

Circuit Breaker for Equipment thermal, 2 pole, Rocker actuation



## Approvals and Compliances

### Description

- Thermal circuit breaker
- 1 or 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                   | 240 V                                   |
| Rated Voltage DC                   | 60 V                                    |
| Rated current range AC             | 0.05 - 20 A                             |
| Conditional short circuit capacity | IEC: Inc, PC1, AC 240 V: 1 kA           |
| Degree of Protection               | from front side IP 40 acc. to IEC 60529 |
| Dielectric Strength                | 4 kVAC                                  |
| Insulation Resistance              | 500 VDC > 100 MΩ                        |
| Endurance typical                  | mechanical: 50'000 switching cycles     |
|                                    | AC: 1 x Ir:<br>50'000 switching cycles  |
|                                    | DC: 1 x Ir:<br>50'000 switching cycles  |

|                      |                                                                                                                 |
|----------------------|-----------------------------------------------------------------------------------------------------------------|
| Overload             | AC: min. 40 trips<br>@ 6 x Ir                                                                                   |
|                      | DC: min. 40 trips<br>@ 4 x Ir                                                                                   |
| Ambient temperature  | -10°C to 55°C                                                                                                   |
| Vibration Resistance | ± 0.75 mm @ 5 - 60 Hz<br>acc. to IEC 60068-2-6, test Fc<br>10 G @ 60 - 500 Hz<br>acc. to IEC 60068-2-6, test Fc |
| Shock Resistance     | 30 G / 18 ms<br>acc. to IEC 60068-2-27, test Ea                                                                 |
| Tripping Type        | Thermal                                                                                                         |
| Actuation Type       | Rocker                                                                                                          |
| Weight               | 30 - 35 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             |
|-------------------------------------------------------------------------------------|-------------------------------|--------------------|-------------------------|
|  | <a href="#">VDE Approvals</a> | VDE                | VDE Certificate Number: |
|  | <a href="#">UL Approvals</a>  | UL                 | UL File Number:         |
|  | <a href="#">CQC Approvals</a> | CQC                | CCC File Number:        |

### 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. |

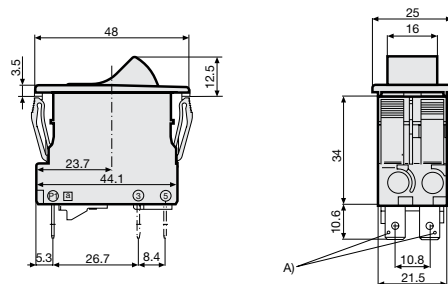
## Compliances

The product complies with following Guide Lines

| Identification                                                                   | Details                      | Initiator   | Description                                                                                                                                                                                           |
|----------------------------------------------------------------------------------|------------------------------|-------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | 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 | 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.                               |

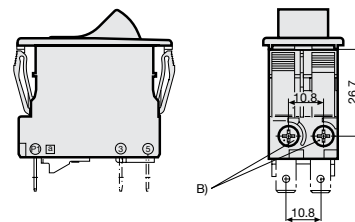
## Dimension [mm]

