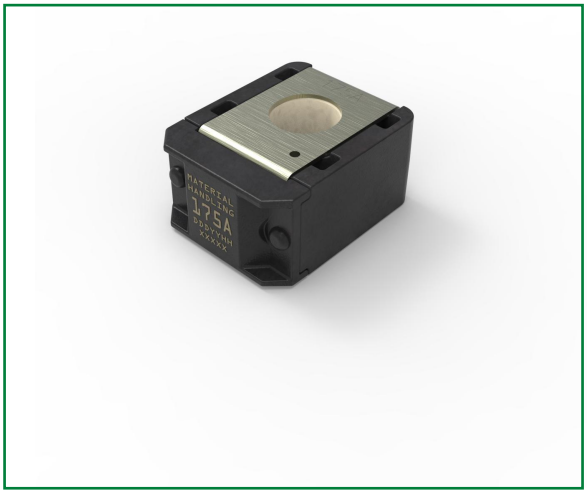
ZCASE® M10 Bolt Down Material Handling

Rated 80V

RoHS



Specifications

Voltage Rating:	80 V DC
Interrupting Rating:	2000 A @ 80 V DC
Recommended Environmental Temperature:	–40 °C to +125 °C
Terminals Material:	Tin-plated copper alloy
Housing Material:	PPA-GF33HS (UL 94 Flammability rating of HB)
Net Weight per Fuse:	22 g ± 10 %
Mounting Torque M10	18 Nm ± 2 Nm
Insulating Tube:	Ceramic

Features & Benefits

- One-bolt connection
- Can mount on a battery post, starter, or busbar
- High-contrast ampere rating stamp aids identification
- SHUNT version available
- Compact design

Description

The Single ZCASE is a Minimal Footprint Bolt Down Fuse optimized for a one bolt connection M10 with a wide rating range from 70A 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 fuses are mostly used in trucks, buses, agriculture and construction equipment's or Material handling for typically Starter protector fuse.

Applications

- Commercial vehicles
- Buses
- Construction equipment
- Material handling equipment
- Agricultural machinery
- Not suitable for passenger car applications

Ordering Information

Part Number	Current Rating (A)	Package Size
3998XXX.ZXM10	70–600 & SHUNT	480

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Ratings

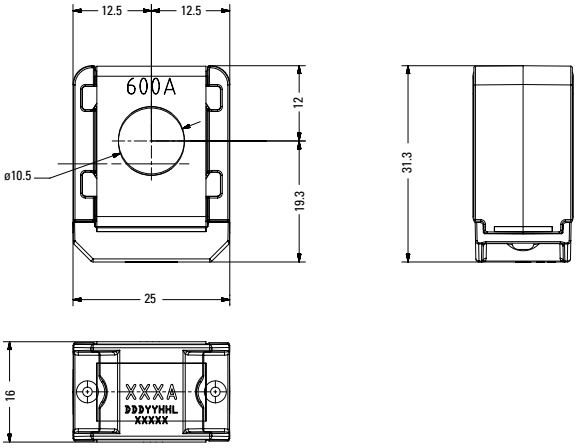
Part number	Current Rating (A)	Test Cable Size (mm²)	Typ. Voltage Drop (mV)	Typ. Cold Resistance (mΩ)	Typ. I²t (A²s)
3998070._	70	10	84	0.88	28,300
3998080._	80	10	95	0.78	32,000
3998100._	100	16	80	0.57	23,200
3998125._	125	16	90	0.46	52,000
3998150._	150	25	78	0.34	81,600
3998160._	160	25	82	0.34	82,800
3998175._	175	25	97	0.29	150,000
3998200._	200	35	94	0.26	165,300
3998225._	225	35	80	0.18	126,900
3998250._	250	50	82	0.17	160,900
3998300._ [2]	300	50	52 [3]	0.14	259,200
3998350._ [2]	350	50	29 [3]	0.10	583,900
3998400._ [2]	400	70	27 [3]	0.08	913,300
3998425._ [1 2]	425	70	30 [3]	0.08	690,200
3998500._ [2]	500	70	59 [3]	0.08	1,384,300
3998600._ [1 2]	600	70	33 [3]	0.05	2,771,800
3998900._ [1]	SHUNT	70	---	0.06	---

* Note 1: Not mentioned in ISO standards
* Note 2: Short Circuit Protector only
* Note 3: Voltage Drop measurements for short circuit protectors taken at 75% of rated current.

