

# ZCASE® M10 Bolt Down Single Fuses

Rated 32V

RoHS



## Specifications

<b>Voltage Rating:</b>	32 V dc
<b>Interrupting Rating:</b>	2000 A @ 32 V dc
<b>Recommended Environmental Temperature:</b>	-40 °C to +125 °C
<b>Terminals Material:</b>	Tin-plated copper alloy
<b>Housing Material:</b>	PPA-GF33HS (UL 94 Flammability rating of HB)
<b>Net Weight per Fuse:</b>	22 g ± 10 %
<b>Mounting Torque M10</b>	18 Nm ± 2 Nm
<b>Insulating Tube:</b>	Ceramic

## Description

ZCASE® M10 32V automotive fuses take up minimal space while providing time-delayed/Slo-Blo® circuit protection similar to MEGA® 32V fuses. Typically used to protect starters, ZCASE M10 fuses with ampere ratings of 80 A to 250 A provide full wire protection. Use fuses rated 300–600 A only for short circuit protection.

## Features & Benefits

- One-bolt connection
- Can mount on a battery post, starter, or busbar
- High-contrast ampere rating stamp aids identification
- 425 A fuse, 600 A fuse, and shunt offered in addition to fuses listed in ISO standard

## Applications

- Commercial vehicles
- Buses
- Construction equipment
- Material handling equipment
- Agricultural machinery

## Ordering Information

Part Number	Current Rating (A)	Package Size
3298XXX.ZXM10	80–600 & SHUNT	480

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### Ratings

Part Number	Current Rating (A)	Test Cable Size (mm <sup>2</sup> )	Typ. Voltage Drop (mV)	Typ. Cold Resistance (mΩ)	I <sup>2</sup> t (A <sup>2</sup> s)
3298080_	80	10	95	0.78	32 000
3298100_	100	16	80	0.57	23 200
3298125_	125	16	90	0.46	51 000
3298150_	150	25	78	0.34	81 600
3298175_	175	25	97	0.29	108 600
3298200_	200	35	94	0.26	126 400
3298225_	225	35	80	0.18	126 900
3298250_	250	50	82	0.17	160 900
3298300_ <sup>2</sup>	300	35	28 <sup>3</sup>	0.14	305 300
3298350_ <sup>2</sup>	350	35	29 <sup>3</sup>	0.10	583 900
3298400_ <sup>2</sup>	400	50	27 <sup>3</sup>	0.08	913 300
3298425_ <sup>1 2</sup>	425	50	27 <sup>3</sup>	0.08	602 770
3298500_ <sup>2</sup>	500	50	32 <sup>3</sup>	0.08	1 250 000
3298600_ <sup>1 2</sup>	600	50	32 <sup>3</sup>	0.05	3 140 000
3298900_ <sup>1</sup>	SHUNT	50	34	—	—

\* Note 1: Not mentioned in ISO standards

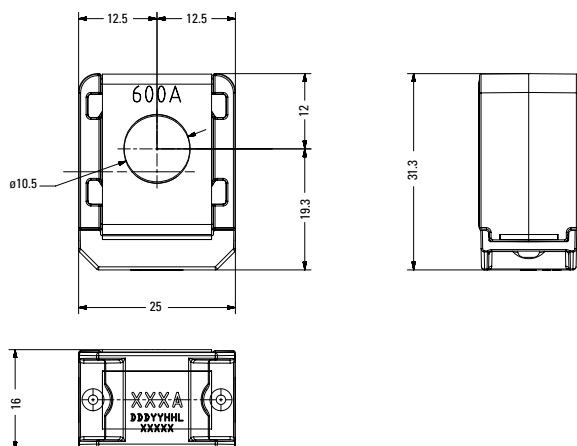
\* Note 2: Short circuit protector only

\* Note 3: Voltage drop measurements for short circuit protectors 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 arcing occurs.

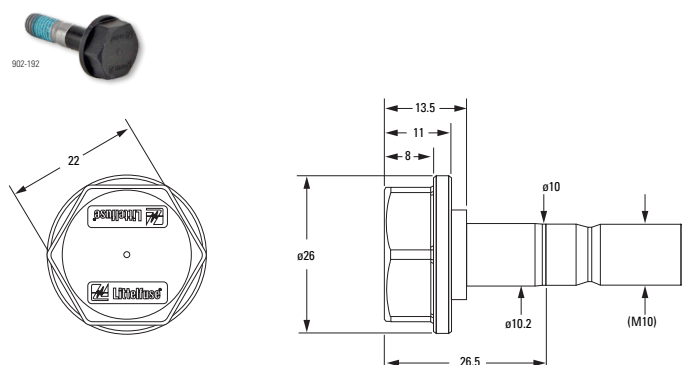
### Dimensions

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



### Assembly Components Sold Separately

Part No.	Description
902-192	Insulated M10 Bolt Required for Installation and Operation

