Circuit Breaker for Equipment thermal, Snap-in type, Reset type, Quick connect terminals



#### See below:

### **Approvals and Compliances**

### **Description**

- Snap-in version
- Thermal circuit breaker
- 1-pole
- Reset type
- Quick connect terminals 6.3 x 0.8 mm

### **Unique Selling Proposition**

- Compact design
- Positively trip-free release
- Available with cover
- Different mounting possibilities

### **Applications**

- Power tools
- Household Equipment
- Power supplies and chargers
- Industrial appliances

#### Weblinks

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

### **Technical Data**

| Rated Voltage AC                       | AC 240 VAC  |
|--|---|
| Rated Voltage DC                       | 48 VDC  |
| Rated current range AC                 | 0.05 - 16 A   |
| Conditional short circuit capacity Inc | IEC 60934: PC1, AC 240 V: 2 kA  |
| Short circuit capacity Icn             | IEC 60934: at ln < 6.5 A/240 VAC : 8 x ln   |
|  | IEC 60934: at ln ≥ 6.5 A/240 VAC : 96 A   |
| Degree of Protection                   | from front side IP40 acc. to IEC 60529  |
| Dielectric Strength                    | 50 Hz: > 1.5 kV   |
|  | Impulse 1.2/50 µs: > 2.5 kV   |
| Insulation Resistance                  | $500\text{VDC} > 100\text{M}\Omega$   |
| Endurance typical                      | 2 x Ir: 500 switching cycles  |
| Endurance minimum                      | Reset type AC: $2 \times Ir$ , $\cos \varphi$ 0.6: DC: $2 \times Ir$ , $L/R = 2 - 3 \text{ ms}$ : 50 switching cycles |

| Overload                  | IEC: min. 40 trips              |
|---------------------------|---------------------------------|
|                           | @ 6 x lr, cos φ 0.6             |
|                           | UL / CSA: min. 50 trips         |
|                           | @ 1.5 x lr, cos φ 0.75          |
| Allowable Operation Temp. | -5°C to 60°C                    |
| Vibration Resistance      | ± 1.5 mm @ 10 - 60 Hz           |
|                           | acc. to IEC 60068-2-6, test Fc  |
|                           | 5 G @ 60 - 500 Hz               |
|                           | acc. to IEC 60068-2-6, test Fc  |
| Shock Resistance          | 100 G / 6ms                     |
|                           | acc. to IEC 60068-2-27, test Ea |
| Tripping Type             | Thermal                         |
| Actuation Type            | Reset type                      |
| Weight                    | ca. 10 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

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: T11

| VDE Approvals  VDE VDE Certificate Number: 99759   | Approval Logo   | Certificates  | Certification Body | Description                              |
|--|-----------------|---------------|--------------------|--|
|  | _DVE            | VDE Approvals | VDE                | VDE Certificate Number: 99759            |
| C THE NUMBER. E71372                               | c <b>FL</b> °us | UL Approvals  | UL                 | UL File Number: E71572                   |
| CCC Approvals CCC Ccc Cccc Ccc Cccc Cccc Cccc Cccc | <b>(W)</b>      | CCC Approvals | CCC                | CCC Certificate Number: 2012010307564692 |

#### **Product standards**

Product standards that are referenced

| Design                | Standard  | Description   |
|-----------------------|---|---|
| Designed according to | IEC 60934   | Circuit-breakers for equipment (CBE)  |
| Designed according to | UL 1077   | Standard for Supplementary Protectors for Use in Electrical Equipment                                   |
| Designed according to | CSA C22.2 No. 235   | Supplementary Protectors  |
| Designed according to | GB 17701  | Circuit-breaker for equipment   |
|                       | Designed according to  Designed according to  Designed according to | Designed according to IEC 60934  Designed according to UL 1077  Designed according to CSA C22.2 No. 235 |

### **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 equipment. |

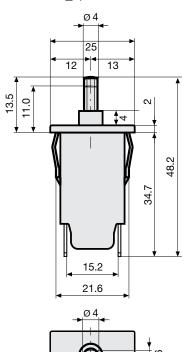
### Compliances

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 | Directive RoHS 2011/65/EU, Amendment (EU) 2015/863  |
| <b>50</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, Evaluation, Authorization and Restriction of Chemicals 1 (abbreviated as "REACH") entered into force.                               |

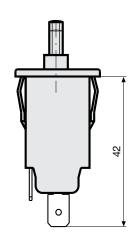
# Dimension [mm]



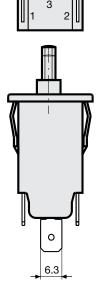


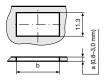
14 3.6

T11-611 >7,5A



T11-611N

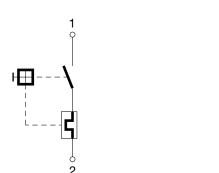




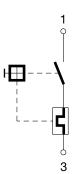
| b    |
|------|
| 21,9 |
| 22,0 |
| 22,1 |
| 22,3 |
| 22,6 |
|      |
|      |

# **Diagrams**

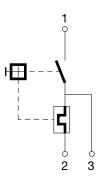
Rated current ≤7,5 A



Rated current >7,5 A



Shunt terminal T11-...N ≤6,5 A



### Typical internal resistance per pole

| Rated Current [A] | Internal Resistance [Ω] |
|-------------------|-------------------------|
| 0.05              | 380.000                 |
| 0.50              | 5.200                   |
| 1.00              | 1.350                   |
| 2.00              | 0.300                   |
| 3.00              | 0.130                   |
| 4.00              | 0.080                   |
| 5.00              | 0.040                   |
| 6.00              | 0.040                   |
| 7.00              | 0.020                   |
| 8.00              | 0.012                   |
| 9.00              | 0.012                   |
| 10.00             | 0.011                   |
| 11.00             | 0.0095                  |
| 12.00             | 0.0095                  |
| 13.00             | 0.0085                  |
| 14.00             | 0.0085                  |
| 15.00             | 0.0075                  |
| 16.00             | 0.0075                  |

