



Product designation  
Product type designation

Power contactor  
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 ( $T \leq 40^\circ C$ ) | 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 |
| 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  |
| 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<br>±30°    |
| Fixing                                              |                  |                 | Screw / DIN rail<br>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       | cycles          | 400000                   |
|                                                     | mechanical load  | cycles          | 15000000                 |
| EMC compatibility                                   |                  |                 | yes                      |
| <b>AC coil operating</b>                            |                  |                 |                          |
| Rated AC voltage at 60Hz                            |                  | V               | 48                       |
| AC operating voltage                                |                  |                 |                          |
| of 60Hz coil powered at 60Hz                        |                  |                 |                          |
| pick-up                                             | min              | %Us             | 80                       |
|                                                     | max              | %Us             | 110                      |
| drop-out                                            | min              | %Us             | 20                       |
|                                                     | max              | %Us             | 55                       |
| AC average coil consumption at 20°C                 |                  |                 |                          |
| 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 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                       |
| in DC                                               |                  |                 |                          |
| Closing NO                                          | min              | ms              | 40                       |
|                                                     | max              | ms              | 85                       |
| Opening NO                                          | min              | ms              | 20                       |
|                                                     | max              | ms              | 55                       |
| <b>UL technical data</b>                            |                  |                 |                          |

