



Product designation			Power contactor
Product type designation			BFK18
Contact characteristics			
Number of poles	nr.	3	
Rated insulation voltage Ui	V	690	
Rated impulse withstand voltage Uimp	kV	6	
Operating frequency	Operational frequency min	Hz	25
	Operational frequency max	Hz	400
Conventional free air thermal current Ith	A	32	
Operating current	Operational current AC3 (≤440V ≤55°C)	A	18
	Operational current AC4 (400V)	A	8.5
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	Breaking capacity 440V	A	144
	Breaking capacity 500V	A	120
	Breaking capacity 690V	A	94
Resistance per pole (average value)	mΩ	2.5	
Power dissipation per pole (average value)	Power dissipation pole (average value) Ith	W	2.6
	AC3	W	0.8
Tightening torque for terminals	min	Nm	1.5
	max	Nm	1.8
	min	lbft	1.1
	max	lbft	1.5
Tightening torque for coil terminal	min	Nm	0.8
	max	Nm	1
	min	lbft	0.59
	max	lbft	0.74
max number of wires simultaneously connectable	nr.	2	
Conductor section			
AWG	min	16	
	max	10	
Flexible w/o lug conductor section			
	min	mm²	1
	max	mm²	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
Auxiliary contact characteristics			
Type of contact			1 NA
Thermal current I _{th}			A 10
IEC/EN 60947-5-1 designation			A600
Ambient conditions			
Temperature			
Operating temperature			
	min	°C	-50
	max	°C	70
Storage temperature			
	min	°C	-60
	max	°C	80
Max altitude		m	3,000
Operating position		normal allowable	Vertical plan ±30°
Mounting			Screw / DIN rail 35mm
Weight		g	0.367
Operations			
Mechanical life		Cycles	20,000,000
Electrical life		Cycles	1600000
Safety related data			
Mirror contacts according to IEC/EN 60947-4-1			Yes
EMC compatibility			Yes
AC coil operating			
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			
	min	%U _s	80
	max	%U _s	110
drop-out			
	min	%U _s	20
	max	%U _s	55
of 50/60Hz coil powered at 60Hz			
pick-up			
	min	%U _s	85
	max	%U _s	110
drop-out			
	min	%U _s	40
	max	%U _s	55
of 60Hz coil powered at 60Hz			
pick-up			
	min	%U _s	80
	max	%U _s	110

drop-out

min	%Us	20
max	%Us	55

AC operating voltage

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
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Max cycles frequency

Mechanical operations

Cycles/h 3,600

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	54
max	ms	66

Opening NO

min	ms	14
max	ms	17

Closing NC

min	ms	24
max	ms	30

Opening NC

min	ms	47
max	ms	57

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

at 110/120V	hp	1
at 230V	hp	3

for three-phase AC motor

at 200/208V	hp	5
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at 220/230V	hp	5
at 460/480V	hp	10
at 575/600V	hp	15

