

Circuit Breaker for Equipment thermal, 2 pole, Push button actuation



See below:

Approvals and Compliances

Description

- Thermal circuit breaker
- 1 or 2 pole thermal overload protection
- Positively trip-free release
- High configurability
- Snap-in or flange mounted
- 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 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 | 60 VDC |
| Rated current range AC | 0.05 - 20 A |
| Conditional short circuit capacity I _{nc} | IEC 60934: PC1, AC 240 V: 1 kA |
| Short circuit capacity I _{cn} | IEC 60934: At I _n < 3 A/ 240 VAC: 10xI _n (max. 3 Zykl.) At I _n ≥ 3 A/ 240 VAC: 300A (max. 3 Zykl.) At I _n < 3 A/ 60 VDC: 10xI _n (max. 3 Zykl.) At I _n ≥ 3 A/ 48 VDC: 120A (max. 3 Zykl.) |
| Degree of Protection | from front side IP40 acc. to IEC 60529 |
| Dielectric Strength | 4 kV |
| Insulation Resistance | 500 VDC > 100 MΩ |
| Lifetime | mechanical: 50'000 switching cycles AC: 1 x I _r : 50'000 switching cycles DC: 1 x I _r : 50'000 switching cycles |

| | |
|---------------------------|---|
| Overload | AC: min. 40trips @ 6 x I _r DC: min. 50trips @ 4 x I _r |
| Allowable Operation Temp. | -10 °C to 55 °C |
| Vibration Resistance | ± 0.75 mm @ 5 - 60 Hz acc. to IEC 60068-2-6, test Fc 10 G @ 60 - 500 Hz acc. to IEC 60068-2-6, test Fc |
| Shock Resistance | 30 G / 18ms acc. to IEC 60068-2-27, test Ea |
| Tripping Type | Thermal |
| Actuation Type | Pushbutton |
| Weight | 35 - 40g |

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: TA45

| Approval Logo | Certificates | Certification Body | Description |
|---------------|---------------|--------------------|--|
| | VDE Approvals | VDE | VDE Certificate Number: 40019880 |
| | UL Approvals | UL | UL File Number: E71572 |
| | CCC Approvals | CCC | 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 | 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 |

Application standards

Application standards where the product can be used

| Organization | Design | Standard | Description |
|--------------|--------------------------------|----------------|--|
| | Designed for applications acc. | IEC/UL 62368-1 | IEC 62368-1 includes the basic requirements for safety of audio, video, information technology and office equipment. |

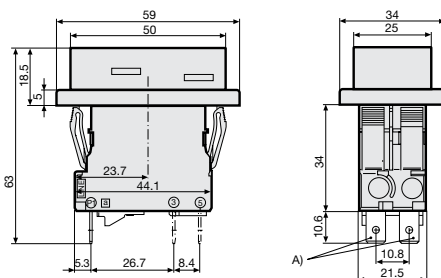
Compliances

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. |
| | 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. |
| | 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. |

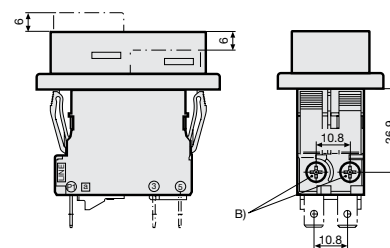
Dimension [mm]

Snap-in type and quick connect terminal



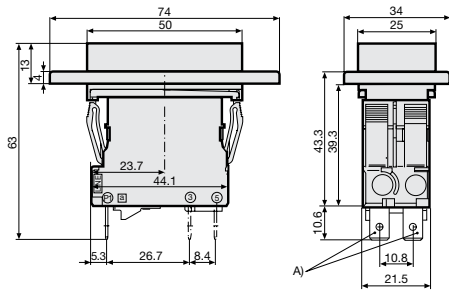
A) Quick connect terminal, IEC 61210, A6.3-0.8 mm

Snap-in type and screw clamp terminal



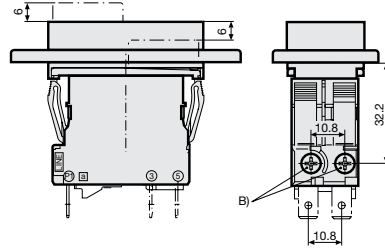
B) Screw type M3, 5x6 (Phillips Form H), maximum torque 1 Nm

