



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
IEC max current I _e 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 _e 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 _e 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 _e 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 _e 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)		m?	2.5
Power dissipation per pole (average value)			
	I _{th}	W	2.6
	AC3	W	0.8
Tightening torque for terminals			
	min	Nm	1.5
	max	Nm	1.8
	min	I _{bin}	1.1
	max	I _{bin}	1.5
Tightening torque for coil terminal			
	min	Nm	0.8
	max	Nm	1
	min	I _{bin}	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	367
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
AC coil operating			
Rated AC voltage at 50/60Hz		V	400

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
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Max cycles frequency

Mechanical operation

cycles/h	3600
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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

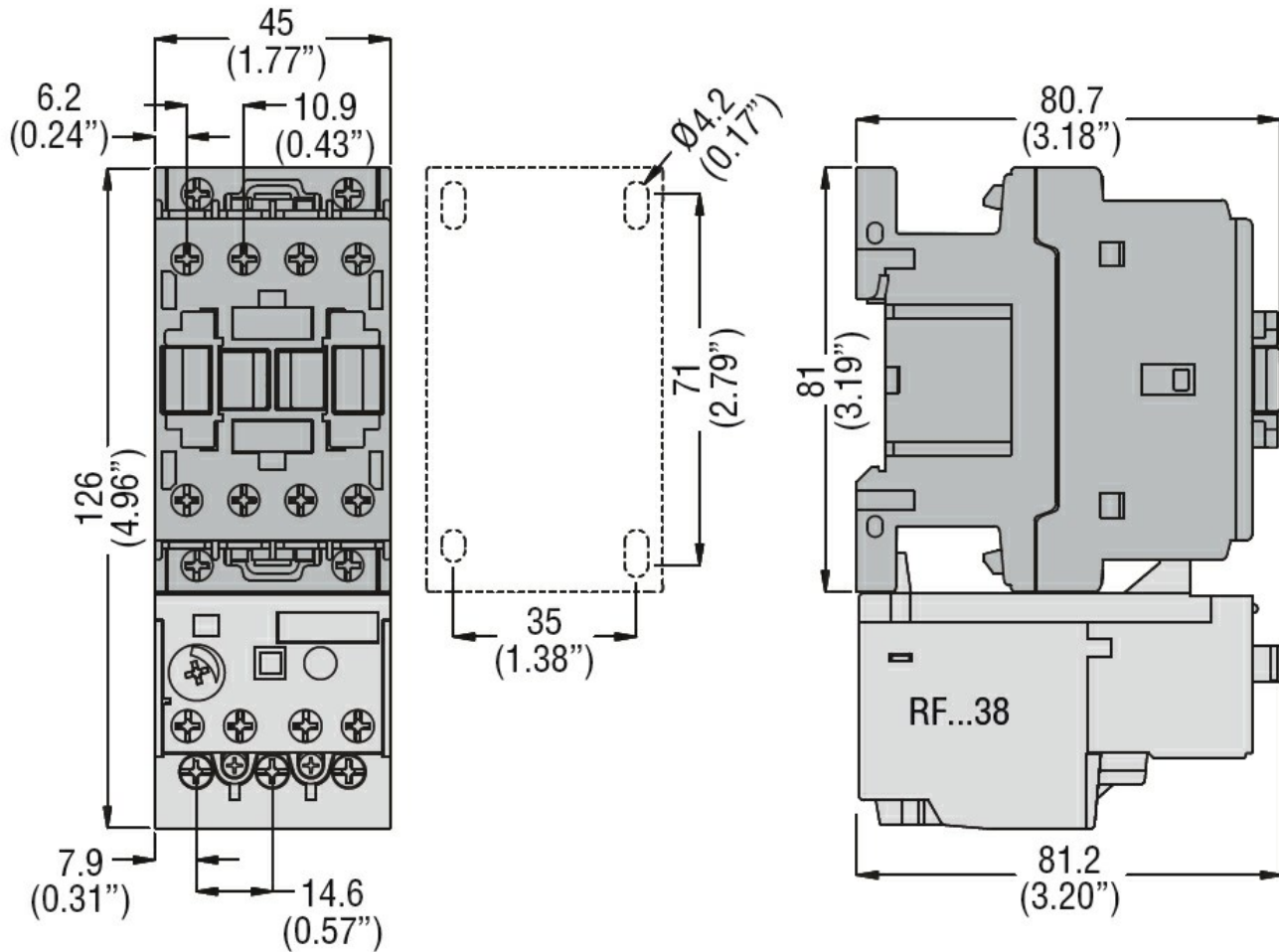
for single-phase AC motor

110/120V	HP	1
230V	HP	3

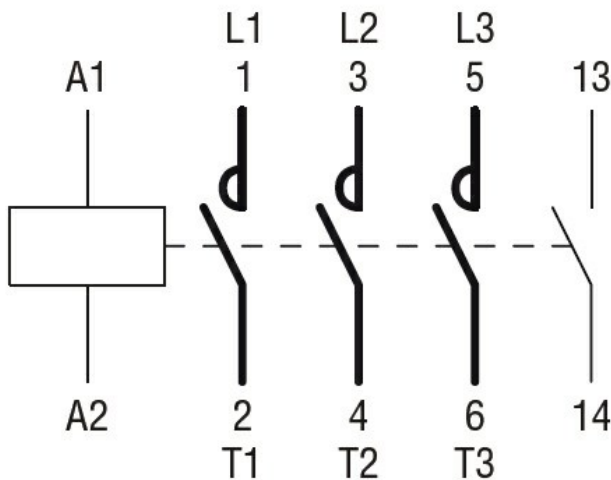
for three-phase AC motor

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

		460/480V	HP	10
		575/600V	HP	15
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