

# FOUR-POLE CONTACTOR, IEC OPERATING CURRENT ITH (AC1) = 32A, DC COIL LOW CONSUMPTION, 24VDC



| Product designation                                  |  |         | Power contactor |
|--|--|---------|-----------------|
| Product type designation                             |  |         | BF18            |
| Contact characteristics                              |  |         |                 |
| Number of poles                                      |  | nr.     | 4               |
| Rated insulation voltage Ui                          |  | V       | 690             |
| Rated impulse withstand voltage Uimp                 |  | kV      | 6               |
| Operating frequency                                  |  |         |                 |
|  | Operational frequency min                      | Hz      | 25              |
|  | Operational frequency max                      | Hz      | 400             |
| Conventional free air thermal current Ith            |  | Α       | 32              |
| Operating current                                    |  |         |                 |
|  | Operational current AC1 (≤40°C)                | Α       | 32              |
|  | Operational current AC3 (≤440V ≤55°C)          | Α       | 18              |
|  | Operational current AC4 (400V)                 | Α       | 8.5             |
| Rated operational power AC1 (T≤40°C)                 |  |         |                 |
|  | 230V   | kW      | 12              |
|  | 400V   | kW      | 21              |
|  | 500V   | kW      | 26              |
|  | 690V   | kW      | 36              |
| Rated operational power AC3 (T≤55°C)                 |  |         |                 |
|  | 230V   | kW      | 4               |
|  | 400V   | kW      | 7.5             |
|  | 415V   | kW      | 9               |
|  | 440V   | kW      | 9               |
|  | 500V   | kW      | 10              |
|  | 690V   | kW      | 10              |
| Short-time allowable current for 10s (IEC/EN60947-1) |  |         | 200             |
| Protection fuse                                      |  |         |                 |
|  | gG (IEC)                                       | Α       | 32              |
|  | aM (IEC)                                       | Α       | 20              |
| Making capacity (RMS value)                          |  | Α       | 180             |
| Breaking capacity at voltage                         |  |         |                 |
|  | Breaking capacity 440V                         | Α       | 144             |
|  | Breaking capacity 500V                         | Α       | 120             |
|  | Breaking capacity 690V                         | Α       | 94              |
| Resistance per pole (average value)                  |  | mΩ      | 2.5             |
| Power dissipation per pole (average value)           |  |         |                 |
| . one alsopalist per pere (are age raids)            |  | W       | 2.6             |
| remer alsospanen per pere (arenage ralae)            | Power dissipation pole (average value) Ith     | V V     |                 |
| . one. alsopalien per pere (arerage railes)          | Power dissipation pole (average value) Ith AC3 | W       | 0.8             |
| , , , , , ,  |  |         |                 |
| , , ,  | AC3  | W       | 0.8             |
| , , , , , ,  |  | W<br>Nm | 1.5             |
| Tightening torque for terminals                      | AC3  | W       | 0.8             |



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|                        |   | min                       | Nm             | 0.8                      |
|------------------------|---|---------------------------|----------------|--------------------------|
|                        |   | max                       | Nm             | 1                        |
|                        |   | min                       | lbft           | 0.8                      |
|                        |   | max                       | lbft           | 0.74                     |
| max number of wires    | simultaneously connectable                          | max                       | nr.            | 2                        |
| Conductor section      |   |                           |                |                          |
|                        | AWG   |                           |                |                          |
|                        |   | min                       |                | 16                       |
|                        |   | max                       |                | 10                       |
|                        | Flexible w/o lug conductor section                  |                           |                |                          |
|                        |   | min                       | mm²            | 1                        |
|                        |   | max                       | mm²            | 6                        |
|                        | Flexible c/w lug conductor section                  |                           |                |                          |
|                        |   | min                       | mm²            | 1                        |
|                        |   | max                       | mm²            | 4                        |
|                        | Flexible with insulated spade lug conductor section | _                         | _              |                          |
|                        |   | min                       | mm²            | 1                        |
|                        |   | max                       | mm²            | 4                        |
|                        | ction according to IEC/EN 60529                     |                           |                | IP20 when wired          |
| Auxiliary contact char |   |                           | ^              | 20                       |
| Operational current A  |   |                           | Α              | 32                       |
| Operating current DC   | , is  | 110V                      | А              | Screw / DIN rail<br>35mm |
| Ambient conditions     |   |                           |                | 3311111                  |
| Temperature            |   |                           |                |                          |
| remperature            | Operating temperature                               |                           |                |                          |
|                        | Operating temperature                               | min                       | °C             | -50                      |
|                        |   | max                       | °C             | 70                       |
|                        | Storage temperature                                 | max                       |                |                          |
|                        | ererage remperature                                 | min                       | °C             | -60                      |
|                        |   | max                       | °C             | 80                       |
| Max altitude           |   |                           | m              | 3000                     |
| Operating position     |   |                           |                | •                        |
|                        |   | normal                    |                | Vertical plan            |
|                        |   | allowable                 |                | ±30°                     |
| Mounting               |   |                           |                | Screw / DIN rail         |
|                        |   |                           |                | 35mm                     |
| Weight                 |   |                           | g              | 0.502                    |
| Operations             |   |                           |                | 00005                    |
| Mechanical life        |   |                           | Cycles         | 20000000                 |
| Electrical life        |   |                           | Cycles         | 1600000                  |
| Safety related data    | 10d according to EN//90 42490 4                     |                           |                |                          |
| renormance level B     | 10d according to EN/ISO 13489-1                     | المحلمين                  | C:=!!          | 1600000                  |
|                        |   | rated load echanical load | Cicli<br>Cicli | 1600000<br>20000000      |
| Mirror contate accord  | ling to IEC/EN 609474-4-1                           | echanicai 10a0            | CIUII          |                          |
| EMC compatibility      | iiig to ILO/EN 003414-4-1                           |                           |                | yes                      |
| DC coil operating      |   |                           |                | yes                      |
| DC rated control volta | ane   |                           |                |                          |
| DO TAIGU COTILIOT VOIL | 29°   | min                       | V              | 6                        |
| DC operating voltage   |   | 111111                    | V              |                          |
| Do operating voltage   | pick-up   |                           |                |                          |
|                        | hior. ab  |                           |                |                          |



