

Circuit Breaker for Equipment thermal, 3 pole, Rocker actuation



See below:

**Approvals and Compliances**

**Description**

- Thermal circuit breaker
- 2 pole thermal overload protection
- Positively trip-free release
- High configurability
- Rocker non-illuminated or illuminated
- Snap-in version
- Quick connect terminal 6.3 x 0.8 mm or screw clamp terminal M3.5 x 6 mm (lineside P1, P2)

**Applications**

- Power tools
- Industrial appliances
- Power supplies

**Weblinks**

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

**Technical Data**

|                        |   |
|------------------------|---|
| Rated Voltage AC       | 400 V   |
| Rated current range AC | 0.05 - 12 A   |
| Degree of Protection   | from front side IP 40 acc. to IEC 60529                                       |
| Dielectric Strength    | 4 kVAC  |
| Insulation Resistance  | 500VDC > 100 MΩ   |
| Endurance typical      | mechanical: 50'000 switching cycles<br>AC: 1 x Ir:<br>50'000 switching cycles |

|                      |  |
|----------------------|--|
| Overload             | AC: min. 40trips<br>@ 6 x Ir   |
| Ambient temperature  | -10°C to 55°C  |
| Vibration Resistance | ± 0.75 mm @ 10 - 60 Hzacc. to IEC 60068-2-6, test Tc10 G @ 60 - 500 Hzacc. to IEC 60068-2-6, test Tc |
| Shock Resistance     | 30 G / 18msacc. to IEC 60068-2-27, test Ea   |
| Tripping Type        | Thermal  |
| Actuation Type       | Rocker   |
| Weight               | 45 - 50g   |

**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: TA45

| Approval Logo | Certificates                  | Certification Body | Description                              |
|---------------|-------------------------------|--------------------|--|
|               | <a href="#">VDE Approvals</a> | VDE                | VDE Certificate Number: 40019880         |
|               | <a href="#">UL Approvals</a>  | UL                 | UL File Number: E71572                   |
|               | <a href="#">CQC Approvals</a> | CQC                | CCC Certificate Number: 2013010307660082 |

**Product standards**

Product standards that are referenced

| Organization | Design                | Standard  | Description                          |
|--------------|-----------------------|-----------|--------------------------------------|
|              | Designed according to | IEC 60934 | Circuit-breakers for equipment (CBE) |
|              | Designed according to | GB 17701  | Circuit-breaker for equipment        |





## 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. |

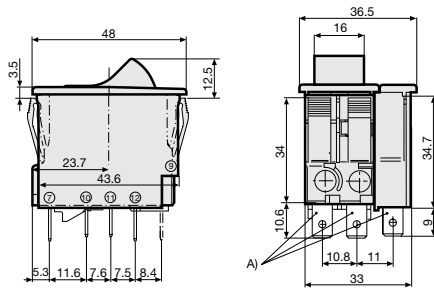
## Compliances

The product complies with following Guide Lines

| Identification   | Details                                      | Initiator   | Description   |
|--|--|-------------|---|
|  | <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. |
|  | RoHS   | SCHURTER AG | EU Directive RoHS 2011/65/EU  |
|  | 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.                               |

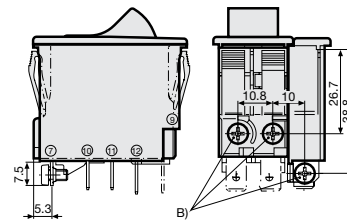
## Dimension [mm]

