



|   |                 |                 |      |
|---|-----------------|-----------------|------|
| Product designation                                   | Power contactor |                 |      |
| Product type designation                              | BFK38           |                 |      |
| <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              | 6               |      |
| Operational frequency                                 | min             | Hz              | 25   |
|   | max             | Hz              | 400  |
| IEC Conventional free air thermal current $I_{th}$    | A               | 56              |      |
| Rated operational power AC-6b ( $T \leq 40^\circ C$ ) | 230V            | kvar            | 17   |
|   | 400V            | kvar            | 30   |
|   | 440...480V      | kvar            | 33   |
|   | 690V            | kvar            | 36   |
| Short-time allowable current for 10s (IEC/EN60947-1)  | A               | 320             |      |
| Protection fuse                                       | gG (IEC)        | A               | 63   |
| Making capacity (RMS value)                           | A               | 380             |      |
| Breaking capacity at voltage                          | 440V            | A               | 304  |
|   | 500V            | A               | 240  |
|   | 690V            | A               | 192  |
| Resistance per pole (average value)                   | m?              | 2               |      |
| Power dissipation per pole (average value)            | $I_{th}$        | W               | 6    |
| Tightening torque for terminals                       | min             | Nm              | 2.5  |
|   | max             | Nm              | 3    |
|   | min             | lbin            | 1.8  |
|   | max             | lbin            | 2.2  |
| Tightening torque for coil terminal                   | min             | Nm              | 0.8  |
|   | max             | Nm              | 1    |
|   | min             | lbin            | 0.59 |
|   | max             | lbin            | 0.74 |
| Max number of wires simultaneously connectable        | Nr.             | 2               |      |
| Conductor section                                     | AWG/Kcmil       |                 |      |
|   | max             |                 | 6    |
| Flexible w/o lug conductor section                    | min             | mm <sup>2</sup> | 2.5  |
|   | max             | mm <sup>2</sup> | 16   |
| Flexible c/w lug conductor section                    | min             | mm <sup>2</sup> | 1    |

|   |                 |                 |                          |
|---|-----------------|-----------------|--------------------------|
|   | max             | mm <sup>2</sup> | 10                       |
| Flexible with insulated spade lug conductor section |                 |                 |                          |
|   | min             | mm <sup>2</sup> | 1                        |
|   | max             | mm <sup>2</sup> | 10                       |
| Power terminal protection according to IEC/EN 60529 |                 |                 | IP20 when wired          |
| <b>Mechanical features</b>                          |                 |                 |                          |
| Operating position                                  | normal          |                 | Vertical plan<br>±30°    |
|   | allowable       |                 |                          |
| Fixing  |                 |                 | Screw / DIN rail<br>35mm |
| Weight  | g               |                 | 400                      |
| Conductor section                                   |                 |                 |                          |
| AWG/kcmil conductor section                         | max             |                 | 6                        |
| <b>Operations</b>                                   |                 |                 |                          |
| Mechanical life                                     |                 | cycles          | 20000000                 |
| Electrical life                                     |                 | cycles          | 1400000                  |
| <b>Safety related data</b>                          |                 |                 |                          |
| Performance level B10d according to EN/ISO 13489-1  | rated load      | cycles          | 400000                   |
|   | mechanical load | cycles          | 20000000                 |
| EMC compatibility                                   |                 |                 | yes                      |
| <b>AC coil operating</b>                            |                 |                 |                          |
| Rated AC voltage at 50/60Hz                         | V               |                 | 110                      |
| 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              | 75                       |
|   | holding         | VA              | 9                        |
| of 50/60Hz coil powered at 60Hz                     | in-rush         | VA              | 70                       |
|   | holding         | VA              | 7                        |
| of 60Hz coil powered at 60Hz                        | in-rush         | VA              | 75                       |
|   | holding         | VA              | 9                        |
| Dissipation at holding ≤20°C 50Hz                   | W               |                 | 2.5                      |
| <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 | 8  |
|            | max | ms | 24 |
| Opening NO | min | ms | 5  |
|            | max | ms | 15 |
| Closing NC | min | ms | 9  |
|            | max | ms | 20 |

