



Product designation

Power contactor

Product type designation

BF95

**Contact characteristics**

|                                                                                |                                                    |        |
|--------------------------------------------------------------------------------|----------------------------------------------------|--------|
| Number of poles                                                                | Nr.                                                | 4      |
| Rated insulation voltage $U_i$ IEC/EN                                          | V                                                  | 1000   |
| Rated impulse withstand voltage $U_{imp}$                                      | kV                                                 | 8      |
| Operational frequency                                                          | min                                                | Hz 25  |
|                                                                                | max                                                | Hz 400 |
| IEC Conventional free air thermal current $I_{th}$                             | A                                                  | 140    |
| Operational current $I_e$                                                      |                                                    |        |
|                                                                                | AC-1 ( $\leq 40^\circ\text{C}$ )                   | A 140  |
|                                                                                | AC-1 ( $\leq 55^\circ\text{C}$ )                   | A 115  |
|                                                                                | AC-1 ( $\leq 70^\circ\text{C}$ )                   | A 100  |
|                                                                                | AC-3 ( $\leq 440\text{V } \leq 55^\circ\text{C}$ ) | A 95   |
|                                                                                | AC-4 (400V)                                        | A 45   |
| Rated operational current AC-3 ( $T \leq 55^\circ\text{C}$ )                   |                                                    |        |
|                                                                                | 230V                                               | A 95   |
|                                                                                | 400V                                               | A 95   |
|                                                                                | 415V                                               | A 95   |
|                                                                                | 440V                                               | A 95   |
|                                                                                | 500V                                               | A 95   |
|                                                                                | 690V                                               | A 93   |
|                                                                                | 1000V                                              | A 33   |
| IEC max current $I_e$ in DC1 with $L/R \leq 1\text{ms}$ with 1 poles in series |                                                    |        |
|                                                                                | $\leq 24\text{V}$                                  | A 140  |
|                                                                                | 48V                                                | A 140  |
|                                                                                | 75V                                                | A 100  |
|                                                                                | 110V                                               | A 10   |
|                                                                                | 220V                                               | A –    |
| IEC max current $I_e$ in DC1 with $L/R \leq 1\text{ms}$ with 2 poles in series |                                                    |        |
|                                                                                | $\leq 24\text{V}$                                  | A 140  |
|                                                                                | 48V                                                | A 140  |
|                                                                                | 75V                                                | A 140  |
|                                                                                | 110V                                               | A 110  |
|                                                                                | 220V                                               | A 12   |
| IEC max current $I_e$ in DC1 with $L/R \leq 1\text{ms}$ with 3 poles in series |                                                    |        |
|                                                                                | $\leq 24\text{V}$                                  | A 140  |
|                                                                                | 48V                                                | A 140  |
|                                                                                | 75V                                                | A 155  |
|                                                                                | 110V                                               | A 120  |
|                                                                                | 220V                                               | A 125  |
| IEC max current $I_e$ in DC1 with $L/R \leq 1\text{ms}$ with 4 poles in series |                                                    |        |
|                                                                                | $\leq 24\text{V}$                                  | A 140  |
|                                                                                | 48V                                                | A 140  |