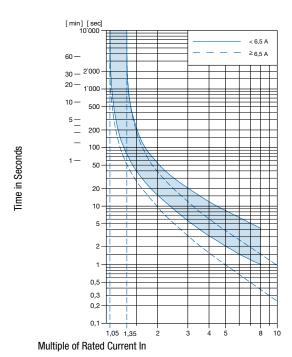
### Effect of ambient temperature

The units are calibrated for an ambient temperature of  $\pm 23^{\circ}$ 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                       | 0.87              |
| 0                        | 0.90              |
| +10                      | 0.95              |
| +23                      | 1.00              |
| +30                      | 1.04              |
| +40                      | 1.10              |
| +50                      | 1.15              |
| +60                      | 1.20              |

Example: Rated current = 5 A, Environmental temperature = 40 °C, --> Correction factor = 1.1, Resulting current = 5.5 A --> Fount to next higher rated current: 6 A

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

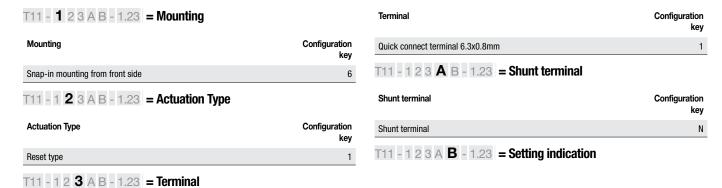


Reference Temperature +23°

### Config. Code

## T11 - 1 2 3 A B - 1.23

The characters are placeholders for the correspondingly keys of selections from the key tables.



| Setting indication                            | Configuration key | Rated current                   | Configuration key |
|---|-------------------|---------------------------------|-------------------|
| Setting indication                            | R                 | 2.1 A                           | 2.1               |
| T11 - 1 2 3 A B - <b>1.23</b> = Rated current |                   | 2.3 A                           | 2.3               |
| - Hateu current                               |                   | 2.5 A                           | 2.5               |
| Rated current                                 | Configuration     | 2.8 A                           | 2.8               |
|   | key               | 3.0 A                           | 3                 |
| 0.05 A  | 0.05              | 3.3 A                           | 3.3               |
| 0.1 A   | 0.1               | 3.5 A                           | 3.5               |
| 0.15 A  | 0.15              | 4.0 A                           | 4                 |
| 0.2 A   | 0.2               | 4.5 A                           | 4.5               |
| 0.3 A   | 0.3               | 5.0 A                           | 5                 |
| 0.4 A   | 0.4               | 5.5 A                           | 5.5               |
| 0.5 A   | 0.5               | 6.0                             | 6                 |
| 0.6 A   | 0.6               | 6.5 A                           | 6.5               |
| 0.7 A   | 0.7               | 7.0 A                           | 7                 |
| 0.8 A   | 0.8               | 7.5 A                           | 7.5               |
| 0.9 A   | 0.9               | 8.0 A                           | 8                 |
| 1.0   | 1                 | 8.5 A                           | 8.5               |
| 1.1 A   | 1.1               | 9.0 A                           | 9                 |
| 1.2 A   | 1.2               | 9.5 A                           | 9.5               |
| 1.3 A   | 1.3               | 10.0 A                          | 10                |
| 1.4 A   | 1.4               | 11.0 A                          | 11                |
| 1.5 A   | 1.5               | 12.0 A                          | 12                |
| 1.6 A   | 1.6               | 13.0 A                          | 13                |
| 1.7 A   | 1.7               | 14.0 A                          | 14                |
| 1.8 A   | 1.8               | 15.0 A                          | 15                |
| 1.9 A   | 1.9               | 16.0 A                          | 16                |
| 2.0 A   | 2                 | Other rated currents on request |                   |

### **Variants**

Other rated currents on request

| Rated current | Construct      | tion variants      | Config. Code | Order Number |
|---------------|----------------|--------------------|--------------|--------------|
|               | Shunt terminal | Setting indication |              |              |
| 2.0 A         |                |                    | T11-611-2    | 4400.0002    |
| 10.0 A        |                |                    | T11-611-10   | 4400.0030    |
| 16.0 A        |                |                    | T11-611-16   | 4400.0034    |
| 3.5 A         |                |                    | T11-611-3.5  | 4400.0200    |

Most Popular.

 $\label{thm:https://www.schurter.com/en/Stock-Check/Stock-Check-Stock-Stock-Check-Stock-Stock-Stock-Check-Stock-S$ 

Packaging Unit

100 Pcs

# **Mouser Electronics**

**Authorized Distributor** 

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# Schurter:

T11-214-2.5 4400.0019 4400.0021 4400.0023 4400.0024 4400.0025 4400.0027 4400.0028 4400.0029

4400.0031 4400.0032 4400.0165 4400.0169 4400.0291 4400.0495 4400.0505 4400.0711 4400.0714 4400.0034

4400.002 4400.003 T11-211-3 T11-211-4 T11-311-5 T11-311-3 T11-211-1 T11-311-2 T11-311-1 T11-311-1 T11-211-2 T11-611-6.0 T11-311-1.5 T11-611-2 T11-611-2.1 T11-211-10 T11-611-5 T11-311-4 T11-211-1.5 T11-311
10 4400.0030 4400.0020 4400.0001 4400.0341 4400.0003 4400.0006 4400.0348 4400.0290 4400.0193

4400.0026 4400.0047 4400.0819 4400.0002