The I²t value is calculated from the breaking capacity tests by using the current time profile before the arcing occurs.

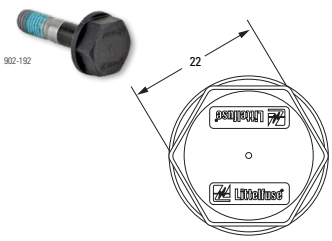
Dimensions

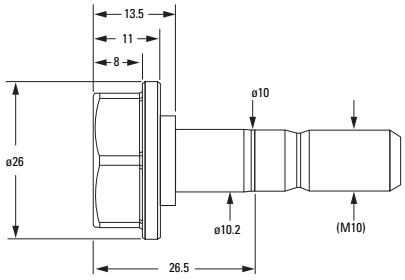
Dimensions in mm for reference only.
See outline drawing for dimensions and tolerances.



Assembly Components Sold Separately

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





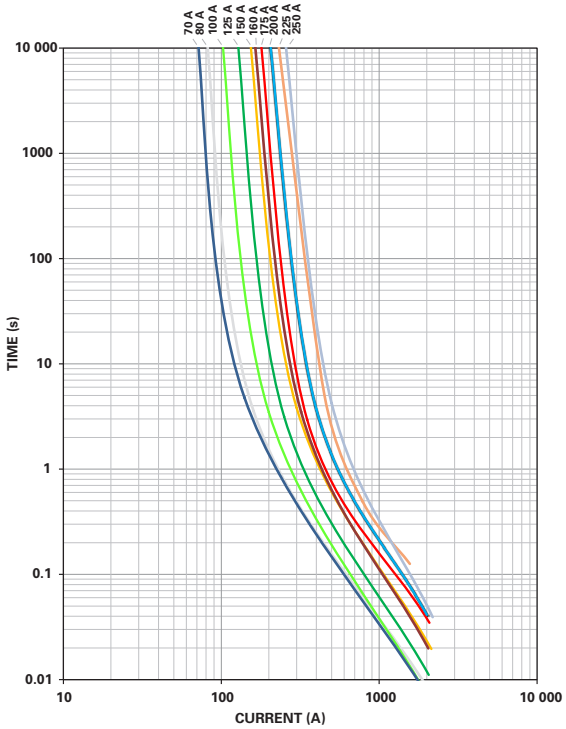
Please contact your Littelfuse representative for application support and information on mating hardware.

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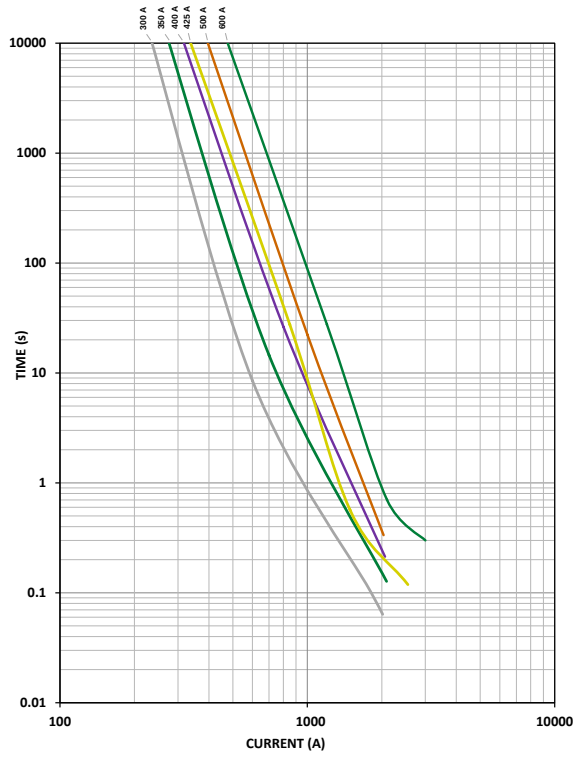
ZCASE® M10 Bolt Down Material Handling

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Time-Current Characteristic



% of Rating	Opening Time Min / Max (s)		
	40–250 A	300–500 A	600 A
75	– / –	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	– / –



