



Product designation				Power contactor
Product type designation				BFK50
Contact characteristics				
Number of poles	nr.	3		
Rated insulation voltage U_i	V	690		
Rated impulse withstand voltage U_{imp}	kV	8		
Operating frequency	Operational frequency min	Hz	25	
	Operational frequency max	Hz	400	
	Conventional free air thermal current I_{th}	A	90	
Rated operational power AC6b ($T \leq 40^\circ C$)	230V	kvar	22	
	400V	kvar	40	
	500V	kvar	41	
	690V	kvar	56	
	Short-time allowable current for 10s (IEC/EN60947-1)	A	400	
Protection fuse	gG (IEC)	A	80	
	Resistance per pole (average value)	m Ω	0.8	
Tightening torque for terminals	min	Nm	4	
	max	Nm	5	
	min	lbft	2.95	
	max	lbft	3.69	
	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	AWG	min	14	
		max	2	
Flexible w/o lug conductor section	min	mm ²	1.5	
	max	mm ²	35	
Flexible c/w lug conductor section	min	mm ²	1.5	
	max	mm ²	35	
Power terminal protection according to IEC/EN 60529				IP20 front
Auxiliary contact characteristics				
Operating current DC13	110V	A	Screw / DIN rail 35mm	

Ambient conditions

Temperature

Operating temperature

min	°C	-50
max	°C	70

Storage temperature

min	°C	-60
max	°C	80

Max altitude

m	3000
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Operating position

normal allowable	Vertical plan ±30°
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Mounting

Screw / DIN rail
35mm

Weight

g	1.09
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Operations

Mechanical life

Cycles	15000000
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Electrical life

Cycles	400000
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Safety related data

Performance level B10d according to EN/ISO 13489-1

rated load	Cicli	400000
mechanical load	Cicli	15000000

EMC compatibility

yes

AC coil operating

AC operating voltage

of 50/60Hz coil powered at 50Hz
pick-up

min	%Us	0.8
max	%Us	1.1

drop-out

min	%Us	0.2
max	%Us	0.55

of 50/60Hz coil powered at 60Hz
pick-up

min	%Us	0.85
max	%Us	1.1

drop-out

min	%Us	0.4
max	%Us	0.55

of 60Hz coil powered at 60Hz
pick-up

min	%Us	0.8
max	%Us	1.1

drop-out

min	%Us	0.2
max	%Us	0.55

AC operating voltage

of 50/60Hz coil powered at 50Hz

in-rush	VA	210
holding	VA	15

of 50/60Hz coil powered at 60Hz

in-rush	VA	195
holding	VA	13

of 60Hz coil powered at 60Hz

	in-rush	VA	210
	holding	VA	15
Dissipation at holding $\leq 20^{\circ}\text{C}$ 50Hz		W	5.0

Max cycles frequency

Mechanical operations	Cycles/h	3600
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Operating times

Average time for U_s control in AC	Closing NO	min	ms	12
		max	ms	28
	Opening NO	min	ms	8
		max	ms	22

