



Product designation

Power contactor

Product type designation

BF115

**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                                                  | 160    |
| Operational current $I_e$                                                           |                                                    |        |
|                                                                                     | AC-1 ( $\leq 40^\circ\text{C}$ )                   | A 160  |
|                                                                                     | AC-1 ( $\leq 55^\circ\text{C}$ )                   | A 130  |
|                                                                                     | AC-1 ( $\leq 70^\circ\text{C}$ )                   | A 115  |
|                                                                                     | AC-3 ( $\leq 440\text{V } \leq 55^\circ\text{C}$ ) | A 115  |
|                                                                                     | AC-4 (400V)                                        | A 54   |
| IEC max current $I_e$ in DC1 with $L/R \leq 1\text{ms}$ with 1 poles in series      |                                                    |        |
|                                                                                     | $\leq 24\text{V}$                                  | A 160  |
|                                                                                     | 48V                                                | A 160  |
|                                                                                     | 75V                                                | A 120  |
|                                                                                     | 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 160  |
|                                                                                     | 48V                                                | A 160  |
|                                                                                     | 75V                                                | A 160  |
|                                                                                     | 110V                                               | A 130  |
|                                                                                     | 220V                                               | A 14   |
| IEC max current $I_e$ in DC1 with $L/R \leq 1\text{ms}$ with 3 poles in series      |                                                    |        |
|                                                                                     | $\leq 24\text{V}$                                  | A 160  |
|                                                                                     | 48V                                                | A 160  |
|                                                                                     | 75V                                                | A 160  |
|                                                                                     | 110V                                               | A 140  |
|                                                                                     | 220V                                               | A 145  |
| IEC max current $I_e$ in DC1 with $L/R \leq 1\text{ms}$ with 4 poles in series      |                                                    |        |
|                                                                                     | $\leq 24\text{V}$                                  | A 160  |
|                                                                                     | 48V                                                | A 160  |
|                                                                                     | 75V                                                | A 160  |
|                                                                                     | 110V                                               | A 160  |
|                                                                                     | 220V                                               | A 160  |
| IEC max current $I_e$ in DC3-DC5 with $L/R \leq 15\text{ms}$ with 1 poles in series |                                                    |        |
|                                                                                     | $\leq 24\text{V}$                                  | 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<br>allowable | Vertical plan<br>±30°    |
|--------|---------------------|--------------------------|
| Fixing |                     | Screw / DIN rail<br>35mm |
| Weight | g                   | 2420                     |

## 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 60Hz V 120

## 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

## 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

### 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

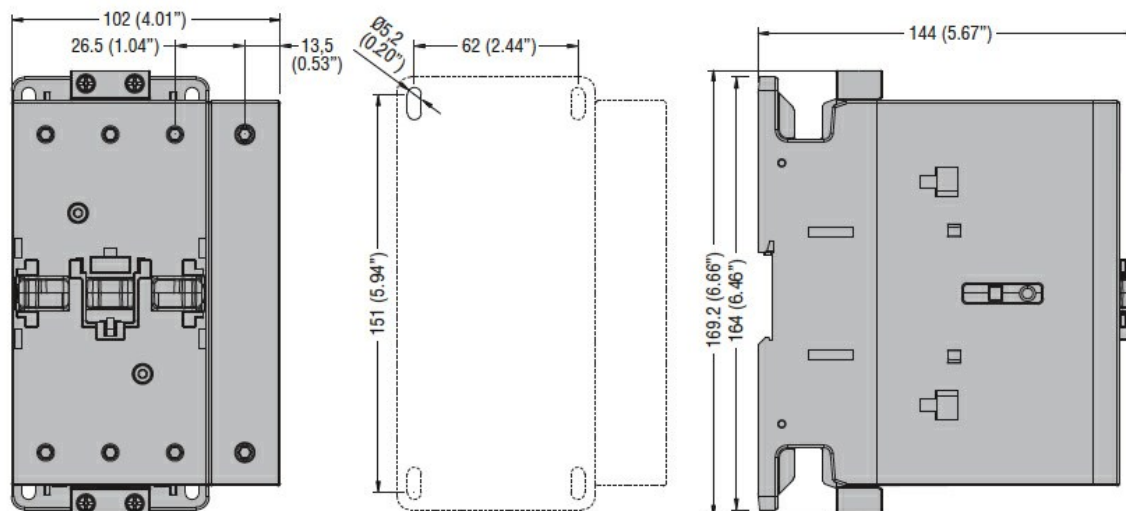
### Temperature

Operating temperature

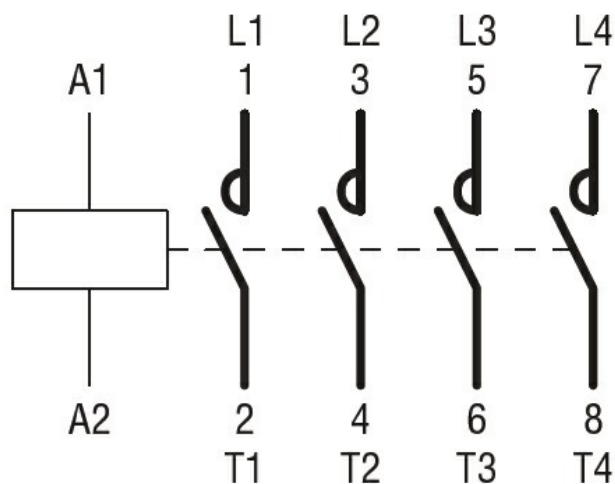
min °C -50

|                     |     |    |      |
|---------------------|-----|----|------|
| Storage temperature | max | °C | 70   |
|                     | 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  
EAC

## ETIM classification

ETIM 8.0

EC000066 -  
Power contactor,  
AC switching