Contact rating of auxiliary contacts according to UL

SI - A600

General USE

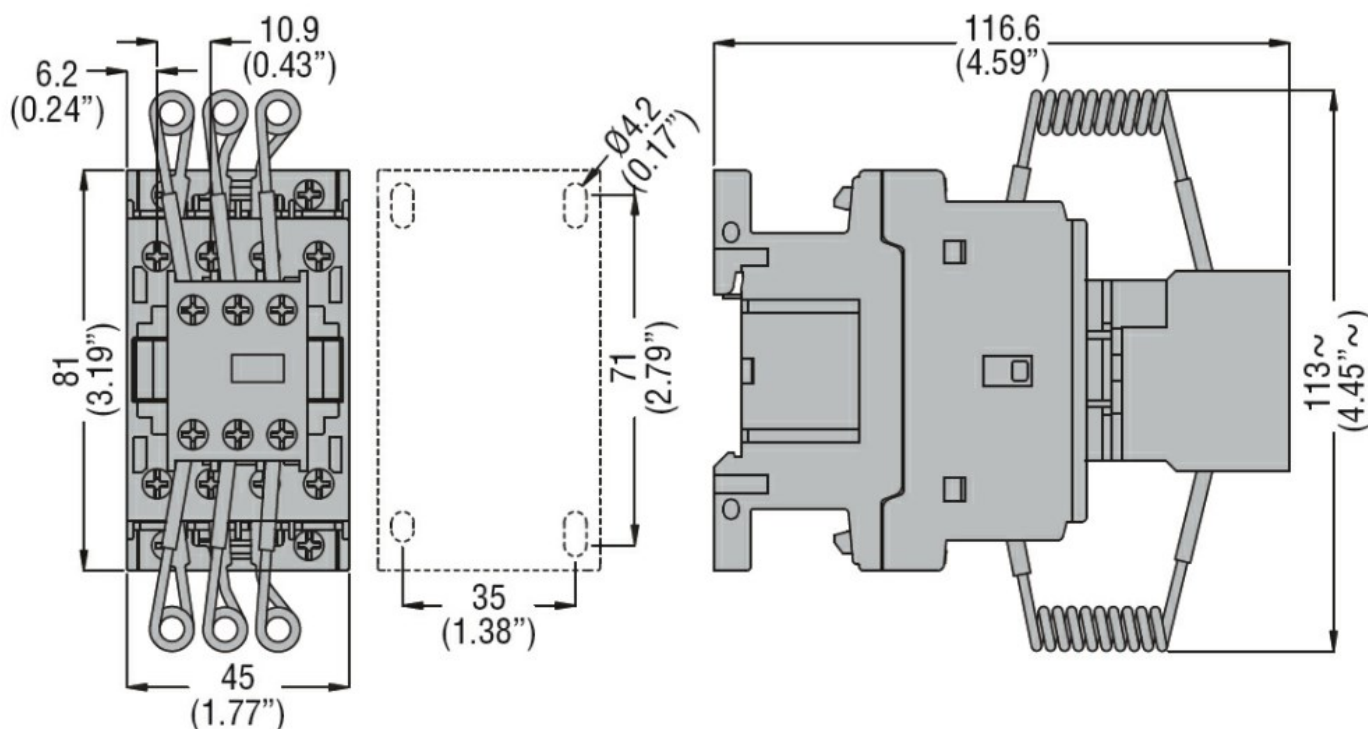
Contactor

AC current A 32

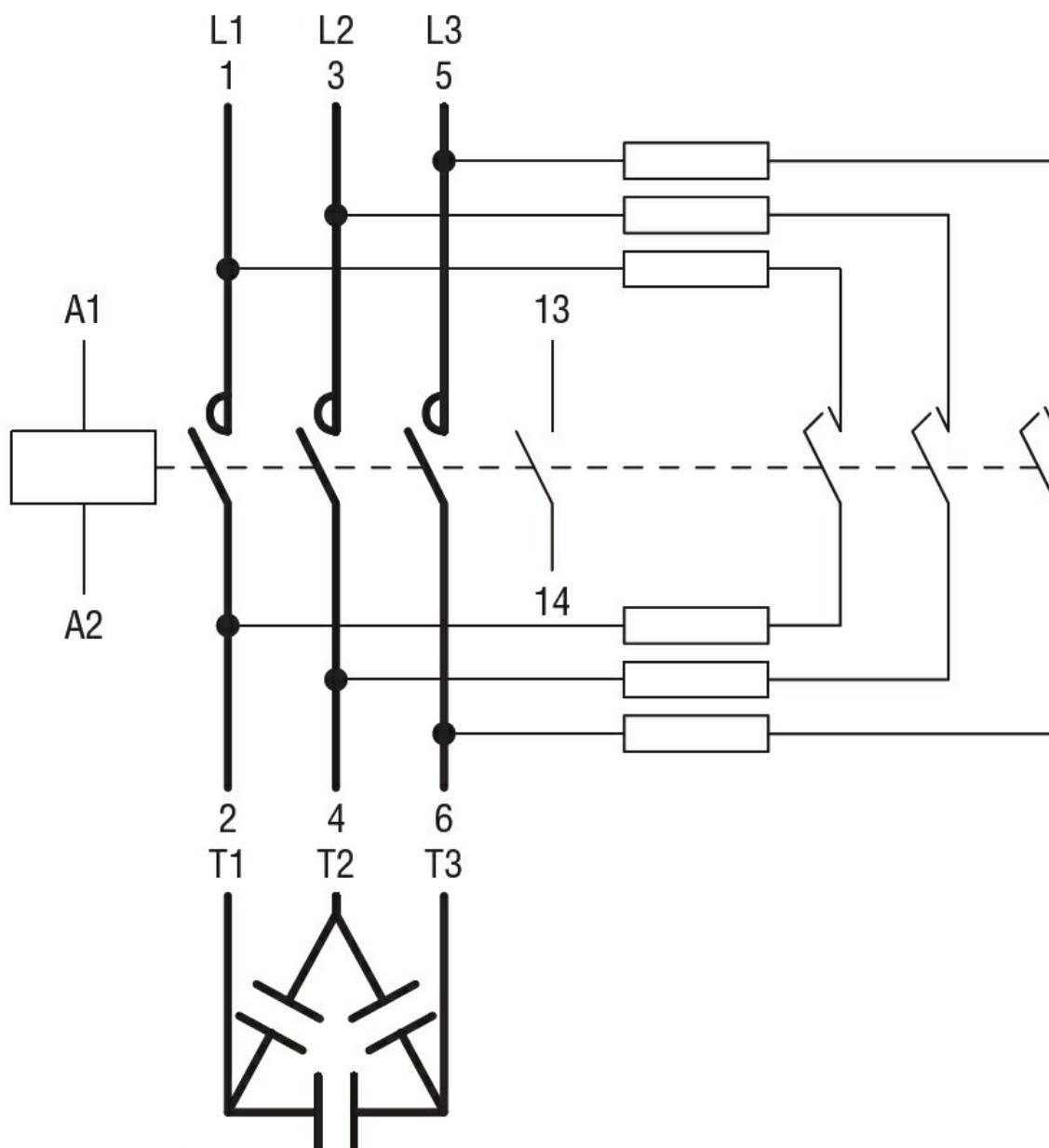
Auxiliary contacts

AC voltage	V	600
AC current	A	10
DC voltage	V	250
DC current	A	1

Dimensions



Wiring diagrams



Certifications and compliance

Certifications

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

Compliance

CCC
cULus
EAC

ETIM 6 classification

EC000066 - Power contactor, AC switching