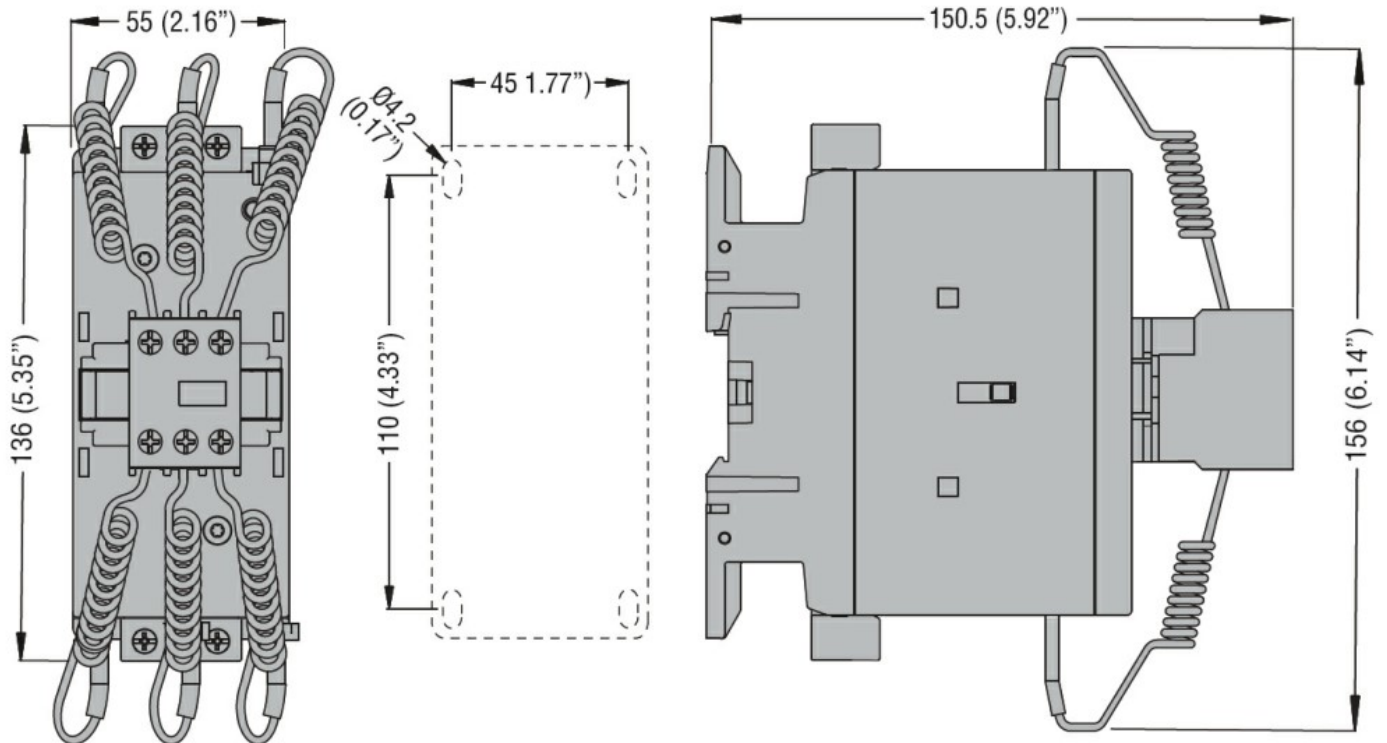
UL technical data

Yielded mechanical performance for single-phase AC motor	at 110/120V	hp	5
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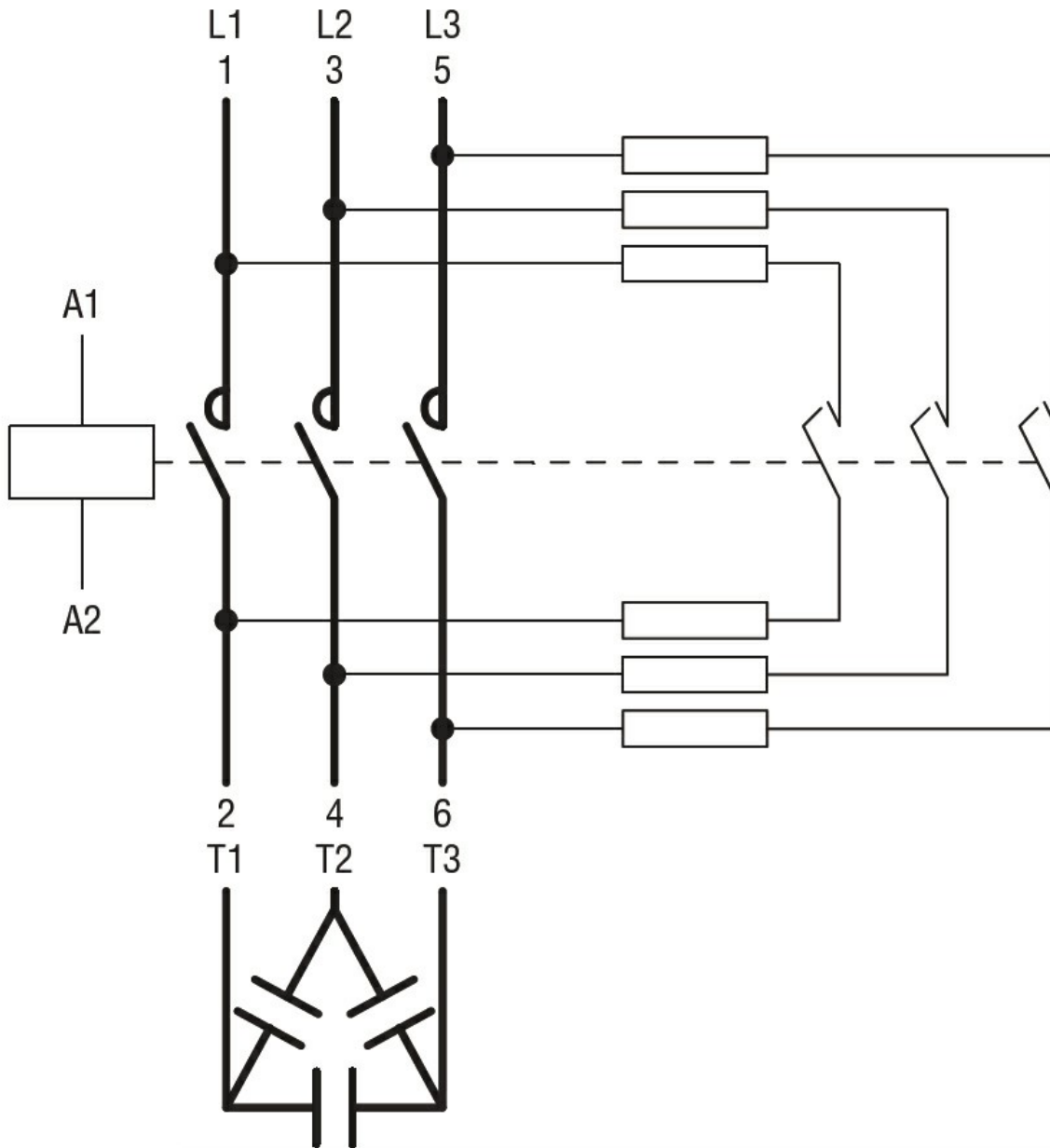
Other features

Pollution degree	3
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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

ETIM 6 classification

EC000066 - Power contactor, AC switching