

Surface Mount Fuse, 5.3 x 16 mm, Time-Lag T, 277 VAC / 250 VDC, Breaking Capacity 1500 A



SMD fuse UMT-H

UL 248-14 · 277 VAC · 250 VDC · Time-Lag T

See below:

[Approvals and Compliances](#)

Description

- 26 rated currents from 160 mA to 50 A
- Square design: 5.3 x 16
- Impermeable to potting compound used to achieve hermetic seal for use in intrinsically safe applications according to ATEX and IECEx requirements.

Unique Selling Proposition

- High breaking capacity up to 1500 A
- High rated voltages up to 277 VAC / 250 VDC
- Compact design
- Suitable for pulse-shaped continuous currents

Applications

- Primary protection on SMD PCBs
- Sensors
- Power supplies
- Intrinsically Safe
- Illumination
- Battery protection

References


Fuse Kit [Fuse Kit UMT-H](#)

Weblinks

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

[Application Note Primary Protection in Equipment](#) with further information on increased [Pulse Strength](#) and their test conditions according to international standards see [Impulse Withstand Voltage](#)

Technical Data

| | |
|--------------------------|--|
| Rated Voltage | 250 - 277 VAC, 72 - 250 VDC |
| Rated current | 0.16 - 50 A |
| Breaking Capacity | 100-1500 A |
| Characteristic | Time-Lag T |
| Mounting | PCB, SMT |
| Admissible Ambient Temp. | -55 °C to 125 °C |
| Climatic Category | 55/125/21 acc. to IEC 60068-1 |
| Material: Housing | Ceramics |
| Material: Terminals | Ni/Sn-Plated Copper Alloy |
| Unit Weight | 1.42 g |
| Storage Conditions | 0 °C to 40 °C, max. 70% r.h. |
| Product Marking |  Rated current, Voltage, Characteristic, Breaking Capacity, Approvals |

| | |
|------------------------------|---|
| Soldering Methods | Reflow Soldering Profile |
| 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 |
| Moisture Sensitivity Level | MSL 1, J-STD-020 |
| Moisture Resistance Test | MIL-STD-202, Method 106 (acc. to EIA/IS-722, Test 4.4.3) |
| Operational Life | 1000h @ 0.60 x In @ 70 °C (acc. to EIA/IS-722, Test 4.4.1) |
| Mechanical Shock | MIL-STD-202, Method 213 Condition A |
| Resistance to Solvents | MIL-STD-202, Method 215 (EIA-722, 4.11) |
| Terminal Strength | (Deflection of board 1 mm for 1 minute) (acc. to 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: UMT-H

| Approval Logo | Certificates | Certification Body | Description |
|--|-------------------------------|--------------------|--|
|  | VDE Approvals | VDE | VDE Certificate Number: 40039476 |
|  | UL Approvals | UL | UR File Number: E41599 |
|  | CQC Approvals | CQC | CQC Certificate Number: CQC20012265448 |

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 |








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 |

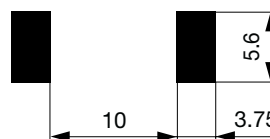
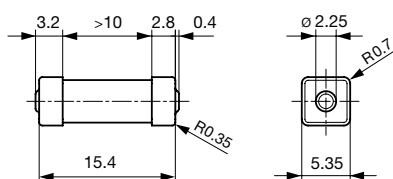
Compliances

The product complies with following Guide Lines

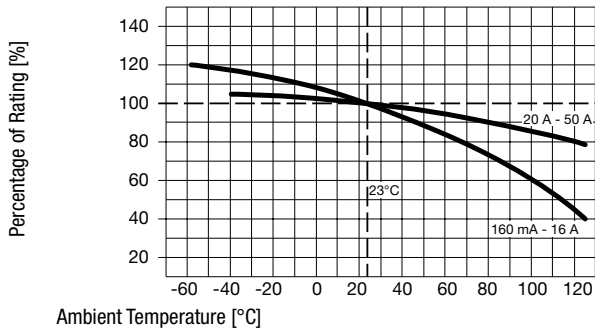
| Identification | Details | Initiator | Description |
|--|--|-------------|---|
|  | CE declaration of conformity | SCHURTER AG | The CE marking declares that the product complies with the applicable requirements laid down in the harmonisation of Community legislation on its affixing in accordance with EU Regulation 765/2008. |
|  | UKCA declaration of conformity | 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. |
|  | Automotive | SCHURTER AG | AEC-Q200 is a test standard for passive components used in automotive applications. SCHURTER tests components according to the customer's agreement and is certified according to IATF 16949. |