Flange type and quick connect terminal



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

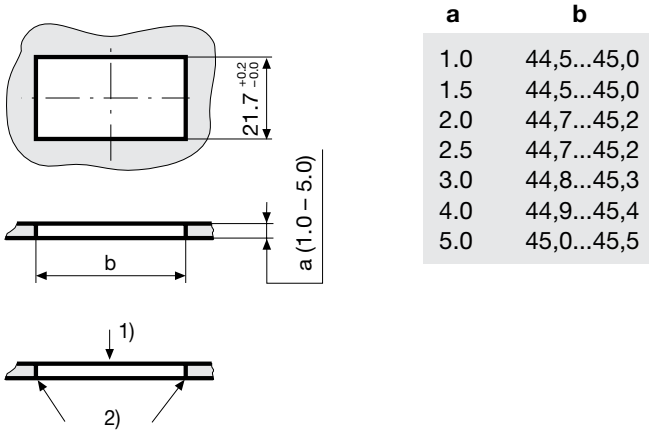
Flange type and screw clamp terminal



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

Cut-out and pin-out

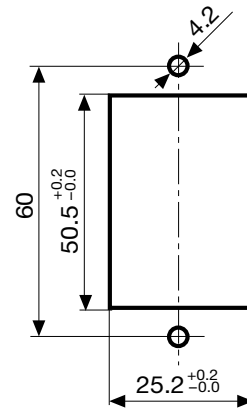
Cut-out snap-in type



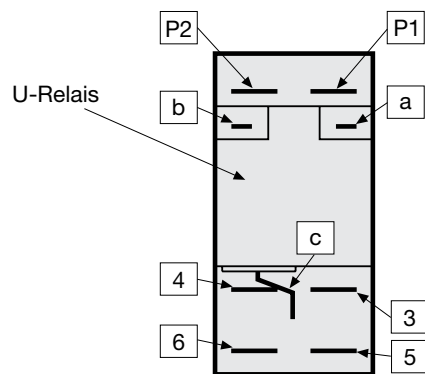
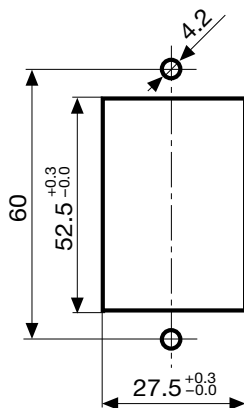
- 1) Assemble
- 2) edge must be sharp

Cut-out flange type/ Installation from rear with AZZ05 cover

Cut-out flange type / Installation from rear

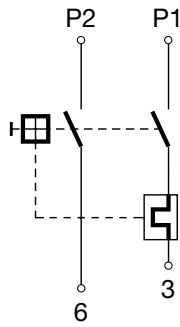


Pin-out

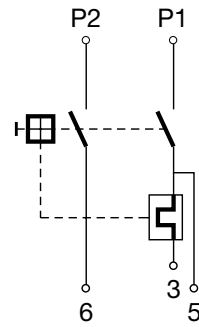


Diagrams

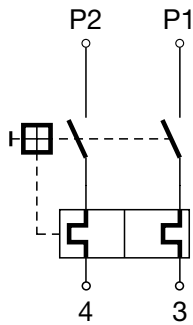
1 pole thermal overload protection



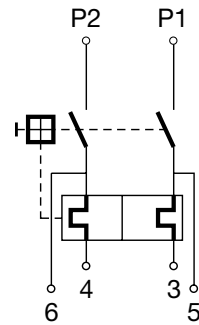
1 pole thermal overload protection, Shunt terminal



