



Product designation	Power contactor		
Product type designation	BF18		
<b>Contact characteristics</b>			
Number of poles	Nr.	3	
Rated insulation voltage $Ui$ IEC/EN	V	690	
Rated impulse withstand voltage $Uimp$	kV	6	
Operational frequency	min	Hz	25
	max	Hz	400
IEC Conventional free air thermal current $Ith$		A	32
Operational current $le$			
	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 $le$ 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 $le$ 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 $le$ 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

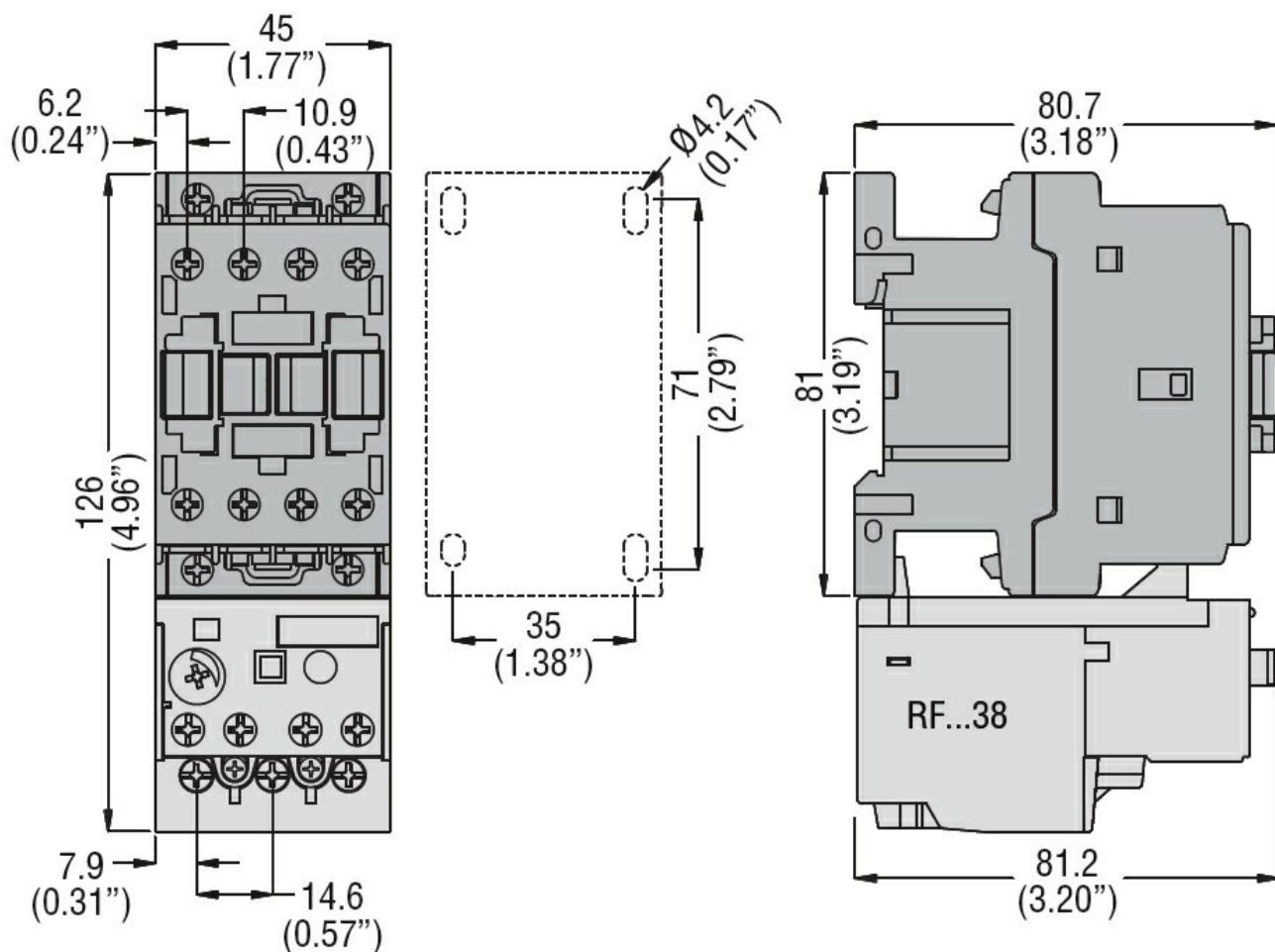
	220V	A	11
IEC max current $I_e$ in DC1 with $L/R \leq 1\text{ms}$ with 4 poles in series	$\leq 24V$	A	22
	48V	A	22
	75V	A	20
	110V	A	18
	220V	A	13
IEC max current $I_e$ in DC3-DC5 with $L/R \leq 15\text{ms}$ with 1 poles in series	$\leq 24V$	A	12
	48V	A	11
	75V	A	11
	110V	A	2
	220V	A	—
IEC max current $I_e$ in DC3-DC5 with $L/R \leq 15\text{ms}$ with 2 poles in series	$\leq 24V$	A	15
	48V	A	13
	75V	A	13
	110V	A	8
	220V	A	2
IEC max current $I_e$ in DC3-DC5 with $L/R \leq 15\text{ms}$ with 3 poles in series	$\leq 24V$	A	18
	48V	A	18
	75V	A	16
	110V	A	12
	220V	A	6
IEC max current $I_e$ in DC3-DC5 with $L/R \leq 15\text{ms}$ with 4 poles in series	$\leq 24V$	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)		$\text{m}\Omega$	2.5
Power dissipation per pole (average value)			
	I <sub>th</sub>	W	2.6
	AC-3	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>bin</sub>	0.8

