



Product designation				Power contactor
Product type designation				BFK12
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			28
Operational current I_e	AC-3 ($\leq 440V \leq 55^\circ C$)	A	12	
	AC-4 (400V)	A	7.9	
Rated operational power AC-6b ($T \leq 40^\circ C$)	230V	kvar	7	
	400V	kvar	12.5	
	500V	kvar	14	
	690V	kvar	16	
Short-time allowable current for 10s (IEC/EN60947-1)	A			150
Protection fuse	gG (IEC)	A	25	
	aM (IEC)	A	12	
Making capacity (RMS value)	A			120
Breaking capacity at voltage	440V	A	96	
	500V	A	96	
	690V	A	94	
Resistance per pole (average value)	m Ω			2.5
Power dissipation per pole (average value)	I_{th}	W	2	
	AC3	W	0.4	
Tightening torque for terminals	min	Nm	1.5	
	max	Nm	1.8	
	min	lbin	1.1	
	max	lbin	1.5	
Tightening torque for coil terminal	min	Nm	0.8	
	max	Nm	1	
	min	lbft	0.8	
	max	lbft	0.74	
Max number of wires simultaneously connectable	nr.			2
Conductor section	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	418
Auxiliary contact characteristics			
Type of contact			1 NO
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	0.6
	600V	A	0.1
Operations			
Mechanical life		cycles	20000000
Electrical life		cycles	400000
Safety related data			
Performance level B10d according to EN/ISO 13489-1			
	rated load	cycles	400000
	mechanical load	cycles	20000000
Mirror contacts according to IEC/EN 60947-4-1			true
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			
	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 operating voltage 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
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Max cycles frequency

Mechanical operations	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	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	11
at 600V	A	11

Yielded mechanical performance

for single-phase AC motor

110/120V	hp	1
230V	hp	2

for three-phase AC motor

200/208V	hp	5
220/230V	hp	5
460/480V	hp	7.5
575/600V	hp	10

Contact rating of auxiliary contacts according to UL

A600 - P600

General USE

Auxiliary contacts

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

Ambient conditions

Temperature

Operating temperature

min	°C	-50
max	°C	70

Storage temperature

min	°C	-60
max	°C	80

Max altitude

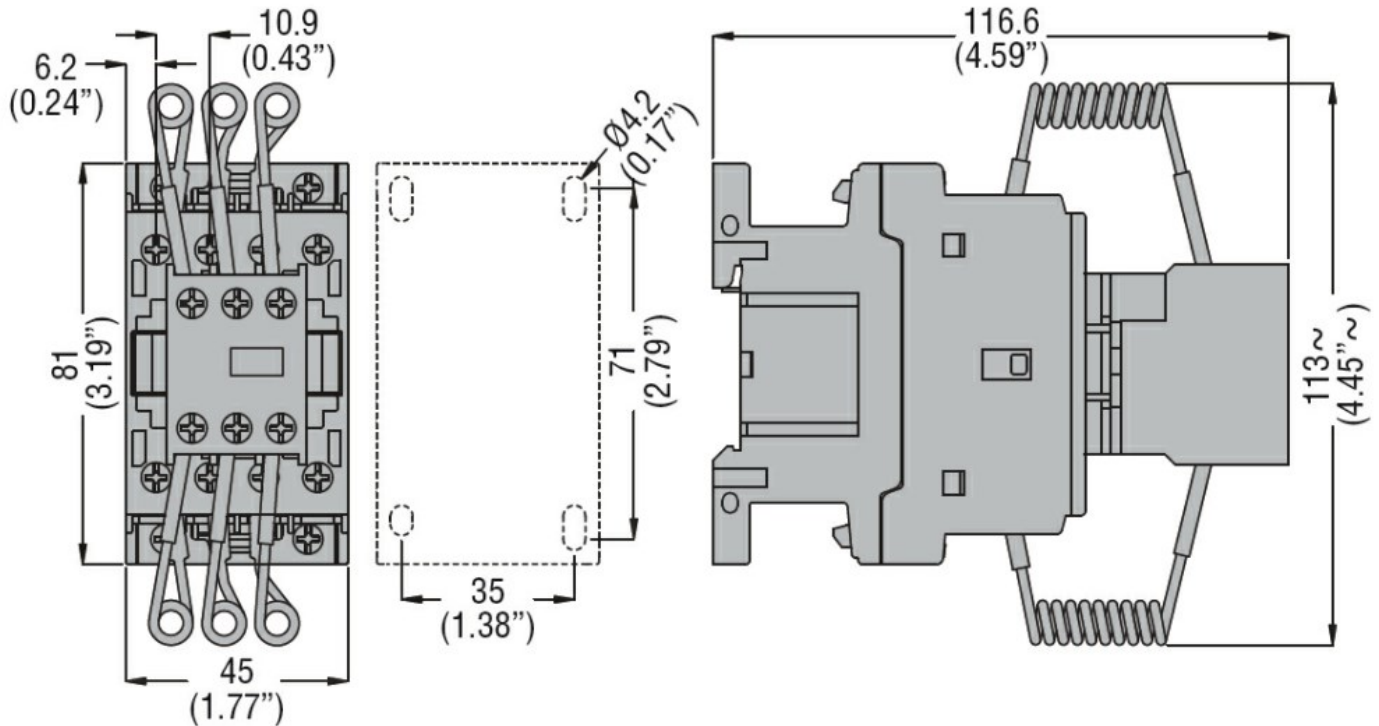
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Resistance & Protection

