# Chipsmall

Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts,Customers Priority,Honest Operation,and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!

## Contact us

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

## Technical Data

| | | | |
|---|---|---|---|
| Rated Voltage AC | 240 V | Overload | AC: min. 40 trips @ 6 x Ir |
| Rated Voltage DC | 60 V | | DC: min. 50 trips @ 4 x Ir |
| Rated current range AC | 0.05 - 20 A | Ambient temperature | -10 °C to 55 °C |
| Conditional short circuit capacity | IEC: Inc, PC1, AC 240 V: 1 kA | 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 |
| Degree of Protection | from front side IP 40 acc. to IEC 60529 | | |
| Dielectric Strength | 4 kV | Shock Resistance | 30 G / 18 ms acc. to IEC 60068-2-27, test Ea |
| Insulation Resistance | 500 VDC > 100 MΩ | | |
| Lifetime | mechanical: 50'000 switching cycles | Tripping Type | Thermal |
| | AC: 1 x Ir: 50'000 switching cycles | Actuation Type | Pushbutton |
| | DC: 1 x Ir: 50'000 switching cycles | Weight | 35 - 40 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: TA45

| Approval Logo | Certificates | Certification Body | Description |
|---|---|---|---|
| | VDE Approvals | VDE | VDE Certificate Number: 40019880 |
| | UL Approvals | UL | UL File Number: E71572 |
| | CQC Approvals | CQC | CCC Certificate Number: 2013010307660082 |

## Product standards

Product standards that are referenced

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

## Application standards

Application standards where the product can be used

| Organization | Design | Standard | Description |
|---|---|---|---|
| IEC | Designed for applications acc. | IEC/UL 60950 | IEC 60950-1 includes the basic requirements for the safety of information technologyequipment. |

## Compliances

The product complies with following Guide Lines

| Identification | Details | Initiator | Description |
|---|---|---|---|
| CE | 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 |
| China RoHS | 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]
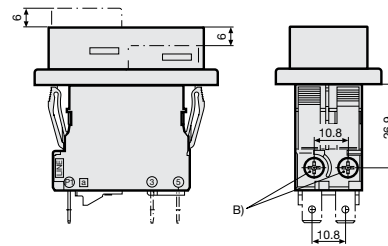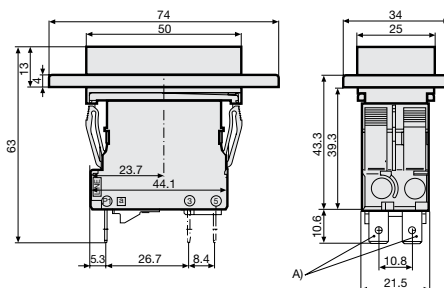
Snap-in type and quick connect terminal
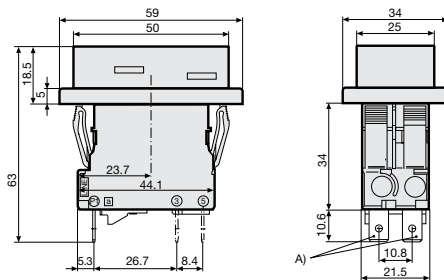


A) Quick connect terminal, IEC 61210, A6.3-0.8 mm

Snap-in type and screw clamp terminal



B) Screw type M3, 5x6 (Philips 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
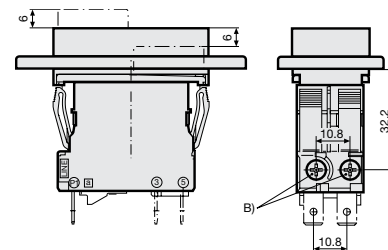


B) Screw type M3, 5x6 (Philips Form H), maximum torque 1 Nm

## Cut-out and pin-out

Cut-out snap-in type

Cut-out flange type / Installation from rear

| 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 |
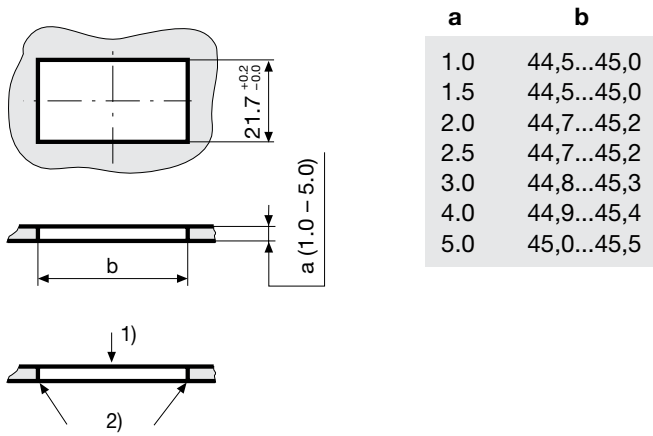
1) Assemble
2) edge must be sharp