	max	I <sub>bin</sub>	0.74
Max number of wires simultaneously connectable	Nr.	2	
<b>Conductor section</b>			
AWG/Kcmil			
Flexible w/o lug conductor section	max	10	
	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 properly wired
<b>Mechanical features</b>			
Operating position	normal allowable		Vertical plan ±30°
Fixing			Screw / DIN rail 35mm
Weight	g	362	
<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
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		

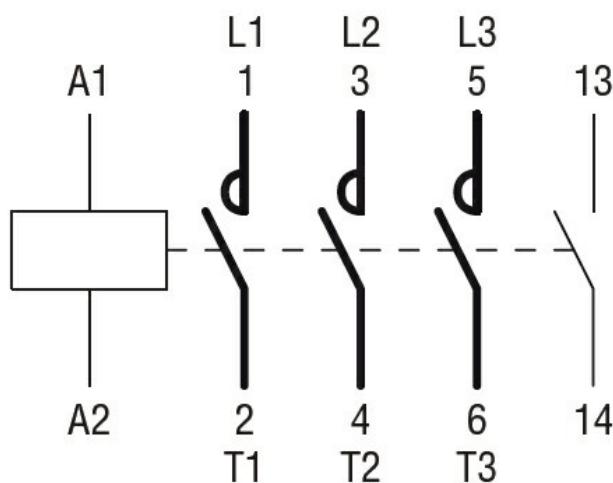
		min	%Us	80
		max	%Us	110
drop-out				
		min	%Us	20
		max	%Us	55
of 50/60Hz coil powered at 60Hz				
pick-up				
		min	%Us	85
		max	%Us	110
drop-out				
		min	%Us	20
		max	%Us	55
AC average coil consumption at 20°C				
of 50/60Hz coil powered at 50Hz				
	in-rush	VA	75	
	holding	VA	9	
of 50/60Hz coil 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 ≤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	10	
	max	ms	20	
Closing NC				
	min	ms	14	
	max	ms	28	
Opening NC				
	min	ms	7	
	max	ms	18	
UL technical data				
Rated operational voltage AC (UL)			V	600
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	

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
Short-circuit protection fuse, 600V			
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
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

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cULus  
EAC

ETIM classification

ETIM 8.0

EC000066 -  
Power contactor,  
AC switching