**UL technical data**

General USE

|           |            |   |    |
|-----------|------------|---|----|
| Contactor | AC current | A | 56 |
|-----------|------------|---|----|

**Ambient conditions**

Temperature

|                       |     |    |     |
|-----------------------|-----|----|-----|
| Operating temperature | min | °C | -50 |
|                       | max | °C | 70  |
| Storage temperature   | min | °C | -60 |
|                       | max | °C | 80  |

Max altitude

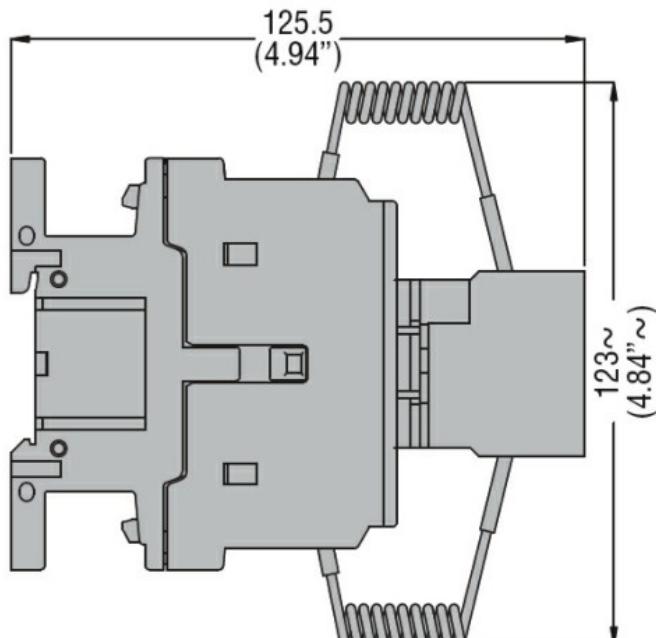
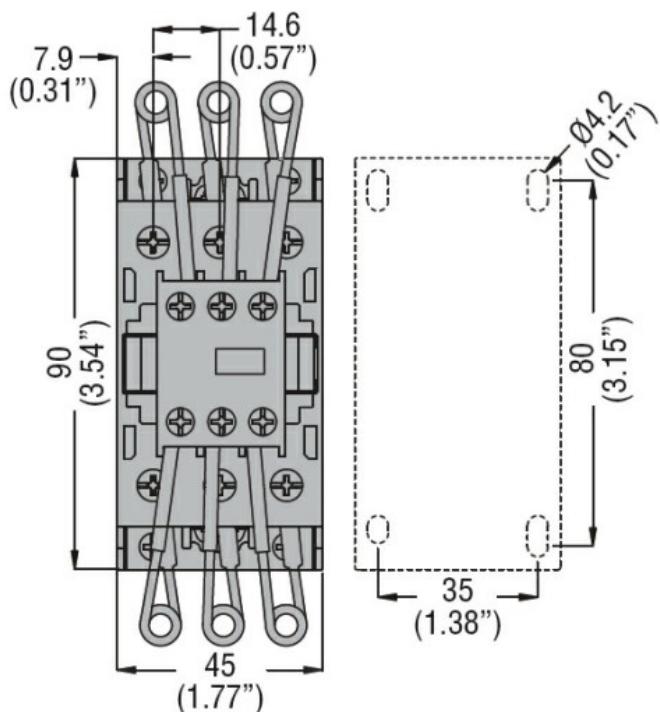
m 3000

