



|   |                    |      |  |                 |
|---|--------------------|------|--|-----------------|
| Product designation                                       |                    |      |  | Power contactor |
| Product type designation                                  |                    |      |  | BF18            |
| <b>Contact characteristics</b>                            |                    |      |  |                 |
| Number of poles   | Nr.                |      |  | 4               |
| Rated insulation voltage U <sub>i</sub> IEC/EN            | V                  |      |  | 690             |
| Rated impulse withstand voltage U <sub>imp</sub>          | kV                 |      |  | 6               |
| Operational frequency                                     | min                | Hz   |  | 25              |
|   | max                | Hz   |  | 400             |
| IEC Conventional free air thermal current I <sub>th</sub> | A                  |      |  | 32              |
| Operational current I <sub>e</sub>                        | AC-1 (≤40°C)       | A    |  | 32              |
|   | AC-1 (≤55°C)       | A    |  | 26              |
|   | AC-1 (≤70°C)       | A    |  | 23              |
|   | AC-3 (≤440V ≤55°C) | A    |  | 18              |
|   | AC-4 (400V)        | A    |  | 8.5             |
| Rated operational power AC-1 (T≤40°C)                     | 230V               | kW   |  | 12              |
|   | 400V               | kW   |  | 21              |
|   | 500V               | kW   |  | 26              |
|   | 690V               | kW   |  | 36              |
| Short-time allowable current for 10s (IEC/EN60947-1)      | A                  |      |  | 200             |
| Protection fuse   | gG (IEC)           | A    |  | 32              |
|   | aM (IEC)           | A    |  | 20              |
| 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)                | I <sub>th</sub>    | W    |  | 2.6             |
|   | AC-3               | W    |  | 0.8             |
| Tightening torque for terminals                           | min                | Nm   |  | 1.5             |
|   | max                | Nm   |  | 1.8             |
|   | min                | lbin |  | 1.1             |
|   | max                | lbin |  | 1.5             |
| 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 | 10                |
| Flexible w/o lug conductor section                  |           | min | mm <sup>2</sup> 1 |
|   |           | max | mm <sup>2</sup> 6 |
| Flexible c/w lug conductor section                  |           | min | mm <sup>2</sup> 1 |
|   |           | max | mm <sup>2</sup> 4 |
| Flexible with insulated spade lug conductor section |           | min | mm <sup>2</sup> 1 |
|   |           | max | mm <sup>2</sup> 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 490                 |

|                   |                             |     |    |
|-------------------|-----------------------------|-----|----|
| Conductor section | AWG/kcmil conductor section | max | 10 |
|-------------------|-----------------------------|-----|----|

**Auxiliary contact characteristics**

|                              |   |             |
|------------------------------|---|-------------|
| Thermal current Ith          | A | 32          |
| IEC/EN 60947-5-1 designation |   | A600 - P600 |

**Operations**

|                 |        |          |
|-----------------|--------|----------|
| Mechanical life | cycles | 20000000 |
| Electrical life | cycles | 1600000  |

**Safety related data**

|  |                            |        |          |
|--|----------------------------|--------|----------|
| Performance level B10d according to EN/ISO 13489-1 | rated load mechanical load | cycles | 1600000  |
|  |                            | cycles | 20000000 |

Mirror contacts according to IEC/EN 60947-4-1 YES

EMC compatibility yes

**DC coil operating**

DC rated control voltage V 12

|                      |     |     |     |
|----------------------|-----|-----|-----|
| DC operating voltage |     |     |     |
| pick-up              | min | %Us | 70  |
|                      | max | %Us | 125 |
| drop-out             | min | %Us | 10  |
|                      | max | %Us | 40  |

|                                |                 |   |     |
|--------------------------------|-----------------|---|-----|
| Average coil consumption ≤20°C | in-rush holding | W | 5.4 |
|                                |                 | W | 5.4 |

**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 |
| Opening NC | min | ms | 7  |
|            | max | ms | 18 |
| <hr/>      |     |    |    |
| in DC      |     |    |    |
| Closing NC | min | ms | 24 |
|            | max | ms | 30 |
| Opening NC | min | ms | 47 |
|            | max | ms | 57 |

**UL technical data**

Full-load current (FLA) for three-phase AC motor

|         |   |    |
|---------|---|----|
| at 480V | A | 14 |
| at 600V | A | 17 |

Yielded mechanical performance

for single-phase AC motor

|          |    |   |
|----------|----|---|
| 110/120V | HP | 1 |
| 230V     | HP | 3 |

for three-phase AC motor

|          |    |    |
|----------|----|----|
| 200/208V | HP | 5  |
| 220/230V | HP | 5  |
| 460/480V | HP | 10 |
| 575/600V | HP | 15 |

