



Power contactor  
BF18

Product designation

Product type designation

**Contact characteristics**

Number of poles	Nr.	3
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	32
Operational current $I_e$	AC-1 ( $\leq 40^\circ\text{C}$ )	A 32
	AC-1 ( $\leq 55^\circ\text{C}$ )	A 26
	AC-1 ( $\leq 70^\circ\text{C}$ )	A 23
	AC-3 ( $\leq 440\text{V} \leq 55^\circ\text{C}$ )	A 18
	AC-4 (400V)	A 8.5
Rated operational power AC-3 ( $T \leq 55^\circ\text{C}$ )	230V	kW 4
	400V	kW 7.5
	415V	kW 9
	440V	kW 9
	500V	kW 10
	690V	kW 10
Rated operational power AC-1 ( $T \leq 40^\circ\text{C}$ )	230V	kW 12
	400V	kW 21
	500V	kW 26
	690V	kW 36
IEC max current $I_e$ in DC1 with $L/R \leq 1\text{ms}$ with 1 poles in series	$\leq 24\text{V}$	A 17
	48V	A 15
	75V	A 15
	110V	A 6
	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 20
	48V	A 20
	75V	A 20
	110V	A 13
	220V	A 1
IEC max current $I_e$ in DC1 with $L/R \leq 1\text{ms}$ with 3 poles in series	$\leq 24\text{V}$	A 22
	48V	A 22
	75V	A 20
	110V	A 16

	220V	A	11
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IEC max current $I_e$ in DC1 with $L/R \leq 1$ ms with 4 poles in series			
	$\leq 24$ V	A	22
	48V	A	22
	75V	A	20
	110V	A	18
	220V	A	13
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IEC max current $I_e$ in DC3-DC5 with $L/R \leq 15$ ms with 1 poles in series			
	$\leq 24$ V	A	12
	48V	A	11
	75V	A	11
	110V	A	2
	220V	A	–
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IEC max current $I_e$ in DC3-DC5 with $L/R \leq 15$ ms with 2 poles in series			
	$\leq 24$ V	A	15
	48V	A	13
	75V	A	13
	110V	A	8
	220V	A	2
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IEC max current $I_e$ in DC3-DC5 with $L/R \leq 15$ ms with 3 poles in series			
	$\leq 24$ V	A	18
	48V	A	18
	75V	A	16
	110V	A	12
	220V	A	6
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IEC max current $I_e$ in DC3-DC5 with $L/R \leq 15$ ms with 4 poles in series			
	$\leq 24$ V	A	18
	48V	A	18
	75V	A	16
	110V	A	13
	220V	A	8
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Short-time allowable current for 10s (IEC/EN60947-1)		A	200
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Protection fuse			
	gG (IEC)	A	32
	aM (IEC)	A	20
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Making capacity (RMS value)		A	180
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Breaking capacity at voltage			
	440V	A	144
	500V	A	120
	690V	A	94
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Resistance per pole (average value)		m $\Omega$	2.5
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Power dissipation per pole (average value)			
	I <sub>th</sub>	W	2.6
	AC3	W	0.8
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Tightening torque for terminals			
	min	Nm	1.5
	max	Nm	1.8
	min	lbin	1.1
	max	lbin	1.5
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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		10
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
Conductor section	AWG/kcmil conductor section	max		10
<b>Auxiliary contact characteristics</b>				
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			V	230

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  $U_s$  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	14
at 600V	A	17

