

Subminiature Fuse, 8.5 mm, Time-Lag T, Telecom, 250 VAC, 63 VDC



IEC 60127-3 · 250 VAC · Time-Lag T

See below:

#### Approvals and Compliances

#### Applications

- xDSL and ADSL linecards and modems

#### References

[Packaging Details](#)

Corresponding Fuseholder

Last order date: 31.12.2016

We recommend for new applications the type [MST 250](#)

MST 250 is fully compatible to MSU 250

#### Weblinks

[pdf data sheet](#), [html datasheet](#), [General Product Information](#), [Packaging details](#), [Distributor-Stock-Check](#), [Detailed request for product](#)

#### Technical Data

|                              |                                                                                                                                                             |
|------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Rated Voltage                | 250 VAC, 63 VDC                                                                                                                                             |
| Rated current                | 0.25 - 3.15 A                                                                                                                                               |
| Breaking Capacity            | 35 A - 50 A                                                                                                                                                 |
| Characteristic               | Time-Lag T                                                                                                                                                  |
| Mounting                     | PCB, THT                                                                                                                                                    |
| Admissible Ambient Air Temp. | -40 °C to 85 °C                                                                                                                                             |
| Climatic Category            | 40/085/21 acc. to IEC 60068-1                                                                                                                               |
| Material: Housing            | Thermoplastic, UL 94V-0                                                                                                                                     |
| Material: Terminals          | Tin-Plated Copper                                                                                                                                           |
| Unit Weight                  | 0.53 g                                                                                                                                                      |
| Storage Conditions           | 0 °C to 40 °C, max. 70% r.h.                                                                                                                                |
| Product Marking              |  Type, Rated current, Rated Voltage, Characteristic, Certification marks |

|                              |                                                                  |
|------------------------------|------------------------------------------------------------------|
| Soldering Methods            | Wave<br><a href="#">Soldering Profile</a>                        |
| Solderability                | 235 °C / 2 sec acc. to IEC 60068-2-20, Test Ta                   |
| Resistance to Soldering Heat | 260 °C / 10 sec acc. to IEC 60068-2-20, Test Tb                  |
| Case Resistance              | acc. to EIA/IS-722, Test 4.7<br>>100 MΩ (between leads and body) |
| Flammability                 | UL 94V-0<br>(acc. to EIA/IS-722, Test 4.12)                      |
| Current Carrying Capacity    | acc. to EIA/IS-722, Test 4.3.3                                   |
| Moisture Resistance Test     | (acc. to EIA/IS-722, Test 4.4.3)                                 |
| Vibration, High Frequency    | MIL-STD-202, Method 204 Condition D                              |
| Mechanical Shock             | (acc. to EIA/IS-722, Test 4.9)                                   |
| Resistance to Solvents       | MIL-STD-202, Method 215                                          |
| Terminal Strength            | Tensile load min. 9 N<br>(acc. to EIA/IS-722, Test 4.5.1)        |

#### Approvals and Compliances

Detailed information on product approvals, code requirements, usage instructions and detailed test conditions can be looked up in [Details about Approvals](#)

SCHURTER products are designed for use in industrial environments. They have approvals from independent testing bodies according to national and international standards. Products with specific characteristics and requirements such as required in the automotive sector according to IATF 16949, medical technology according to ISO 13485 or in the aerospace industry can be offered exclusively with customer-specific, individual agreements by SCHURTER.

## Approvals

The approval mark is used by the testing authorities to certify compliance with the safety requirements placed on electronic products.

Approval Reference Type: MSU 250

| Approval Logo                                                                    | Certificates  | Certification Body | Description                              |
|----------------------------------------------------------------------------------|---------------|--------------------|------------------------------------------|
|  | VDE Approvals | VDE                | VDE Certificate Number: 40013529         |
|  | UL Approvals  | UL                 | UL File Number: E41599                   |
|  | CCC Approvals | CCC                | CCC Certificate Number: 2003010207100519 |

## Product standards

Product standards that are referenced

| Organization                                                                     | Design                | Standard           | Description                                     |
|----------------------------------------------------------------------------------|-----------------------|--------------------|-------------------------------------------------|
|  | Designed according to | UL 248-14          | Low voltage fuses - Part 14: Additional fuses   |
|  | Designed according to | CSA22.2 No. 248.14 | Low-Voltage Fuses - Part 14: Supplemental Fuses |

