



Product designation				Power contactor
Product type designation				BFK50
<b>Contact characteristics</b>				
Number of poles	Nr.			3
Rated insulation voltage $U_i$ IEC/EN	V			690
Rated impulse withstand voltage $U_{imp}$	kV			8
Operational frequency	min	Hz	25	
	max	Hz	400	
IEC Conventional free air thermal current $I_{th}$	A			90
Rated operational power AC-6b ( $T \leq 40^\circ C$ )	230V	kvar	22	
	400V	kvar	40	
	440...480V	kvar	41	
	690V	kvar	46	
Short-time allowable current for 10s (IEC/EN60947-1)	A			400
Protection fuse	gG (IEC)	A	80	
		A	500	
Making capacity (RMS value)				500
Breaking capacity at voltage	440V	A	400	
	500V	A	352	
	690V	A	312	
Resistance per pole (average value)		m $\Omega$	0.8	
Power dissipation per pole (average value)	lth	W	6.5	
Tightening torque for terminals	min	Nm	4	
	max	Nm	5	
	min	lbin	2.95	
	max	lbin	3.69	
Tightening torque for coil terminal	min	Nm	0.8	
	max	Nm	1	
	min	lbin	0.8	
	max	lbin	0.74	
Max number of wires simultaneously connectable	Nr.			2
Conductor section	AWG/Kcmil	max	2	
	Flexible w/o lug conductor section	min	mm <sup>2</sup>	1.5
max		mm <sup>2</sup>	35	
Flexible c/w lug conductor section	min	mm <sup>2</sup>	1.5	

		max	mm <sup>2</sup>	35
Power terminal protection according to IEC/EN 60529				IP20 front
<b>Mechanical features</b>				
Operating position		normal allowable		Vertical plan ±30°
Fixing				Screw / DIN rail 35mm
Weight			g	1090
Conductor section	AWG/kcmil conductor section	max		2
<b>Operations</b>				
Mechanical life			cycles	15000000
Electrical life			cycles	400000
<b>Safety related data</b>				
Performance level B10d according to EN/ISO 13489-1		rated load mechanical load	cycles cycles	400000 15000000
EMC compatibility				yes
<b>AC coil operating</b>				
Rated AC voltage at 50/60Hz			V	48
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 holding	VA VA	210 15
	of 50/60Hz coil powered at 60Hz	in-rush holding	VA VA	195 13
	of 60Hz coil powered at 60Hz	in-rush holding	VA VA	210 15
Dissipation at holding ≤20°C 50Hz			W	5
<b>Max cycles frequency</b>				
Mechanical operation			cycles/h	3600
<b>Operating times</b>				
Average time for Us control	in AC			
	Closing NO			

		min	ms	12
		max	ms	28
	Opening NO			
		min	ms	8
		max	ms	22
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	in DC			
	Closing NO			
		min	ms	40
		max	ms	85
	Opening NO			
		min	ms	20
		max	ms	55