Quick connect terminal



A) Quick connect terminal, IEC 61210, A6.3-0.8 mm

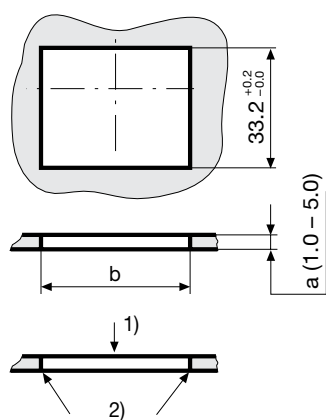
Screw clamp terminal



B) Screw type M3, 5x6 (Philips Form H), maximum torque 1 Nm

## Cut-out and pin-out

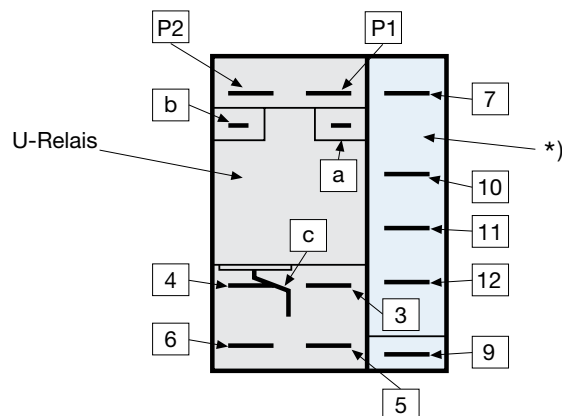
Cut-out snap-in type



| a   | b           |
|-----|-------------|
| 1.0 | 44,5...45,0 |
| 1.5 | 44,5...45,0 |
| 2.0 | 44,7...45,2 |
| 2.5 | 44,7...45,2 |
| 3.0 | 44,8...45,3 |
| 4.0 | 44,9...45,4 |
| 5.0 | 45,0...45,5 |

- 1) Assemble
- 2) edge must be sharp

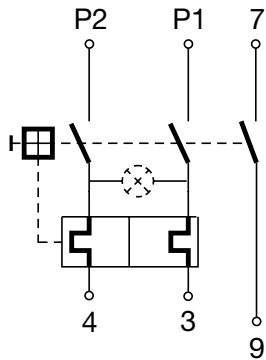
Pin-out



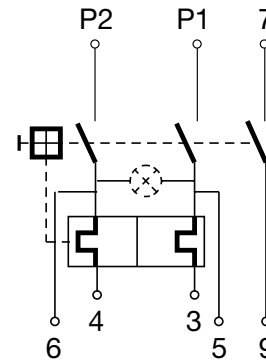
\*) Auxiliary contact / 3 pole

Diagrams

2 pole thermal overload protection



2 pole thermal overload protection, Shunt terminal



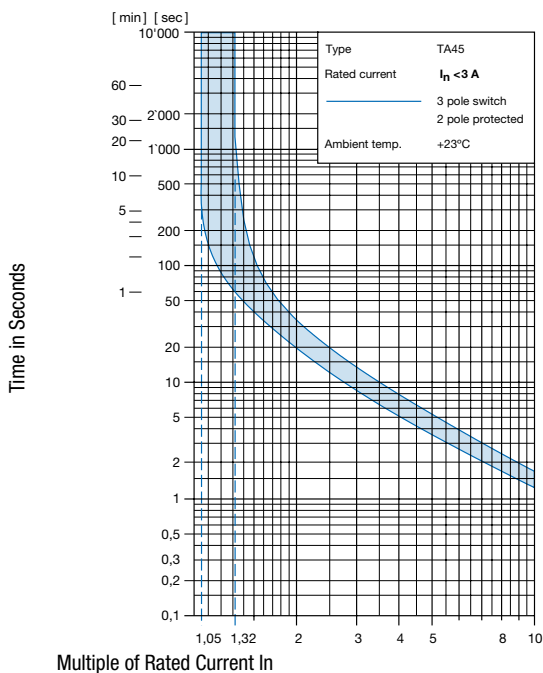
Effect of ambient temperature

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 |
|--------------------------|-------------------|
| -10                      | 0.89              |
| -5                       | 0.91              |
| 0                        | 0.92              |
| +23                      | 1.00              |
| +30                      | 1.03              |
| +40                      | 1.08              |
| +55                      | 1.16              |

