



|                                                      |            |      |                 |
|------------------------------------------------------|------------|------|-----------------|
| Product designation                                  |            |      | Power contactor |
| Product type designation                             |            |      | BFK18           |
| 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    | 32              |
| Rated operational power AC-6b (T≤40°C)               |            |      |                 |
|                                                      | 230V       | kvar | 9               |
|                                                      | 400V       | kvar | 15              |
|                                                      | 440...480V | kvar | 17              |
|                                                      | 690V       | kvar | 20              |
| Short-time allowable current for 10s (IEC/EN60947-1) |            | A    | 200             |
| Protection fuse                                      |            |      |                 |
|                                                      | gG (IEC)   | A    | 40              |
| Making capacity (RMS value)                          |            | A    | 180             |
| Breaking capacity at voltage                         |            |      |                 |
|                                                      | 440V       | A    | 144             |
|                                                      | 500V       | A    | 120             |
|                                                      | 690V       | A    | 94              |
| Resistance per pole (average value)                  |            | mΩ   | 2.5             |
| Power dissipation per pole (average value)           |            |      |                 |
|                                                      | Ith        | W    | 2.6             |
| Tightening torque for terminals                      |            |      |                 |
|                                                      | min        | Nm   | 1.5             |
|                                                      | max        | Nm   | 1.8             |
|                                                      | min        | Ibin | 1.1             |
|                                                      | max        | Ibin | 1.5             |
| Tightening torque for coil terminal                  |            |      |                 |
|                                                      | min        | Nm   | 0.8             |
|                                                      | max        | Nm   | 1               |
|                                                      | min        | Ibin | 0.8             |
|                                                      | max        | Ibin | 0.74            |
| Max number of wires simultaneously connectable       |            | Nr.  | 2               |
| Conductor section                                    |            |      |                 |
| AWG/Kcmil                                            |            |      |                 |
|                                                      | max        |      | 10              |
| Flexible w/o lug conductor section                   |            |      |                 |
|                                                      | min        | mm²  | 1               |
|                                                      | max        | mm²  | 6               |
| Flexible c/w lug conductor section                   |            |      |                 |
|                                                      | min        | mm²  | 1               |

|                                                     |                              |        |                          |
|-----------------------------------------------------|------------------------------|--------|--------------------------|
| Flexible with insulated spade lug conductor section | max                          | mm²    | 4                        |
|                                                     | min                          | mm²    | 1                        |
|                                                     | max                          | mm²    | 4                        |
| Power terminal protection according to IEC/EN 60529 |                              |        | IP20 when properly wired |
| Mechanical features                                 |                              |        |                          |
| Operating position                                  | normal allowable             |        | Vertical plan ±30°       |
| Fixing                                              |                              |        | Screw / DIN rail 35mm    |
| Weight                                              |                              | g      | 460                      |
| Auxiliary contact characteristics                   |                              |        |                          |
| Thermal current Ith                                 |                              | A      | 10                       |
| IEC/EN 60947-5-1 designation                        |                              |        | A600 - P600              |
| Operating current AC15                              | 230V                         | A      | 3                        |
|                                                     | 400V                         | A      | 1.9                      |
|                                                     | 500V                         | A      | 1.4                      |
| Operating current DC12                              | 110V                         | A      | 5.7                      |
| Operating current DC13                              | 24V                          | A      | 5.7                      |
|                                                     | 48V                          | A      | 2.9                      |
|                                                     | 60V                          | A      | 2.3                      |
|                                                     | 110V                         | A      | 1.25                     |
|                                                     | 125V                         | A      | 1.1                      |
|                                                     | 220V                         | A      | 0.6                      |
|                                                     | 600V                         | A      | 0.1                      |
| Operations                                          |                              |        |                          |
| Mechanical life                                     |                              | cycles | 20000000                 |
| Electrical life                                     |                              | cycles | 400000                   |
| Safety related data                                 |                              |        |                          |
| Performance level B10d according to EN/ISO 13489-1  | rated load                   | cycles | 400000                   |
|                                                     | mechanical load              | cycles | 20000000                 |
| EMC compatibility                                   |                              |        | yes                      |
| AC coil operating                                   |                              |        |                          |
| 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     | 75                       |
|                                                     | holding                      | VA     | 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 | 10 |
| max | ms | 20 |