|                                                                      |           |      |      |
|----------------------------------------------------------------------|-----------|------|------|
|                                                                      | 75V       | A    | 155  |
|                                                                      | 110V      | A    | 140  |
|                                                                      | 220V      | A    | 140  |
| IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 1 poles in series |           |      |      |
|                                                                      | ≤24V      | A    | 140  |
|                                                                      | 48V       | A    | 44   |
|                                                                      | 75V       | A    | 36   |
|                                                                      | 110V      | A    | 6    |
|                                                                      | 220V      | A    | –    |
| IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 2 poles in series |           |      |      |
|                                                                      | ≤24V      | A    | 140  |
|                                                                      | 48V       | A    | 63   |
|                                                                      | 75V       | A    | 60   |
|                                                                      | 110V      | A    | 55   |
|                                                                      | 220V      | A    | 7    |
| IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 3 poles in series |           |      |      |
|                                                                      | ≤24V      | A    | 140  |
|                                                                      | 48V       | A    | 115  |
|                                                                      | 75V       | A    | 90   |
|                                                                      | 110V      | A    | 85   |
|                                                                      | 220V      | A    | 76   |
| IEC max current Ie in DC3-DC5 with L/R ≤ 15ms with 4 poles in series |           |      |      |
|                                                                      | ≤24V      | A    | 140  |
|                                                                      | 48V       | A    | 110  |
|                                                                      | 75V       | A    | 110  |
|                                                                      | 110V      | A    | 105  |
|                                                                      | 220V      | A    | 95   |
| Short-time allowable current for 10s (IEC/EN60947-1)                 |           | A    | 760  |
| Protection fuse                                                      |           |      |      |
|                                                                      | gG (IEC)  | A    | 160  |
|                                                                      | aM (IEC)  | A    | 100  |
| Making capacity (RMS value)                                          |           | A    | 1200 |
| Breaking capacity at voltage                                         |           |      |      |
|                                                                      | 440V      | A    | 1100 |
|                                                                      | 500V      | A    | 775  |
|                                                                      | 690V      | A    | 745  |
| Resistance per pole (average value)                                  |           | mΩ   | 0.45 |
| Power dissipation per pole (average value)                           |           |      |      |
|                                                                      | Ith       | W    | 8.8  |
|                                                                      | AC-3      | W    | 4.1  |
| Tightening torque for terminals                                      |           |      |      |
|                                                                      | min       | Nm   | 6    |
|                                                                      | max       | Nm   | 7    |
|                                                                      | min       | lbin | 4.4  |
|                                                                      | max       | lbin | 5.2  |
| Tightening torque for coil terminal                                  |           |      |      |
|                                                                      | min       | Nm   | 0.8  |
|                                                                      | max       | Nm   | 1    |
|                                                                      | min       | lbin | 0.59 |
|                                                                      | max       | lbin | 0.74 |
| Conductor section                                                    |           |      |      |
|                                                                      | AWG/Kcmil |      |      |
|                                                                      | max       |      | 2/0  |

|                                                     |                  |                 |                       |
|-----------------------------------------------------|------------------|-----------------|-----------------------|
| Flexible w/o lug conductor section                  |                  |                 |                       |
|                                                     | min              | mm <sup>2</sup> | 1.5                   |
|                                                     | max              | mm <sup>2</sup> | 70                    |
| Flexible c/w lug conductor section                  |                  |                 |                       |
|                                                     | min              | mm <sup>2</sup> | 1.5                   |
|                                                     | max              | mm <sup>2</sup> | 70                    |
| Power terminal protection according to IEC/EN 60529 |                  |                 | IP20 front            |
| <b>Mechanical features</b>                          |                  |                 |                       |
| Operating position                                  |                  |                 |                       |
|                                                     | normal allowable |                 | Vertical plan ±30°    |
| Fixing                                              |                  |                 | Screw / DIN rail 35mm |
| Weight                                              |                  | g               | 2420                  |
| <b>Auxiliary contact characteristics</b>            |                  |                 |                       |
| Thermal current I <sub>th</sub>                     |                  | A               | 140                   |
| <b>Operations</b>                                   |                  |                 |                       |
| Mechanical life                                     |                  | cycles          | 15000000              |
| Electrical life                                     |                  | cycles          | 1400000               |
| <b>Safety related data</b>                          |                  |                 |                       |
| Performance level B10d according to EN/ISO 13489-1  |                  |                 |                       |
|                                                     | rated load       | cycles          | 1400000               |
|                                                     | mechanical load  | cycles          | 15000000              |
| <b>AC coil operating</b>                            |                  |                 |                       |
| Rated AC voltage at 50/60Hz                         |                  | V               | 48                    |
| AC operating voltage                                |                  |                 |                       |
| of 50/60Hz coil powered at 50Hz                     |                  |                 |                       |
| pick-up                                             |                  |                 |                       |
|                                                     | min              | %U <sub>s</sub> | 80                    |
|                                                     | max              | %U <sub>s</sub> | 110                   |
| drop-out                                            |                  |                 |                       |
|                                                     | min              | %U <sub>s</sub> | 20                    |
|                                                     | max              | %U <sub>s</sub> | 55                    |
| of 50/60Hz coil powered at 60Hz                     |                  |                 |                       |
| pick-up                                             |                  |                 |                       |
|                                                     | min              | %U <sub>s</sub> | 85                    |
|                                                     | max              | %U <sub>s</sub> | 110                   |
| drop-out                                            |                  |                 |                       |
|                                                     | min              | %U <sub>s</sub> | 40                    |
|                                                     | max              | %U <sub>s</sub> | 55                    |
| AC average coil consumption at 20°C                 |                  |                 |                       |
| of 50/60Hz coil powered at 50Hz                     |                  |                 |                       |
|                                                     | in-rush          | VA              | 300                   |
|                                                     | holding          | VA              | 20                    |
| of 50/60Hz coil powered at 60Hz                     |                  |                 |                       |
|                                                     | in-rush          | VA              | 275                   |
|                                                     | holding          | VA              | 17                    |
| of 60Hz coil powered at 60Hz                        |                  |                 |                       |
|                                                     | in-rush          | VA              | 300                   |
|                                                     | holding          | VA              | 20                    |
| Dissipation at holding ≤20°C 50Hz                   |                  | W               | 6.5                   |
| <b>Max cycles frequency</b>                         |                  |                 |                       |
| Mechanical operation                                |                  | cycles/h        | 1500                  |
| <b>Operating times</b>                              |                  |                 |                       |