### Quick connect terminal



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

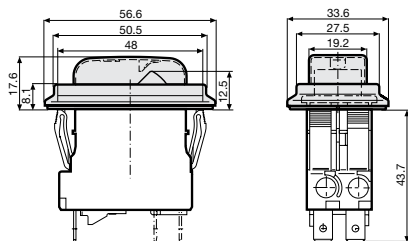
### Screw clamp terminal



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

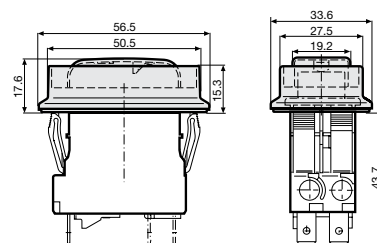
## Accessories / factory mounted

### AZM01 / Collar with cover, IP 54

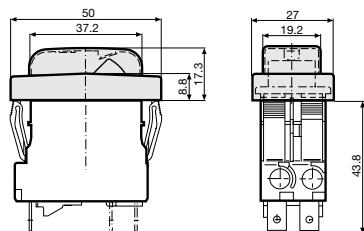


### AZM02 / Raised collar with cover, narrow, IP 54

### AZM03 / Raised collar, IP 40

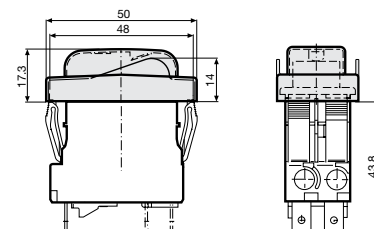


### AZM10 / Collar with cover, narrow, IP 54

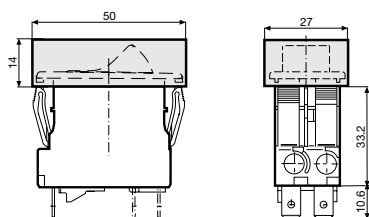


### AZM11 / Partially raised collar with cover, narrow, IP 54

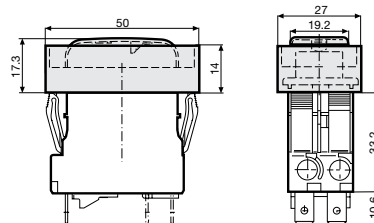
### AZM12 / Partially raised collar without cover, narrow, IP 40



AZM13 / Raised collar narrow, IP40



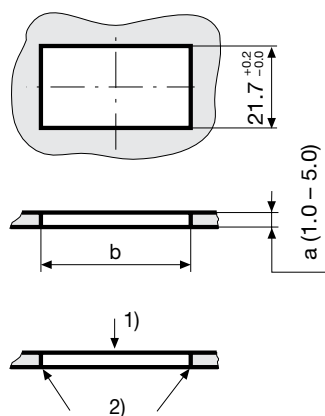
AZM14 / Raised collar with cover narrow, IP 54



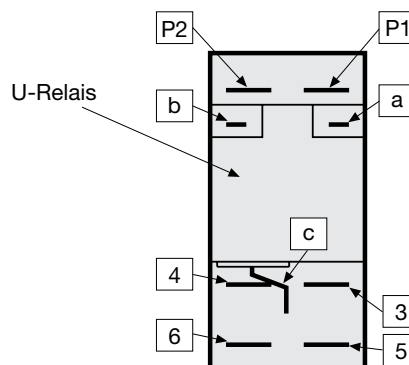
## Cut-out and pin-out

Cut-out snap-in type

Pin-out



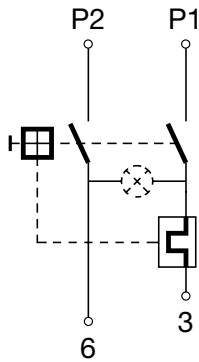
| a   | b           |
|-----|-------------|
| 1.0 | 44,5...45,0 |
| 1.5 | 44,5...45,0 |
| 2.0 | 44,7...45,2 |
| 2.5 | 44,7...45,2 |
| 3.0 | 44,8...45,3 |
| 4.0 | 44,9...45,4 |
| 5.0 | 45,0...45,5 |



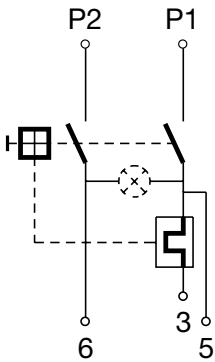
- 1) Assemble
- 2) edge must be sharp

Diagrams

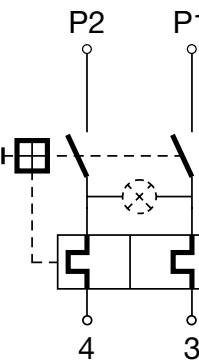
1 pole thermal overload protection



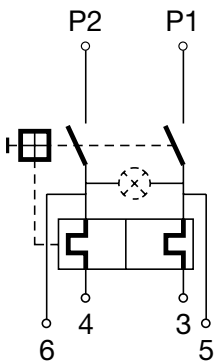
1 pole thermal overload protection, Shunt terminal