2 pole thermal overload protection



2 pole thermal overload protection, Shunt terminal



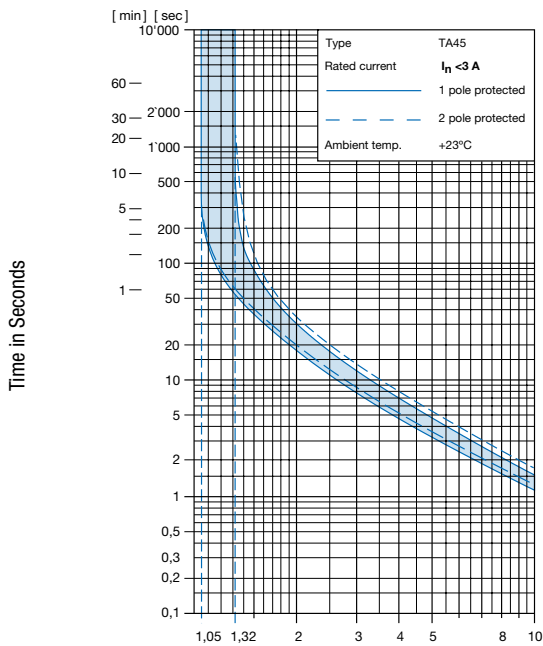
Effect of ambient temperature

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 |

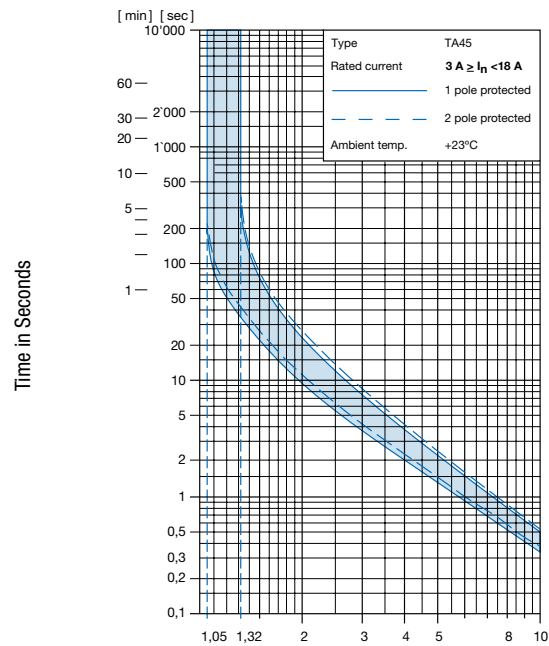
Example: Rated current = 5 A, Environmental temperature = 40 °C, --> Correction factor = 1.08, Resulting current = 5.5 A --> Fount to next higher rated current: 6 A

