



Product designation  
Product type designation

Power contactor  
BF115

**Contact characteristics**

|                                                                    |                    |        |
|--------------------------------------------------------------------|--------------------|--------|
| Number of poles                                                    | Nr.                | 3      |
| 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                  | 160    |
| Operational current $I_e$                                          | AC-1 (=40°C)       | A 160  |
|                                                                    | AC-1 (=55°C)       | A 130  |
|                                                                    | AC-1 (=70°C)       | A 115  |
|                                                                    | AC-3 (=440V =55°C) | A 115  |
|                                                                    | AC-4 (400V)        | A 54   |
| Rated operational power AC-3 (T=55°C)                              | 230V               | kW 37  |
|                                                                    | 400V               | kW 55  |
|                                                                    | 415V               | kW 55  |
|                                                                    | 440V               | kW 55  |
|                                                                    | 500V               | kW 75  |
|                                                                    | 690V               | kW 110 |
|                                                                    | 1000V              | kW 55  |
| IEC max current $I_e$ in DC1 with L/R = 1ms with 1 poles in series | =24V               | A 160  |
|                                                                    | 48V                | A 160  |
|                                                                    | 75V                | A 120  |
|                                                                    | 110V               | A 10   |
|                                                                    | 220V               | A –    |
| IEC max current $I_e$ in DC1 with L/R = 1ms with 2 poles in series | =24V               | A 160  |
|                                                                    | 48V                | A 160  |
|                                                                    | 75V                | A 160  |
|                                                                    | 110V               | A 130  |
|                                                                    | 220V               | A 14   |
| IEC max current $I_e$ in DC1 with L/R = 1ms with 3 poles in series | =24V               | A 160  |
|                                                                    | 48V                | A 160  |
|                                                                    | 75V                | A 160  |
|                                                                    | 110V               | A 140  |
|                                                                    | 220V               | A 145  |
| IEC max current $I_e$ in DC1 with L/R = 1ms with 4 poles in series | =24V               | A 160  |
|                                                                    | 48V                | A 160  |

|                                                                      |           |      |      |
|----------------------------------------------------------------------|-----------|------|------|
|                                                                      | 75V       | A    | 160  |
|                                                                      | 110V      | A    | 160  |
|                                                                      | 220V      | A    | 160  |
| IEC max current Ie in DC3-DC5 with L/R = 15ms with 1 poles in series |           |      |      |
|                                                                      | =24V      | A    | 160  |
|                                                                      | 48V       | A    | 50   |
|                                                                      | 75V       | A    | 40   |
|                                                                      | 110V      | A    | 6    |
|                                                                      | 220V      | A    | –    |
| IEC max current Ie in DC3-DC5 with L/R = 15ms with 2 poles in series |           |      |      |
|                                                                      | =24V      | A    | 160  |
|                                                                      | 48V       | A    | 72   |
|                                                                      | 75V       | A    | 65   |
|                                                                      | 110V      | A    | 65   |
|                                                                      | 220V      | A    | 7    |
| IEC max current Ie in DC3-DC5 with L/R = 15ms with 3 poles in series |           |      |      |
|                                                                      | =24V      | A    | 160  |
|                                                                      | 48V       | A    | 150  |
|                                                                      | 75V       | A    | 100  |
|                                                                      | 110V      | A    | 100  |
|                                                                      | 220V      | A    | 92   |
| IEC max current Ie in DC3-DC5 with L/R = 15ms with 4 poles in series |           |      |      |
|                                                                      | =24V      | A    | 160  |
|                                                                      | 48V       | A    | 120  |
|                                                                      | 75V       | A    | 120  |
|                                                                      | 110V      | A    | 125  |
|                                                                      | 220V      | A    | 115  |
| Short-time allowable current for 10s (IEC/EN60947-1)                 |           | A    | 920  |
| Protection fuse                                                      |           |      |      |
|                                                                      | gG (IEC)  | A    | 200  |
|                                                                      | aM (IEC)  | A    | 125  |
| Making capacity (RMS value)                                          |           | A    | 1500 |
| Breaking capacity at voltage                                         |           |      |      |
|                                                                      | 440V      | A    | 1200 |
|                                                                      | 500V      | A    | 850  |
|                                                                      | 690V      | A    | 905  |
| Resistance per pole (average value)                                  |           | m?   | 0.45 |
| Power dissipation per pole (average value)                           |           |      |      |
|                                                                      | Ith       | W    | 11.5 |
|                                                                      | AC3       | W    | 6.0  |
| 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 allowable | Vertical plan ±30° |                       |
| Fixing                                              |  |                  |                    | Screw / DIN rail 35mm |
| Weight                                              |  | g                |                    | 2020                  |
| Conductor section                                   |  |                  |                    |                       |
| AWG/kcmil conductor section                         |  | max              | 2/0                |                       |
| Operations                                          |  |                  |                    |                       |
| Mechanical life                                     |  | cycles           |                    | 15000000              |
| Electrical life                                     |  | cycles           |                    | 1200000               |
| AC coil operating                                   |  |                  |                    |                       |
| Rated AC voltage at 50/60Hz                         |  | V                |                    | 230                   |
| AC operating voltage                                |  |                  |                    |                       |
| of 50/60Hz coil powered at 50Hz pick-up             |  | min              | %Us                | 80                    |
|                                                     |  | max              | %Us                | 110                   |
| drop-out                                            |  | min              | %Us                | 20                    |
|                                                     |  | max              | %Us                | 55                    |
| of 50/60Hz coil powered at 60Hz pick-up             |  | min              | %Us                | 85                    |
|                                                     |  | max              | %Us                | 110                   |
| drop-out                                            |  | min              | %Us                | 40                    |
|                                                     |  | max              | %Us                | 55                    |
| AC average coil consumption at 20°C                 |  |                  |                    |                       |
| of 50/60Hz coil powered at 50Hz                     |  | in-rush holding  | VA                 | 300                   |
|                                                     |  |                  | VA                 | 20                    |
| of 50/60Hz coil powered at 60Hz                     |  | in-rush holding  | VA                 | 275                   |
|                                                     |  |                  | VA                 | 17                    |
| of 60Hz coil powered at 60Hz                        |  | in-rush holding  | VA                 | 300                   |
|                                                     |  |                  | VA                 | 20                    |
| Max cycles frequency                                |  |                  |                    |                       |
| Mechanical operation                                |  | cycles/h         |                    | 1500                  |
| Operating times                                     |  |                  |                    |                       |
| Average time for Us control in AC                   |  |                  |                    |                       |
| Closing NO                                          |  | min              | ms                 | 16                    |