**UL technical data**

General USE

Contactor

AC current A 90

**Ambient conditions**

Temperature

Operating temperature

min °C -50  
max °C 70

Storage temperature

min °C -60  
max °C 80

Max altitude

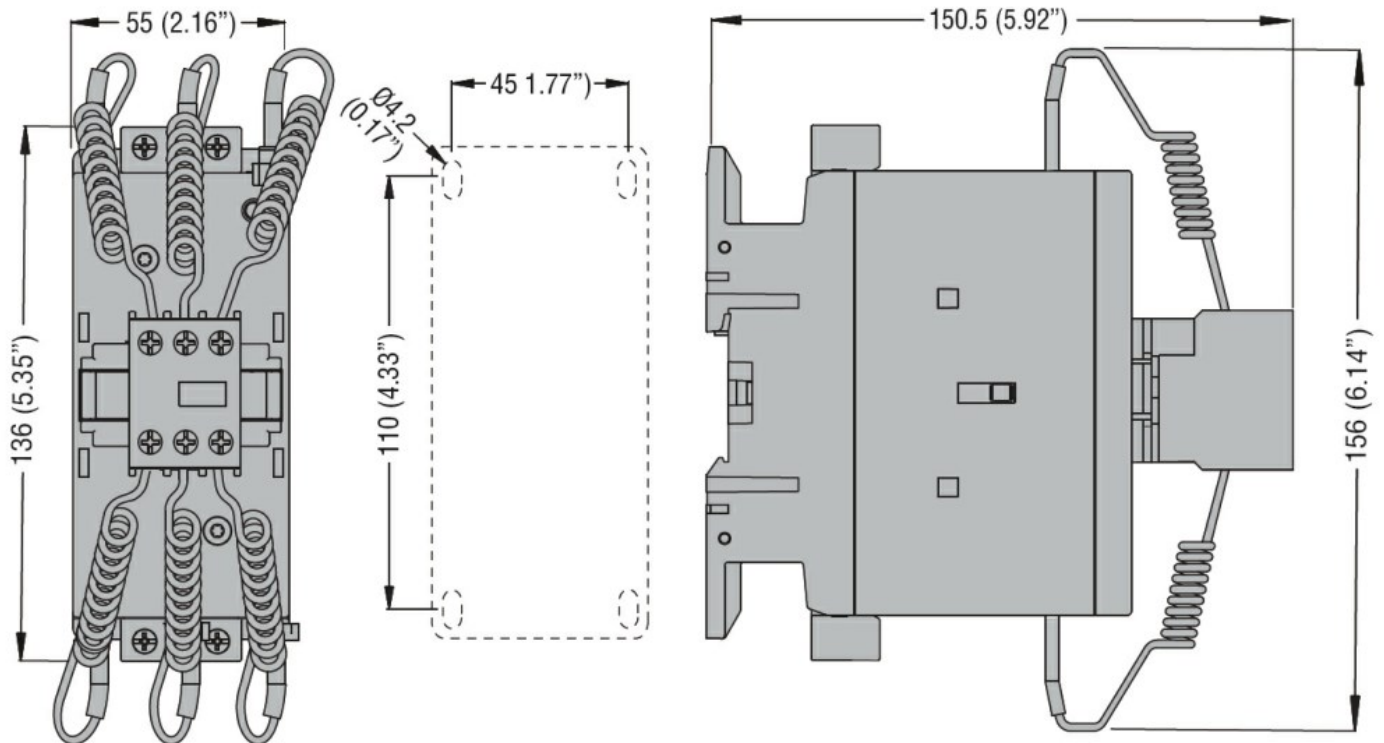
m 3000

**Resistance & Protection**

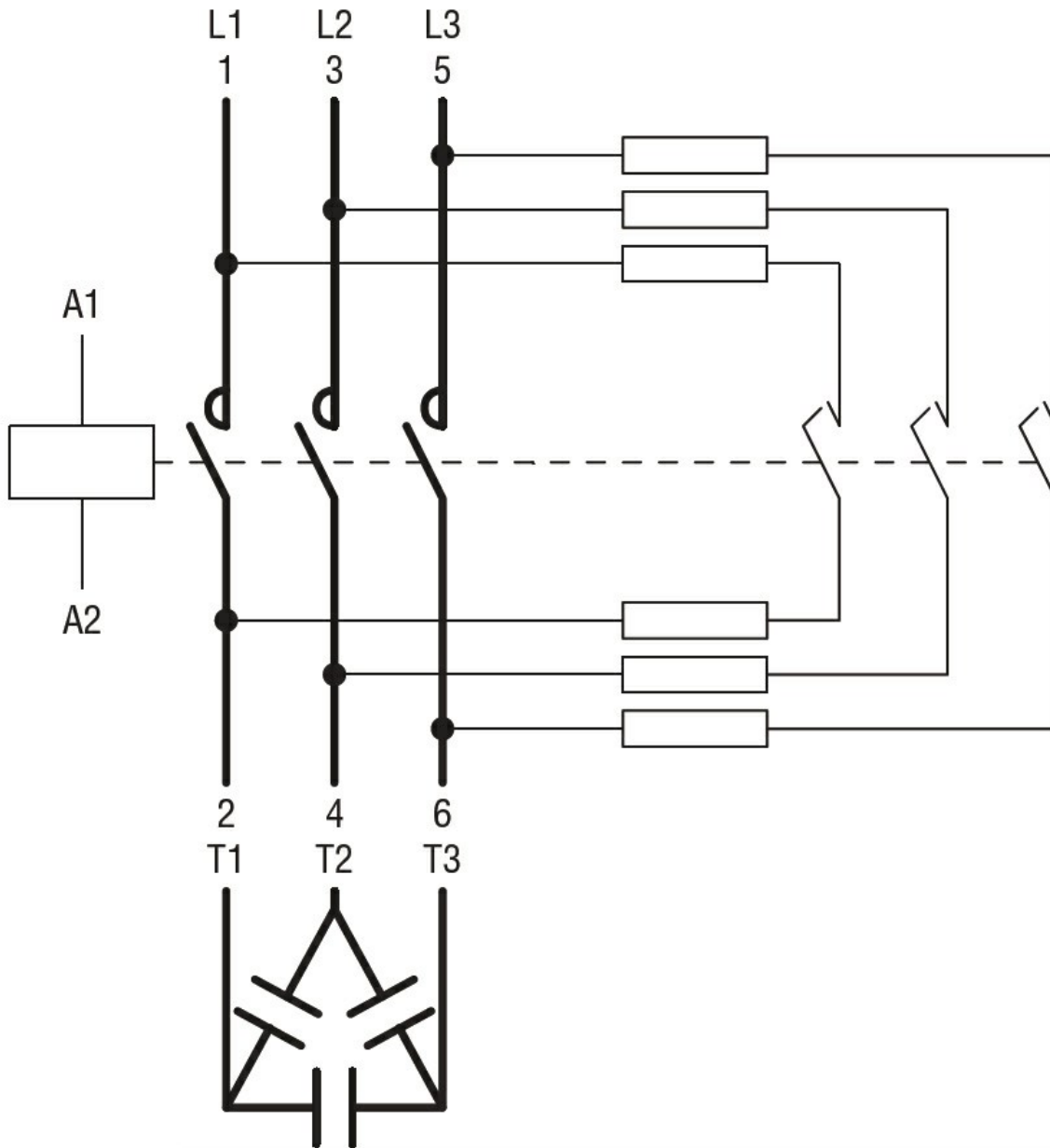
Pollution degree

3

**Dimensions**



**Wiring diagrams**



**Certifications and compliance**

Compliance

- CSA C22.2 n° 60947-1

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- CSA C22.2 n° 60947-4-1

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- IEC/EN/BS 60947-1

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- IEC/EN/BS 60947-4-1

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- UL 60947-1

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- UL 60947-4-1

Certificates

- CCC

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- cULus

**ETIM classification**

ETIM 8.0

EC001079 -  
Capacitor  
contactor