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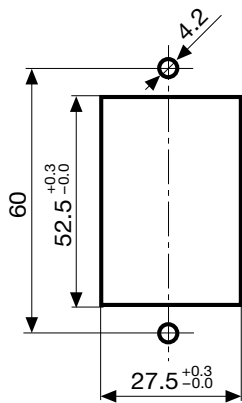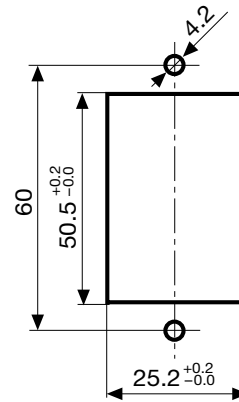
Pin-out
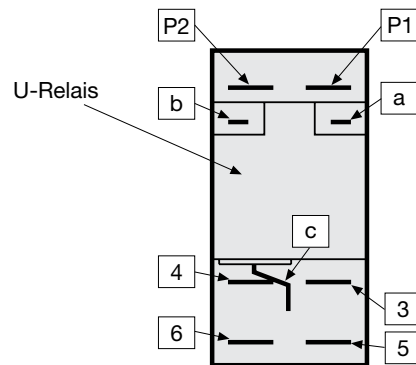
## Diagrams

1 pole thermal overload protection
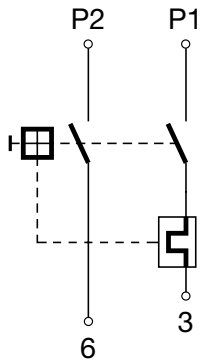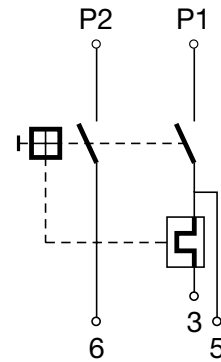
P2    P1

3
6

1 pole thermal overload protection, Shunt terminal

P2    P1

6      3  5

2 pole thermal overload protection

P2    P1

4    3

2 pole thermal overload protection, Shunt terminal

P2    P1

6    4    3    5
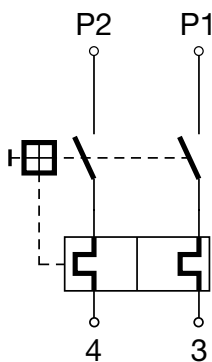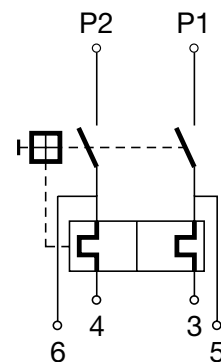
## Effect of ambient temperature

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
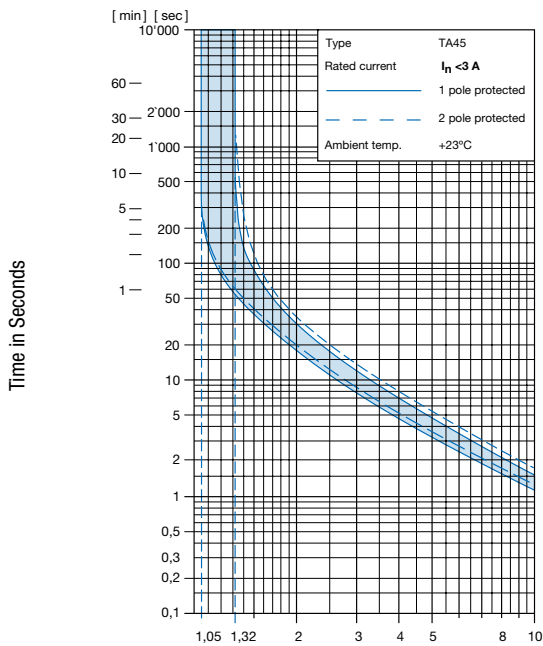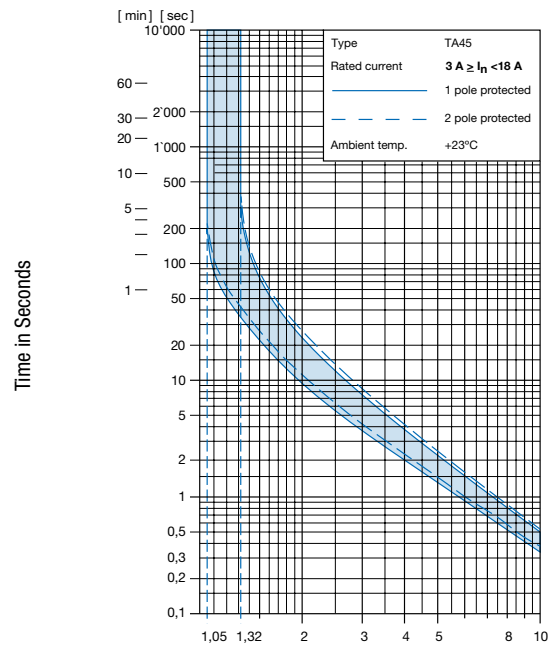


