



ZCASE Single Mega/Starter Fuse

## ZCASE Single MEGA/Starter Fuse

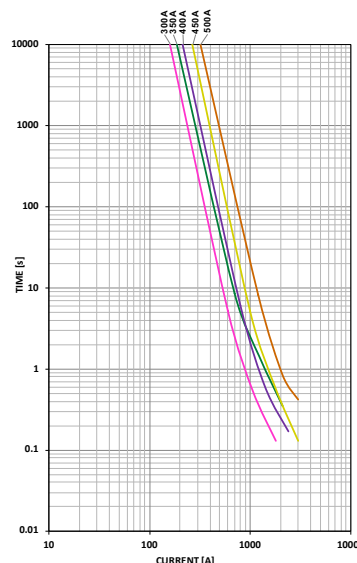
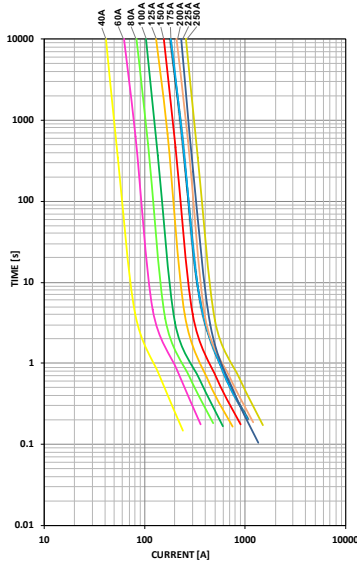
The Single ZCASE is a Minimal Footprint Bolt Down Fuse with a wide rating range up to 600A in the same packaging size. The Time Current characteristic is similar to the well known MEGA Design and can be used as full wire protection until 250A. Higher ratings mostly used for typically Starter Fuse application as a protector fuse. The fuse design is optimized for a one bolt connection M6 (40A - 250A) or M8 (300A - 600A) and can be used directly on a battery post or busbar connection. Littelfuse is offering a complete solution for the necessary stud and different busbar connections including some battery clamps.

### Specifications

|  |   |
|--|---|
| Voltage Rating:                        | 32V DC  |
| Interrupting Rating:                   | 2000A @ 32V VDC                               |
| Recommended Environmental Temperature: | -40 to 125°C                                  |
| Terminal Material:                     | Tin plated Copper                             |
| Housing Material:                      | PPA-GF33HS (U.L. 94 Flammability rating - HB) |
| Insulating Tube:                       | Out of ceramic                                |
| Mounting Torque M6:                    | 9.8Nm±1.4Nm                                   |
| Mounting Torque M8:                    | 14Nm±2Nm                                      |

### Time-Current Characteristic Curves

See note on next page regarding Test Set-Up



### Ordering Information

| Part Number   | Rating         | Package Size |
|---------------|----------------|--------------|
| 3298XXX.ZXSTA | 300 - 600      | 480          |
| 3298XXX.Z     | 40 - 250 SHUNT | 480          |
| 3298XXX.H     | 40 - 600       | 100          |

### Time-Current Characteristics

| % of Rating | Opening Time Min / Max (s) |             |            |
|-------------|----------------------------|-------------|------------|
|             | 40A - 250A                 | 300A - 500A | 600A       |
| 50          | - / -                      | 14,400 / ∞  | 14,400 / ∞ |
| 100         | 14,400 / ∞                 | - / -       | - / -      |
| 135         | 120 / 1800                 | - / -       | - / -      |
| 200         | 1 / 15                     | 1 / 40      | 1 / 40     |
| 350         | 0.3 / 5                    | 0.3 / 5     | 0.3 / 5    |
| 500         | - / -                      | - / -       | 0.1 / 1    |
| 600         | 0.1 / 1                    | 0.1 / 1     | - / -      |

