



|                                                      |            |      |                 |
|------------------------------------------------------|------------|------|-----------------|
| Product designation                                  |            |      | Power contactor |
| Product type designation                             |            |      | BFK38           |
| Contact characteristics                              |            |      |                 |
| Number of poles                                      | Nr.        | 3    |                 |
| Rated insulation voltage Ui IEC/EN                   | V          | 690  |                 |
| Rated impulse withstand voltage Uimp                 | kV         | 6    |                 |
| Operational frequency                                | min        | Hz   | 25              |
|                                                      | max        | Hz   | 400             |
| IEC Conventional free air thermal current Ith        | A          | 56   |                 |
| Rated operational power AC-6b (T≤40°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              |
|                                                      |            | A    | 380             |
| 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)           | Ith        | 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        | mm²  | 2.5             |
|                                                      | max        | mm²  | 16              |
| Flexible c/w lug conductor section                   | min        | mm²  | 1               |
|                                                      |            |      |                 |

|                                                     |                                                     |                               |                  |                          |
|-----------------------------------------------------|-----------------------------------------------------|-------------------------------|------------------|--------------------------|
|                                                     |                                                     | max                           | mm²              | 10                       |
|                                                     | Flexible with insulated spade lug conductor section |                               |                  |                          |
|                                                     |                                                     | min                           | mm²              | 1                        |
|                                                     |                                                     | max                           | mm²              | 10                       |
| Power terminal protection according to IEC/EN 60529 |                                                     |                               |                  | IP20 when wired          |
| Mechanical features                                 |                                                     |                               |                  |                          |
| Operating position                                  |                                                     | normal<br>allowable           |                  | Vertical plan<br>±30°    |
| Fixing                                              |                                                     |                               |                  | Screw / DIN rail<br>35mm |
| Weight                                              |                                                     |                               | g                | 400                      |
| Conductor section                                   |                                                     |                               |                  |                          |
| AWG/kcmil conductor section                         |                                                     |                               |                  |                          |
|                                                     |                                                     | max                           |                  | 6                        |
| Operations                                          |                                                     |                               |                  |                          |
| Mechanical life                                     |                                                     |                               | cycles           | 20000000                 |
| Electrical life                                     |                                                     |                               | cycles           | 1400000                  |
| Safety related data                                 |                                                     |                               |                  |                          |
| Performance level B10d according to EN/ISO 13489-1  |                                                     |                               |                  |                          |
|                                                     |                                                     | rated load<br>mechanical load | cycles<br>cycles | 400000<br>20000000       |
| EMC compatibility                                   |                                                     |                               |                  | yes                      |
| AC coil operating                                   |                                                     |                               |                  |                          |
| Rated AC voltage at 50/60Hz                         |                                                     |                               | V                | 48                       |
| AC operating voltage                                |                                                     |                               |                  |                          |
|                                                     | of 50/60Hz coil powered at 50Hz<br>pick-up          | min<br>max                    | %Us<br>%Us       | 80<br>110                |
|                                                     | drop-out                                            | min<br>max                    | %Us<br>%Us       | 20<br>55                 |
|                                                     | of 50/60Hz coil powered at 60Hz<br>pick-up          | min<br>max                    | %Us<br>%Us       | 85<br>110                |
|                                                     | drop-out                                            | min<br>max                    | %Us<br>%Us       | 20<br>55                 |
| AC average coil consumption at 20°C                 |                                                     |                               |                  |                          |
|                                                     | of 50/60Hz coil powered at 50Hz                     | in-rush<br>holding            | VA<br>VA         | 75<br>9                  |
|                                                     | of 50/60Hz coil powered at 60Hz                     | in-rush<br>holding            | VA<br>VA         | 70<br>7                  |
|                                                     | of 60Hz coil powered at 60Hz                        | in-rush<br>holding            | VA<br>VA         | 75<br>9                  |
| Dissipation at holding ≤20°C 50Hz                   |                                                     |                               | W                | 2.5                      |
| Max cycles frequency                                |                                                     |                               |                  |                          |
| Mechanical operation                                |                                                     |                               | cycles/h         | 3600                     |
| Operating times                                     |                                                     |                               |                  |                          |

