



ZCASE M10 Bolt Down Single 32V Fuse

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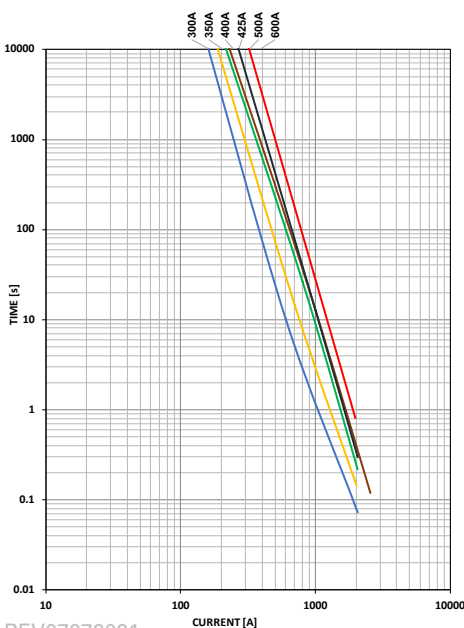
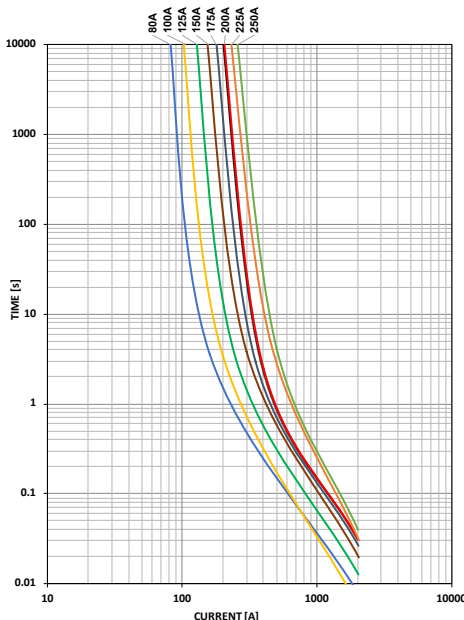
The Single ZCASE is a Minimal Footprint Bolt Down Fuse with a wide rating range up to 600A in the same packaging size. The Time Current characteristic is similar to the well known MEGA Design and can be used as full wire protection until 250A. Higher ratings mostly used for typically Starter Fuse application as a protector fuse. The fuse design is optimized for a one bolt connection M10 and can be used directly on a battery post or busbar connection

### Specifications

Voltage Rating:	32 VDC
Interrupting Rating:	2000A @ 32 VDC
Recommended Environmental Temperature:	-40°C to +125°C
Housing Material:	PPA-GF33HS (U.L. 94 Flammability rating - HB)
Terminals Material:	Tin Plated Copper Alloy
Insulating Tube:	Out of Ceramic
Net Weight Per Fuse:	22±10% gr
Mounting Torque M10:	18±2 Nm

**RoHS**

### Time-Current Characteristic Curves



### Ordering Information

Part Number	Rating	Package Size
3298XXX.ZXM10	80 - 600 & SHUNT	480

### 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)
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 I<sup>2</sup>t value is calculated from the breaking capacity tests by using the current time profile before the arcing occurs.

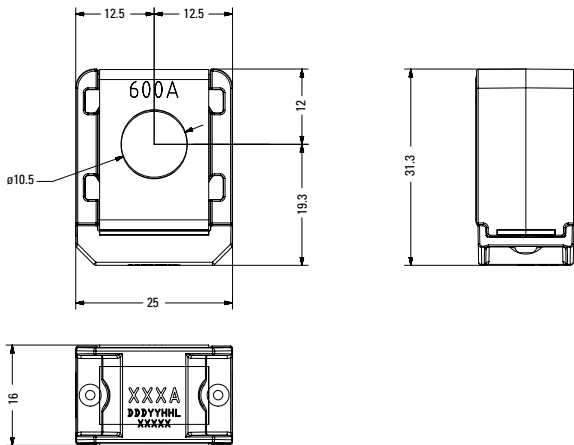
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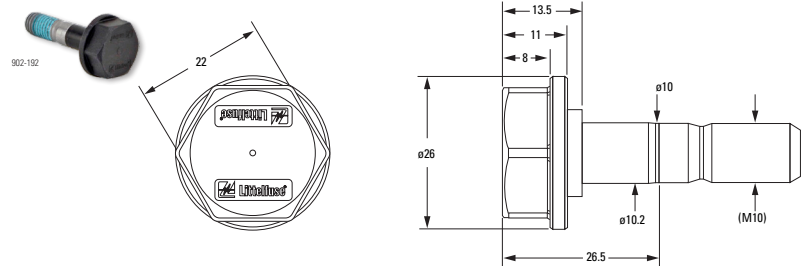
### Dimensions