Dimension [mm]

Soldering pads



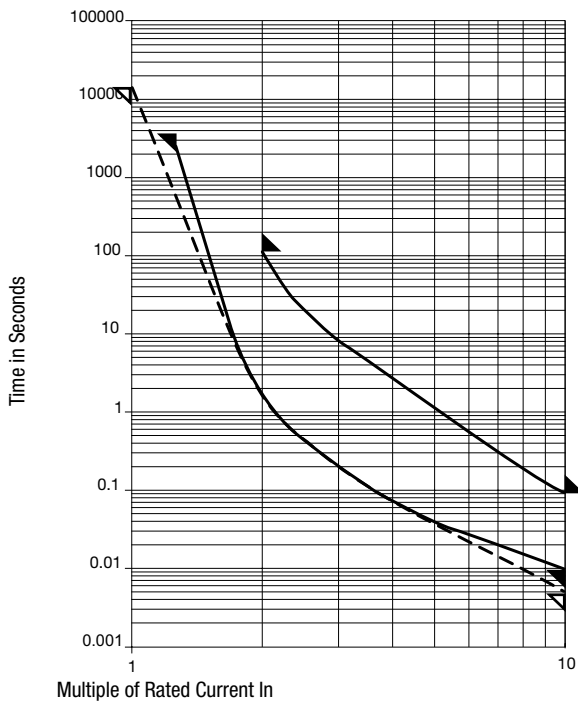
Derating Curves



Pre-Arcing Time


| Rated Current I_n | 1.0 x I_n min. | 1.25 x I_n min. | 2.0 x I_n max. | 2.5 x I_n max. | 10.0 x I_n min. | 10.0 x I_n max. |
|---------------------|------------------|-------------------|------------------|------------------|-------------------|-------------------|
| 0.160 A - 12.5 A | - | 60 min | 120 s | - | 10 ms | 100 ms |
| 16 A | 4 h | - | 120 s | - | 10 ms | 100 ms |
| 20 A - 50 A | 4 h | - | - | 120 s | 5 ms | 100 ms |

Time-Current-Curves



All Variants

| Rated Current [A] | Rated Voltage [VAC] | Rated Voltage [VDC] | Breaking Capacity | Voltage Drop 1.0 I_n typ. [mV] | Power Dissipation 1.25 I_n typ. [mW] | Melting I^2t 10.0 I_n typ. [A ² s] | | Order Number |
|-------------------|---------------------|---------------------|-------------------|----------------------------------|--|---|-----|--------------|
| 0.16 | 277 | 250 | 1) | 1680 | 410 | 0.055 | ● ● | 3403.0266.11 |
| 0.16 | 277 | 250 | 1) | 1680 | 410 | 0.055 | ● ● | 3403.0266.23 |
| 0.2 | 277 | 250 | 1) | 1330 | 425 | 0.09 | ● ● | 3403.0267.11 |
| 0.2 | 277 | 250 | 1) | 1330 | 425 | 0.09 | ● ● | 3403.0267.23 |
| 0.25 | 277 | 250 | 1) | 1120 | 450 | 0.15 | ● ● | 3403.0268.11 |
| 0.25 | 277 | 250 | 1) | 1120 | 450 | 0.15 | ● ● | 3403.0268.23 |