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

SI - A600

**Ambient conditions**

Temperature

Operating temperature

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

Storage temperature

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

Max altitude

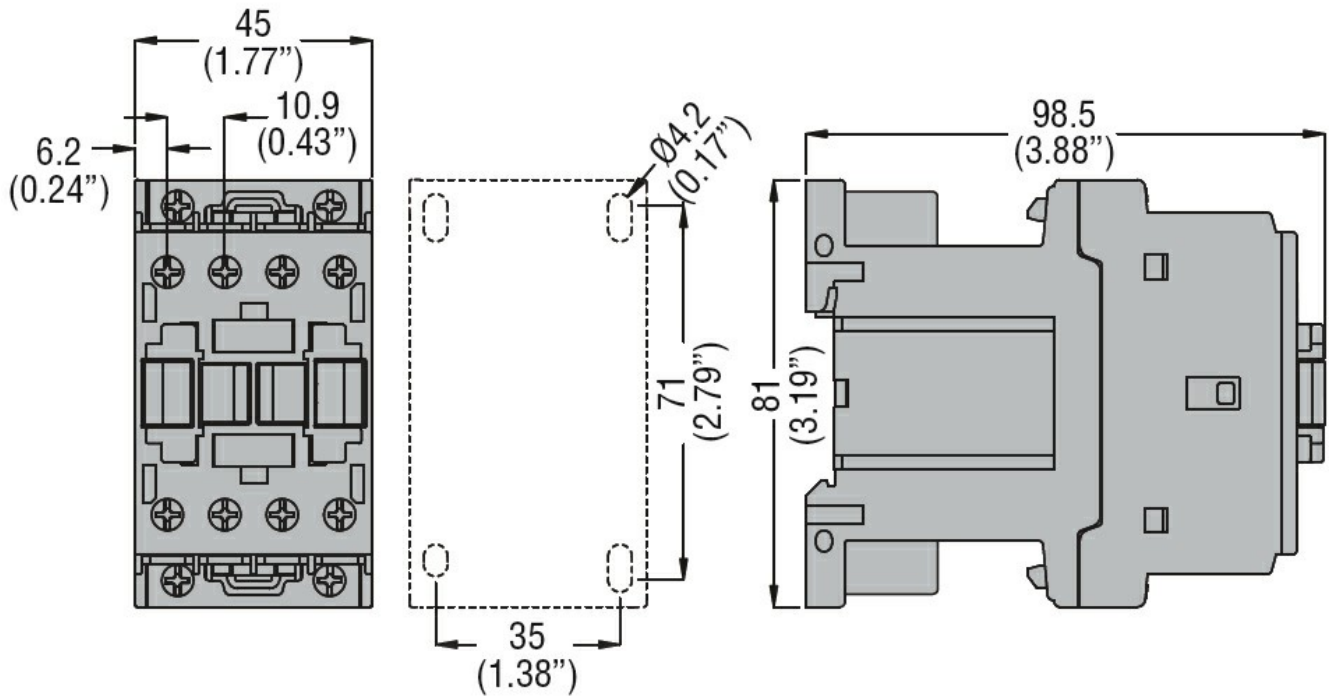
m 3000

**Resistance & Protection**

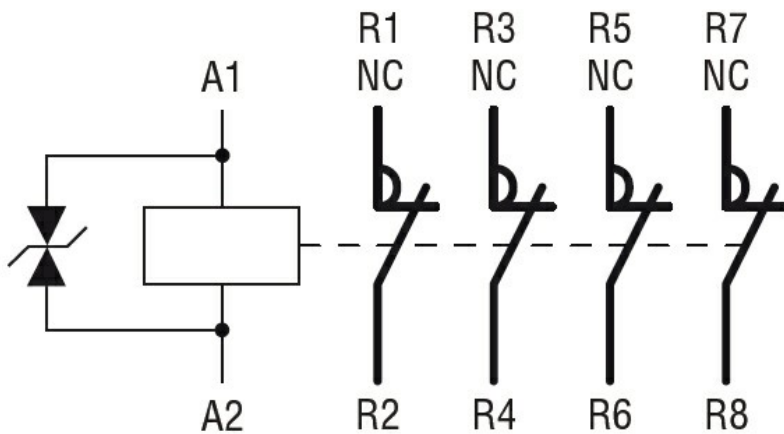
Pollution degree

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

EC000066 -  
Power contactor,  
AC switching