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



### Assembly Components (sold separately)

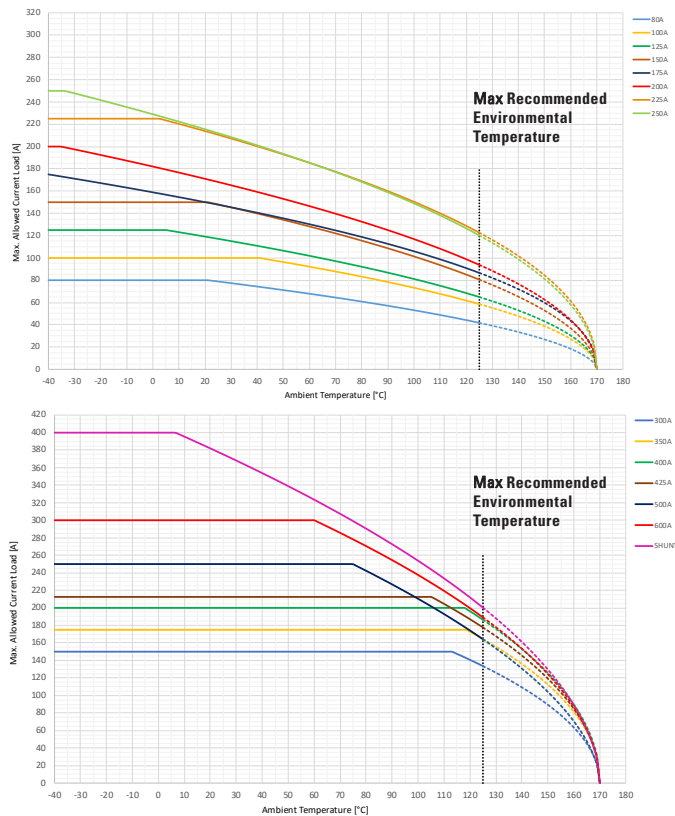
Part No.	Description
902-192	Insulated M10 Bolt (Required for installation/operation)



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

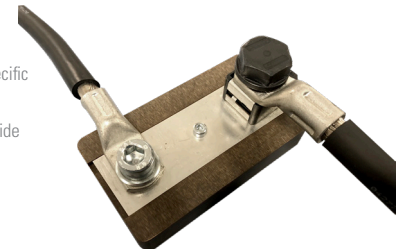


### Temperature Table

	max. allowed current load [A] at ambient temperature (typical derating)						
	-40°C	0°C	20°C	65°C	85°C	110°C	125°C
<b>80A</b>	80	80	80	66	59	49	42
<b>100A</b>	100	100	100	90	81	68	59
<b>125A</b>	125	125	119	100	89	75	65
<b>150A</b>	150	150	150	125	112	94	81
<b>175A</b>	175	159	150	128	116	99	87
<b>200A</b>	200	182	171	143	129	108	94
<b>225A</b>	225	225	214	181	165	140	123
<b>250A</b>	250	229	215	181	164	138	120
<b>300A</b>	150	150	150	150	150	150	134
<b>350A</b>	175	175	175	175	175	175	164
<b>400A</b>	200	200	200	200	200	200	186
<b>425A</b>	213	213	213	213	213	205	178
<b>500A</b>	250	250	250	250	235	193	164
<b>600A</b>	300	300	300	293	263	219	189
<b>SHUNT</b>	250	250	250	250	235	193	164

All ZCASE Derating curves were performed on the specific fixture as shown in the picture.

A 50mm<sup>2</sup> Cu wire was mounted at the opposite fuse side of the metal bar as current feed.



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

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