



Product designation

Power contactor

Product type designation

BF18

**Contact characteristics**

|   |                    |           |
|---|--------------------|-----------|
| 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 372                    |
| 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                      |
| AC coil operating                                   |  |                            |                          |
| Rated AC voltage at 60Hz                            |  | V                          | 575                      |
| 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 holding            | VA 75                    |
|   |  |                            | 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 |

Opening NC

|     |    |    |
|-----|----|----|
| min | ms | 7  |
| max | ms | 18 |

### 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

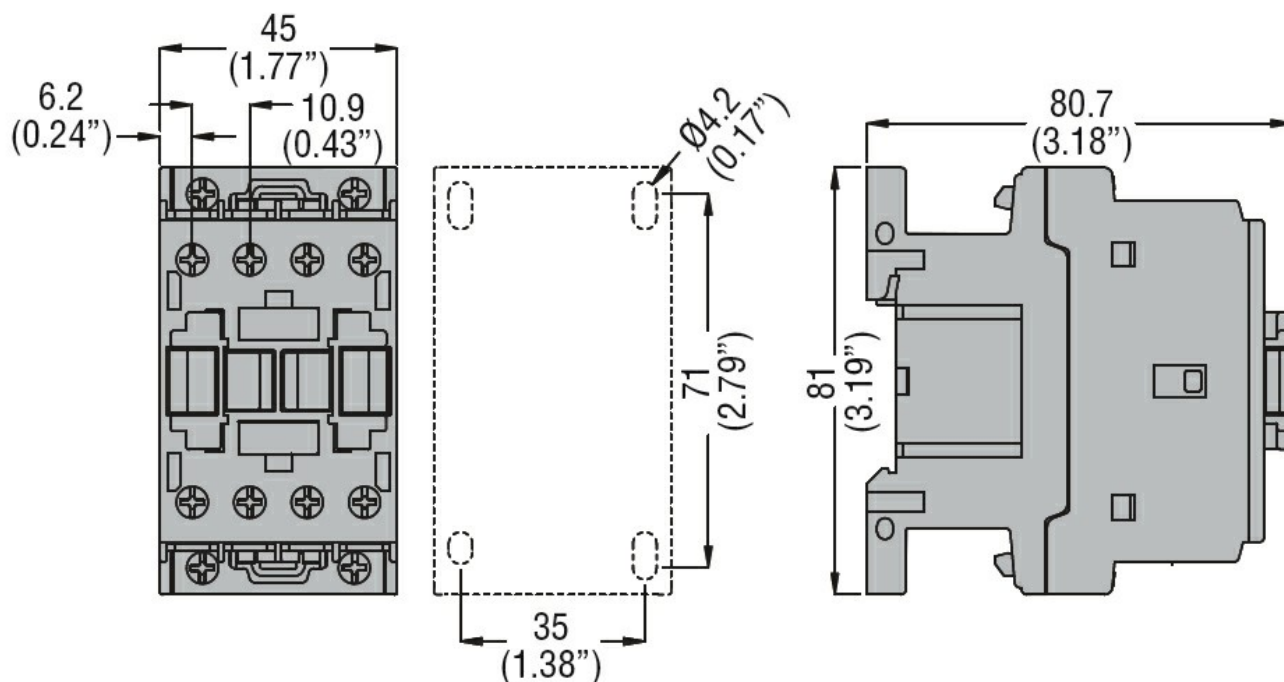
|   |      |
|---|------|
| m | 3000 |
|---|------|

### Resistance & Protection

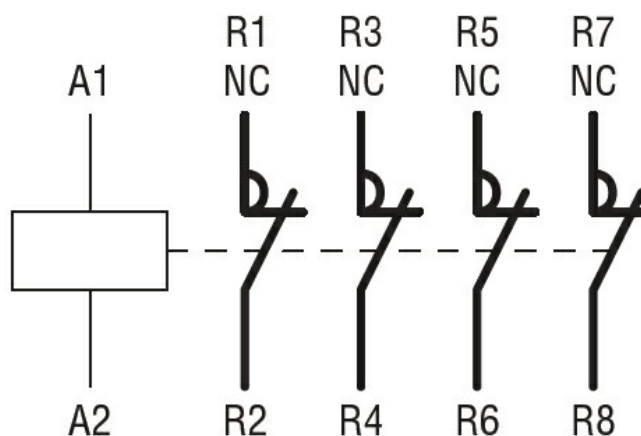
Pollution degree

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