10EV+ Series

High Voltage Fuses – Rated 500 V DC

Description

10EV Plus fuses comes in four configurations. Each version of the cylindrical high-voltage, low-current fuse employs diffusion pill technology to provide time-delayed protection to circuits in EVs and hybrid passenger vehicles. Ask Littelfuse which configuration best meets your needs.

Features & Benefits

- Interrupting Rating of 20 kA @ 500 V DC
- Interrupting Rating of 20 kA @ 500 V DC / 275 VAC only for 50A
- Operates from -40 °C to +125 °C
- Voltage Rating of 500 V DC
- Voltage Rating of 500 V DC / 275 VAC only for 50A
- Typical weight of 9.5 g
- Melamine body with UL 94 flammability ratings of V-0
- Mounting Torque M5 of 4.5 ±1 Nm (ISO prescription for ZXISO and ZXBDP versions)
- Terminal in tin plated copper alloy/nickel-plated copper alloy
- End caps in nickel plated brass
- Refers to ISO 8820-8

Applications

- All EV and Hybrid passenger vehicles

See Disclaimer Notice

Additional Information

Resources

Samples

Specifications

Voltage Rating:	500 V DC 500 V DC / 275 VAC (only for 50A)
Interrupting Rating:	20 kA @ 500 V DC 20 kA @ 500 V DC / 275 VAC (only for 50A)
Recommended Environmental Temperature:	–40 ˚C to +125 ˚C
Terminals Material:	Tin-plated copper alloy/nickel-plated copper alloy
Housing Material:	Melamine body (UL 94 Flammability rating of V-0)
End caps Material:	Nickel plated brass
Mounting Torque M5:	4.5 ±1 Nm (ISO prescription for ZXPISO and ZXPBD versions)
Typical Weight per Fuse:	9.5 g
Comply With:	ISO 8820-8

Ordering Information

Part Number	Termination	Package Size
10EVxxx.ZXPISO	BOLT DOWN (ISO)	320
10EVxxx.ZXPBD	BOLT DOWN (AXIAL)	320
10EVxxx.ZXPPCB	PCB MOUNT	350
10EVxxx.ZXPPCBL	PCB MOUNT (LONG)	350
10EVxxx.950BLD	PLUG IN	320
10EVxxx.630BLD	PLUG IN	320

Revised: 01/06/2026

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Ratings

Part Number	Current Rating (A)	Color Coding	Test Cable Size (mm^2)	Typ. Voltage Drop at 70% IR (mV)	Typ. Cold Resistance (mΩ)	Typ. I^2t (A^2s)
10EV030.xxx	30		5	67	2.9	1500
10EV040.xxx	40		5	69	2.1	4450
10EV050.xxx	50		5	69	1.6	7800

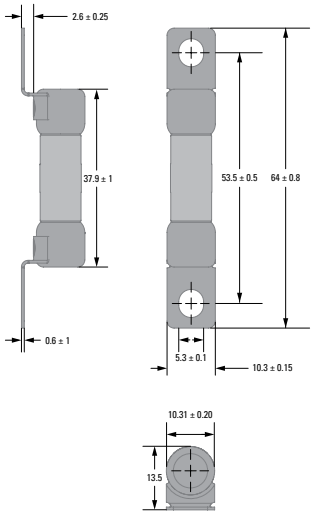
Please contact Littelfuse® for more details regarding availability timing.
Note: The typical I^2t is an average value calculated from the breaking capacity tests by using the melting time before the arcing occurs.

Dimensions

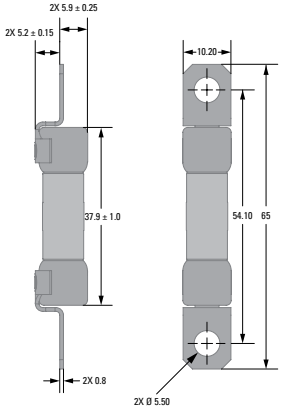
Data from 10EV.