| Rated Current [A] | Rated Voltage [VAC] | Rated Voltage [VDC] | Breaking Capacity | Voltage Drop 1.0 I _n typ. [mV] | Power Dissipation 1.25 I _n typ. [mW] | Melting I ² t 10.0 I _n typ. [A ² s] |  | | | Order Number |
|-------------------|---------------------|---------------------|-------------------|---|---|--|--|---|---|--------------|
| 0.315 | 277 | 250 | 1) | 880 | 460 | 0.24 | ● | ● | | 3403.0269.11 |
| 0.315 | 277 | 250 | 1) | 880 | 460 | 0.24 | ● | ● | | 3403.0269.23 |
| 0.4 | 277 | 250 | 1) | 810 | 520 | 0.44 | ● | ● | | 3403.0270.11 |
| 0.4 | 277 | 250 | 1) | 810 | 520 | 0.44 | ● | ● | | 3403.0270.23 |
| 0.5 | 277 | 250 | 1) | 710 | 550 | 0.62 | ● | ● | | 3403.0271.11 |
| 0.5 | 277 | 250 | 1) | 710 | 550 | 0.62 | ● | ● | | 3403.0271.23 |
| 0.63 | 277 | 250 | 1) | 530 | 570 | 1.28 | ● | ● | | 3403.0272.11 |
| 0.63 | 277 | 250 | 1) | 530 | 570 | 1.28 | ● | ● | | 3403.0272.23 |
| 0.8 | 277 | 250 | 1) | 450 | 610 | 2.2 | ● | ● | | 3403.0273.11 |
| 0.8 | 277 | 250 | 1) | 450 | 610 | 2.2 | ● | ● | | 3403.0273.23 |
| 1 | 277 | 250 | 1) | 420 | 710 | 3.6 | ● | ● | | 3403.0274.11 |
| 1 | 277 | 250 | 1) | 420 | 710 | 3.6 | ● | ● | | 3403.0274.23 |
| 1.25 | 277 | 250 | 1) | 330 | 735 | 4.05 | ● | ● | | 3403.0275.11 |
| 1.25 | 277 | 250 | 1) | 330 | 735 | 4.05 | ● | ● | | 3403.0275.23 |
| 1.6 | 277 | 250 | 1) | 270 | 810 | 4.66 | ● | ● | | 3403.0276.11 |
| 1.6 | 277 | 250 | 1) | 270 | 810 | 4.66 | ● | ● | | 3403.0276.23 |
| 2 | 277 | 250 | 1) | 230 | 850 | 9.6 | ● | ● | | 3403.0277.11 |
| 2 | 277 | 250 | 1) | 230 | 850 | 9.6 | ● | ● | | 3403.0277.23 |
| 2.5 | 277 | 125 | 2) | 205 | 940 | 24 | ● | ● | ● | 3403.0278.11 |
| 2.5 | 277 | 125 | 2) | 205 | 940 | 24 | ● | ● | ● | 3403.0278.23 |
| 3.15 | 277 | 125 | 2) | 175 | 990 | 39 | ● | ● | ● | 3403.0279.11 |
| 3.15 | 277 | 125 | 2) | 175 | 990 | 39 | ● | ● | ● | 3403.0279.23 |
| 4 | 277 | 125 | 2) | 140 | 1015 | 52 | ● | ● | ● | 3403.0280.11 |
| 4 | 277 | 125 | 2) | 140 | 1015 | 52 | ● | ● | ● | 3403.0280.23 |
| 5 | 277 | 125 | 2) | 115 | 1055 | 100 | ● | ● | | 3403.0281.11 |
| 5 | 277 | 125 | 2) | 115 | 1055 | 100 | ● | ● | | 3403.0281.23 |
| 6.3 | 277 | 125 | 2) | 105 | 1280 | 190 | ● | ● | | 3403.0282.11 |
| 6.3 | 277 | 125 | 2) | 105 | 1280 | 190 | ● | ● | | 3403.0282.23 |
| 8 | 250 | 125 | 3) | 79 | 1250 | 95 | ● | ● | | 3403.0283.11 |
| 8 | 250 | 125 | 3) | 79 | 1250 | 95 | ● | ● | | 3403.0283.23 |
| 10 | 250 | 125 | 3) | 73 | 1220 | 180 | ● | ● | | 3403.0284.11 |
| 10 | 250 | 125 | 3) | 73 | 1220 | 180 | ● | ● | | 3403.0284.23 |
| 12.5 | 250 | 125 | 4) | 63 | 1490 | 340 | ● | ● | | 3403.0285.11 |
| 12.5 | 250 | 125 | 4) | 63 | 1490 | 340 | ● | ● | | 3403.0285.23 |
| 16 | 250 | 125 | 5) | 65 | - | 650 | ● | ● | | 3403.0286.11 |
| 16 | 250 | 125 | 5) | 65 | - | 650 | ● | ● | | 3403.0286.23 |
| 20 | 125 | 72 | 6) | 76 | - | 445 | | ● | | 3403.0287.11 |
| 20 | 125 | 72 | 6) | 76 | - | 445 | | ● | | 3403.0287.23 |
| 25 | 125 | 72 | 6) | 64 | - | 1170 | | ● | | 3403.0288.11 |
| 25 | 125 | 72 | 6) | 64 | - | 1170 | | ● | | 3403.0288.23 |
| 30 | 125 | 72 | 6) | 64 | - | 1650 | | ● | | 3403.0289.11 |
| 30 | 125 | 72 | 6) | 64 | - | 1650 | | ● | | 3403.0289.23 |
| 40 | 125 | 72 | 7) | 61 | - | 3620 | | ● | | 3403.0290.11 |
| 40 | 125 | 72 | 7) | 61 | - | 3620 | | ● | | 3403.0290.23 |
| 50 | 125 | 72 | 7) | 61 | - | 6980 | | ● | | 3403.0291.11 |
| 50 | 125 | 72 | 7) | 61 | - | 6980 | | ● | | 3403.0291.23 |

