## ENERGY AND AUTOMATION

CONTACTOR FOR POWER FACTOR CORRECTION WITH AC CONTROL CIRCUIT, INCLUDING LIMITING RESISTORS, MAXIMUM IEC OPERATIONAL POWER 400V = 15KVAR, COIL 460VAC 60HZ



**BFK1810A46060** 

|   |                                     |              |                     | <b>D</b>                 |
|---|-------------------------------------|--------------|---------------------|--------------------------|
| Product designation                             | ion                                 |              |                     | Power contactor<br>BFK18 |
| Product type designat<br>Contact characteristic |                                     |              |                     | BFK18                    |
| Number of poles                                 | S                                   |              | Nr.                 | 3                        |
| Rated insulation voltage                        |                                     |              | V                   | 690                      |
| Rated impulse withsta                           |                                     |              | kV                  | 6                        |
| Operational frequency                           |                                     |              | ΓV                  | 0                        |
| Operational frequency                           |                                     | min          | Hz                  | 25                       |
|   |                                     | max          | Hz                  | 400                      |
| IFC Conventional free                           | air thermal current Ith             | max          | A                   | 32                       |
| Rated operational pov                           |                                     |              | ,,                  | 02                       |
| rated operational per                           |                                     | 230V         | kvar                | 9                        |
|   |                                     | 400V         | kvar                | 15                       |
|   |                                     | 440480V      | kvar                | 17                       |
|   |                                     | 690V         | kvar                | 20                       |
| Short-time allowable of                         | current for 10s (IEC/EN60947-1)     |              | A                   | 200                      |
| Protection fuse                                 |                                     |              |                     |                          |
|   |                                     | gG (IEC)     | А                   | 40                       |
| Making capacity (RMS                            | Svalue)                             | <b>0</b> ( ) | Α                   | 180                      |
| Breaking capacity at v                          |                                     |              |                     |                          |
|   | -                                   | 440V         | А                   | 144                      |
|   |                                     | 500V         | А                   | 120                      |
|   |                                     | 690V         | А                   | 94                       |
| Resistance per pole (a                          | Resistance per pole (average value) |              | mΩ                  | 2.5                      |
| Power dissipation per                           | pole (average value)                |              |                     |                          |
|   |                                     | Ith          | W                   | 2.6                      |
| Tightening torque for t                         | terminals                           |              |                     |                          |
|   |                                     | min          | Nm                  | 1.5                      |
|   |                                     | max          | Nm                  | 1.8                      |
|   |                                     | min          | lbin                | 1.1                      |
|   |                                     | max          | lbin                | 1.5                      |
| Tightening torque for o                         | coil terminal                       |              |                     |                          |
|   |                                     | min          | Nm                  | 0.8                      |
|   |                                     | max          | Nm                  | 1                        |
|   |                                     | min          | lbin                | 0.8                      |
|   |                                     | max          | Ibin                | 0.74                     |
| Max number of wires simultaneously connectable  |                                     |              | Nr.                 | 2                        |
| Conductor section                               |                                     |              |                     |                          |
|   | AWG/Kcmil                           |              |                     | 10                       |
|   |                                     | max          |                     | 10                       |
|   | Flexible w/o lug conductor section  |              |                     | 4                        |
|   |                                     | min          | mm²                 | 1                        |
|   | Flovible o/w lug conductor conting  | max          | mm²                 | 6                        |
|   | Flexible c/w lug conductor section  |              | no 100 <sup>2</sup> | 4                        |
|   |                                     | min          | mm²                 | 1                        |

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|   | max          | mm²        | 4               |
|---|--------------|------------|-----------------|
| Flexible with insulated spade lug conductor section |              |            | 4               |
|   | min          | mm²<br>mm² | 1               |
|   | max          |            | 4<br>IP20 when  |
| Power terminal protection according to IEC/EN 60529 |              |            | properly wired  |
| Mechanical features                                 |              |            |                 |
| Operating position                                  | normal       |            | Vertical plan   |
|   | allowable    |            | ±30°            |
|   | allowable    |            | Screw / DIN rai |
| Fixing  |              |            | 35mm            |
| Weight  |              | g          | 416             |
| Conductor section                                   |              |            |                 |
| AWG/kcmil conductor section                         |              |            |                 |
|   | max          |            | 10              |
| Auxiliary contact characteristics                   |              |            |                 |
| Thermal current Ith                                 |              | A          | 10              |
| IEC/EN 60947-5-1 designation                        |              |            | A600 - P600     |
| Operating current AC15                              |              |            | 2               |
|   | 230V         | A          | 3               |
|   | 400V         | A          | 1.9             |
| Operating current DC12                              | 500V         | A          | 1.4             |
| Operating current DC12                              | 110V         | А          | 5.7             |
| Operating current DC13                              | 1100         | ~          | 5.7             |
| Operating current DC13                              | 24V          | А          | 5.7             |
|   | 24V<br>48V   | A          | 2.9             |
|   | 40V<br>60V   | A          | 2.3             |
|   | 110V         | A          | 1.25            |
|   | 125V         | A          | 1.1             |
|   | 220V         | A          | 0.6             |
|   | 600V         | А          | 0.1             |
| Operations  |              |            |                 |
| Mechanical life                                     |              | cycles     | 2000000         |
| Electrical life                                     |              | cycles     | 400000          |
| Safety related data                                 |              |            |                 |
| Performance level B10d according to EN/ISO 13489-1  |              |            |                 |
|   | rated load   | cycles     | 400000          |
|   | hanical load | cycles     | 2000000         |
| Mirror contats according to IEC/EN 609474-4-1       |              |            | YES             |
| EMC compatibility                                   |              |            | yes             |
| AC coil operating                                   |              |            | 400             |
| Rated AC voltage at 60Hz                            |              | V          | 460             |
| AC operating voltage                                |              |            |                 |
| of 60Hz coil powered at 60Hz                        |              |            |                 |
| pick-up   | min          | %Us        | 80              |
|   | min          | %Us<br>%Us | 80<br>110       |
| drop-out  | max          | /005       | 110             |
| diop-out  | min          | %Us        | 20              |
|   | max          | %Us        | 55              |
| AC average coil consumption at 20°C                 | max          | ,          |                 |

