



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

### Mechanical features

Operating position

|                     |                       |
|---------------------|-----------------------|
| normal<br>allowable | Vertical plan<br>±30° |
|---------------------|-----------------------|

Fixing

Screw / DIN rail  
35mm

Weight

|   |      |
|---|------|
| g | 2420 |
|---|------|

### Auxiliary contact characteristics

Thermal current Ith

|   |     |
|---|-----|
| A | 140 |
|---|-----|

### Operations

Mechanical life

|        |          |
|--------|----------|
| cycles | 15000000 |
|--------|----------|

Electrical life

|        |         |
|--------|---------|
| cycles | 1400000 |
|--------|---------|

### Safety related data

Performance level B10d according to EN/ISO 13489-1

|                 |        |          |
|-----------------|--------|----------|
| rated load      | cycles | 1400000  |
| mechanical load | cycles | 15000000 |

### AC coil operating

Rated AC voltage at 60Hz

|   |     |
|---|-----|
| V | 460 |
|---|-----|

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 | VA | 300 |
| holding | VA | 20  |

Dissipation at holding ≤20°C 50Hz

|   |     |
|---|-----|
| W | 6.5 |
|---|-----|

### Max cycles frequency

Mechanical operation

|          |      |
|----------|------|
| cycles/h | 1500 |
|----------|------|

### Operating times

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  |

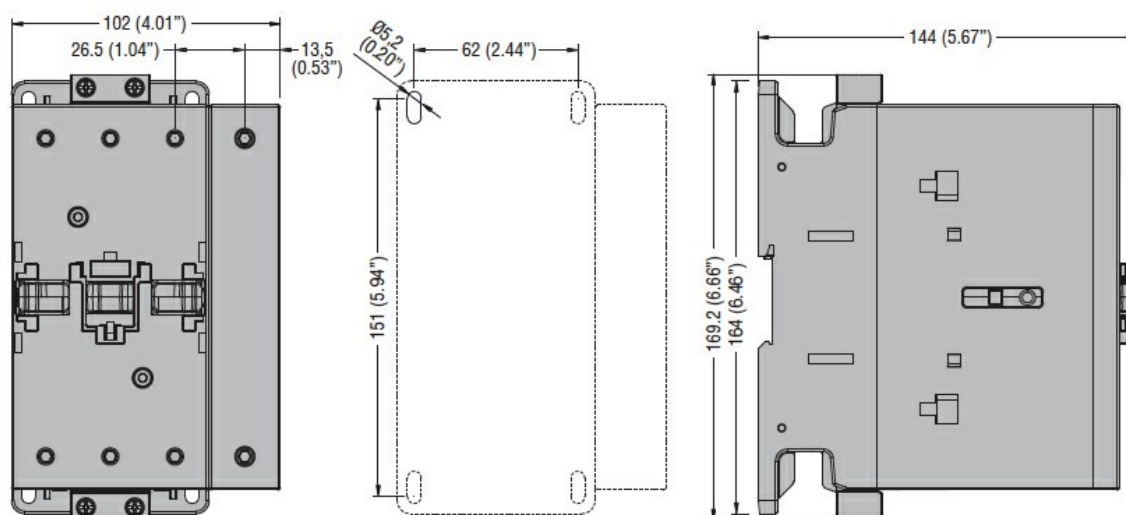
Storage temperature

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

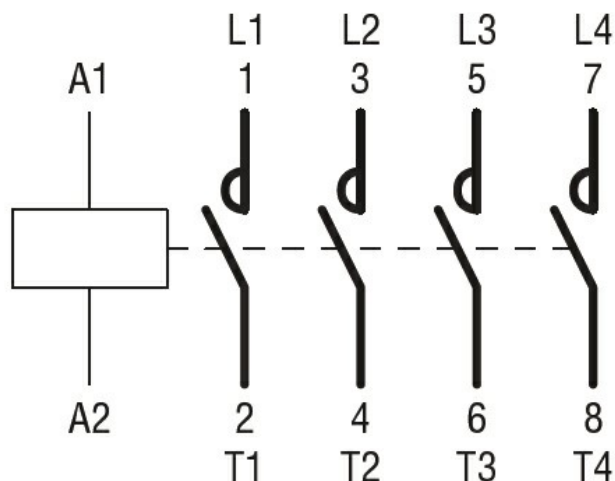
Max altitude

m 3000

## Dimensions



## Wiring diagrams



## Certifications and compliance

Compliance

CSA C22.2 n° 60947-1

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CSA C22.2 n° 60947-4-1

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IEC/EN/BS 60947-1

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IEC/EN/BS 60947-4-1

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UL 60947-1

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UL 60947-4-1

Certificates

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CCC

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cULus

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EAC

ETIM classification

ETIM 8.0

EC000066 -  
Power contactor,  
AC switching