

Solid State, Thin Film, SMD 3220 Fuse for High Current Application



IEC 60127-7 · 125VAC · 125VDC · Quick-Acting F

See below:  
[Approvals and Compliances](#)

### Description

- IEC Approved
- For high current applications
- Max. ambient temperature 125 °C
- Impermeable to potting compound used to achieve hermetic seal for use in intrinsically safe applications according to ATEX and IECEx requirements.

### Unique Selling Proposition

- Sealed and robust construction
- High breaking capacity up to 1000 A
- Smallest size

### Applications

- Applications where high reliability and availability is required
- Avionics
- Medical Equipment
- Offshore
- Defense

### References

Alternative: Space version

### Weblinks

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

### Technical Data

|                          |                                   |
|--------------------------|-----------------------------------|
| Rated Voltage            | 125VAC, 125VDC                    |
| Rated current            | 5 - 15 A                          |
| Breaking Capacity        | 200A - 1000A                      |
| Characteristic           | Quick-Acting F                    |
| Mounting                 | PCB,SMT                           |
| Admissible Ambient Temp. | -50°C to 125°C                    |
| Climatic Category        | 55/125/56 acc. to IEC 60068-1     |
| Material: Housing        | Ceramics                          |
| Material: Terminals      | Copper alloy, tin-plated          |
| Unit Weight              | 0.8 g                             |
| Storage Conditions       | 0°C to 60°C, max. 70% r.h.        |
| Product Marking          | Variant Code, Certification marks |

|                              |   |
|------------------------------|---|
| Soldering Methods            | Reflow, Wave<br><a href="#">Soldering Profile</a>               |
| Solderability                | 245 °C / 3 sec acc. to IEC 60068-2-58                           |
| Resistance to Soldering Heat | 260 °C / 10 sec acc. to IEC 60068-2-58, Test Td                 |
| Damp heat, steady state      | IEC 60068-2-78 (40°C, 93% RH, 56 days)                          |
| Thermal Shock                | IEC 60068-2-14<br>(200 air-to-air cycles from -55 to +150°C)    |
| Operational Life             | MIL-STD-202, Method 108 Condition F<br>2000h @ 0.8 x In @ 125°C |
| Vibration, High Frequency    | IEC 60068-2-6<br>Shock 20 g, 20 min, 10-2000 Hz, 12 cyc.        |
| Mechanical Shock             | IEC 60068-2-27<br>(12 shocks, 1600 g, 0.5 ms)                   |
| Board Flex                   | EIA/IS-722, Test 4.5.5  |

### 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: HCF

| Approval Logo | Certificates                  | Certification Body | Description                      |
|---------------|-------------------------------|--------------------|----------------------------------|
|               | <a href="#">VDE Approvals</a> | VDE                | VDE Certificate Number: 40046597 |
|               | <a href="#">UL Approvals</a>  | UL                 | UR File Number: E41599           |


**Product standards**

Product standards that are referenced

| Organization   | Design                | Standard           | Description   |
|--|-----------------------|--------------------|---|
|  | Designed according to | IEC 60127-7        | Miniature fuses - Part 7: Miniature fuse-links for special applications |
|  | Designed according to | UL 248-14          | Low voltage fuses - Part 14: Supplemental 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   |
|--|--------------------------------|----------------|---|
|  | Suitable for applications acc. | IEC/UL 62368-1 | Audio/video, information and communication technology equipment - Part 1: Safety requirements |

**Compliances**

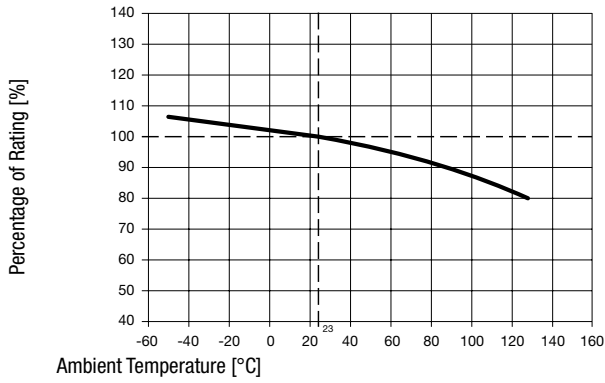
The product complies with following Guide Lines

| Identification   | Details  | Initiator   | Description   |
|--|--|-------------|---|
|    | <a href="#">CE declaration of conformity</a>   | 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. |
|    | <a href="#">UKCA declaration of conformity</a> | SCHURTER AG | The UKCA marking declares that the product complies with the applicable requirements laid down in the British Amendment of Regulation (EC) 765/2008.  |
|    | RoHS   | SCHURTER AG | Directive RoHS 2011/65/EU, Amendment (EU) 2015/863  |
|   | 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.  |
|  | Halogen Free                                   | SCHURTER AG | SCHURTER strives to offer our customers halogen free products.  |
|  | 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]**