AC average coil consumption at 20°C

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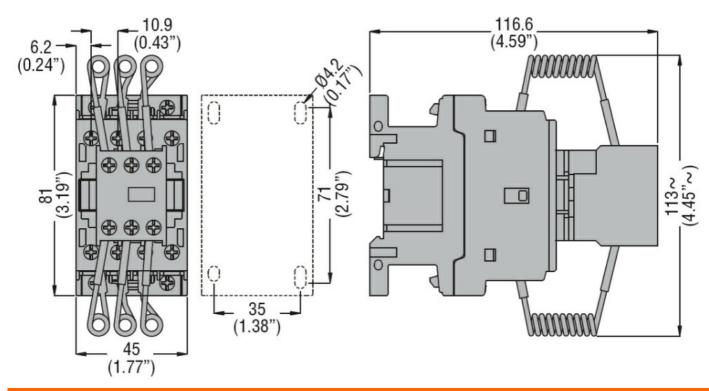
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|                           | of 60Hz coil powered a    | at 60Hz    |            |          |             |
|---------------------------|---------------------------|------------|------------|----------|-------------|
|                           | •                         |            | in-rush    | VA       | 75          |
|                           |                           |            | holding    | VA       | 9           |
| Dissipation at holding    | ≤20°C 50Hz                |            | <b>~</b>   | W        | 2.5         |
| Max cycles frequency      |                           |            |            |          |             |
| Mechanical operation      |                           |            |            | cycles/h | 3600        |
| Operating times           |                           |            |            |          |             |
| Average time for Us co    | ontrol                    |            |            |          |             |
|                           | 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         |                           |            |            |          |             |
| General USE               |                           |            |            |          |             |
|                           | Contactor                 |            |            |          |             |
|                           |                           |            | AC current | А        | 32          |
|                           | Auxiliary contacts        |            |            |          |             |
|                           | ·                         |            | AC voltage | V        | 600         |
|                           |                           |            | AC current | А        | 10          |
|                           |                           |            | DC voltage | V        | 250         |
|                           |                           |            | DC current | А        | 1           |
| Contact rating of auxilia | ary contacts according to | UL         |            |          | A600 - P600 |
| Ambient conditions        | ,                         |            |            |          |             |
| Temperature               |                           |            |            |          |             |
|                           | Operating temperature     | 9          |            |          |             |
|                           |                           |            | min        | °C       | -50         |
|                           |                           |            | max        | °C       | 70          |
|                           | Storage temperature       |            |            | -        |             |
|                           |                           |            | min        | °C       | -60         |
|                           |                           |            | max        | °Č       | 80          |
| Max altitude              |                           |            |            | m        | 3000        |
| Resistance & Protectic    | on                        |            |            |          |             |
| Pollution degree          |                           |            |            |          | 3           |
| Dimensions                |                           |            |            |          |             |
|                           |                           |            |            |          |             |

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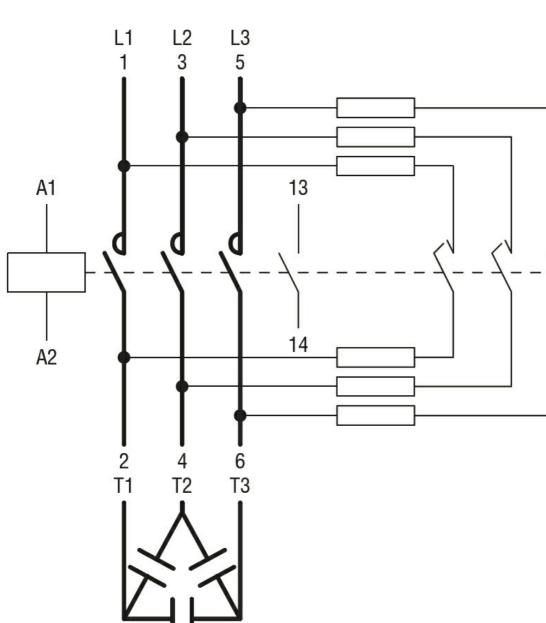


Wiring diagrams

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## Certifications and compliance

| Comp |  |
|------|--|
|      |  |
|      |  |
|      |  |

| eemphanee           |                        |            |
|---------------------|------------------------|------------|
|                     | 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 |                        |            |
|                     |                        | EC001079 - |
| ETIM 8.0            |                        | Capacitor  |

contactor