Most Popular.

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

- 1) UL = 1500 A @ 277 VAC, resistive / 1500 A @ 250 VDC
- 1) IEC = 1500 A @ 250 VAC, resistive / 1500 A @ 250 VDC
- 2) UL = 1500 A @ 277 VAC, resistive / 1500 A @ 125 VDC
- 2) IEC = 1500 A @ 250 VAC, resistive / 1500 A @ 125 VDC

| Rated Current [A] | Rated Voltage [VAC] | Rated Voltage [VDC] | Breaking Capacity | Voltage Drop 1.0 I _n typ. [mV] | Power Dissipation 1.25 I _n typ. [mW] | Melting I²t 10.0 I _n typ. [A²s] | Order Number |
|--|---------------------|---------------------|-------------------|---|---|--|--------------|
| 3) UL = 1500 A @ 250 VAC, resistive / 1500 A @ 125 VDC | | | | | | | |
| 3) IEC = 1500 A @ 250 VAC, resistive / 1500 A @ 125 VDC | | | | | | | |
| 4) UL = 1000 A @ 250 VAC, resistive / 1000 A @ 125 VDC | | | | | | | |
| 4) IEC = 1000 A @ 250 VAC, resistive / 1000 A @ 125 VDC | | | | | | | |
| 5) UL = 500 A @ 250 VAC, resistive / 500 A @ 125 VDC | | | | | | | |
| 5) IEC = 500 A @ 250 VAC, resistive / 500 A @ 125 VDC | | | | | | | |
| 6) UL = 100 A @ 250 VAC, resistive / 500 A @ 125 VAC, resistive / 500 A @ 72 VDC | | | | | | | |
| 7) UL = 500 A @ 125 VAC, resistive / 500 A @ 72 VDC | | | | | | | |

All measurements are carried out on a test board according to IEC 60127 with the following tracks:

- 125 mA to 5 A: Track width 5.0 mm, Cu layer 35 µm
- 6.3 A to 8 A: Track width 7.5 mm, Cu layer 70 µm
- 10 A, 12.5 A: Track width 7.5 mm, Cu layer 140 µm
- 16 A, 20 A: Track width 10 mm, Cu layer 140 µm
- 25 A: Track width 15 mm, Cu layer 140 µm
- 30 A to 50 A: Track width 20 mm, Cu layer 210 µm

| Packaging Unit | .xx = .11 | 100 pcs in ESD-plastic bag |
|--------------------------|-----------|---|
| acc. IEC 60286-3 Type 2a | .xx = .23 | 1500 pcs. in tape [W: 24mm and P1: 8mm] on reel [A: 33cm] |