## Application standards

Application standards where the product can be used

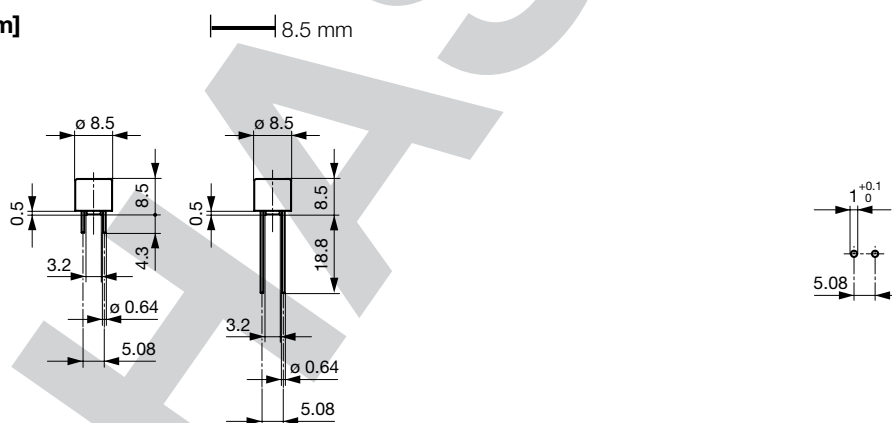
| Organization                                                                     | Design                         | Standard     | Description                                                                                     |
|----------------------------------------------------------------------------------|--------------------------------|--------------|-------------------------------------------------------------------------------------------------|
|  | Designed for applications acc. | IEC/UL 60950 | IEC 60950-1 includes the basic requirements for the safety of information technology equipment. |

## Compliances

The product complies with following Guide Lines

| Identification                                                                     | Details                      | Initiator   | Description                                                                                                                                                                                           |
|------------------------------------------------------------------------------------|------------------------------|-------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | CE declaration of conformity | SCHURTER AG | The CE marking declares that the product complies with the applicable requirements laid down in the harmonisation of Community legislation on its affixing in accordance with EU Regulation 765/2008. |
|  | RoHS                         | SCHURTER AG | Directive RoHS 2011/65/EU, Amendment (EU) 2015/836                                                                                                                                                    |
|  | China RoHS                   | SCHURTER AG | The law SJ / T 11363-2006 (China RoHS) has been in force since 1 March 2007. It is similar to the EU directive RoHS.                                                                                  |
|  | REACH                        | SCHURTER AG | On 1 June 2007, Regulation (EC) No 1907/2006 on the Registration, Evaluation, Authorization and Restriction of Chemicals 1 (abbreviated as "REACH") entered into force.                               |

## Dimension [mm]

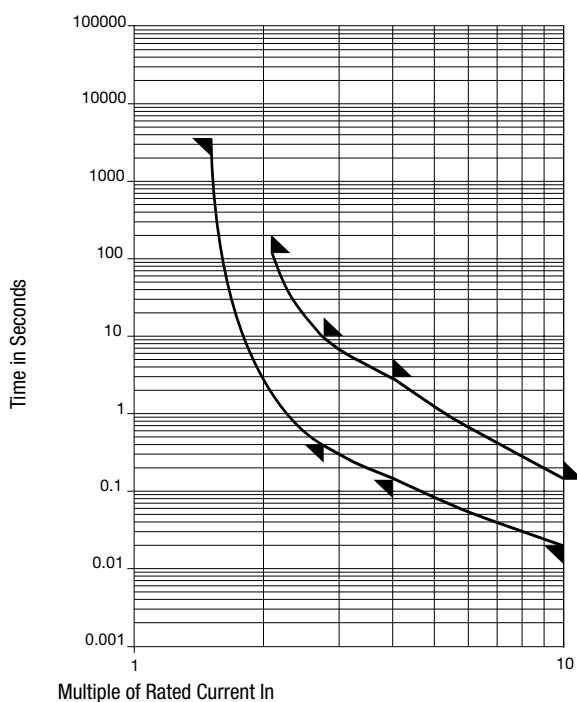


Drilling diagram

## Pre-Arcing Time

| Rated Current In | 1.5 x In min. | 2.1 x In max. | 2.75 x In min. | 2.75 x In max. | 4.0 x In min. | 4.0 x In max. | 10.0 x In min. | 10.0 x In max. |
|------------------|---------------|---------------|----------------|----------------|---------------|---------------|----------------|----------------|
| 0.25 A - 3.15 A  | 60 min        | 120 s         | 400 ms         | 10 s           | 150 ms        | 3 s           | 20 ms          | 150 ms         |