Time-Current-Curves



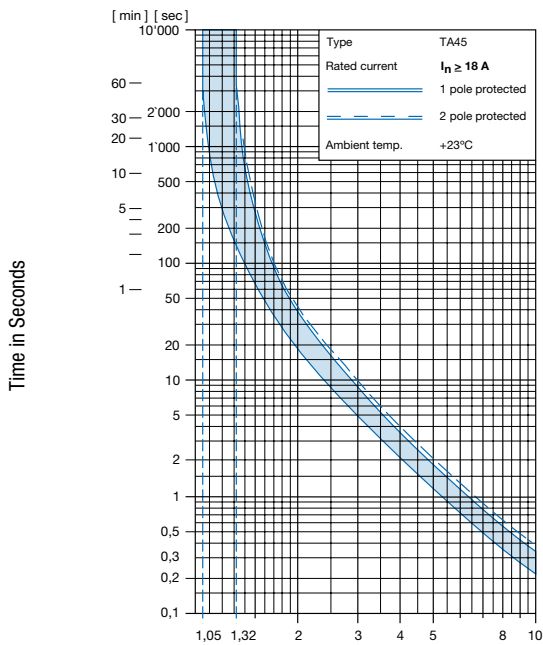
Multiple of Rated Current I_n

Reference Temperature +23°



Multiple of Rated Current I_n

Reference Temperature +23°



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 |
|---|-------------------|
| 2-pole, push button, 1pole overload protection, quick connect terminal, snap-in type, push button gasket IP40 | ABL |
| 2-pole, push button, 1pole overload protection, shunt terminal, quick connect terminal, snap-in type, push button gasket IP40 | ABM |
| 2-pole, push button, 2pole overload protection, quick connect terminal, snap-in type, push button gasket IP40 | ABN |
| 2-pole, push button, 2p overload protection, shunt terminal, quick connect terminal, snap-in type, push button gasket IP40 | ABP |
| 2-pole, push button, 1pole overload protection, quick connect terminal, snap-in type, push button gasket IP65 | ABU |
| 2-pole, push button, 1pole overload protection, shunt terminal, quick connect terminal, snap-in type, push button gasket IP65 | ABV |
| 2-pole, push button, 2pole overload protection, quick connect terminal, snap-in type, push button gasket IP65 | ABW |
| 2-pole, push button, 2p overload protection, shunt terminal, quick connect terminal, snap-in type, push button gasket IP65 | ABX |
| 2-pole, push button, 1pole overload protection, screw connection, snap-in type, push button gasket IP40 | AEL |
| 2-pole, push button, 1p overload protection, shunt terminal, screw connection, snap-in type, push button gasket IP40 | AEM |
| 2-pole, push button, 2pole overload protection, screw connection, snap-in type, push button gasket IP40 | AEN |
| 2-pole, push button, 2p overload protection, shunt terminal, screw connection, snap-in type, push button gasket IP40 | AEP |
| 2-pole, push button, 1pole overload protection, screw connection, snap-in type, push button gasket IP65 | AEU |
| 2-pole, push button, 1p overload protection, shunt terminal, screw connection, snap-in type, push button gasket IP65 | AEV |
| 2-pole, push button, 2pole overload protection, screw connection, snap-in type, push button gasket IP65 | AEW |
| 2-pole, push button, 2p overload protection, shunt terminal, screw connection, snap-in type, push button gasket IP65 | AEX |
| 2-pole, push button, 1pole overload protection, quick connect terminal, flange type, push button gasket IP40 | AHL |
| 2-pole, push button, 1pole overload protection, shunt terminal, quick connect terminal, flange type, push button gasket IP40 | AHM |
| 2-pole, push button, 2pole overload protection, quick connect terminal, flange type, push button gasket IP40 | AHN |
| 2-pole, push button, 2p overload protection, shunt terminal, quick connect terminal, flange type, push button gasket IP40 | AHP |
| 2-pole, push button, 1pole overload protection, quick connect terminal, flange type, push button gasket IP65 | AHU |
| 2-pole, push button, 1pole overload protection, shunt terminal, quick connect terminal, flange type, push button gasket IP65 | AHV |
| 2-pole, push button, 2pole overload protection, quick connect terminal, flange type, push button gasket IP65 | AHW |
| 2-pole, push button, 2p overload protection, shunt terminal, quick connect terminal, flange type, push button gasket IP65 | AHX |
| 2-pole, push button, 1pole overload protection, screw connection, flange type, push button gasket IP40 | AJL |
| 2-pole, push button, 1p overload protection, shunt terminal, screw connection, flange type, push button gasket IP40 | AJM |
| 2-pole, push button, 2pole overload protection, screw connection, flange type, push button gasket IP40 | AJN |
| 2-pole, push button, 2p overload protection, shunt terminal, screw connection, flange type, push button gasket IP40 | AJP |
| 2-pole, push button, 1pole overload protection, screw connection, flange type, push button gasket IP65 | AJU |
| 2-pole, push button, 1p overload protection, shunt terminal, screw connection, flange type, push button gasket IP65 | AJV |
| 2-pole, push button, 2pole overload protection, screw connection, flange type, push button gasket IP65 | AJW |
| 2-pole, push button, 2p overload protection, shunt terminal, screw connection, flange type, push button gasket IP65 | AJX |

| Actuator colour | Configuration key |
|-------------------------|-------------------|
| Front Black: Green/Red | T |
| Front Yellow: Green/Red | U |
| Front Grey: Green/Red | V |

TA45 - AK2 W F 120 A2 - AZM11 = Legend

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

Other rated currents on request

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

| Rated current | Configuration key |
|---------------|-------------------|
| 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 |
| 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

| Rated current | Configuration key |
|---------------|-------------------|
| 13.0 A | 130 |
| 14.0 A | 140 |
| 15.0 A | 150 |
| 16.0 A | 160 |
| 17.0 A | 170 |
| 18.0 A | 180 |
| 19.0 A | 190 |
| 20.0 A | 200 |

Other rated currents on request

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

| Release / lock-out latch | Configuration key |
|----------------------------------|-------------------|
| without release / lock-out latch | C0 |

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

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

For subsequent fitting accessories see:

https://www.schurter.com/pdf/english/typ_TA45-ACC.pdf

Variants

| Thermal overload protection | Addition | connection type | Mounting | IP Protection Class Front Side | Actuator colour | Legend | Rated current | Accessories | Config. Code | Order Number |
|-----------------------------|----------|------------------------|--------------|--------------------------------|------------------------|---------------|---------------|---------------|-----------------|--------------|
| 2-pole | | Quick connect terminal | Flange type | IP65 | Front Black: Green/Red | white printed | 20.0 A | Without cover | TA45-AHWTL200C0 | 4430.3513 |
| 2-pole | | Quick connect terminal | Snap-in type | IP40 | Front Black: Green/Red | embossed | 12.0 A | Without cover | TA45-ABNTF120C0 | 4430.3516 |
| 1-pole | | Quick connect terminal | Snap-in type | IP65 | Front Black: Green/Red | black printed | 10.0 A | Without cover | TA45-ABUTM100C0 | 4430.3608 |

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