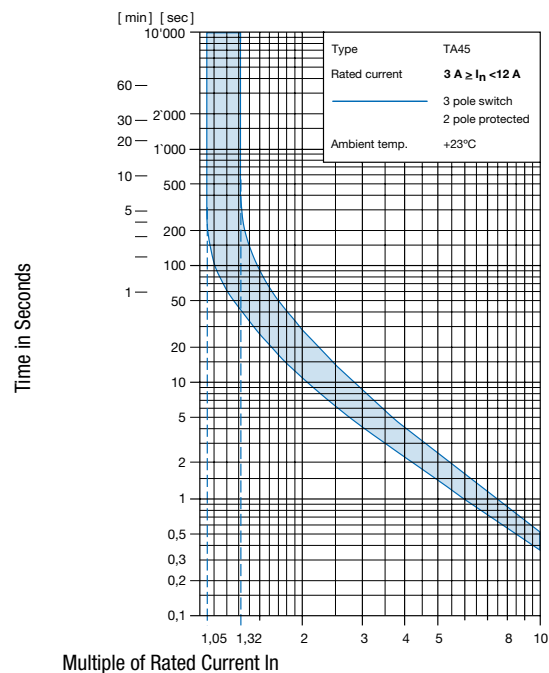
Example: Rated current = 5 A; Environmental temperature = 40 °C; --> Correction factor = 1.08; Resulting current = 5.5 A --> Found to next higher rated current: 6 A

Time-Current-Curves



Multiple of Rated Current  $I_n$

Reference Temperature +23°



Multiple of Rated Current  $I_n$

Reference Temperature +23°

**Config. Code**

TA45 - AK2 W F 120 A2 - AZM11

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


TA45 - **AK2** W F 120 A2 - AZM11 = **Basic function**






| Basic function  | Configuration key |
|---|-------------------|
| 3-pole, rocker, 2pole overload protection, screw connection, illuminated 380 V...400 V                              | A1D               |
| 3-pole, rocker, 2pole overload protection, shunt terminal, screw connection, illuminated 380 V...400 V              | A1G               |
| 3-pole, rocker, 2pole overload protection, flat connection, illuminated 380 V...400 V                               | AD1               |
| 3-pole, rocker, 2pole overload protection, shunt terminal, flat connection, illuminated 380 V...400 V               | AG1               |
| 3-pole, rocker, 2pole overload protection, flat connection, without illumination                                    | AKD               |
| 3-pole, rocker, 2pole overload protection, shunt terminal, flat connection, without illumination                    | AKG               |
| 3-pole, rocker, 2pole overload protection, flat connection, momentary switch, without illumination                  | ALD               |
| 3-pole, rocker, 2pole overload protection, shunt terminal, flat connection, momentary switch, without illumination  | ALG               |
| 3-pole, rocker, 2pole overload protection, screw connection, without illumination                                   | AMD               |
| 3-pole, rocker, 2pole overload protection, shunt terminal, screw connection, without illumination                   | AMG               |
| 3-pole, rocker, 2pole overload protection, screw connection, momentary switch, without illumination                 | AND               |
| 3-pole, rocker, 2pole overload protection, shunt terminal, screw connection, momentary switch, without illumination | ANG               |

TA45 - AK2 **W** F 120 A2 - AZM11 = **Actuator colour**

| Actuator colour    | Configuration key |
|--------------------|-------------------|
| Clear transparent  | 1                 |
| Red transparent    | 3                 |
| Green transparent  | 4                 |
| Orange transparent | 6                 |
| Black              | B                 |
| Green              | G                 |
| Red                | R                 |
| White              | W                 |
| Orange             | X                 |
| Yellow             | Y                 |

TA45 - AK2 W **F** 120 A2 - AZM11 = **Legend**

| Legend  | Configuration key |
|---|-------------------|
| embossed       | F                 |
| white printed  | H                 |
| black printed  | K                 |
| white printed  | L                 |

| Legend  | Configuration key |
|---|-------------------|
| black printed  | M                 |
| white printed  | P                 |
| black printed  | R                 |
| white printed  | S                 |
| black printed  | T                 |

