

# 30EV Series

## High Voltage Fuses – Rated 500 V DC

RoHS


### Description

Bolt-down 30EV fuses designed for circuit protection in high-voltage, high-current automotive systems. These fuses make particularly good choices for ensuring overcurrent protection to branch circuits in EVs and hybrid passenger vehicles.

### Features & Benefits

- High-contrast ampere marking on bodies aid identification
- M8 and M6 versions available
- Industry-standard footprints
- Refers to ISO 8820-8

### Applications

- EVs
- Hybrid passenger vehicles

[See Disclaimer Notice](#)

### Additional Information



Resources



Samples

### Specifications

|                                               |                                                |
|-----------------------------------------------|------------------------------------------------|
| <b>Voltage Rating:</b>                        | 500 V DC                                       |
| <b>Interrupting Rating:</b>                   | 30 kA @ 500 V DC                               |
| <b>Recommended Environmental Temperature:</b> | -40 °C to +125 °C                              |
| <b>Terminals Material:</b>                    | Copper / Copper Alloy                          |
| <b>Housing Material:</b>                      | Melamine<br>(U.L. 94 Flammability rating – V0) |
| <b>End caps Material:</b>                     | Zinc Alloy                                     |
| <b>Recommended Mounting Torque M8:</b>        | 12 ±1 Nm                                       |
| <b>Recommended Mounting Torque M6:</b>        | 6 ±1 Nm (Max. allowed 10 Nm)                   |
| <b>Net Weight per Fuse:</b>                   | 100 g ±10% g                                   |
| <b>Refers To:</b>                             | ISO 8820-8                                     |

### Ordering Information

| Part Number      | Current Rating (A) | Termination  | Package Size |
|------------------|--------------------|--------------|--------------|
| 30EVxxx.ZXBDM    | 150 A - 300 A      | M8 Bolt Down | 72           |
| 30EVxxx.ZXBDM-M6 | 150 A - 300 A      | M6 Bolt Down | 72           |

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### Ratings

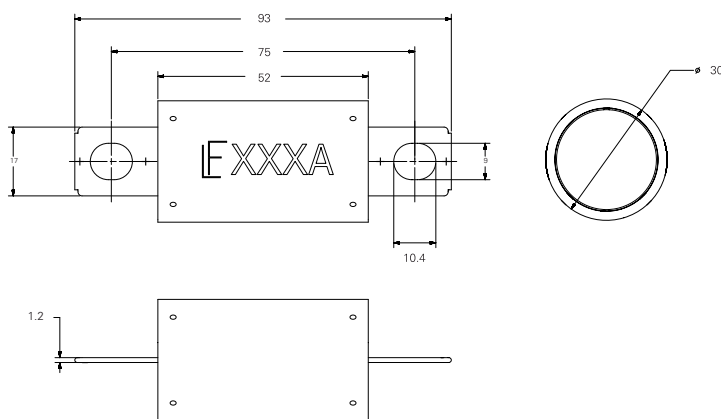
| Part Number   | Current Rating (A) | Test Cable Size (mm <sup>2</sup> ) | Typ. Voltage Drop (mV) | Max. Voltage Drop Spec at 100% IR (mV) | Typ. Cold Resistance (mΩ) | Typical Melting I <sup>2</sup> t (A <sup>2</sup> s) |
|---------------|--------------------|------------------------------------|------------------------|----------------------------------------|---------------------------|-----------------------------------------------------|
| 30EV150.ZXBDM | 150                | 20                                 | 160                    | 180                                    | 0.54                      | 15 000                                              |
| 30EV175.ZXBDM | 175                | 20                                 | 160                    | 180                                    | 0.46                      | 22 000                                              |
| 30EV200.ZXBDM | 200                | 30                                 | 160                    | 180                                    | 0.41                      | 32 000                                              |
| 30EV225.ZXBDM | 225                | 40                                 | 160                    | 180                                    | 0.36                      | 41 000                                              |
| 30EV250.ZXBDM | 250                | 40                                 | 160                    | 180                                    | 0.32                      | 52 000                                              |
| 30EV300.ZXBDM | 300                | 50                                 | 160                    | 180                                    | 0.27                      | 101 000                                             |

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.

