# High Current Fuses





### **Time-Current Characteristic Curves**





## BF1 Fuses Rated 58V

This BF1 fuse is rated at 58V and offers a bolt-on fuse for high current wiring protection. Current rating 30A - 200A; with transparent housing material for easy detection of blown fuses.

### Specifications

Voltage Rating: Interrupting Rating: Recommended Environmental Temperature: Terminals Material: Housing Material: Clear Housing Material: Mounting Torque M5: Mounting Torque M6: Refers to: 58 VDC 1000A @32 VDC -40° to 125°C Tin plated copper alloy PET-GF33 (U.L. 94 Flammability rating – V0) PES (U.L. 94 Flammability rating – V0) 4.5 Nm +/- 1Nm 6.0 Nm +/- 1Nm ISO 8820-5:2015, UL 248 Special Purpose Fuses

c Sus RoHS

### **Ordering Information**

| Part Number   | Rating   | Package<br>Size | Bolt<br>Size | Bolt Hole<br>Qty |  |
|---------------|----------|-----------------|--------------|------------------|--|
| 142.5631.xxxx | 30 - 200 | 500             | M5           | 2                |  |
| 142.7010.xxxx | 30 - 200 | 500             | M6           | 2                |  |
| 142.0020.xxxx | 30 - 200 | 500             | N/A          | 0                |  |

### **Time-Current Characteristics**

| % of<br>Rating | Opening Time Min / Max (s) |             |  |  |  |
|----------------|----------------------------|-------------|--|--|--|
|                | 30-125A                    | 150-200A    |  |  |  |
| 75             | -/-                        | 360,000 / ∞ |  |  |  |
| 100            | 360,000 /∞                 | -/-         |  |  |  |
| 110            | 14,400 /∞                  | - / -       |  |  |  |
| 150            | 90 / 3,600                 | - / -       |  |  |  |
| 200            | 3 / 100                    | 1 / 15      |  |  |  |
| 300            | 0.3 / 3                    | - / -       |  |  |  |
| 350            | - / -                      | 0.3 / 5     |  |  |  |
| 500            | 0.1 / 1                    | - / -       |  |  |  |
| 600            | -/-                        | 0.1 / 1     |  |  |  |

### Ratings

| Part Number<br>M5          | Part Number<br>M6          | Current<br>Rating<br>(A) | Housing<br>Material<br>Color | Test Cable<br>Size (mm²) | Typ. Voltage<br>Drop (mV) | Typ.Cold<br>Resistance<br>(mΩ) | Typ. I²t<br>(A²s) |
|----------------------------|----------------------------|--------------------------|------------------------------|--------------------------|---------------------------|--------------------------------|-------------------|
| 142.5631.5302 <sup>1</sup> | 142.7010.5302 <sup>1</sup> | 30                       |                              | 2.5                      | 105                       | 2.70                           | 5,100             |
| 142.5631.5402              | 142.7010.5402              | 40                       |                              | 4                        | 90                        | 1.56                           | 6,800             |
| 142.5631.5502              | 142.7010.5502              | 50                       |                              | 6                        | 80                        | 1.03                           | 6,900             |
| 142.5631.5602              | 142.7010.5602              | 60                       |                              | 6                        | 75                        | 0.75                           | 16,200            |
| 142.5631.5702              | 142.7010.5702              | 70                       |                              | 10                       | 70                        | 0.64                           | 22,000            |
| 142.5631.5802              | 142.7010.5802              | 80                       |                              | 10                       | 70                        | 0.55                           | 25,600            |
| 142.5631.6102              | 142.7010.6002              | 100                      |                              | 16                       | 70                        | 0.44                           | 42,500            |
| 142.5631.6122              | 142.7010.6122              | 125                      |                              | 25                       | 70                        | 0.34                           | 62,500            |
| 142.5631.6152              | 142.7010.6152              | 150                      |                              | 25                       | 70                        | 0.29                           | 83,400            |
| 142.5631.6202 <sup>2</sup> | 142.7010.6202              | 200                      |                              | 35                       | 70                        | 0.24                           | 126,000           |

Note 1: Not UL rated

Note 2: Short Circuit Protector only

The typical I2t is an average value calculated from the breaking capacity tests by using the melting time before the arcing occurs.

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# High Current Fuses



## **BF1 Fuse Rated 58V**

### **Dimensions**

Dimensions in mm for reference only. See outline drawing for dimensions and tolerances.

### BF1 2 Holes M5/M6



**BF1 No Holes versions** 



### Typical Derating of Fuse Melting Element

Temperature Security Margin is 20%

Please contact Littelfuse® for Details Regarding Derating Test Set-Up.



### **Temperature Table**

|             | max. allowed current load [A] at ambient temperature (typical derating) |     |      |      |      |       |       |
|-------------|---|-----|------|------|------|-------|-------|
|             | -40°C   | 0°C | 20°C | 65°C | 85°C | 110°C | 125°C |
| 30A         | 30  | 30  | 28   | 24   | 21   | 18    | 16    |
| 40 <b>A</b> | 40  | 40  | 40   | 36   | 32   | 27    | 23    |
| 50A         | 50  | 50  | 50   | 46   | 41   | 35    | 30    |
| 60A         | 60  | 60  | 60   | 55   | 50   | 42    | 36    |
| 70A         | 70  | 70  | 70   | 68   | 61   | 51    | 45    |
| 80A         | 80  | 80  | 80   | 74   | 66   | 56    | 49    |
| 100A        | 100   | 100 | 100  | 90   | 81   | 70    | 61    |
| 125A        | 125   | 125 | 125  | 112  | 101  | 86    | 75    |
| 150A        | 113   | 113 | 111  | 93   | 84   | 70    | 61    |
| 200A        | 129   | 118 | 111  | 95   | 86   | 73    | 64    |

Derating curves may change depending on the final condition of the application (terminals characteristics, wire size etc..). Please ask Littelfuse for more information.

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