

High Current Fuses



MEGA® 70V HP Fuse-SF51

MEGA® High Performance Fuse Rated 70V-SF51

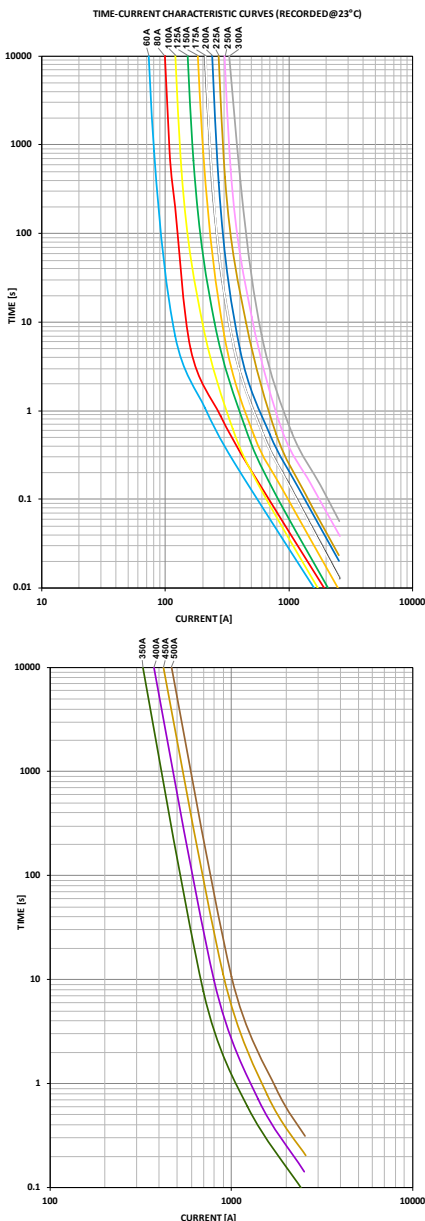
The MEGA® 70V-SF51 High Performance (HP) Fuse is designed for high current circuit protection up to 500A with "Diffusion Pill Technology." The MEGA 70V HP features 1MΩ Open State Resistance after fuse opening to guarantee safe interruption at any voltage up to 70V. The MEGA® 70V HP Fuse is ideal for battery and alternator protection application and other heavy gauge cables requiring ultra-high current protection.

Specifications

| | |
|--|---|
| Voltage Rating: | 70 VDC |
| Interrupting Rating: | 2500A @ 70 VDC |
| Recommended Environmental Temperature: | -40°C to + 125°C |
| Terminals Material: | Tin Plated Copper |
| Housing Material: | PPA-GF33 (U.L. 94 Flammability rating – HB) |
| Mounting Torque M6: | 9Nm+/-1Nm |
| Mounting Torque M8: | 20Nm+/-1Nm |
| Open State Resistance (after fuse opening) | >1MΩhm |
| Complies With: | ISO 20934 - Type SF51 |



Time-Current Characteristic Curves



Ordering Information

| Part Number | Rating | Package Size | Bolt Size | Bolt Hole Qty |
|----------------|----------|--------------|-----------|---------------|
| 0998xxx.UX-2M8 | 60 - 500 | 500 | M8 | 2 |
| 0998xxx.UX-1M8 | 60 - 500 | 500 | M8 | 1 |
| 0998xxx.UX-2M6 | 60 - 500 | 500 | M6 | 2 |
| 0998xxx.UX-1M6 | 60 - 500 | 500 | M6 | 1 |
| 0998xxx.UX-NH | 60 - 500 | 500 | N/A | 0 |

Time-Current Characteristics

| % of Rating | Opening Time Min / Max (s) | | |
|-------------|----------------------------|------------|--------------|
| | 60-250A | 300A | 350-500A |
| 75 | -/- | 14,400 / ∞ | 14,400 s / ∞ |
| 100 | 14,400 / ∞ | -/- | -/- |
| 135 | 120 / 1800 | 120 / 1800 | -/- |
| 150 | 20 / 450 | 20 / 450 | -/- |
| 200 | 1 / 15 | 1 / 15 | 1 / 15 |
| 350 | 0.3 / 5 | 0.3 / 5 | 0.5 / 5 |
| 600 | 0.1 / 1 | 0.1 / 1 | 0.1 / 1 |

Ratings

| Part Number | Current Rating (A) | Font Color | Test Cable Size (mm ²) | Typ. Voltage Drop (mV) | Typ. Cold Resistance (mΩ) | Typ. I ² t (A ² s) |
|-------------|--------------------|------------|------------------------------------|------------------------|---------------------------|--|
| 0998060_ | 60 | | 6 | 75.5 | 0.90 | 22,800 |
| 0998080_ | 80 | | 10 | 88.0 | 0.75 | 34,900 |
| 0998100_ | 100 | | 10 | 66.7 | 0.46 | 24,000 |
| 0998125_ | 125 | | 16 | 70.4 | 0.37 | 38,000 |
| 0998150_ | 150 | | 25 | 70.6 | 0.32 | 58,100 |
| 0998175_ | 175 | | 25 | 79.2 | 0.28 | 79,300 |
| 0998200_ | 200 | | 35 | 76.9 | 0.24 | 123,600 |
| 0998225_ | 225 | | 35 | 76.6 | 0.21 | 142,500 |
| 0998250_ | 250 | | 50 | 66.0 | 0.17 | 220,000 |
| 0998300_ | 300 | | 50 | 46.9 ² | 0.15 | 340,000 |
| 0998350_ | 350 ¹ | | 50 | 50.7 ² | 0.14 | 495,000 |
| 0998400_ | 400 ¹ | | 70 | 50.1 ² | 0.12 | 872,000 |
| 0998450_ | 450 ¹ | | 70 | 52.9 ² | 0.10 | 1,224,000 |
| 0998500_ | 500 ¹ | | 70 | 56.3 ² | 0.09 | 1,800,000 |

¹ Short Circuit Protector only

² Voltage Drop measurements for short circuit protectors taken at 75% of rated current.