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

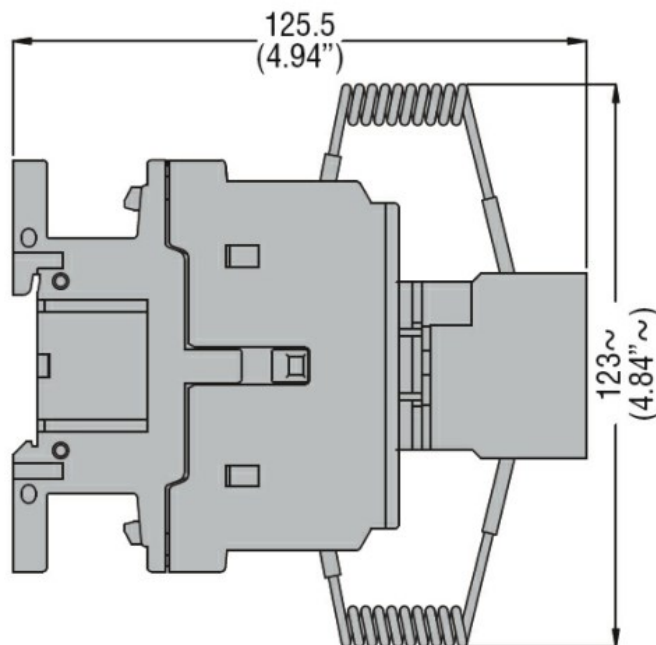
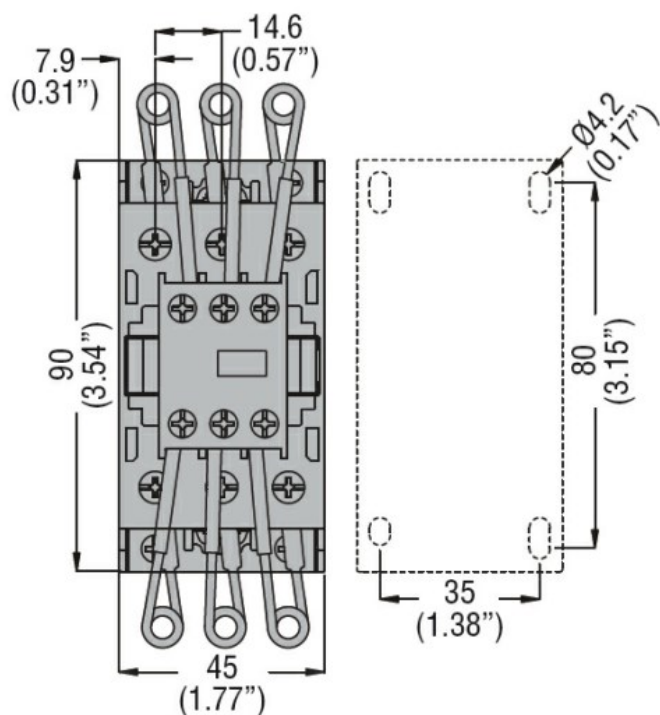
|   |      |
|---|------|
| m | 3000 |
|---|------|

#### Resistance & Protection

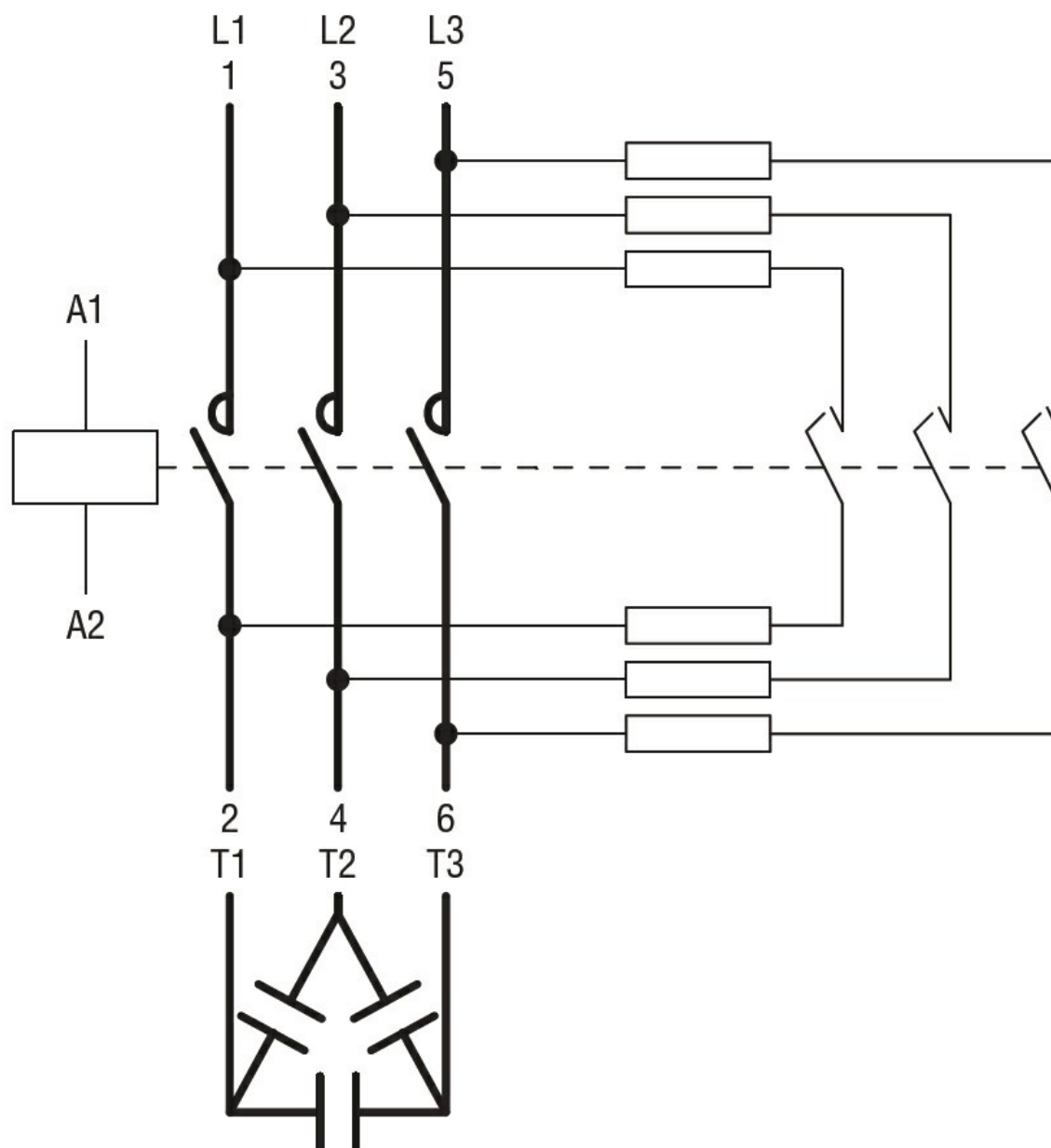
Pollution degree

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