Closing NC

|     |    |    |
|-----|----|----|
| min | ms | 14 |
| max | ms | 28 |

### UL technical data

Rated operational voltage AC (UL) V 600

General USE

Contactor

|            |   |    |
|------------|---|----|
| AC current | A | 32 |
|------------|---|----|

Auxiliary contacts

|            |   |     |
|------------|---|-----|
| AC voltage | V | 600 |
| AC current | A | 10  |
| DC voltage | V | 250 |
| DC current | A | 1   |

Contact rating of auxiliary contacts according to UL

A600 - P600

### Ambient conditions

Temperature

Operating temperature

|     |    |     |
|-----|----|-----|
| min | °C | -50 |
| max | °C | 70  |

Storage temperature

|     |    |     |
|-----|----|-----|
| min | °C | -60 |
| max | °C | 80  |

Max altitude

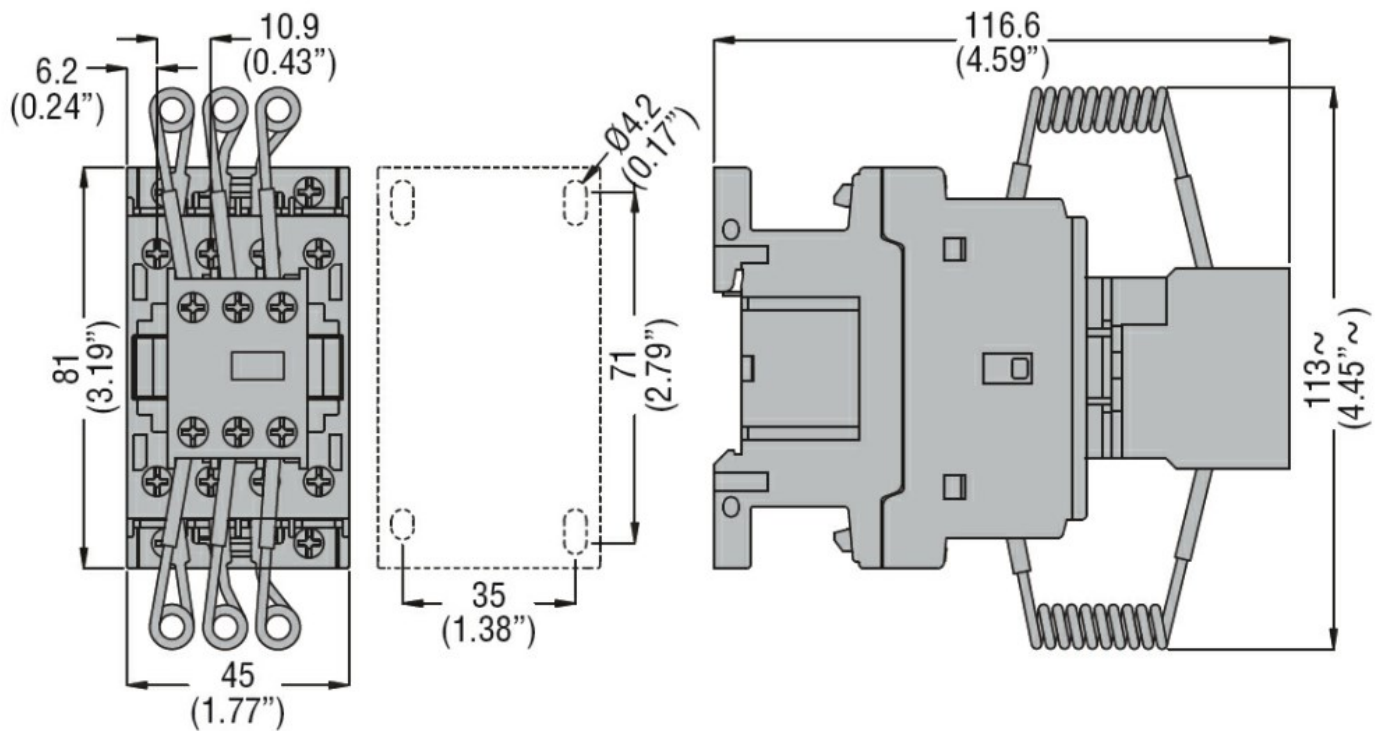
m 3000

### Resistance & Protection

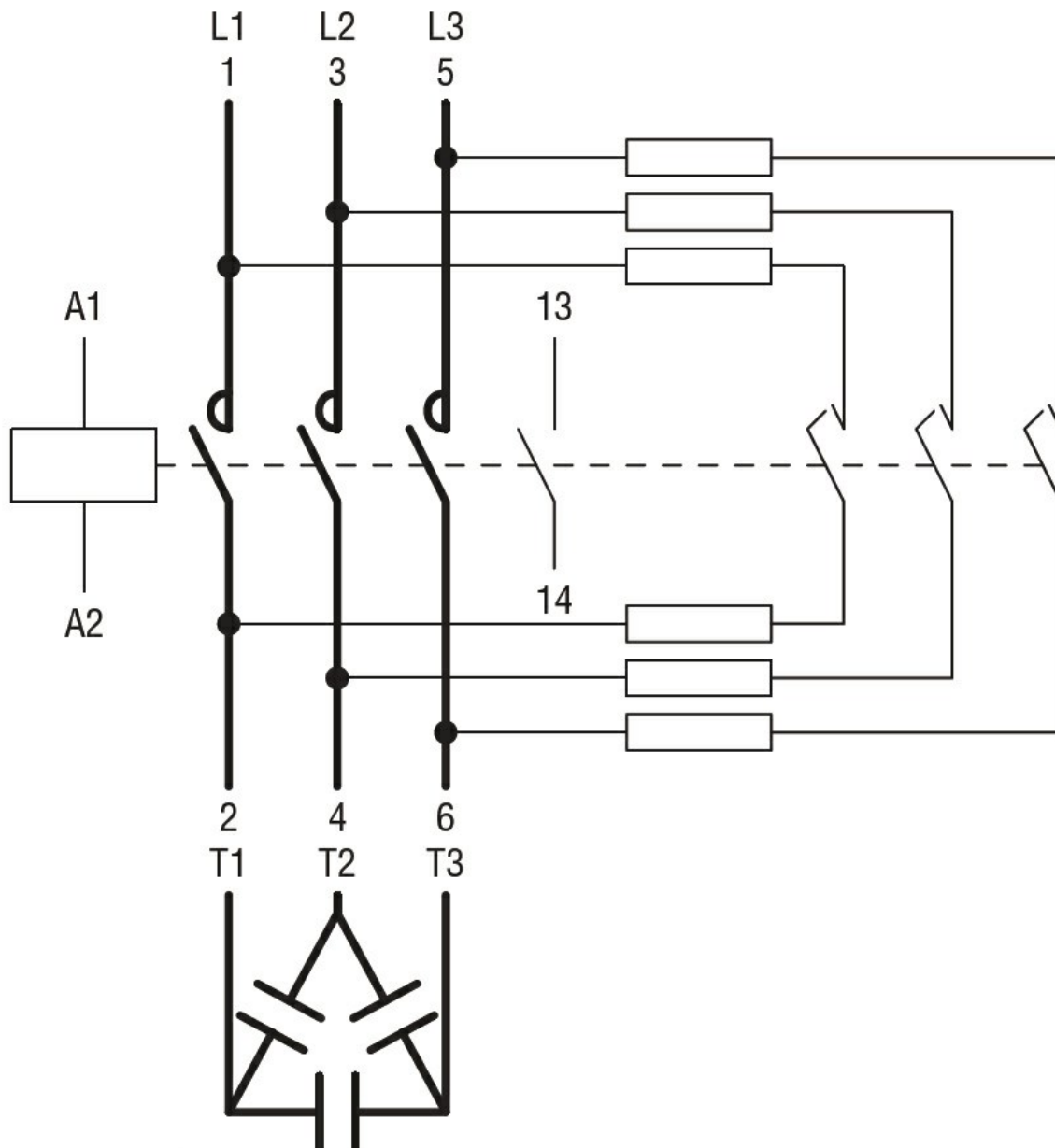
Pollution degree

3

### Dimensions



## Wiring diagrams



## Certifications and compliance

### Compliance

CSA C22.2 n° 60947-1  
CSA C22.2 n° 60947-4-1  
IEC/EN/BS 60947-1  
IEC/EN/BS 60947-4-1  
UL 60947-1  
UL 60947-4-1

### Certificates

CCC  
cULus  
EAC

## ETIM classification

ETIM 8.0

EC001079 -  
Capacitor  
contactor