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

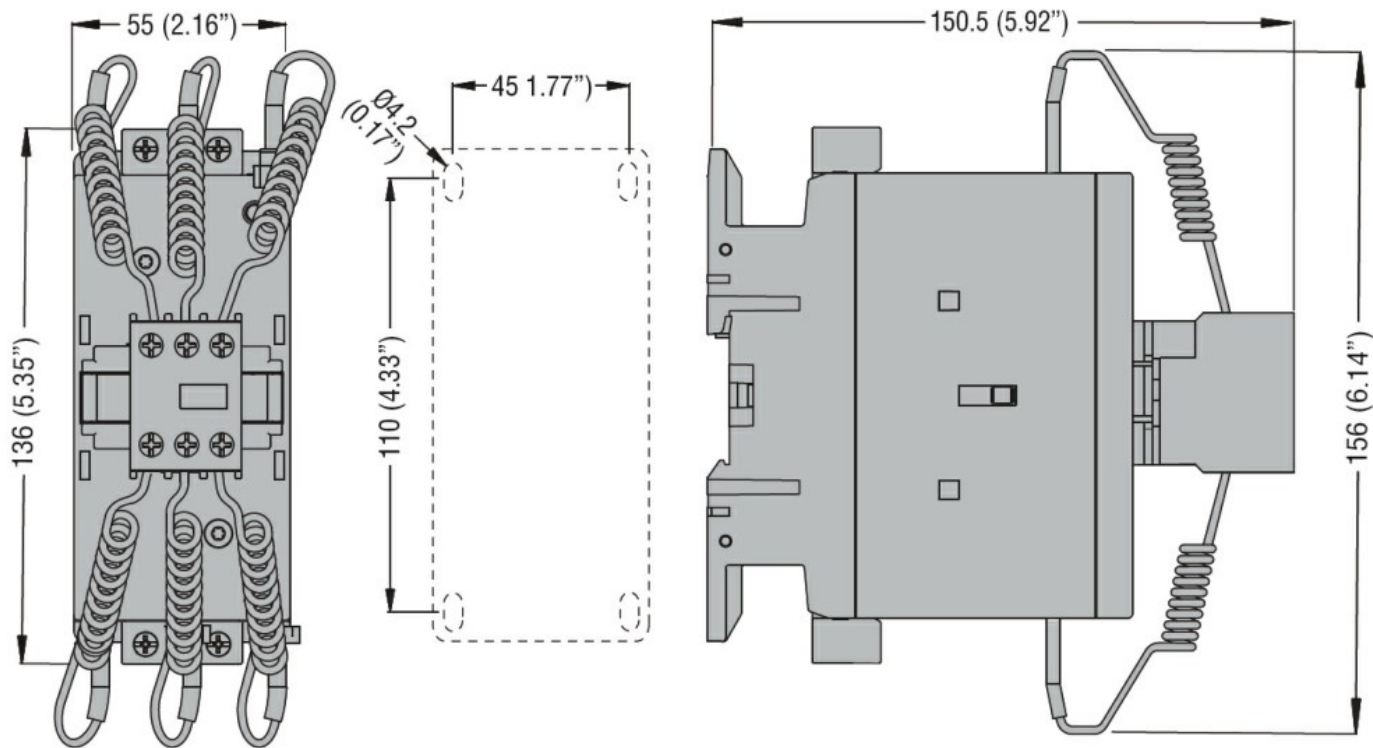
m      3000

Resistance & Protection

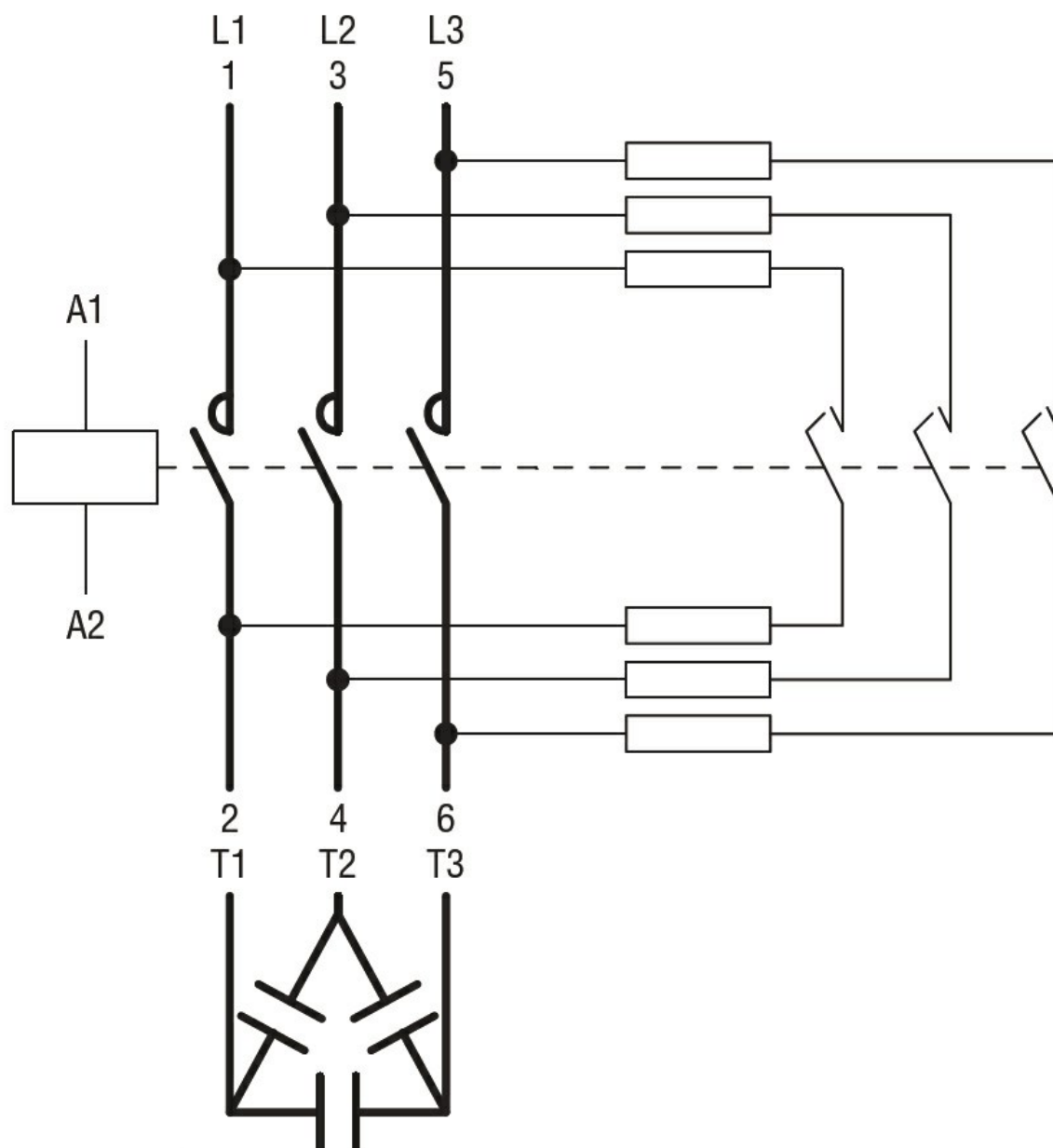
Pollution degree

3

Dimensions



Wiring diagrams



## Certifications and compliance

### Compliance

CSA C22.2 n° 60947-1  
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