## Time-Current-Curves



## All Variants

| Rated Current [A] | Rated Voltage [VAC] | Voltage Drop 1.0 I <sub>n</sub> typ. [mV] | Power Dissipation 1.5 I <sub>n</sub> typ. [mW] | Melting I <sup>2</sup> t 10.0 I <sub>n</sub> typ. [A <sup>2</sup> s] | GR-1089-CORE [A] | UL60950 | ITU - Lightning Surge [A] | ITU - Power Induc- | ITU - Power Contact [A] | S | L | T | Order Number |
|-------------------|---------------------|-------------------------------------------|------------------------------------------------|----------------------------------------------------------------------|------------------|---------|---------------------------|--------------------|-------------------------|---|---|---|--------------|
| 0.25              | 250                 | 120                                       | 80                                             | 0.6                                                                  | > 14.0           |         | 25.3                      | ●                  | 35.0                    | ● |   |   | 2040.0609    |
| 0.315             | 250                 | 120                                       | 100                                            | 0.8                                                                  | > 14.0           |         | 29.2                      | ●                  | 35.0                    | ● |   |   | 2040.0610    |
| 0.4               | 250                 | 110                                       | 100                                            | 1.1                                                                  | > 14.0           |         | 39.5                      | ●                  | 35.0                    | ● |   |   | 2040.0611    |
| 0.5               | 250                 | 100                                       | 100                                            | 2.5                                                                  | > 14.0           |         | 57                        | ●                  | 35.0                    | ● |   |   | 2040.0612    |
| 0.63              | 250                 | 90                                        | 100                                            | 4                                                                    | > 14.0           |         | 67                        | ●                  | 35.0                    | ● |   |   | 2040.0613    |
| 0.8               | 250                 | 80                                        | 200                                            | 8                                                                    | > 14.0           | ●       | 67                        | ●                  | 35.0                    | ● |   |   | 2040.0614    |
| 1                 | 250                 | 70                                        | 200                                            | 12                                                                   | > 14.0           | ●       | 67                        | ●                  | 35.0                    | ● |   |   | 2040.0615    |
| 1.25              | 250                 | 70                                        | 300                                            | 15                                                                   | > 14.0           | ●       | 67                        | ●                  | 35.0                    | ● |   |   | 2040.0616    |
| 1.6               | 250                 | 60                                        | 300                                            | 30                                                                   | > 14.0           | ●       | 67                        | ●                  | 50.0                    | ● |   |   | 2040.0617    |
| 2                 | 250                 | 60                                        | 300                                            | 34                                                                   | > 14.0           | ●       | 67                        | ●                  | 50.0                    | ● |   |   | 2040.0618    |
| 2.5               | 250                 | 50                                        | 400                                            | 55                                                                   | > 14.0           | ●       | 67                        | ●                  | 50.0                    | ● |   |   | 2040.0619    |
| 3.15              | 250                 | 50                                        | 500                                            | 76                                                                   | > 14.0           | ●       | 67                        | ●                  | 50.0                    | ● |   |   | 2040.0620    |
| 0.25              | 250                 | 120                                       | 80                                             | 0.6                                                                  | > 14.0           |         | 25.3                      | ●                  | 35.0                    |   | ● |   | 2040.0709    |
| 0.315             | 250                 | 120                                       | 100                                            | 0.8                                                                  | > 14.0           |         | 29.2                      | ●                  | 35.0                    |   | ● |   | 2040.0710    |
| 0.4               | 250                 | 110                                       | 100                                            | 1.1                                                                  | > 14.0           |         | 39.5                      | ●                  | 35.0                    |   | ● |   | 2040.0711    |
| 0.5               | 250                 | 100                                       | 100                                            | 2.5                                                                  | > 14.0           |         | 57                        | ●                  | 35.0                    |   | ● |   | 2040.0712    |
| 0.63              | 250                 | 90                                        | 100                                            | 4                                                                    | > 14.0           |         | 67                        | ●                  | 35.0                    |   | ● |   | 2040.0713    |
| 0.8               | 250                 | 80                                        | 200                                            | 8                                                                    | > 14.0           | ●       | 67                        | ●                  | 35.0                    |   | ● |   | 2040.0714    |
| 1                 | 250                 | 70                                        | 200                                            | 12                                                                   | > 14.0           | ●       | 67                        | ●                  | 35.0                    |   | ● |   | 2040.0715    |
| 1.25              | 250                 | 70                                        | 300                                            | 15                                                                   | > 14.0           | ●       | 67                        | ●                  | 35.0                    |   | ● |   | 2040.0716    |
| 1.6               | 250                 | 60                                        | 300                                            | 30                                                                   | > 14.0           | ●       | 67                        | ●                  | 50.0                    |   | ● |   | 2040.0717    |
| 2                 | 250                 | 60                                        | 300                                            | 34                                                                   | > 14.0           | ●       | 67                        | ●                  | 50.0                    |   | ● |   | 2040.0718    |
| 2.5               | 250                 | 50                                        | 400                                            | 55                                                                   | > 14.0           | ●       | 67                        | ●                  | 50.0                    |   | ● |   | 2040.0719    |
| 3.15              | 250                 | 50                                        | 500                                            | 76                                                                   | > 14.0           | ●       | 67                        | ●                  | 50.0                    |   | ● |   | 2040.0720    |
| 0.25              | 250                 | 120                                       | 80                                             | 0.6                                                                  | > 14.0           |         | 25.3                      | ●                  | 35.0                    |   |   | ● | 2040.0809    |
| 0.315             | 250                 | 120                                       | 100                                            | 0.8                                                                  | > 14.0           |         | 29.2                      | ●                  | 35.0                    |   |   | ● | 2040.0810    |
| 0.4               | 250                 | 110                                       | 100                                            | 1.1                                                                  | > 14.0           |         | 39.5                      | ●                  | 35.0                    |   |   | ● | 2040.0811    |