TA45 - AK2 W F **120** A2 - AZM11 = **Rated current**

| Rated current | Configuration key |
|---------------|-------------------|
| 0.05 A        | Z05               |
| 0.1 A         | J01               |
| 0.2 A         | J02               |
| 0.3 A         | J03               |
| 0.4 A         | J04               |
| 0.5 A         | J05               |
| 0.6 A         | J06               |
| 0.7 A         | J07               |
| 0.8 A         | J08               |
| 0.9 A         | J09               |
| 1.0 A         | J10               |
| 1.1 A         | J11               |
| 1.2 A         | J12               |
| 1.3 A         | J13               |
| 1.4 A         | J14               |
| 1.5 A         | J15               |
| 1.6 A         | J16               |
| 1.7 A         | J17               |
| 1.8 A         | J18               |
| 1.9 A         | J19               |
| 2.0 A         | J20               |
| 2.1 A         | J21               |
| 2.2 A         | J22               |
| 2.3 A         | J23               |
| 2.5 A         | J25               |
| 2.8 A         | J28               |
| 3.0 A         | 030               |
| 3.5 A         | 035               |
| 4.0 A         | 040               |
| 4.5 A         | 045               |

Other rated currents on request

\* The approved current range is 0.05 to 12 A. We recommend to limit the range to max. 8 A at AC 400 V. For the current range 9 to 12 A the voltage should be limited to AC 240 V.

| Rated current | Configuration key |
|---------------|-------------------|
| 5.0 A         | 050               |
| 6.0 A         | 060               |
| 6.5 A         | 065               |
| 7.0 A         | 070               |
| 7.5 A         | 075               |
| 8.0 A         | 080               |
| 9.0 A*        | 090               |
| 10.0 A*       | 100               |
| 11.0 A*       | 110               |
| 12.0 A*       | 120               |

Other rated currents on request

\* The approved current range is 0.05 to 12 A. We recommend to limit the range to max. 8 A at AC 400 V.  
 For the current range 9 to 12 A the voltage should be limited to AC 240 V.

TA45 - AK2 W F 120 **A2** - AZM11 = Release / lock-out latch

| Release / lock-out latch  | Configuration key |
|---|-------------------|
| Remote trip release, rated voltage 400 V AC                             | A1                |
| whithout release / lock-out latch                                       | C0                |
| Undervoltage release with additional contact, rated voltage 400 V AC    | E1                |
| Undervoltage release, rated voltage 400 V AC                            | U1                |
| Undervoltage release with 2 additional contacts, rated voltage 400 V AC | Z1                |

TA45 - AK2 W F 120 A2 - **AZM11** = Accessories

| Factory mounted accessories | Configuration key |
|-----------------------------|-------------------|
| Without cover               |                   |

For subsequent fitting accessories see:

[http://www.schurter.com/pdf/english/typ\\_TA45-ACC.pdf](http://www.schurter.com/pdf/english/typ_TA45-ACC.pdf)

**Variants**

| Thermal overload protection | Addition | connection type        | Illumination         | Actuator colour | Legend        | Rated current | Accessories   | Config. Code    | Order Number |
|-----------------------------|----------|------------------------|----------------------|-----------------|---------------|---------------|---------------|-----------------|--------------|
| 2-pole                      |          | Quick connect terminal | without illumination | Black           | white printed | 4.0 A         | Without cover | TA45-AKDBH040C0 | 4430.2827    |
| 2-pole                      |          | Quick connect terminal | without illumination | Red             | white printed | 4.0 A         | Without cover | TA45-AKDRL040C0 | 4430.3400    |

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

**Packaging Unit** 1 Pcs

**Accessories**



**Description**

TA45-ACC  
 Accessories to TA45