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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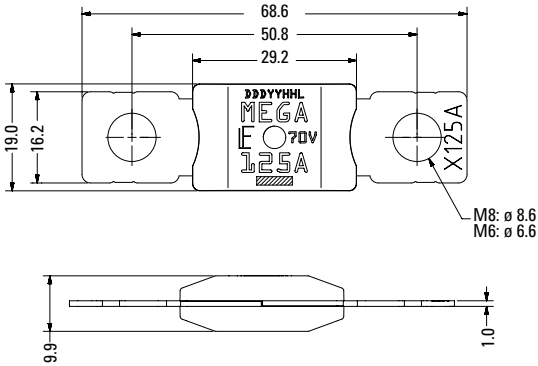
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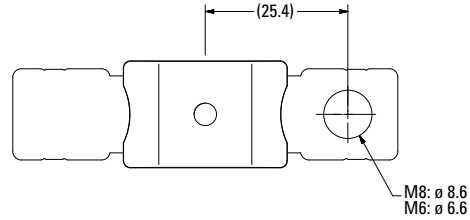
Dimensions

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

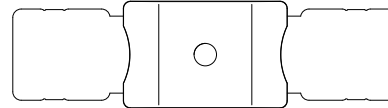
MEGA HP SF51 2 Holes M8/M6 versions



MEGA HP SF51 1 Hole M8/M6 versions

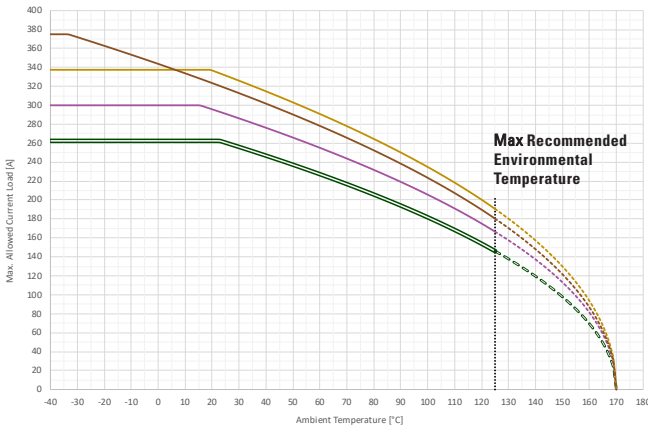
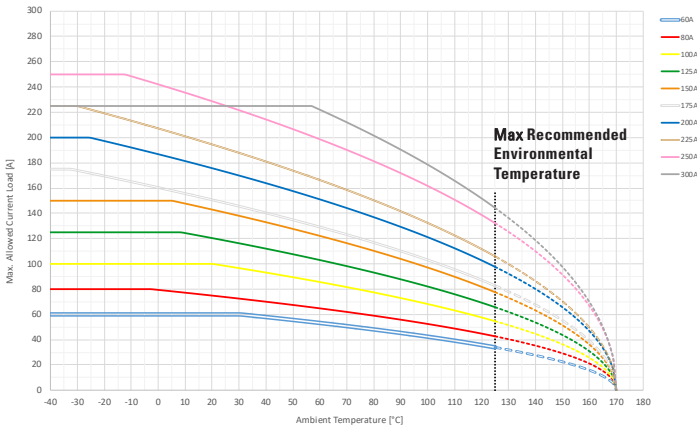


MEGA HP SF51 No-Holes version



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 | | | | | | |
|-------------|--|-----|------|------|------|-------|-------|
| | -40°C | 0°C | 20°C | 65°C | 85°C | 110°C | 125°C |
| 60A | 60 | 60 | 60 | 52 | 47 | 39 | 34 |
| 80A | 80 | 79 | 75 | 63 | 57 | 49 | 43 |
| 100A | 100 | 100 | 100 | 84 | 75 | 63 | 55 |
| 125A | 125 | 125 | 120 | 101 | 90 | 76 | 66 |
| 150A | 150 | 150 | 143 | 119 | 107 | 90 | 78 |
| 175A | 175 | 160 | 151 | 126 | 114 | 95 | 83 |
| 200A | 200 | 187 | 176 | 148 | 133 | 112 | 98 |
| 225A | 225 | 207 | 195 | 163 | 146 | 123 | 106 |
| 250A | 250 | 242 | 229 | 194 | 177 | 151 | 132 |
| 300A | 225 | 225 | 225 | 217 | 196 | 166 | 144 |
| 350A | 263 | 263 | 263 | 222 | 200 | 168 | 146 |
| 400A | 300 | 300 | 296 | 250 | 226 | 191 | 167 |
| 450A | 338 | 338 | 337 | 285 | 257 | 218 | 191 |
| 500A | 375 | 344 | 323 | 272 | 246 | 207 | 180 |

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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