### Ratings

| Part number               | Current Rating (A) | Test Cable Size (mm <sup>2</sup> ) | Typ. Voltage Drop (mV) | Typ. Cold Resistance (mΩ) | Typ. I <sup>2</sup> t (A <sup>2</sup> s) |
|---------------------------|--------------------|------------------------------------|------------------------|---------------------------|--|
| 3298040.Z / 3298040.H     | 40                 | 4                                  | 86                     | 1.53                      | 5,000                                    |
| 3298060.Z / 3298060.H     | 60                 | 6                                  | 83                     | 0.98                      | 18,000                                   |
| 3298080.Z / 3298080.H     | 80                 | 10                                 | 80                     | 0.72                      | 15,500                                   |
| 3298100.Z / 3298100.H     | 100                | 16                                 | 88                     | 0.57                      | 31,000                                   |
| 3298125.Z / 3298125.H     | 125                | 16                                 | 71                     | 0.39                      | 45,000                                   |
| 3298150.Z / 3298150.H     | 150                | 25                                 | 83                     | 0.32                      | 75,000                                   |
| 3298175.Z / 3298175.H     | 175                | 25                                 | 82                     | 0.26                      | 140,000                                  |
| 3298200.Z / 3298200.H     | 200                | 35                                 | 92                     | 0.23                      | 235,000                                  |
| 3298225.Z / 3298225.H     | 225                | 35                                 | 86                     | 0.18                      | 95,000                                   |
| 3298250.Z / 3298250.H     | 250                | 50                                 | 88                     | 0.17                      | 160,000                                  |
| 3298300.ZXSTA / 3298300.H | 300 <sup>1</sup>   | 35                                 | 29 <sup>2</sup>        | 0.13                      | 310,000                                  |
| 3298350.ZXSTA / 3298350.H | 350 <sup>1</sup>   | 35                                 | 30 <sup>2</sup>        | 0.10                      | 570,000                                  |
| 3298400.ZXSTA / 3298400.H | 400 <sup>1</sup>   | 50                                 | 30 <sup>2</sup>        | 0.08                      | 870,000                                  |
| 3298500.ZXSTA / 3298500.H | 500 <sup>1</sup>   | 50                                 | 34 <sup>2</sup>        | 0.07                      | 1,550,000                                |
| 3298600.ZXSTA / 3298600.H | 600 <sup>1</sup>   | 50                                 | 36 <sup>2</sup>        | 0.05                      | 3,000,000                                |
| 3298900.Z /               | SHUNT              | 50                                 | -                      | -                         | -  |

Note 1 STARTER fuses

Note 2 Voltage Drop taken at 50% of Rated Current

The typical I<sup>2</sup>t is an average value calculated from the breaking capacity tests by using the melting time before the arcing occurs.

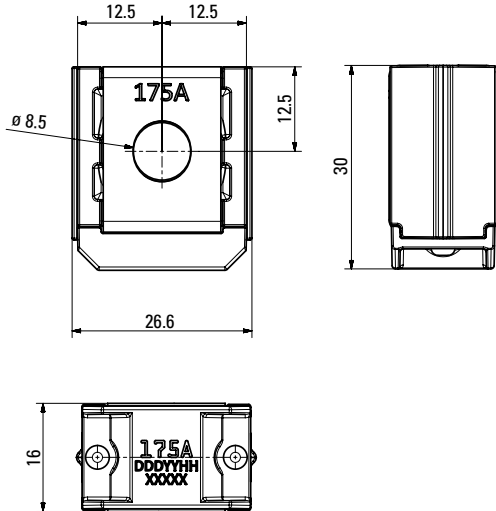
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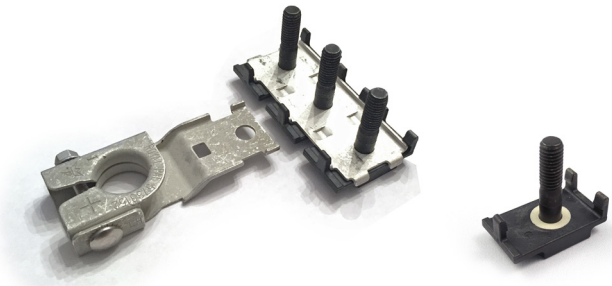
## ZCASE Single Mega/Starter Fuse