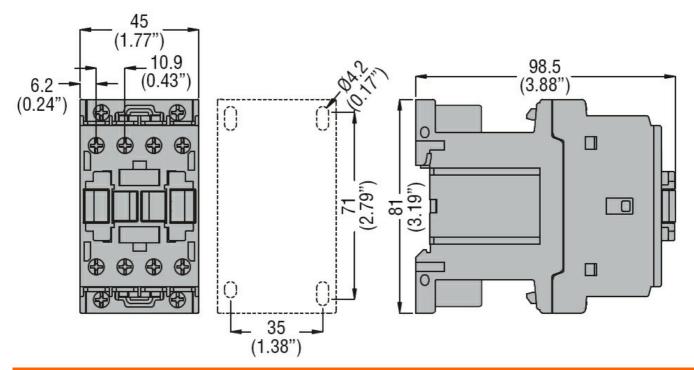


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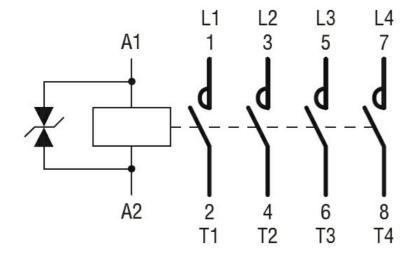
|                         |                          |            | min         | %Us        | 0.8     |
|-------------------------|--------------------------|------------|-------------|------------|---------|
|                         | -lane and                |            | max         | %Us        | 1.10    |
|                         | drop-out                 |            | min         | %Us        | 0.1     |
|                         |                          |            | min<br>max  | %Us<br>%Us | 0.40    |
| Average coil consuption | n <20°C                  |            | IIIdx       | /003       | 0.40    |
| Avorago com comcapac    | =20 0                    |            | in-rush     | W          | 2.4     |
|                         |                          |            | holding     | W          | 2.4     |
| Max cycles frequency    |                          |            | Ü           |            |         |
| Mechanical operations   |                          |            |             | Cycles/h   | 3600    |
| Operating times         |                          |            |             |            |         |
| Average time for Us co  |                          |            |             |            |         |
|                         | in AC                    |            |             |            |         |
|                         |                          | Closing NC |             |            |         |
|                         |                          |            | min         | ms         | 14      |
|                         |                          | 0 NO       | max         | ms         | 28      |
|                         |                          | Opening NC |             |            | 7       |
|                         |                          |            | min         | ms         | 7<br>18 |
|                         | in DC                    |            | max         | ms         | 10      |
|                         | III DC                   | Closing NO |             |            |         |
|                         |                          | Closing NO | min         | ms         | 75      |
|                         |                          |            | max         | ms         | 91      |
|                         |                          | Opening NO |             |            |         |
|                         |                          | . 0        | min         | ms         | 15      |
|                         |                          |            | max         | ms         | 19      |
| UL technical data       |                          |            |             |            |         |
| Full-load current (FLA) | for three-phase AC motor | or         |             |            |         |
|                         |                          |            | at 480V     | Α          | 14      |
|                         |                          |            | at 600V     | A          | 17      |
| Yielded mechanical per  |                          |            |             |            |         |
|                         | for single-phase AC mo   | otor       | -1.440/4001 | 1 .        | 4       |
|                         |                          |            | at 110/120V | hp         | 1       |
|                         | for three phase AC ===   | tor        | at 230V     | hp         | 3       |
|                         | for three-phase AC mo    | iOi        | at 200/208V | hp         | 5       |
|                         |                          |            | at 220/230V | hp         | 5       |
|                         |                          |            | at 460/480V | hp         | 10      |
|                         |                          |            | at 575/600V | hp         | 15      |
| General USE             |                          |            |             | ·r         |         |
|                         | Contactor                |            |             |            |         |
|                         |                          |            | AC current  | Α          | 32      |
| Other features          |                          |            |             |            |         |
| Pollution degree        |                          |            |             |            | 3       |
| Dimensions              |                          |            |             |            |         |

**ENERGY AND AUTOMATION** 

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### Wiring diagrams



### Certifications and compliance

Certifications

CSA C22.2 n° 60947-1

CSA C22.2 n° 60947-4-1

IEC/EN 60947-1

IEC/EN 60947-4-1

UL 60947-1

UL 60947-4-1

Compliance

CCC

cULus

EAC

### ETIM 6 classification

EC000066 - Power contactor, AC switching