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

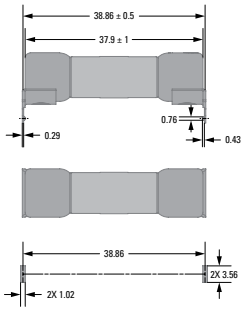
ZXPISO Bolt Down (ISO)



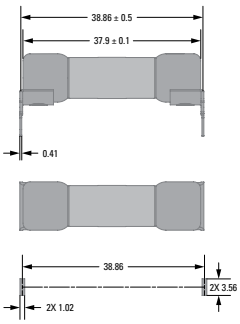
ZXPBD Bolt Down (Axial)



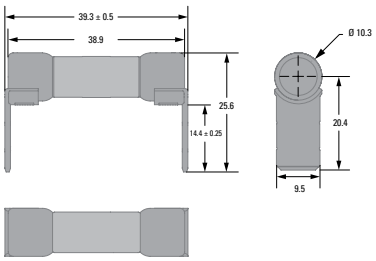
ZXPPCB PCB Mount



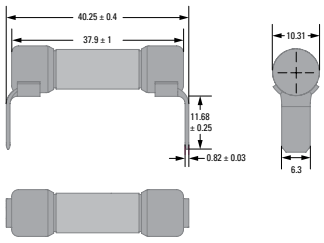
ZXPPCBL PCB Mount (Long)



950BLD



630BLD



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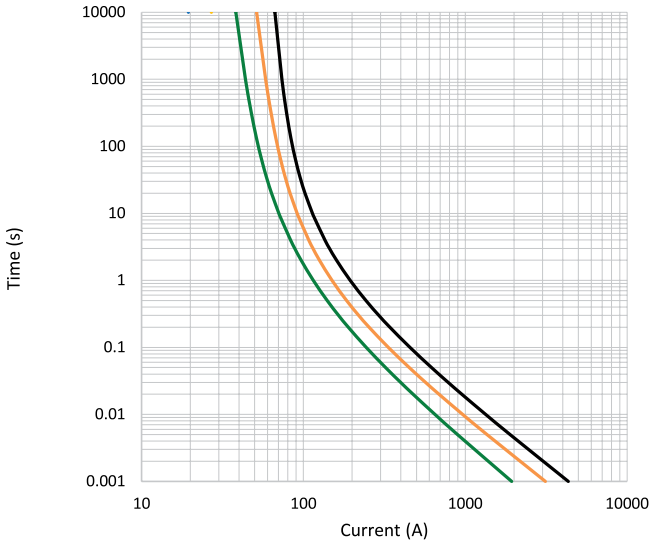
Time-Current Characteristic



% of Rating	Opening Time Min. / Max. (s)
110	14 400 / -
135	150 / 3600
150	10 / 1000
200	0.5 / 100
300	0.1 / 15
500	0.05 / 1

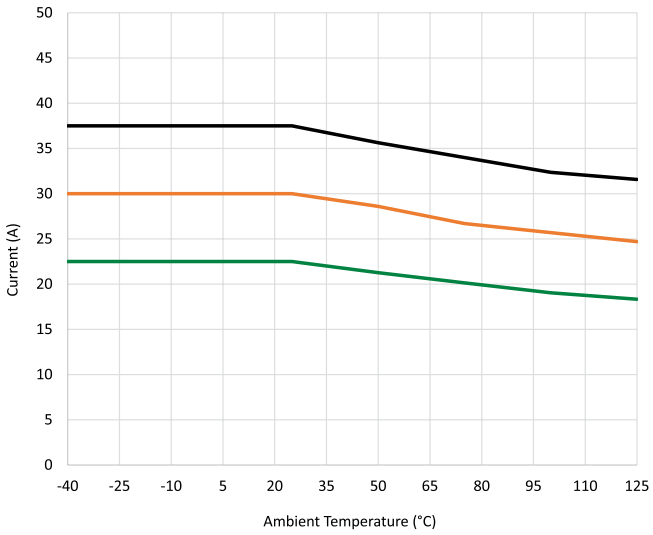
30 A
40 A
50 A

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 Rerating Curves

Temperature security margin is 20%.

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



	Max. allowed current load (A) at ambient temperature based on typical rerating						
	-40 °C	0 °C	20 °C	65 °C	85 °C	110 °C	125 °C
30 A	22.5	22.5	22.5	20.6	20	18.8	18.3
40 A	30	30	30	27	26	25.1	24.7
50 A	37.5	37.5	37.5	34.8	33.4	32	31.6

30 A
40 A
50 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.