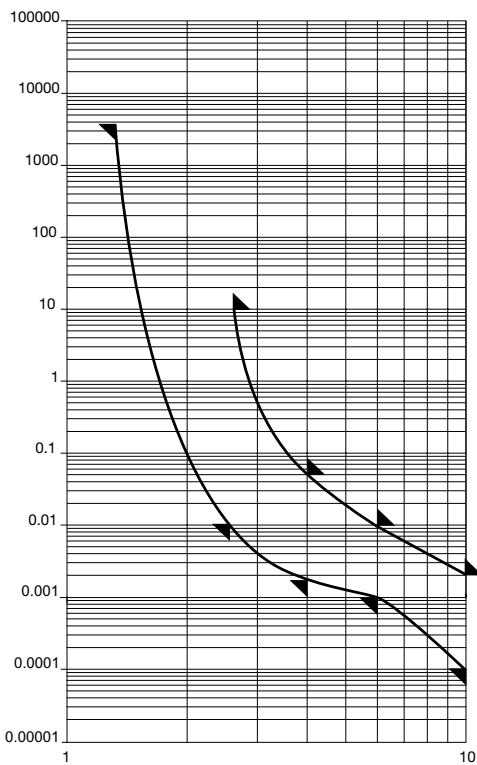
### Derating Curves




### Pre-Arcing Time

| Rated Current I <sub>n</sub> | 1.25 x I <sub>n</sub> min. | 2.5 x I <sub>n</sub> min. | 2.5 x I <sub>n</sub> max. | 4.0 x I <sub>n</sub> min. | 4.0 x I <sub>n</sub> max. | 6.0 x I <sub>n</sub> min. | 6.0 x I <sub>n</sub> max. | 10.0 x I <sub>n</sub> min. | 10.0 x I <sub>n</sub> max. |
|------------------------------|----------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|----------------------------|----------------------------|
| 5 A - 15 A                   | > 1 h                      | 10 ms                     | 10 s                      | 2 ms                      | 50 ms                     | 1 ms                      | 10 ms                     | 0.1 ms                     | 2 ms                       |

### Time-Current-Curves




### All Variants

| Rated Current [A] | Rated Voltage [VAC] | Rated Voltage [VDC] | Breaking Capacity | Voltage Drop 1.0 I <sub>n</sub> typ. [mV] | Cold Resistance typ. [mΩ] | Melting I <sup>2</sup> t 10.0 I <sub>n</sub> typ. [A <sup>2</sup> s] |  | Order Number |
|-------------------|---------------------|---------------------|-------------------|---|---------------------------|--|---|--------------|
| 5                 | 125                 | 125                 | 1)                | 90  | 14.2                      | 1.75   | ● ●   | 3-101-056    |
| 7.5               | 125                 | 125                 | 1)                | 90  | 9.5                       | 5.6  | ● ●   | 3-101-050    |
| 10                | 125                 | 125                 | 1)                | 105                                       | 8.2                       | 11   | ● ●   | 3-101-051    |
| 15                | 125                 | 125                 | 2)                | 86  | 4.3                       | 28   | ●   | 3-101-062    |

Availability for all products can be searched real-time: <https://www.schurter.com/en/info-center/support-tools/stock-check-distributors>

1) 200 A @ 125 VAC, p.f. > 0.999 / 1000 A @ 125 VDC, L/R < 1 ms

| Rated Current [A] | Rated Voltage [VAC] | Rated Voltage [VDC] | Breaking Capacity | Voltage Drop<br>1.0 I <sub>n</sub> typ.<br>[mV] | Cold Resistance typ.<br>[mΩ] | Melting I <sup>2</sup> t<br>10.0 I <sub>n</sub> typ.<br>[A <sup>2</sup> s] |  | Order Number |
|-------------------|---------------------|---------------------|-------------------|---|------------------------------|--|---|--------------|
|-------------------|---------------------|---------------------|-------------------|---|------------------------------|--|---|--------------|

2) 200 A @ 125 VAC, p.f. > 0.999 / 500 A @ 125 VDC, L/R < 1 ms

**Packaging Unit**

acc. IEC 60286-3 Type 2a

100 pcs. in Blister Tape [W: 16mm and P1: 8mm] on Reel [A: 18cm] in ESD Plastic Bag