### Dimensions

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



## Assembly Components (sold separately)



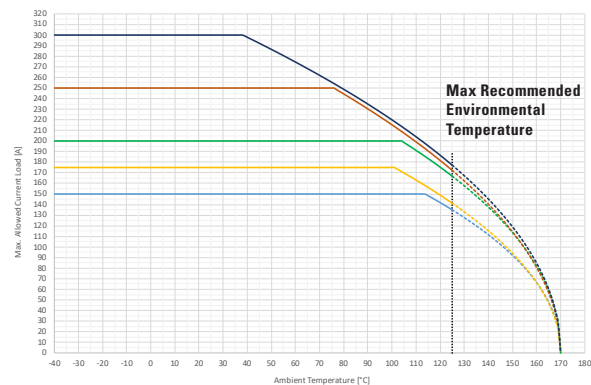
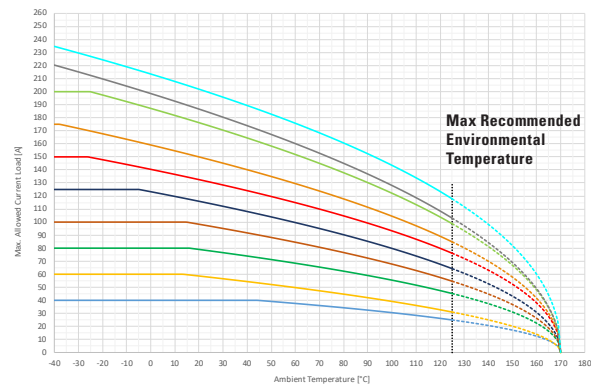
| Part No.     | Description                                      |
|--------------|--|
| 882-853      | 3-Way Bus Bar with M8 Insulating Bolts Assembly* |
| 882-854      | 2-Way Bus Bar with M8 Insulating Bolts Assembly* |
| 876-199      | Battery Terminal Mount                           |
| 32980001ZXM8 | M8 Insulating Bolt                               |

\*M8 Nuts not included

Please contact your Littelfuse representative for application support and information on mating hardware.

### Typical Derating of Fuse Melting Element

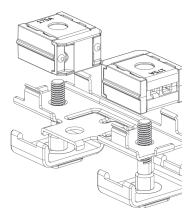
Temperature Security Margin is 20%  
Please contact Littelfuse® for Details Regarding Derating Test Set-Up.



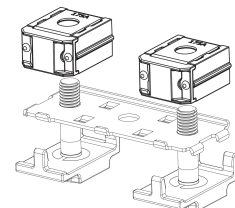
### Temperature Table

|             | max. allowed current load [A] at ambient temperature |     |      |      |      |       |       |
|-------------|--|-----|------|------|------|-------|-------|
|             | -20°C  | 0°C | 20°C | 65°C | 85°C | 110°C | 125°C |
| <b>40A</b>  | 40   | 40  | 40   | 37   | 33   | 28    | 25    |
| <b>60A</b>  | 60   | 60  | 59   | 49   | 43   | 36    | 31    |
| <b>80A</b>  | 80   | 80  | 79   | 67   | 61   | 52    | 45    |
| <b>100A</b> | 100  | 100 | 98   | 83   | 75   | 63    | 55    |
| <b>125A</b> | 125  | 123 | 116  | 97   | 88   | 74    | 64    |
| <b>150A</b> | 150  | 140 | 133  | 112  | 102  | 87    | 76    |
| <b>175A</b> | 175  | 159 | 150  | 127  | 115  | 97    | 85    |
| <b>200A</b> | 200  | 187 | 176  | 148  | 134  | 113   | 99    |
| <b>225A</b> | 220  | 199 | 187  | 157  | 141  | 119   | 103   |
| <b>250A</b> | 235  | 214 | 202  | 172  | 157  | 134   | 118   |
| <b>300A</b> | 150  | 150 | 150  | 150  | 150  | 150   | 135   |
| <b>350A</b> | 175  | 175 | 175  | 175  | 175  | 163   | 141   |
| <b>400A</b> | 200  | 200 | 200  | 200  | 200  | 191   | 167   |
| <b>500A</b> | 250  | 250 | 250  | 250  | 238  | 199   | 172   |
| <b>600A</b> | 300  | 300 | 300  | 268  | 242  | 204   | 177   |

All tests were performed on the left or right side of the metal bar as shown in the pictures. A 50mm<sup>2</sup> Cu wire was mounted at the mid hole (M8) as current feed.



Zcase Mega Fixture



Zcase Starter Fixture

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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