Circuit Breaker for Equipment thermal, Snap-in type, Fuseholder style, 1 pole



#### See below:

# **Approvals and Compliances**

#### Description

- Snap-in type from front side (0.8...2.0mm)
- Thermal circuit breaker
- 1-pole
- On request available with elevaled glow-wire ratings
- Quick connect terminals 6.3 x 0.8 mm

# **Unique Selling Proposition**

- Reset type
- Cycling trip-free release
- Compact design
- Different mounting possibilities

## **Applications**

- Power supplies
- Uninterruptible power supply
- Power tools
- Industrial appliances
- HVAC
- Household appliances

#### Weblinks

pdf datasheet, html-datasheet, General Product Information, Distributor-Stock-Check, Detailed request for product, Product News

#### **Technical Data**

| Rated Voltage AC                | 240 V, 50 / 60 Hz                      |
|---------------------------------|--|
| Rated Voltage DC                | 48 / 32 V, see approvals               |
| Rated current                   | 3-16 A, see approbations               |
| Conditional short circuit ca-   | IEC: Inc, PC1, AC 240 V: 2 kA          |
| pacity                          |  |
|                                 | UL / CSA: SC, AC 240 V DC 48 / 32 V:   |
|                                 | 2 kA, C1                               |
| Degree of protection front side | IP 40                                  |
| Endurance minimum               | IEC: 200% Ir, cos φ 0.6: min. 50 swit- |
|                                 | ching cycles                           |
| Endurance typical               | 3-8 A: 150% lr, cos φ 0.9:             |
|                                 | 2500 switching cycles                  |
|                                 | 10-16 A: 150% lr, cos φ 0.9:           |
|                                 | 6000 switching cycles                  |
| Dielectric Strength             | 1500 VAC                               |
| Insulation Resistance           | 500 VDC > 1000 MΩ                      |
|                                 |  |

| Ambient temperature | 3 A: -5 °C to 60 °C    |
|---------------------|------------------------|
|                     | 4 A: -5°C to 50 °C     |
|                     | 5-16 A: -5 °C to 60 °C |
| Weight              | 9 - 13 g               |

## **Approvals and Compliances**

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

### **Approvals**

The approval mark is used by the testing authorities to certify compliance with the safety requirements placed on electronic products. Approval Reference Type: T9

| Approval Logo   | Certificates  | Certification Body | Description                              |
|-----------------|---------------|--------------------|--|
|                 | VDE Approvals | VDE                | VDE Certificate Number: 40038016         |
| c <b>FU</b> °us | UL Approvals  | UL                 | UL File Number: E71572                   |
| <b>(1)</b>      | CQC Approvals | CQC                | CCC Certificate Number: 2013010307617688 |

### **Product standards**

Product standards that are referenced

| Organization | Design                | Standard          | Description   |
|--------------|-----------------------|-------------------|---|
| <u>IEC</u>   | Designed according to | IEC 60934         | Circuit-breakers for equipment (CBE)                                  |
| (I)          | Designed according to | UL 1077           | Standard for Supplementary Protectors for Use in Electrical Equipment |
| CSA<br>Group | Designed according to | CSA C22.2 No. 235 | Supplementary Protectors  |
| (III)        | Designed according to | GB 17701          | Circuit-breaker for equipment   |

# **Application standards**

Application standards where the product can be used

| Organization | Design                         | Standard     | Description  |
|--------------|--------------------------------|--------------|--|
| <u>IEC</u>   | Designed for applications acc. | IEC/UL 60950 | IEC 60950-1 includes the basic requirements for the safety of information technology<br>equipment. $\label{eq:continuous}$ |

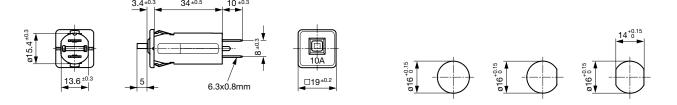
# Compliances

The product complies with following Guide Lines

| Identification | Details                      | Initiator   | Description   |
|----------------|------------------------------|-------------|---|
| C€             | 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           | RoHS                         | SCHURTER AG | EU Directive RoHS 2011/65/EU  |
| <b>©</b>       | 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          | REACH                        | SCHURTER AG | On 1 June 2007, Regulation (EC) No 1907/2006 on the Registration,<br>Evaluation, Authorization and Restriction of Chemicals 1 (abbreviated as<br>"REACH") entered into force.                         |

# Dimension [mm]

T9-611



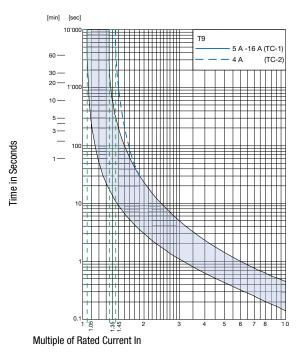
Pannel thickness s = 0.8 - 2.0 mm

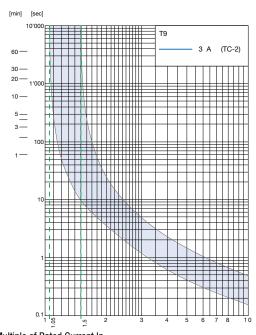
| Approval        |              | Rated current         | Rated voltage AC | Rated voltage DC |
|-----------------|--------------|-----------------------|------------------|------------------|
| c <b>FL</b> °us | UL 1077      | 3 - 12 A<br>14 - 16 A | 240 V<br>240 V   | 48 V<br>32 V     |
| c <b>SU</b> °us | CSA 22.2 235 | 3 - 12 A<br>14 - 16 A | 240 V<br>240 V   | 48 V<br>32 V     |
| DV <sub>E</sub> | IEC 60934    | 3 - 12 A<br>14 - 16 A | 240 V<br>240 V   | 48 V<br>32 V     |
| (*)             | GB 17701     | 3 - 12 A<br>14 - 16 A | 240 V<br>240 V   | 48 V<br>32 V     |