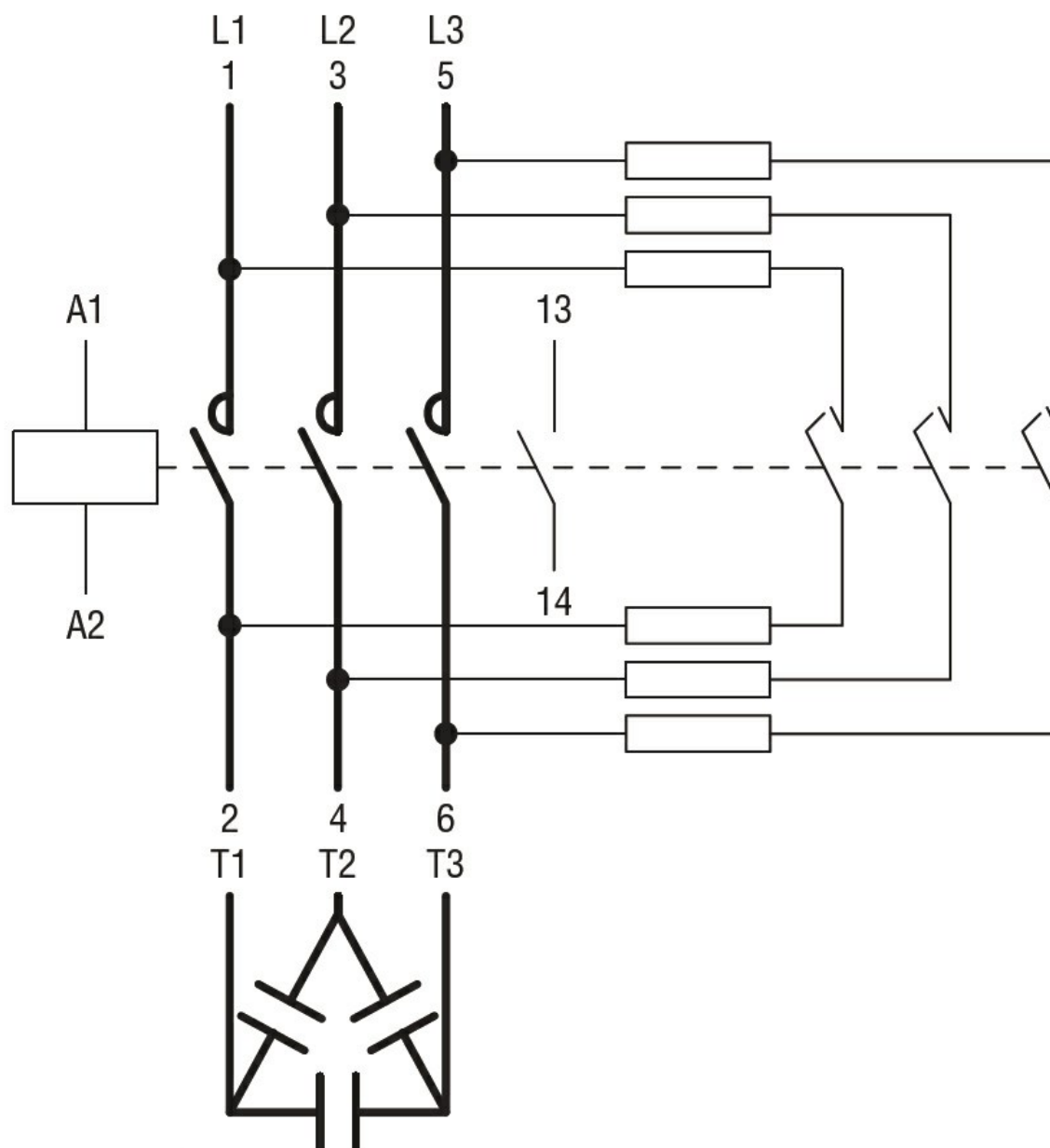
Pollution degree

3

Dimensions



Wiring diagrams



Certifications and compliance

Compliance

CSA C22.2 n° 60947-1
 CSA C22.2 n° 60947-4-1
 IEC/EN 60947-1
 IEC/EN 60947-4-1
 UL 60947-1
 UL 60947-4-1

Certificates

CCC
 cULus
 EAC

ETIM 6 classification

EC000066 - Power contactor, AC switching