|            |     |    |    |
|------------|-----|----|----|
| Opening NO | max | ms | 32 |
|            | min | ms | 9  |
|            | max | ms | 24 |

#### UL technical data

Yielded mechanical performance

for three-phase AC motor

|          |    |     |
|----------|----|-----|
| 200/208V | HP | 40  |
| 220/230V | HP | 40  |
| 460/480V | HP | 75  |
| 575/600V | HP | 100 |

General USE

Contactor

|            |   |     |
|------------|---|-----|
| AC current | A | 165 |
|------------|---|-----|

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  |

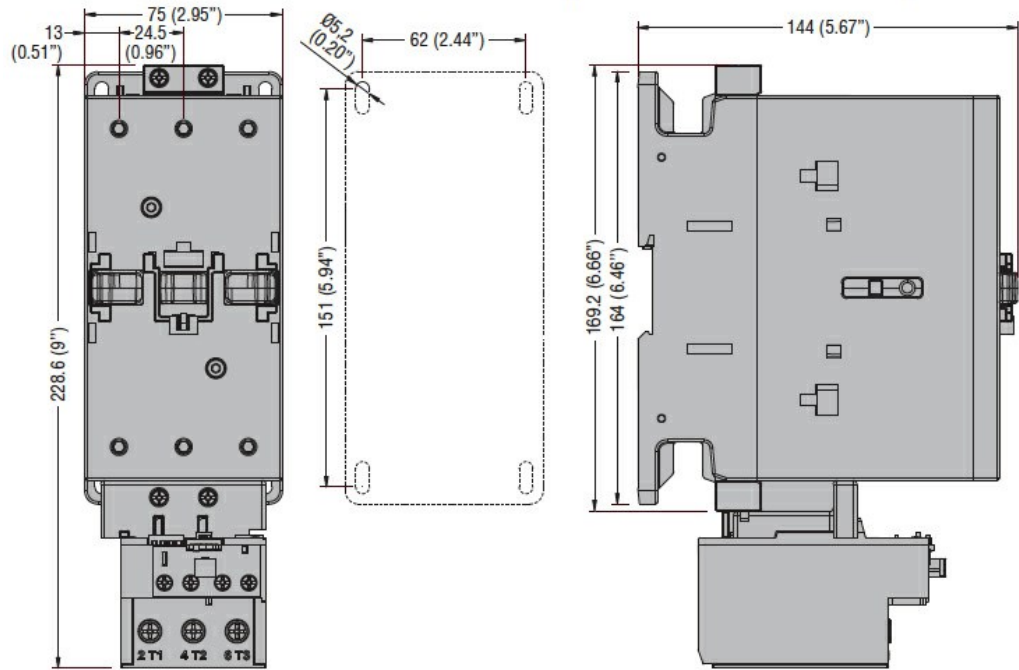
Storage temperature

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

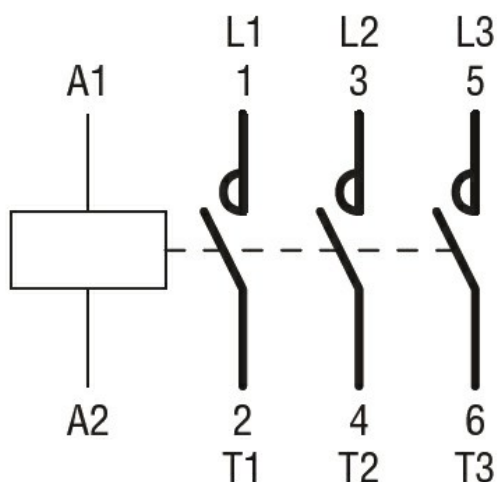
Max altitude

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

#### Dimensions



#### Wiring diagrams



#### Certifications and compliance

##### Compliance

CSA C22.2 n° 60947-1

CSA C22.2 n° 60947-4-1

IEC/EN 60947-1

IEC/EN 60947-4-1

UL 60947-1

UL 60947-4-1

##### Certificates

CCC

cULus

#### ETIM classification

ETIM 8.0

EC000066 -  
Power contactor,  
AC switching