Operating position			
	normal allowable		Vertical plan ±30°
Fixing			Screw / DIN rail 35mm
Weight		g	358
<b>Auxiliary contact characteristics</b>			
Type of contact			1 NC
Thermal current I <sub>th</sub>		A	10
IEC/EN 60947-5-1 designation			A600 - P600
Operating current AC15	230V	A	3
	400V	A	1.9
	500V	A	1.4
Operating current DC12	110V	A	5.7
Operating current DC13	24V	A	5.7
	48V	A	2.9
	60V	A	2.3
	110V	A	1.25
	125V	A	1.1
	220V	A	0.55
	600V	A	0.2
<b>Operations</b>			
Mechanical life		cycles	20000000
Electrical life		cycles	1600000
<b>Safety related data</b>			
Performance level B10d according to EN/ISO 13489-1	rated load	cycles	1600000
	mechanical load	cycles	20000000
Mirror contacts according to IEC/EN 60947-4-1			yes
EMC compatibility			yes
<b>AC coil operating</b>			
Rated AC voltage at 50/60Hz, 60Hz	min	V	12
	max	V	600
AC operating voltage			
			of 50/60Hz coil powered at 50Hz

	pick-up	max	%Us	110	
	drop-out	min	%Us	20	
		max	%Us	55	
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of 50/60Hz coil powered at 60Hz					
	pick-up	min	%Us	85	
		max	%Us	110	
	drop-out	min	%Us	20	
		max	%Us	55	
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AC operating voltage at 20°C					
of 50/60Hz coil powered at 50Hz					
	in-rush	VA		75	
	holding	VA		9	
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of 50/60Hz coil powered at 60Hz					
	in-rush	VA		70	
	holding	VA		6.5	
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of 60Hz coil powered at 60Hz					
	in-rush	VA		75	
	holding	VA		9	
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Dissipation at holding ≤20°C 50Hz				W	2.5
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<b>Max cycles frequency</b>					
Mechanical operation				cycles/h	3600
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<b>Operating times</b>					
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	
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<b>UL technical data</b>					
Full-load current (FLA) for three-phase AC motor					
	at 480V	A		14	
	at 600V	A		17	
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Yielded mechanical performance					
for single-phase AC motor					
	110/120V	hp		1	
	230V	hp		3	
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for three-phase AC motor					
	200/208V	hp		5	
	220/230V	hp		5	
	460/480V	hp		10	
	575/600V	hp		15	
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Contact rating of auxiliary contacts according to UL				A600 - P600	

General USE

Contactor	AC current	A	32
Auxiliary contacts	AC voltage	V	600
	AC current	A	10
	DC voltage	V	250
	DC current	A	1

Ambient conditions

Temperature

Operating temperature	min	°C	-50
	max	°C	70
Storage temperature	min	°C	-60
	max	°C	80