Reference Temperature +23°
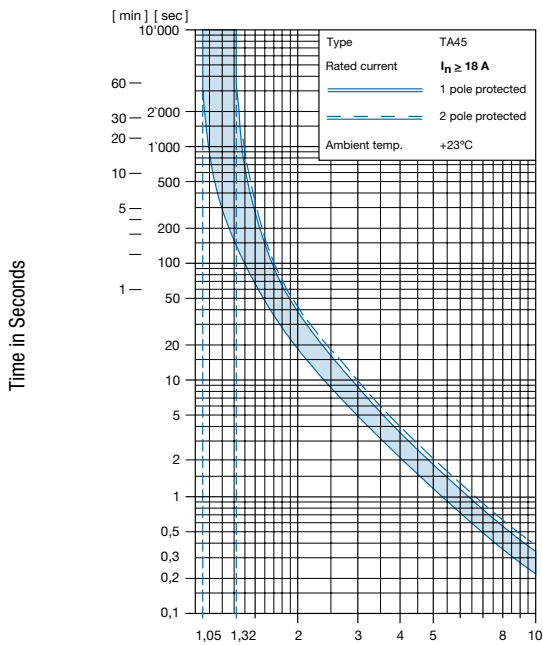


Reference Temperature +23°



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, flat connection, snap-in type, push button gasket IP40 | ABL |
| 2-pole, push button, 1pole overload protection, shunt terminal, flat connection, snap-in type, push button gasket IP40 | ABM |
| 2-pole, push button, 2pole overload protection, flat connection, snap-in type, push button gasket IP40 | ABN |
| 2-pole, push button, 2p overload protection, shunt terminal, flat connection, snap-in type, push button gasket IP40 | ABP |
| 2-pole, push button, 1pole overload protection, flat connection, snap-in type, push button gasket IP65 | ABU |
| 2-pole, push button, 1pole overload protection, shunt terminal, flat connection, snap-in type, push button gasket IP65 | ABV |
| 2-pole, push button, 2pole overload protection, flat connection, snap-in type, push button gasket IP65 | ABW |
| 2-pole, push button, 2p overload protection, shunt terminal, flat connection, 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, flat connection, flange type, push button gasket IP40 | AHL |
| 2-pole, push button, 1pole overload protection, shunt terminal, flat connection, flange type, push button gasket IP40 | AHM |
| 2-pole, push button, 2pole overload protection, flat connection, flange type, push button gasket IP40 | AHN |
| 2-pole, push button, 2p overload protection, shunt terminal, flat connection, flange type, push button gasket IP40 | AHP |
| 2-pole, push button, 1pole overload protection, flat connection, flange type, push button gasket IP65 | AHU |
| 2-pole, push button, 1pole overload protection, shunt terminal, flat connection, flange type, push button gasket IP65 | AHV |
| 2-pole, push button, 2pole overload protection, flat connection, flange type, push button gasket IP65 | AHW |
| 2-pole, push button, 2p overload protection, shunt terminal, flat connection, 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 |

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

| 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 | ON OFF | H |
| black printed | ON OFF | K |
| white printed | − ○ | L |
| black printed | − ○ | M |
| white printed | I 0 | P |
| black printed | I 0 | R |
| white printed | ON O OFF | S |
| black printed | ON O OFF | 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 |

Other rated currents on request

| Rated current | Configuration key |
|---|---|
| 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 |
| 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 |
| 13.0 A | 130 |

Other rated currents on request

| Rated current | Configuration key |
|---|---|
| 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 |
|---|---|
| whithout 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:

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

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## 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

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**Packaging Unit**     1 Pcs

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## Accessories

**Description**



TA45-ACC
Accessories to TA45

19.01.2018