#### Typical internal resistance

| Rated Current [A] | Internal Resistance [mΩ] |
|-------------------|--------------------------|
| 3                 | 65.0                     |
| 4                 | 21.6                     |
| 5                 | 23.6                     |
| 6                 | 16.3                     |
| 7                 | 15.3                     |
| 8                 | 12.9                     |
| 10                | 7.3                      |
| 12                | 7.0                      |
| 14                | 4.8                      |
| 15                | 4.3                      |
| 16                | 3.9                      |

#### **Time-Current-Curves**





Reference Temperature +23°

Multiple of Rated Current In

Time in Seconds

Reference Temperature +23°

## Effect of ambient temperature

The units are calibrated for an ambient temperature of +23°C. To determine the rated current for a lower or higher ambient temperature, use a correction factor (typical value) from the table below:

| Ambient temperature [°C] | Correction factor |
|--------------------------|-------------------|
| -5                       | 0,85              |
| +10                      | 0,95              |
| +23                      | 1,00              |
| +40                      | 1,08              |
| +60                      | 1,21              |

Example: Rated current = 10 A; Environmental temperature = 60 °C; --> Correction factor = 1.21; Resulting current = 12.1 A --> Fount to next higher rated current: 13 A

#### **Accessory**

| Part Number | Туре      | Resources / Description                |
|-------------|-----------|--|
| 4404.0039   | TZZ31     | Protection cover for IP 65             |
| 4400.0420   | TZZ11     | Knurled nut nickel-plated              |
| 4400.0559   | TZZ11-414 | Knurled nut black                      |
| 4400.0425   | TZZ12     | Additional hexagonal nut nickel-plated |
| 4404.0072   | TZZ51     | Additional hexagonal nut PA 66         |

### **Variants**

| Mounting                         | Front printing                             | Rated current | Order Number |
|----------------------------------|--|---------------|--------------|
| Snap-in mounting from front side | Rated current printed on front             | 3.0 A         | 4404.0018    |
| Snap-in mounting from front side | Rated current printed on front             | 4.0 A         | 4404.0001    |
| Snap-in mounting from front side | Rated current printed on front             | 5.0 A         | 4404.0007    |
| Snap-in mounting from front side | Rated current printed on front             | 6.0           | 4404.0002    |
| Snap-in mounting from front side | Rated current printed on front             | 7.0 A         | 4404.0009    |
| Snap-in mounting from front side | Rated current printed on front             | 8.0 A         | 4404.0003    |
| Snap-in mounting from front side | Rated current printed on front             | 10.0 A        | 4404.0004    |
| Snap-in mounting from front side | Rated current printed on front             | 12.0 A        | 4404.0005    |
| Snap-in mounting from front side | Rated current printed on front             | 14.0 A        | 4404.0008    |
| Snap-in mounting from front side | Rated current printed on front             | 15.0 A        | 4404.0010    |
| Snap-in mounting from front side | Rated current printed on front             | 16.0 A        | 4404.0006    |
| Snap-in mounting from front side | Rated current printed on front 90° shifted | 4.0 A         | 4404.0066    |
| Snap-in mounting from front side | Rated current printed on front 90° shifted | 5.0 A         | 4404.0067    |
| Snap-in mounting from front side | Rated current printed on front 90° shifted | 6.0           | 4404.0068    |
| Snap-in mounting from front side | Rated current printed on front 90° shifted | 8.0 A         | 4404.0069    |
| Snap-in mounting from front side | Rated current printed on front 90° shifted | 15.0 A        | 4404.0071    |
| Snap-in mounting from front side | Rated current not printed on front         | 3.0 A         | 4404.0088    |
| Snap-in mounting from front side | Rated current not printed on front         | 4.0 A         | 4404.0089    |
| Snap-in mounting from front side | Rated current not printed on front         | 5.0 A         | 4404.0090    |
| Snap-in mounting from front side | Rated current not printed on front         | 6.0           | 4404.0091    |
| Snap-in mounting from front side | Rated current not printed on front         | 7.0 A         | 4404.0065    |
| Snap-in mounting from front side | Rated current not printed on front         | 8.0 A         | 4404.0092    |
| Snap-in mounting from front side | Rated current not printed on front         | 10.0 A        | 4404.0093    |
| Snap-in mounting from front side | Rated current not printed on front         | 12.0 A        | 4404.0063    |
| Snap-in mounting from front side | Rated current not printed on front         | 14.0 A        | 4404.0094    |
| Snap-in mounting from front side | Rated current not printed on front         | 15.0 A        | 4404.0095    |
| Snap-in mounting from front side | Rated current not printed on front         | 16.0 A        | 4404.0087    |

Most Popular.

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**Packaging Unit** 

100 Pcs