



Product designation				Power contactor
Product type designation				BF18
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 (=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_e 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_e 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_e 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
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IEC max current Ie 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
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IEC max current Ie 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	–
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IEC max current Ie 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
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IEC max current Ie 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
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IEC max current Ie 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
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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?	2.5
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Power dissipation per pole (average value)			
	Ith	W	2.6
	AC3	W	0.8
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Tightening torque for terminals			
	min	Nm	1.5
	max	Nm	1.8
	min	Ibin	1.1
	max	Ibin	1.5
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Tightening torque for coil terminal			
	min	Nm	0.8
	max	Nm	1
	min	Ibin	0.8

		max	I _{bin}	0.74
Max number of wires simultaneously connectable			Nr.	2
Conductor section	AWG/Kcmil	max		10
Flexible w/o lug conductor section		min	mm ²	1
		max	mm ²	6
Flexible c/w lug conductor section		min	mm ²	1
		max	mm ²	4
Flexible with insulated spade lug conductor section		min	mm ²	1
		max	mm ²	4
Power terminal protection according to IEC/EN 60529				IP20 when wired
Mechanical features				
Operating position		normal allowable		Vertical plan ±30°
Fixing				Screw / DIN rail 35mm
Weight			g	502
Conductor section	AWG/kcmil conductor section	max		10
Auxiliary contact characteristics				
Thermal current I _{th}			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
Operations				
Mechanical life			cycles	20000000
Electrical life			cycles	1600000
Safety related data				
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
DC coil operating				
DC rated control voltage			V	24

DC operating voltage			
pick-up	min	%Us	80
	max	%Us	110
drop-out			
	min	%Us	10
	max	%Us	40

Average coil consumption =20°C			
	in-rush	W	2.4
	holding	W	2.4

Max cycles frequency

Mechanical operation	cycles/h	3600
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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
in DC			
Closing NO	min	ms	75
	max	ms	91
Opening NO	min	ms	15
	max	ms	19
Closing NC	min	ms	24
	max	ms	30
Opening NC	min	ms	67
	max	ms	81

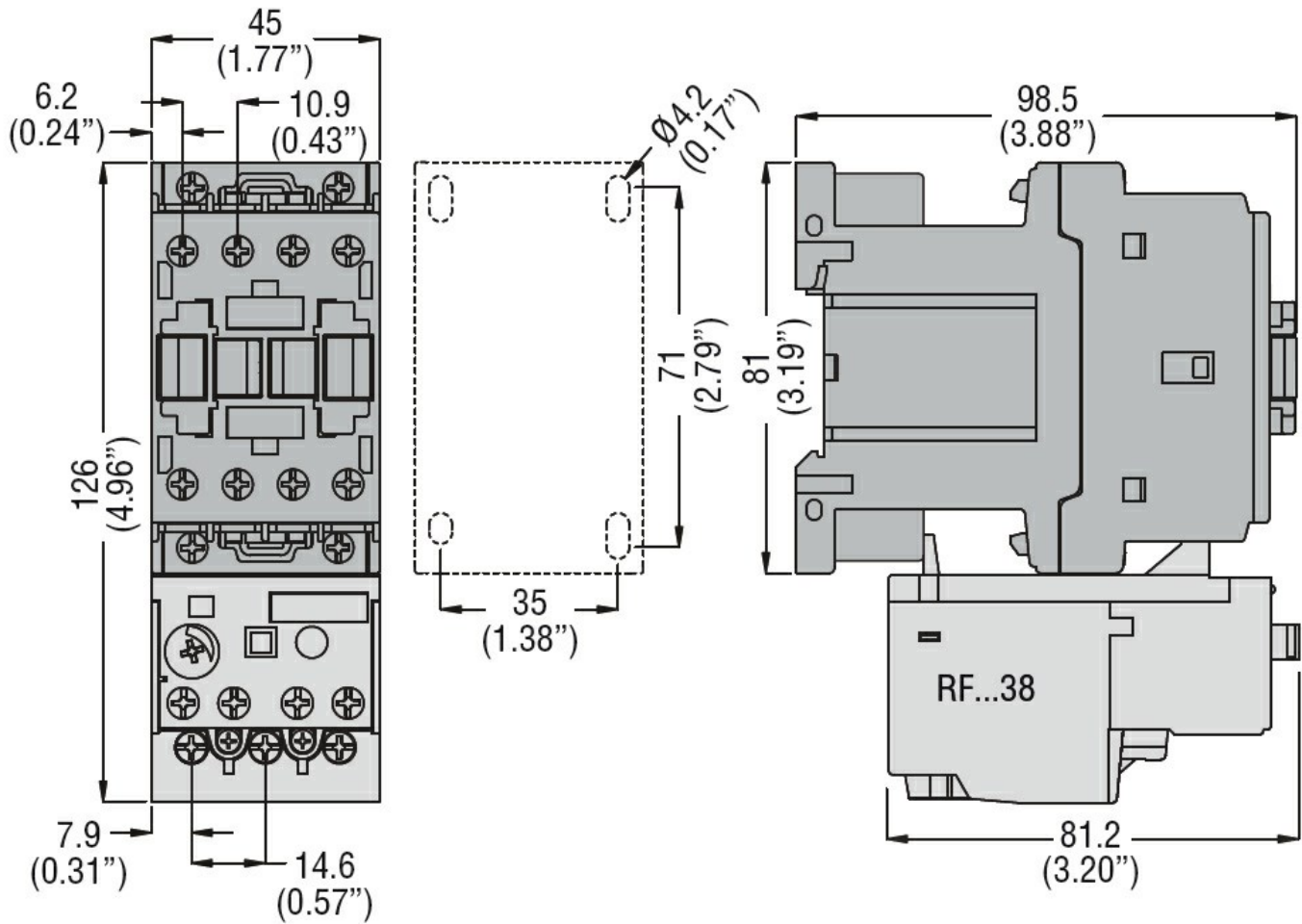
UL technical data

Full-load current (FLA) for three-phase AC motor			
	at 480V	A	14
	at 600V	A	17

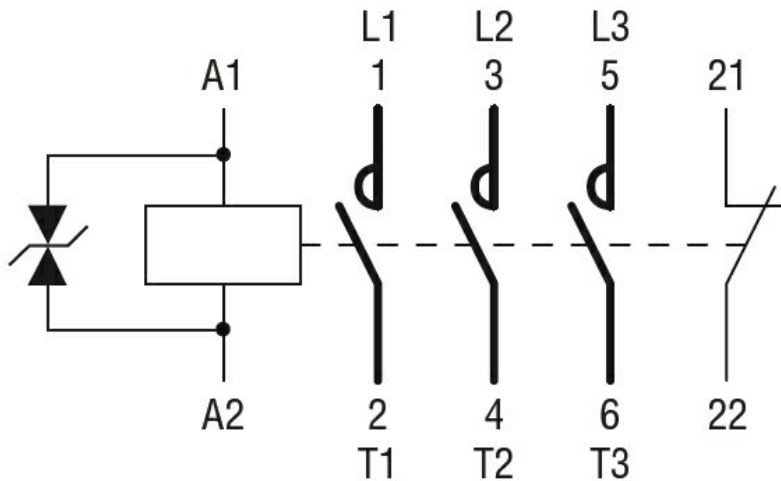
Yielded mechanical performance			
for single-phase AC motor			
	110/120V	HP	1
	230V	HP	3
for three-phase AC motor			
	200/208V	HP	5
	220/230V	HP	5
	460/480V	HP	10
	575/600V	HP	15

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

cULus

EAC

ETIM classification

ETIM 8.0

EC000066 -
Power contactor,
AC switching