Average time for Us control  
in AC

Closing NO

|     |    |    |
|-----|----|----|
| min | ms | 16 |
| max | ms | 32 |

Opening NO

|     |    |    |
|-----|----|----|
| min | ms | 9  |
| max | ms | 24 |

#### UL technical data

Rated operational voltage AC (UL) V 600

General USE

Contactor

AC current A 150

Short-circuit protection fuse, 600V

High fault

|                       |    |     |
|-----------------------|----|-----|
| Short circuit current | kA | 100 |
| Fuse rating           | A  | 200 |
| Fuse class            |    | J   |

Standard fault

|                       |    |     |
|-----------------------|----|-----|
| Short circuit current | kA | 10  |
| Fuse rating           | A  | 250 |
| Fuse class            |    | RK5 |

#### Ambient conditions

Temperature

Operating temperature

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

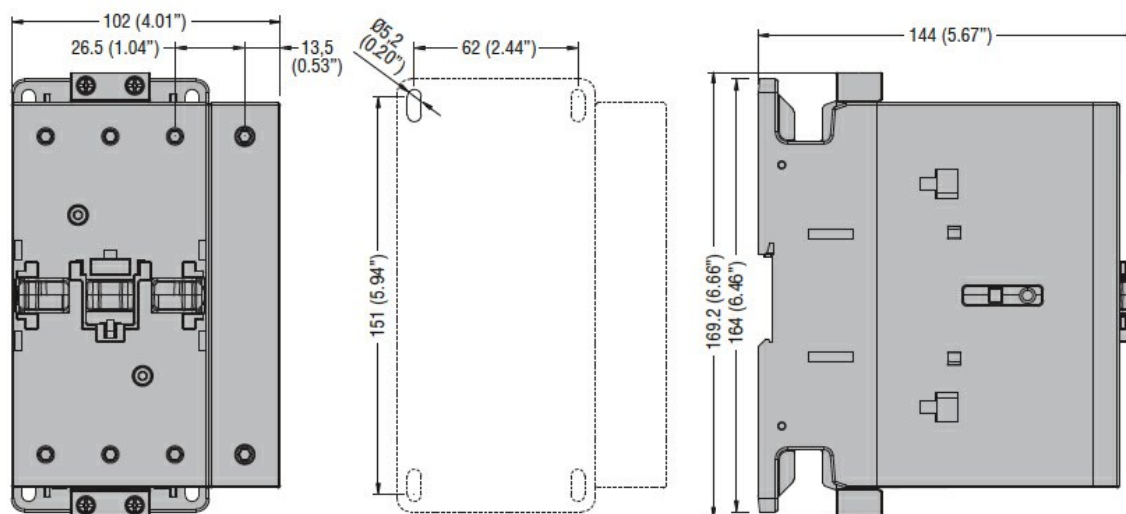
Storage temperature

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

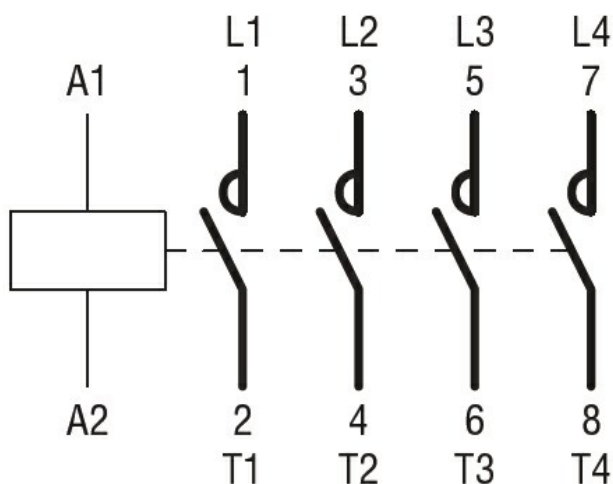
Max altitude

m 3000

#### 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