



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
Operational current $I_e$	AC-1 ( $\leq 55^\circ\text{C}$ )	A		130
	AC-3 ( $\leq 440\text{V} \leq 55^\circ\text{C}$ )	A		50
	AC-4 (400V)	A		28
Rated operational power AC-6b ( $T \leq 40^\circ\text{C}$ )	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
	aM (IEC)	A		50
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 $\Omega$			0.8
Power dissipation per pole (average value)	$I_{th}$	W		6.5
	AC3	W		2
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	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 <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
<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	cycles	400000
	mechanical load	cycles	15000000
Mirror contacts according to IEC/EN 60947-4-1			true
EMC compatibility			yes
<b>AC coil operating</b>			
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	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
<b>Max cycles frequency</b>			
Mechanical operations			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

in DC

Closing NO	min	ms	40
	max	ms	85
Opening NO	min	ms	20
	max	ms	55

### UL technical data

Full-load current (FLA) for three-phase AC motor

at 480V	A	52
at 600V	A	41

Yielded mechanical performance

for single-phase AC motor

110/120V	hp	5
230V	hp	10

for three-phase AC motor

200/208V	hp	15
220/230V	hp	20
460/480V	hp	40
575/600V	hp	40

Contact rating of auxiliary contacts according to UL

SI - A600

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

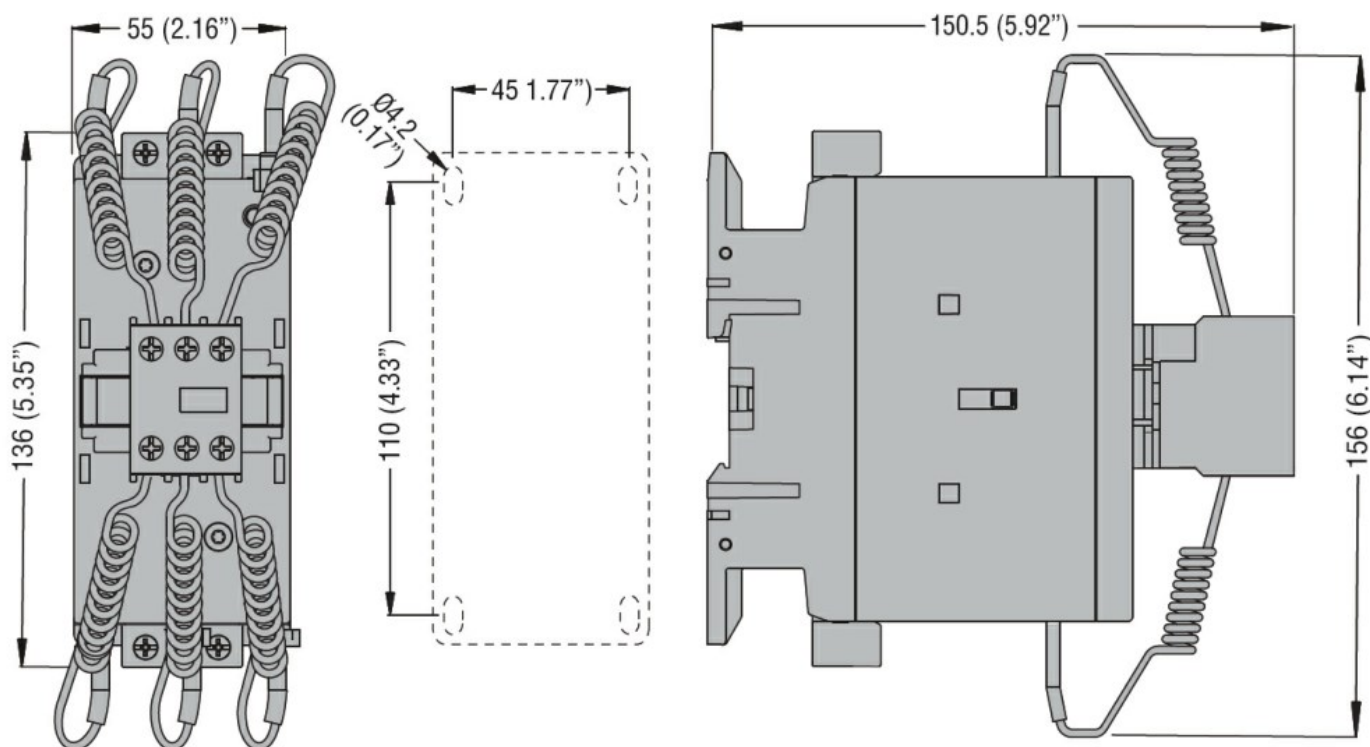
m 3000

### Resistance & Protection

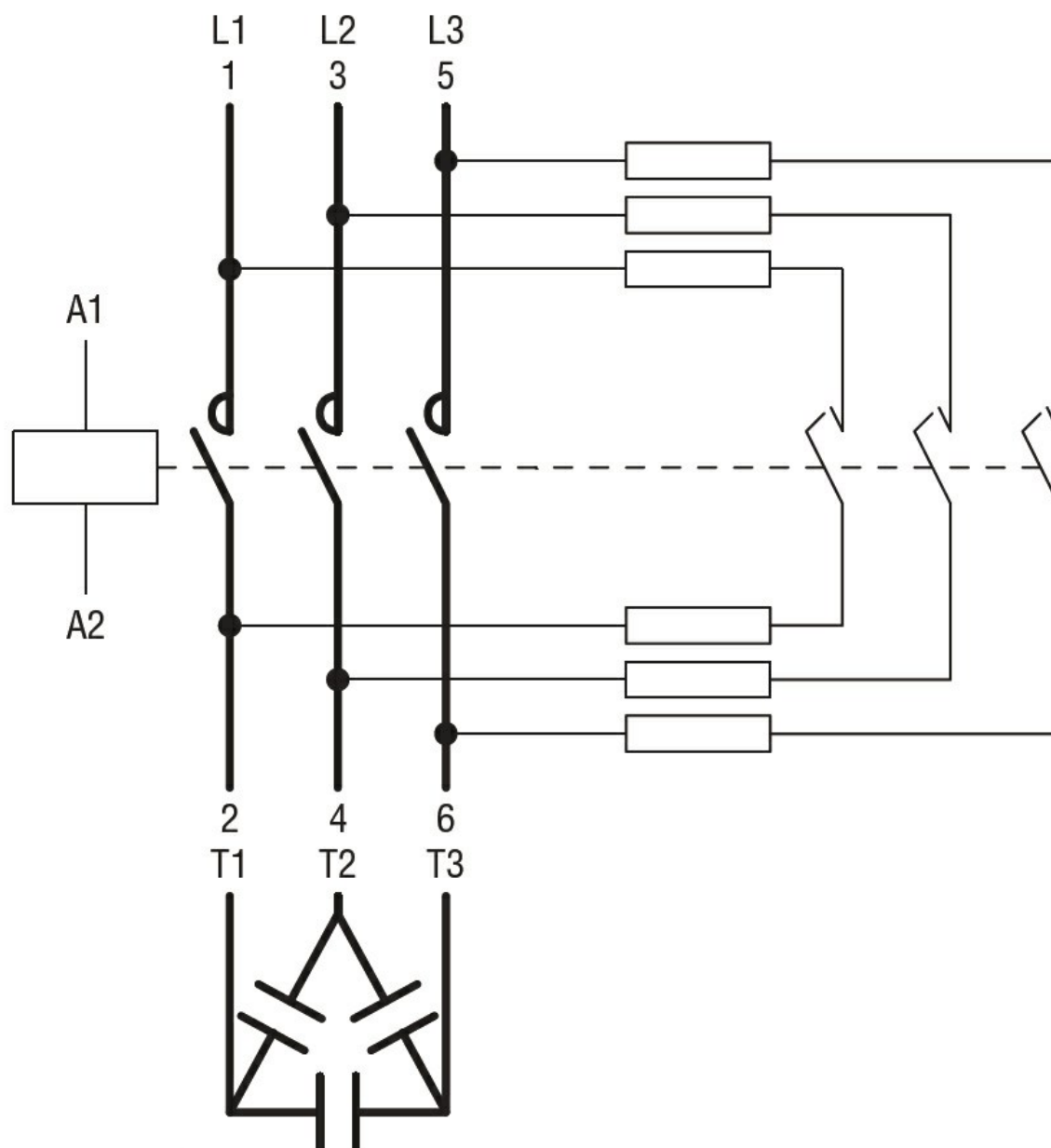
Pollution degree

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 6 classification**

EC000066 - Power contactor, AC switching