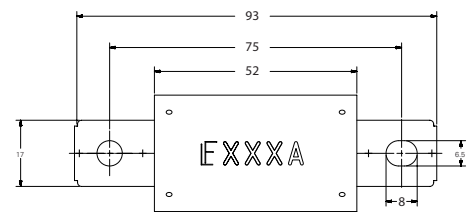
### Dimensions

Dimensions in mm. Please refer to the outline drawing for dimensions and tolerances.

M8 Version



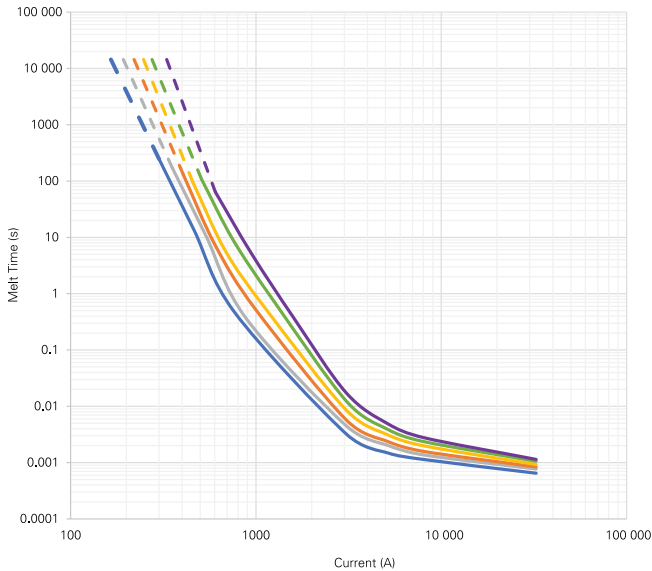
M6 Version



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### Time-Current Characteristic



| % of Rating | Opening Time Min. / Max. (s) |
|-------------|------------------------------|
| 110         | 14 400 / -                   |
| 200         | 1 / 300                      |
| 300         | 0.2 / 30                     |
| 500         | 0.05 / 1                     |

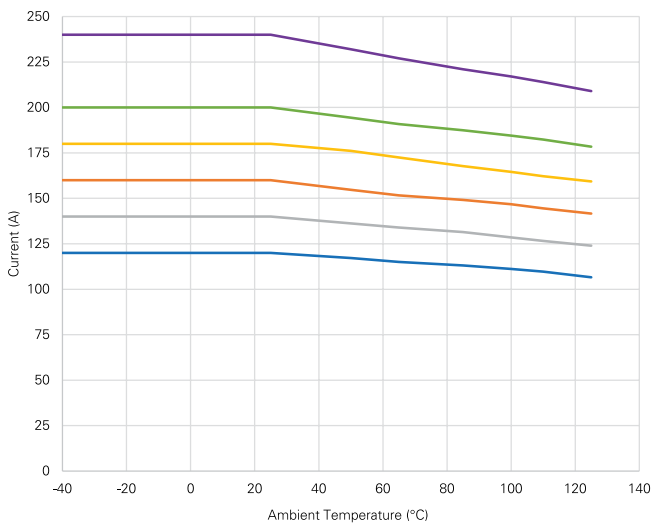
- 150 A
- 175 A
- 200 A
- 225 A
- 250 A
- 300 A

**Note:** Current recommendation may be impacted by the final condition of the application (terminals characteristics, wire size etc.). Please contact Littelfuse® for more information.

### Typical Derating Curves

Temperature security margin is 20%.

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



|              | Max. allowed current load (A) at ambient temperature based on typical derating |      |       |       |       |        |        |
|--------------|--------------------------------------------------------------------------------|------|-------|-------|-------|--------|--------|
|              | -40 °C                                                                         | 0 °C | 25 °C | 65 °C | 85 °C | 110 °C | 125 °C |
| <b>150 A</b> | 120                                                                            | 120  | 120   | 115   | 113   | 110    | 107    |
| <b>175 A</b> | 140                                                                            | 140  | 140   | 134   | 132   | 127    | 124    |
| <b>200 A</b> | 160                                                                            | 160  | 160   | 152   | 149   | 145    | 142    |
| <b>225 A</b> | 180                                                                            | 180  | 180   | 173   | 168   | 162    | 159    |
| <b>250 A</b> | 200                                                                            | 200  | 200   | 191   | 188   | 182    | 178    |
| <b>300 A</b> | 240                                                                            | 240  | 240   | 227   | 221   | 214    | 209    |

- 150 A
- 175 A
- 200 A
- 225 A
- 250 A
- 300 A

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