| Rated Current [A] | Rated Voltage [VAC] | Voltage Drop 1.0 I <sub>n</sub> typ. [mV] | Power Dissipation 1.5 I <sub>n</sub> typ. [mW] | Melting I <sup>2</sup> t 10.0 I <sub>n</sub> typ. [A²s] | GR-1089-CORE [A] | UL60950 | ITU - Lightning Surge[A] | ITU - Power Induc- | ITU - Power Contact[A] | S | L | T | Order Number              |
|-------------------|---------------------|-------------------------------------------|------------------------------------------------|---------------------------------------------------------|------------------|---------|--------------------------|--------------------|------------------------|---|---|---|---------------------------|
| 0.5               | 250                 | 100                                       | 100                                            | 2.5                                                     | > 14.0           |         | 57                       | ●                  | 35.0                   |   |   | ● | <a href="#">2040.0812</a> |
| 0.63              | 250                 | 90                                        | 100                                            | 4                                                       | > 14.0           |         | 67                       | ●                  | 35.0                   |   |   | ● | <a href="#">2040.0813</a> |
| 0.8               | 250                 | 80                                        | 200                                            | 8                                                       | > 14.0           | ●       | 67                       | ●                  | 35.0                   |   |   | ● | <a href="#">2040.0814</a> |
| 1                 | 250                 | 70                                        | 200                                            | 12                                                      | > 14.0           | ●       | 67                       | ●                  | 35.0                   |   |   | ● | <a href="#">2040.0815</a> |
| 1.25              | 250                 | 70                                        | 300                                            | 15                                                      | > 14.0           | ●       | 67                       | ●                  | 35.0                   |   |   | ● | <a href="#">2040.0816</a> |
| 1.6               | 250                 | 60                                        | 300                                            | 30                                                      | > 14.0           | ●       | 67                       | ●                  | 50.0                   |   |   | ● | <a href="#">2040.0817</a> |
| 2                 | 250                 | 60                                        | 300                                            | 34                                                      | > 14.0           | ●       | 67                       | ●                  | 50.0                   |   |   | ● | <a href="#">2040.0818</a> |
| 2.5               | 250                 | 50                                        | 400                                            | 55                                                      | > 14.0           | ●       | 67                       | ●                  | 50.0                   |   |   | ● | <a href="#">2040.0819</a> |
| 3.15              | 250                 | 50                                        | 500                                            | 76                                                      | > 14.0           | ●       | 67                       | ●                  | 50.0                   |   |   | ● | <a href="#">2040.0820</a> |

Availability for all products can be searched real-time:<https://www.schurter.com/en/Stock-Check/Stock-Check-SCHURTER>

IEC: 35 A @ 250 VAC

UL: 35 A @ 250 VAC / 50 A @ 63 VDC

|                |     |                             |
|----------------|-----|-----------------------------|
| Packaging Unit | S = | Plastic Bag (100 pcs.)      |
|                | L = | Bulk (100 pcs.)             |
|                | T = | Taped 36 cm Reel (750 pcs.) |