**Resistance & Protection**

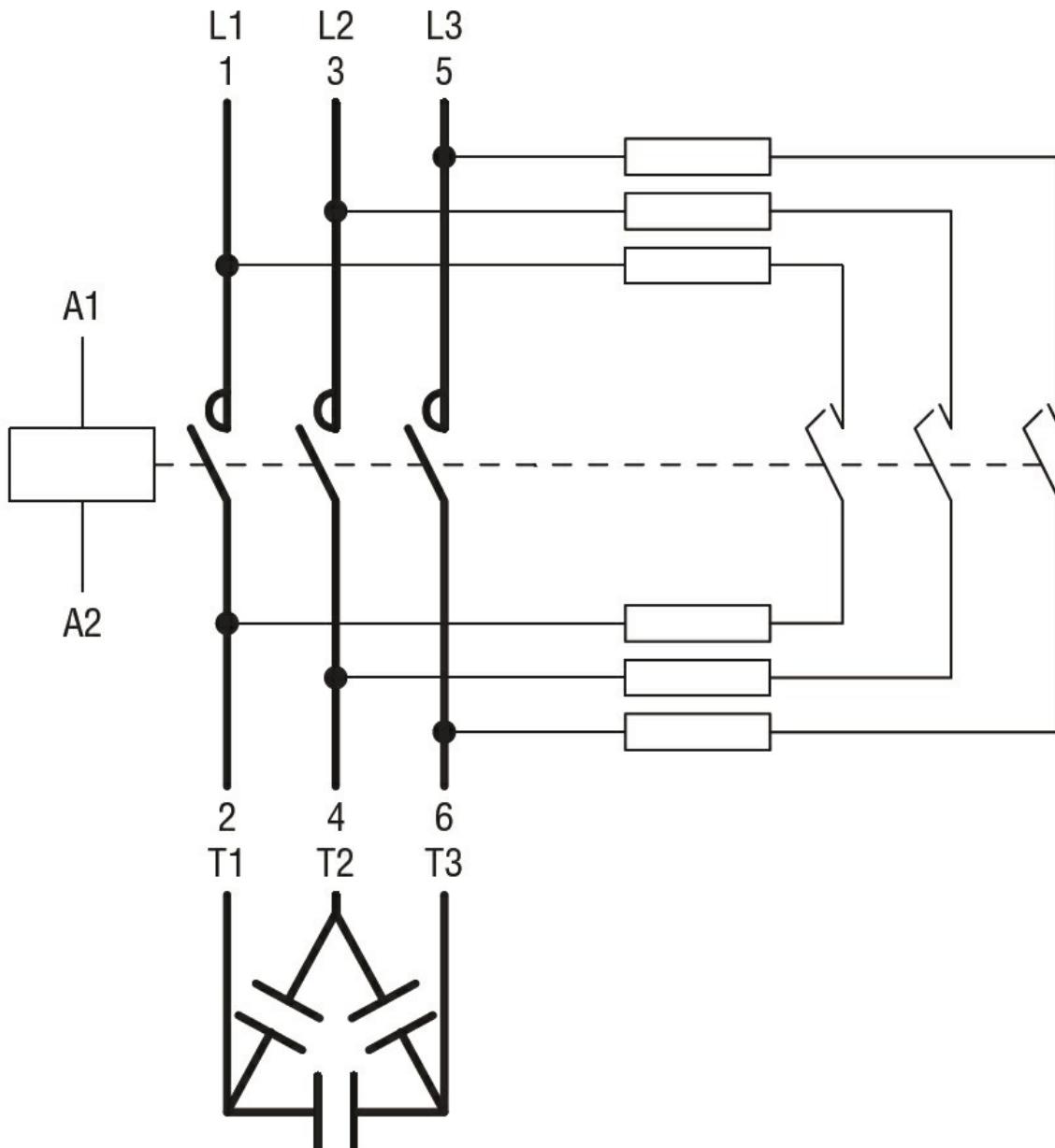
Pollution degree

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

EAC

#### ETIM classification

##### ETIM 8.0

EC001079 -  
Capacitor  
contactor