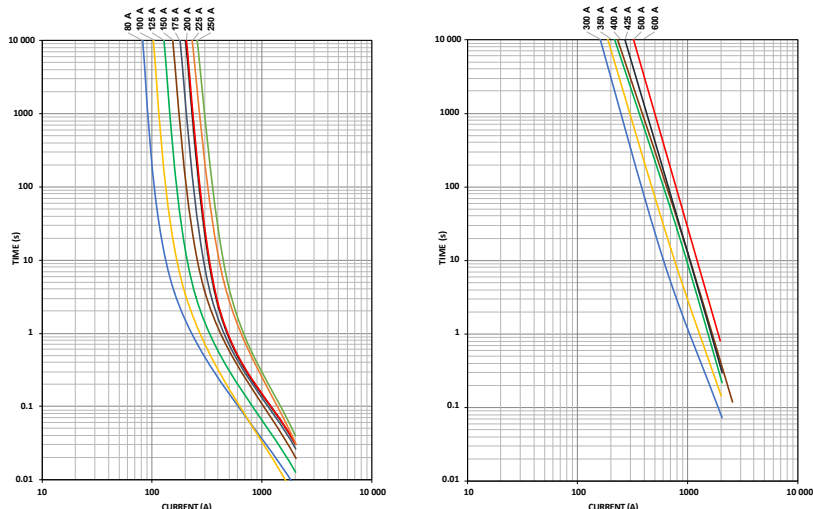


Please contact your Littelfuse representative for application support and information on mating hardware.

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### Time-Current Characteristic Curves

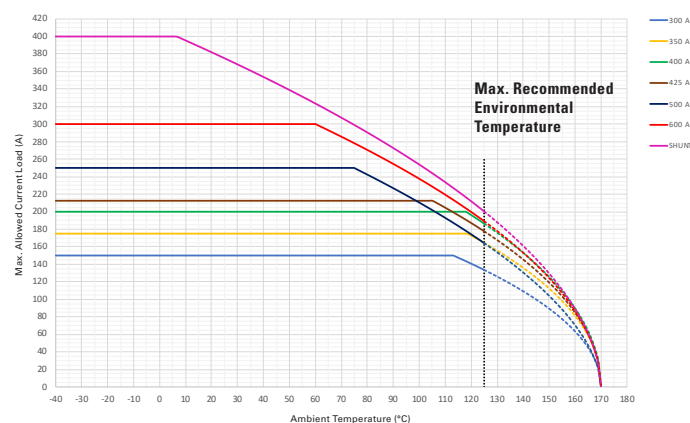
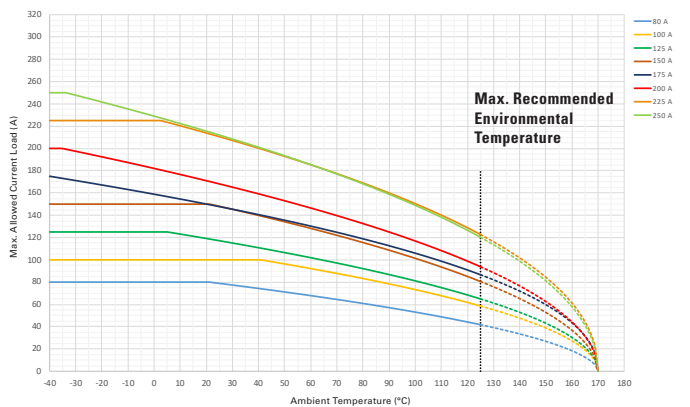


### Time-Current Characteristics

% of Rating	Opening Time Min / Max (s)		
	40-250 A	300-500 A	600 A
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	- / -

### Typical Derating of Fuse Melting Element

Temperature security margin is 20 %.  
Please contact Littelfuse for details regarding derating test setup.



### 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
<b>80 A</b>	80	80	80	66	59	49	42
<b>100 A</b>	100	100	100	90	81	68	59
<b>125 A</b>	125	125	119	100	89	75	65
<b>150 A</b>	150	150	150	125	112	94	81
<b>175 A</b>	175	159	150	128	116	99	87
<b>200 A</b>	200	182	171	143	129	108	94
<b>225 A</b>	225	225	214	181	165	140	123
<b>250 A</b>	250	229	215	181	164	138	120
<b>300 A</b>	150	150	150	150	150	150	134
<b>350 A</b>	175	175	175	175	175	175	164
<b>400 A</b>	200	200	200	200	200	200	186
<b>425 A</b>	213	213	213	213	213	205	178
<b>500 A</b>	250	250	250	250	235	193	164
<b>600 A</b>	300	300	300	293	263	219	189
<b>SHUNT</b>	400	400	382	316	282	234	200

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