Yielded mechanical performance

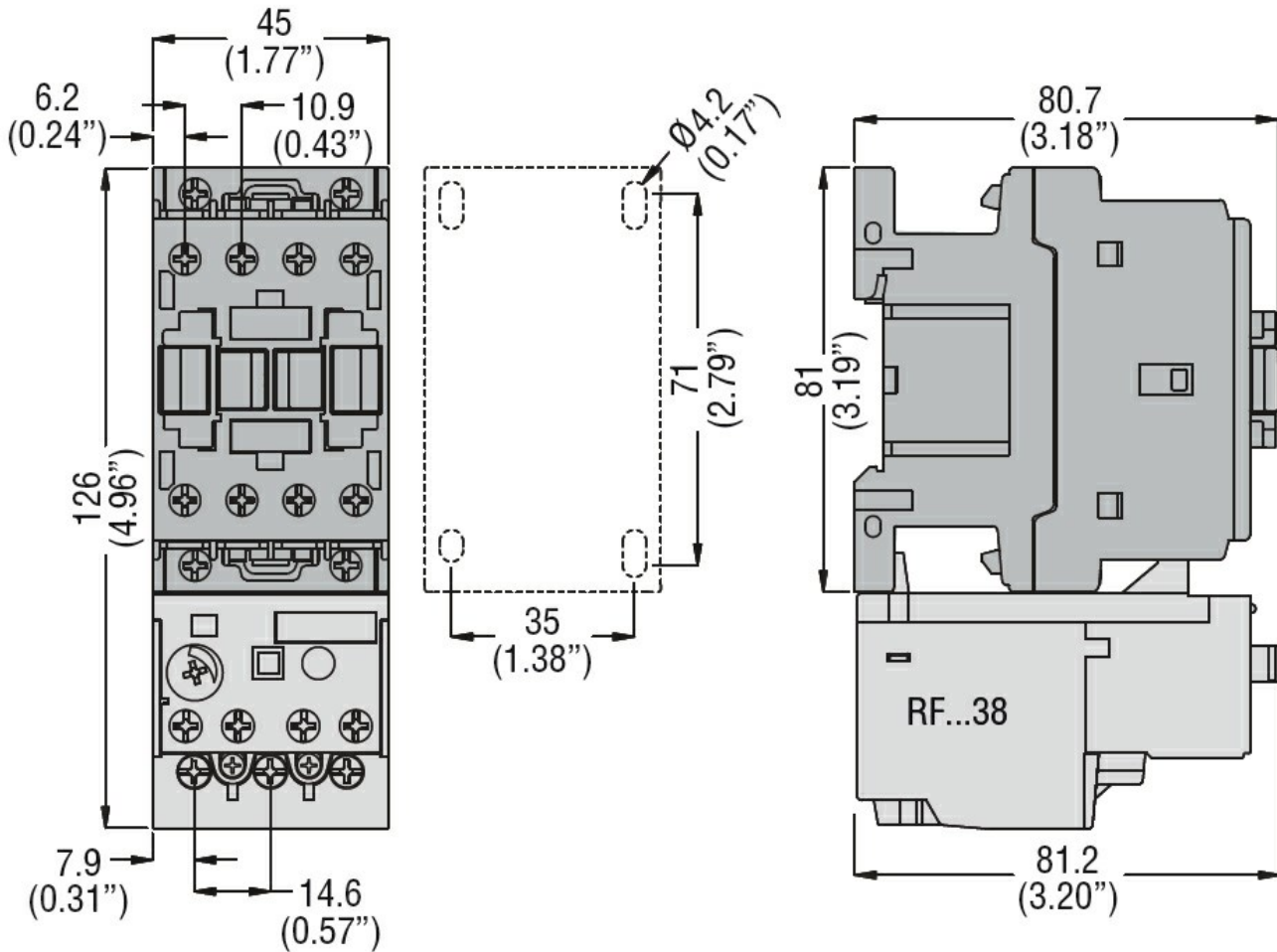
for single-phase AC motor

110/120V	HP	1
230V	HP	3

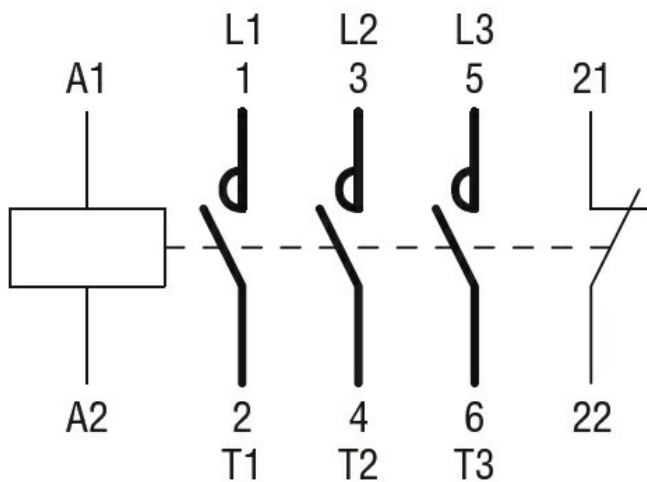
for three-phase AC motor

200/208V	HP	5
220/230V	HP	5

		460/480V	HP	10
		575/600V	HP	15
<b>General USE</b>				
	Contactor	AC current	A	32
	Auxiliary contacts	AC voltage	V	600
		AC current	A	10
		DC voltage	V	250
		DC current	A	1
<b>Short-circuit protection fuse, 600V</b>				
	High fault	Short circuit current	kA	100
		Fuse rating	A	60
		Fuse class		J
	Standard fault	Short circuit current	kA	5
		Fuse rating	A	80
Contact rating of auxiliary contacts according to UL				A600 - P600
<b>Ambient conditions</b>				
<b>Temperature</b>				
	Operating temperature	min	°C	-50
		max	°C	70
	Storage temperature	min	°C	-60
		max	°C	80
Max altitude				m 3000
<b>Resistance &amp; Protection</b>				
Pollution degree				3
<b>Dimensions</b>				



**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

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cULus

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EAC

ETIM classification

ETIM 8.0

EC000066 -  
Power contactor,  
AC switching