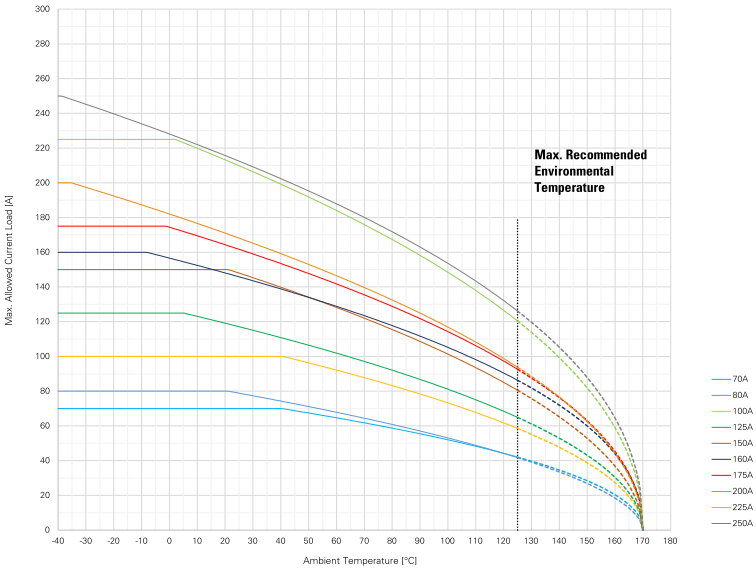
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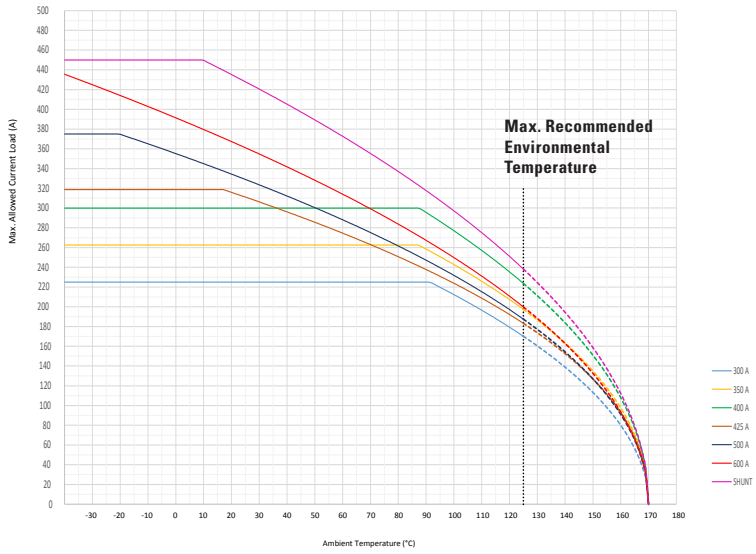
ZCASE® M10 Bolt Down Material Handling

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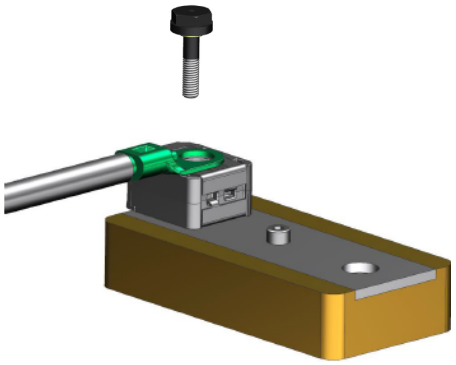
Derating of Fuse Melting Element

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





	Max. allowed current load (A) according to typical derating						
	-40 °C	0 °C	20 °C	65 °C	85 °C	110 °C	125 °C
70 A	70	70	70	63	57	48	41
80 A	80	80	80	66	59	49	42
100 A	100	100	100	90	81	68	59
125 A	125	125	119	100	89	75	65
150 A	150	150	150	125	112	94	81
160 A	160	157	148	126	115	98	86
175 A	175	159	150	128	116	99	87
200 A	200	182	171	143	129	108	94
225 A	225	225	214	181	165	140	123
250 A	250	229	215	181	164	138	120
300 A	225	225	225	225	225	197	170
350 A	263	263	263	263	263	226	197
400 A	300	300	300	300	300	257	224
425 A	319	319	316	269	244	209	183
500 A	375	355	334	282	255	215	188
600 A	436	391	367	307	276	231	200
SHUNT	450	450	435	364	328	275	238



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

All tests were performed mounting the Zcase on the left or right side of the metal bar, as shown in the picture.
A 50mm^2 wire was used as current feed for all the ratings, while the output wire size was according to the table on page 2.

Please contact Littelfuse for details regarding specific applications in vehicle.

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