Max altitude

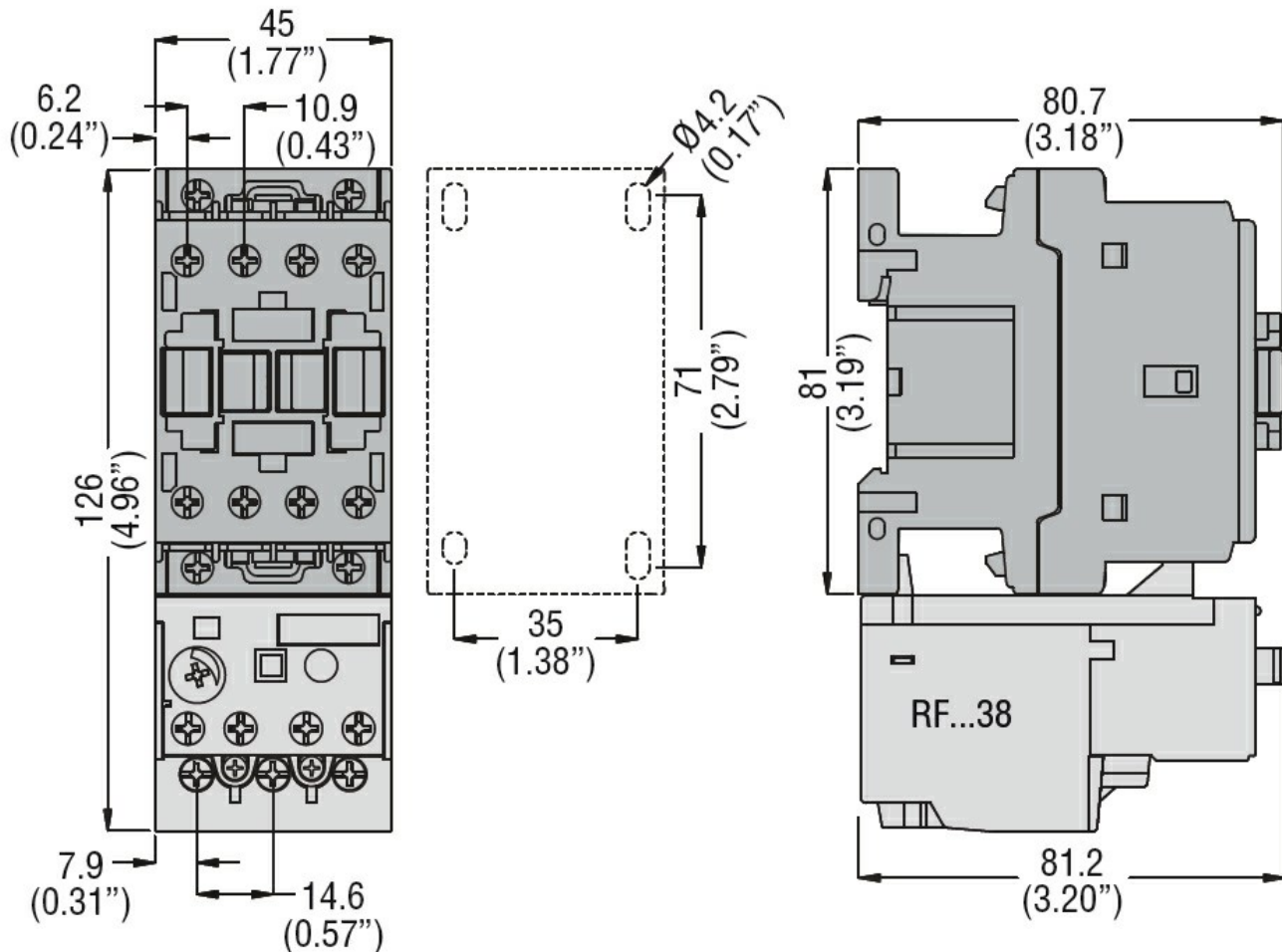
m 3000

Resistance & Protection

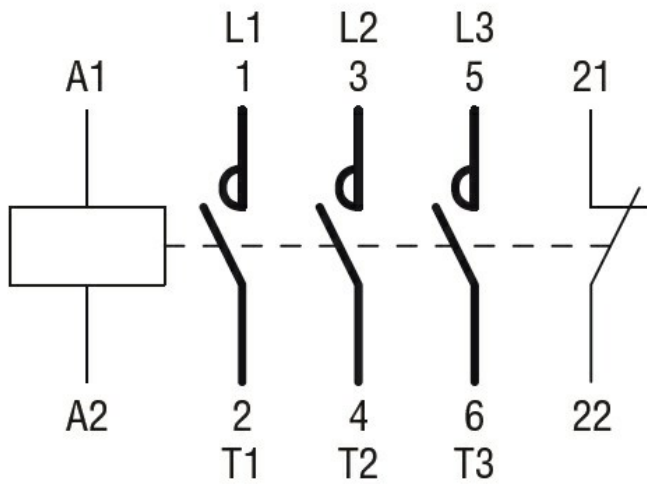
Pollution degree

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