



Product designation	Power contactor		
Product type designation	BFK50		
Contact characteristics			
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 ($T=40^\circ C$)	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
Making capacity (RMS value)		A	500
Breaking capacity at voltage	440V	A	400
	500V	A	352
	690V	A	312
Resistance per pole (average value)		m?	0.8
Power dissipation per pole (average value)	I_{th}	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 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
Mechanical features			
Operating position	normal allowable		Vertical plan ±30°
Fixing			Screw / DIN rail 35mm
Weight	g	1090	
Conductor section			
AWG/kcmil conductor section	max	2	
Operations			
Mechanical life	cycles	15000000	
Electrical life	cycles	400000	
Safety related data			
Performance level B10d according to EN/ISO 13489-1			
rated load	cycles	400000	
mechanical load	cycles	15000000	
EMC compatibility			yes
AC coil operating			
Rated AC voltage at 50/60Hz	V	230	
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	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 =20°C 50Hz	W	5	
Max cycles frequency			
Mechanical operation	cycles/h	3600	
Operating times			
Average time for Us control			
in AC			
	Closing NO		

		min	ms	12
		max	ms	28
Opening NO				
		min	ms	8
		max	ms	22
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
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Ambient conditions

Temperature

Operating temperature	min	°C	-50
	max	°C	70

Storage temperature	min	°C	-60
	max	°C	80

Max altitude

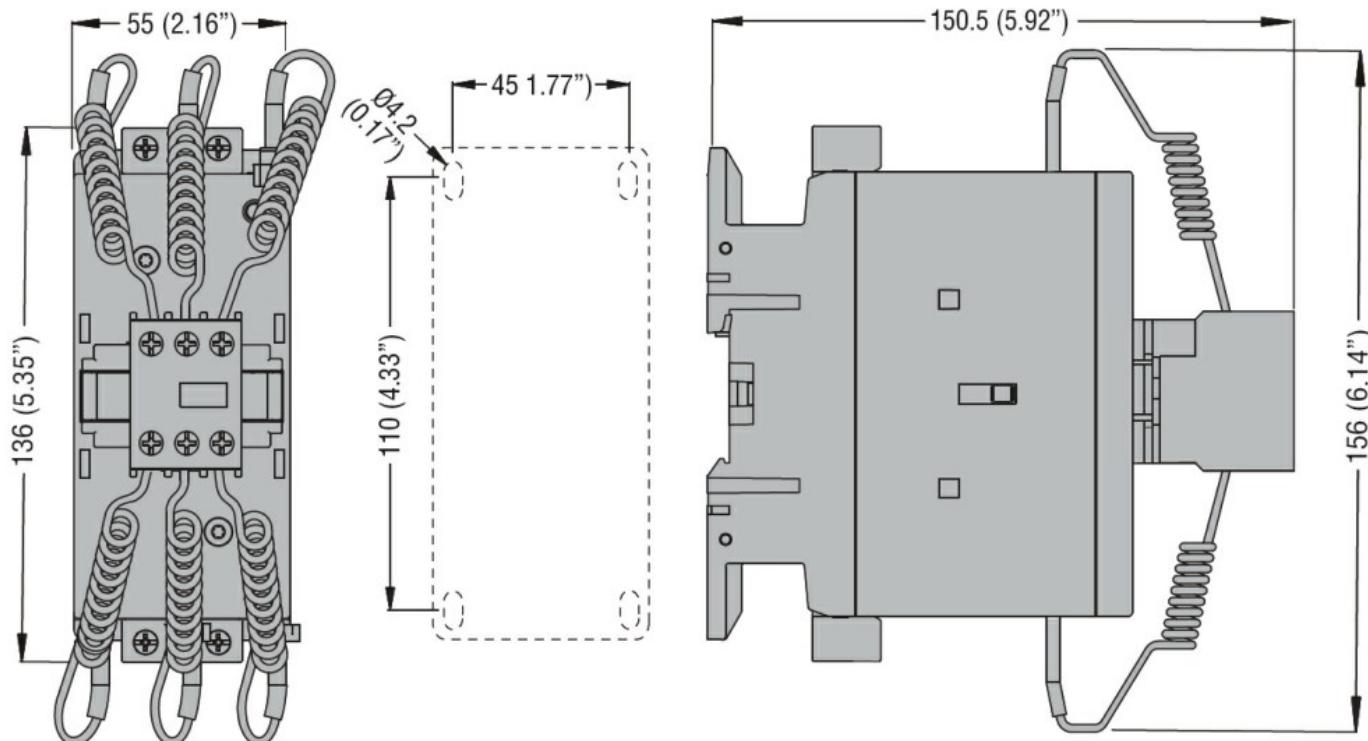
m 3000

Resistance & Protection

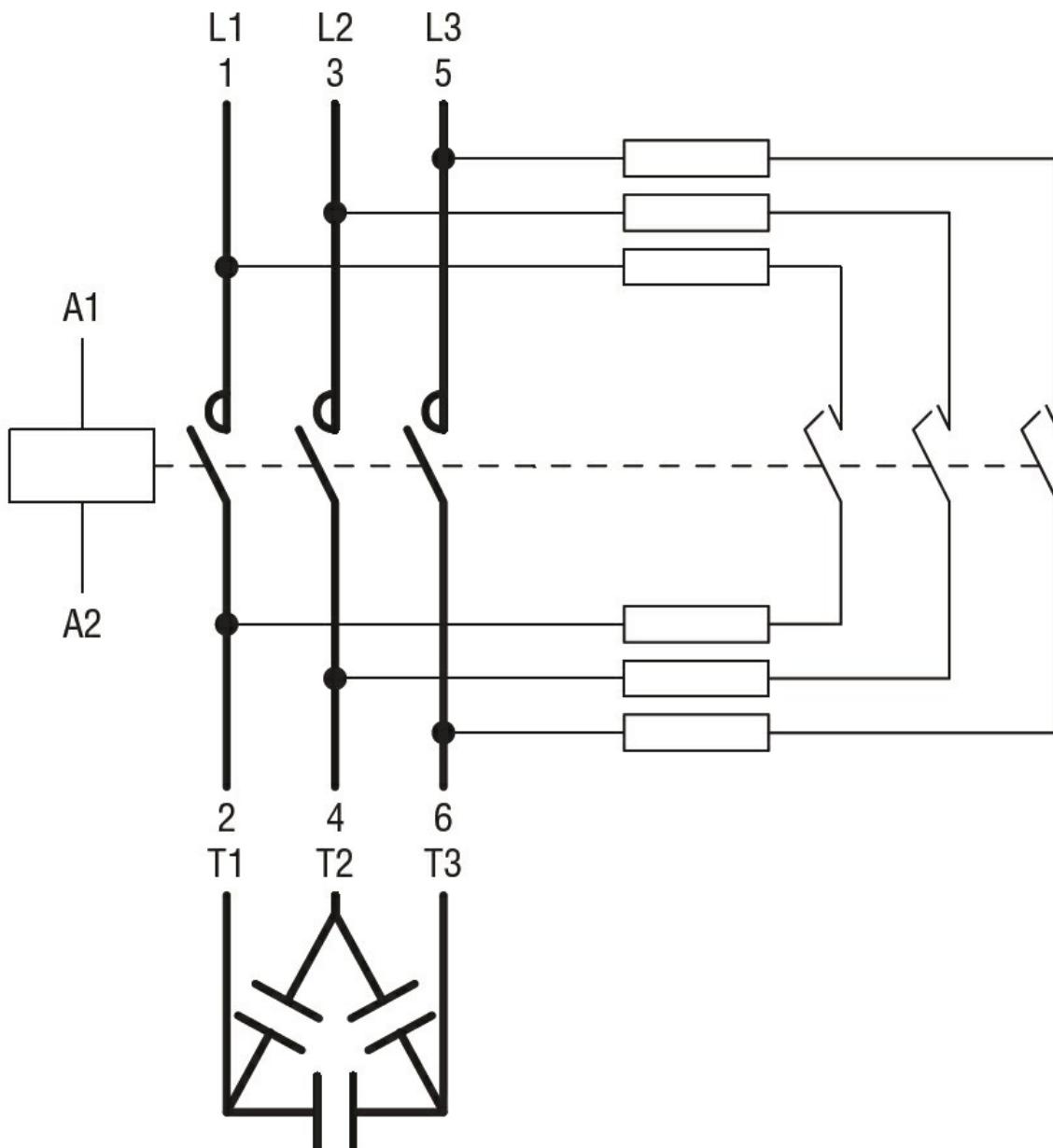
Pollution degree

3

Dimensions



Wiring diagrams



Certifications and compliance

Compliance

CSA C22.2 n° 60947-1

CSA C22.2 n° 60947-4-1

IEC/EN 60947-1

IEC/EN 60947-4-1

UL 60947-1

UL 60947-4-1

Certificates

CCC

cULus

ETIM classification

ETIM 8.0

EC001079 -

Capacitor

contactor