



Product designation  
Product type designation

Power contactor  
BF115

**Contact characteristics**

|   |   |        |
|---|---|--------|
| Number of poles   | Nr.   | 3      |
| Rated insulation voltage U <sub>i</sub> IEC/EN                              | V   | 1000   |
| Rated impulse withstand voltage U <sub>imp</sub>                            | kV  | 8      |
| Operational frequency   | min   | Hz 25  |
|   | max   | Hz 400 |
| IEC Conventional free air thermal current I <sub>th</sub>                   | A   | 160    |
| Operational current I <sub>e</sub>  | 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  |
| Rated operational current AC-3 (T≤55°C)                                     | 230V  | A 115  |
|   | 400V  | A 115  |
|   | 415V  | A 115  |
|   | 440V  | A 115  |
|   | 500V  | A 106  |
|   | 690V  | A 106  |
|   | 1000V   | A 39   |
| IEC max current I <sub>e</sub> 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 <sub>e</sub> in DC1 with L/R ≤ 1ms with 2 poles in series | ≤24V   |
| 48V   |   | A 160  |
| 75V   |   | A 160  |
| 110V  |   | A 130  |
| 220V  |   | A 14   |
| IEC max current I <sub>e</sub> 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  |
| <hr/>  |          |      |      |
| IEC max current Ie 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  |
| <hr/>  |          |      |      |
| 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    | –    |
| <hr/>  |          |      |      |
| 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    |
| <hr/>  |          |      |      |
| 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   |
| <hr/>  |          |      |      |
| 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  |
| <hr/>  |          |      |      |
| Short-time allowable current for 10s (IEC/EN60947-1)                 |          | A    | 920  |
| <hr/>  |          |      |      |
| Protection fuse  | gG (IEC) | A    | 200  |
|  | aM (IEC) | A    | 125  |
| <hr/>  |          |      |      |
| Making capacity (RMS value)  |          | A    | 1500 |
| <hr/>  |          |      |      |
| Breaking capacity at voltage   | 440V     | A    | 1200 |
|  | 500V     | A    | 850  |
|  | 690V     | A    | 905  |
| <hr/>  |          |      |      |
| Resistance per pole (average value)                                  |          | mΩ   | 0.45 |
| <hr/>  |          |      |      |
| Power dissipation per pole (average value)                           | Ith      | W    | 11.5 |
|  | AC-3     | W    | 6.0  |
| <hr/>  |          |      |      |
| Tightening torque for terminals                                      | min      | Nm   | 6    |
|  | max      | Nm   | 7    |
|  | min      | Ibin | 4.4  |
|  | max      | Ibin | 5.2  |

Tightening torque for coil terminal

|     |      |      |
|-----|------|------|
| min | Nm   | 0.8  |
| max | Nm   | 1    |
| min | Ibin | 0.59 |
| max | Ibin | 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 24

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

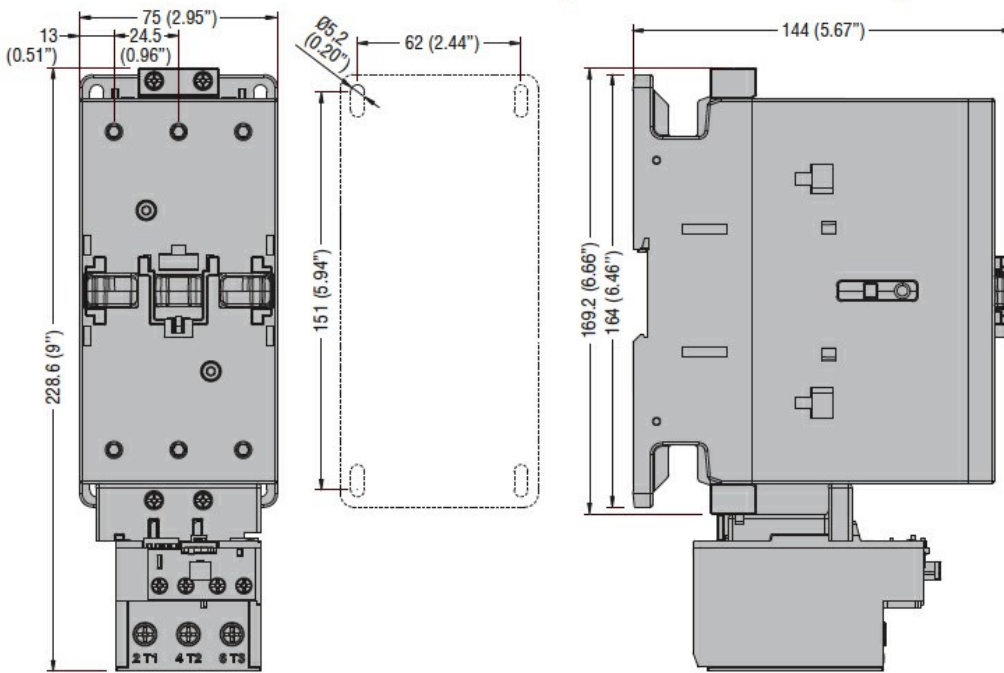
of 50/60Hz coil powered at 60Hz

|         |    |     |
|---------|----|-----|
| in-rush | VA | 275 |
| holding | VA | 17  |

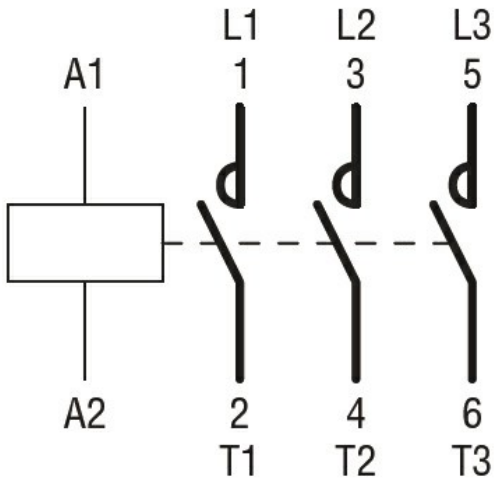
of 60Hz coil powered at 60Hz

|         |    |     |
|---------|----|-----|
| in-rush | VA | 300 |
|---------|----|-----|

|  |                          |                       |          |       |
|--|--------------------------|-----------------------|----------|-------|
|  |                          | holding               | VA       | 20    |
| <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 |
| <b>UL technical data</b>                   |                          |                       |          |       |
| Yielded mechanical performance             |                          |                       |          |       |
|  | for three-phase AC motor |                       |          |       |
|  |                          | 200/208V              | HP       | 40    |
|  |                          | 220/230V              | HP       | 40    |
|  |                          | 460/480V              | HP       | 75    |
|  |                          | 575/600V              | HP       | 100   |
| <b>General USE</b>                         |                          |                       |          |       |
|  | Contactor                |                       |          |       |
|  |                          | AC current            | A        | 165   |
| <b>Short-circuit protection fuse, 600V</b> |                          |                       |          |       |
|  | 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   |
| <b>Ambient conditions</b>                  |                          |                       |          |       |
| <b>Temperature</b>                         |                          |                       |          |       |
|  | Operating temperature    |                       |          |       |
|  |                          | min                   | °C       | -50   |
|  |                          | max                   | °C       | 70    |
|  | Storage temperature      |                       |          |       |
|  |                          | min                   | °C       | -60   |
|  |                          | max                   | °C       | +80   |
| Max altitude                               |                          |                       | m        | 3000  |
| <b>Dimensions</b>                          |                          |                       |          |       |



### 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

### ETIM classification

ETIM 8.0

EC000066 -  
Power contactor,  
AC switching