



Product designation

Power contactor

Product type designation

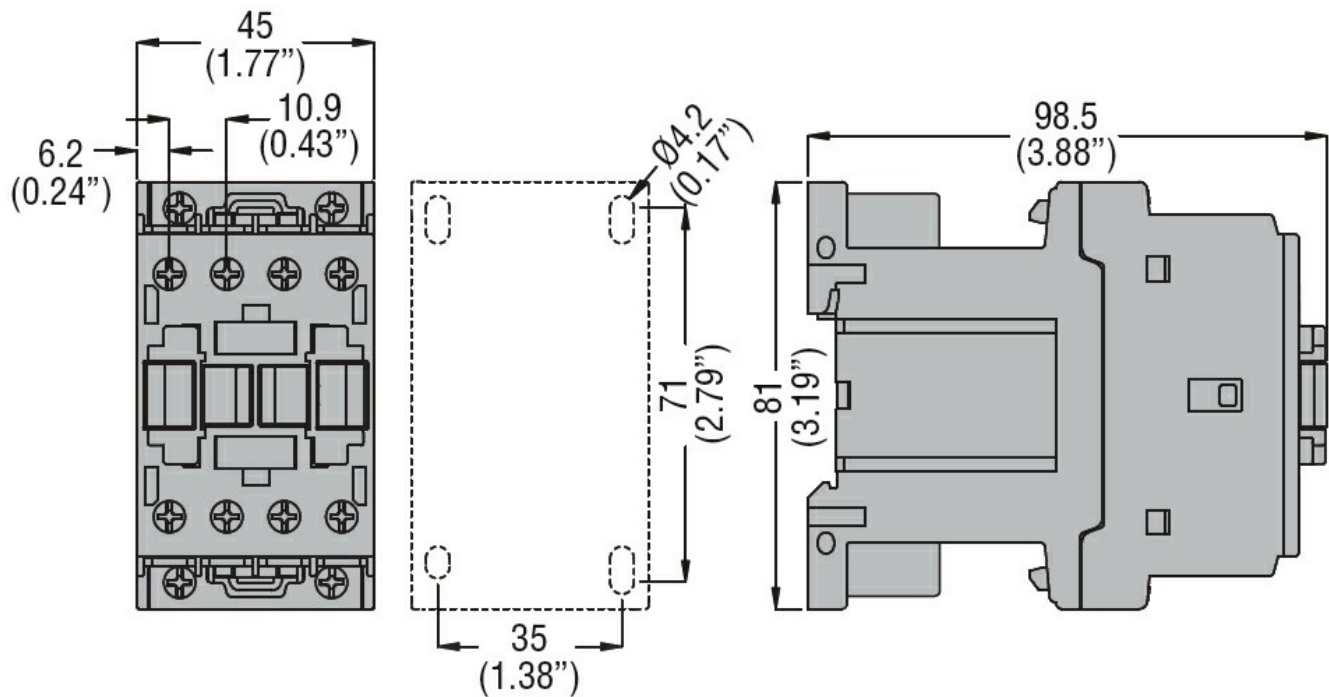
BF18

**Contact characteristics**

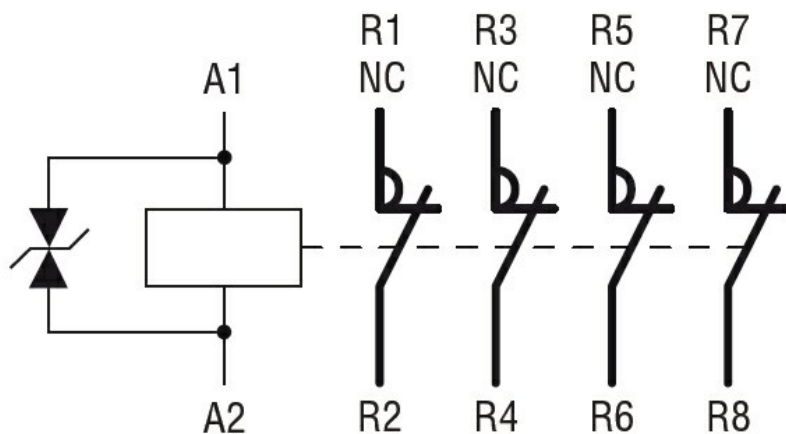
|                                                           |                    |           |
|-----------------------------------------------------------|--------------------|-----------|
| Number of poles                                           | Nr.                | 4         |
| Rated insulation 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                  | 500                      |
| Auxiliary contact characteristics                   |  |                            |                    |                          |
| Thermal current I <sub>th</sub>                     |  |                            | 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                 |
| EMC compatibility                                   |  |                            |                    | yes                      |
| DC coil operating                                   |  |                            |                    |                          |
| DC rated control voltage                            |  |                            | V                  | 48                       |
| DC operating voltage                                |  |                            |                    |                          |
| pick-up                                             |  | min                        | %U <sub>s</sub>    | 70                       |
|                                                     |  | max                        | %U <sub>s</sub>    | 125                      |
| drop-out                                            |  |                            |                    |                          |
|                                                     |  | min                        | %U <sub>s</sub>    | 10                       |
|                                                     |  | max                        | %U <sub>s</sub>    | 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 U <sub>s</sub> control             |  |                            |                    |                          |
| in AC                                               |  |                            |                    |                          |
| Closing NO                                          |  | min                        | ms                 | 8                        |
|                                                     |  | max                        | ms                 | 24                       |
| Opening NO                                          |  | min                        | ms                 | 10                       |

|                                                      |            |            |       |           |    |
|------------------------------------------------------|------------|------------|-------|-----------|----|
|                                                      | Closing NC | max        | ms    | 20        |    |
|                                                      |            | min        | ms    | 14        |    |
|                                                      |            | max        | ms    | 28        |    |
|                                                      |            | Opening NC | min   | ms        | 7  |
|                                                      |            |            | max   | ms        | 18 |
|                                                      |            |            | in DC |           |    |
| Closing NC                                           | min        | ms         | 24    |           |    |
|                                                      | max        | ms         | 30    |           |    |
|                                                      | Opening NC | min        | ms    | 47        |    |
| max                                                  |            | ms         | 57    |           |    |
| UL technical data                                    |            |            |       |           |    |
| Rated operational voltage AC (UL)                    |            |            | V     | 600       |    |
| 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