2 pole thermal overload protection



2 pole thermal overload protection, Shunt terminal



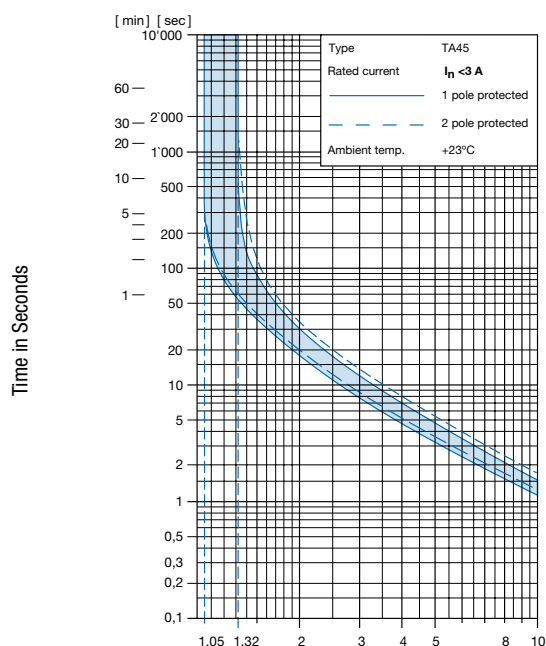
Effect of ambient temperature

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              |

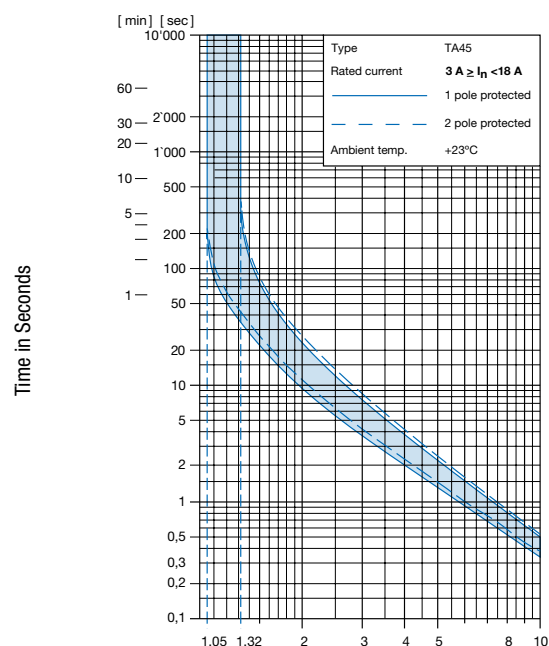
Example: Rated current = 5 A; Environmental temperature = 40 °C; --> Correction factor = 1.08; Resulting current = 5.5 A --> Fount to next higher rated current: 6 A

## Time-Current-Curves



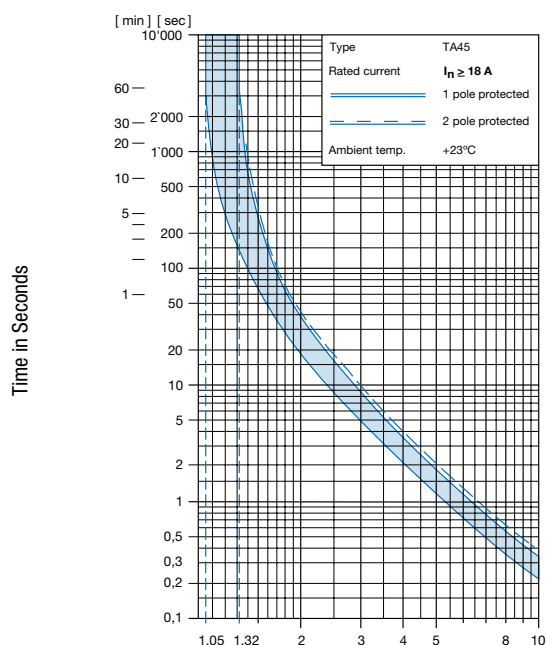
Multiple of Rated Current  $I_n$

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, rocker, 1pole overload protection, flat connection, illuminated 220 V...240 V                  | A12               |
| 2-pole, rocker, 1pole overload protection, flat connection, illuminated 110 V...120 V                  | A14               |
| 2-pole, rocker, 1pole overload protection, flat connection, illuminated 20 V...26 V                    | A17               |
| 2-pole, rocker, 1pole overload protection, flat connection, illuminated 10 V...13 V                    | A18               |
| 2-pole, rocker, 1pole overload protection, flat connection, illuminated 4 V...7 V                      | A19               |
| 2-pole, rocker, 1pole overload protection, shunt terminal, flat connection, illuminated 220 V...240 V  | A22               |
| 2-pole, rocker, 1pole overload protection, shunt terminal, flat connection, illuminated 110 V...120 V  | A24               |
| 2-pole, rocker, 1pole overload protection, shunt terminal, flat connection, illuminated 20 V...26 V    | A27               |
| 2-pole, rocker, 1pole overload protection, shunt terminal, flat connection, illuminated 10 V...13 V    | A28               |
| 2-pole, rocker, 1pole overload protection, shunt terminal, flat connection, illuminated 4 V...7 V      | A29               |
| 2-pole, rocker, 2pole overload protection, flat connection, illuminated 220 V...240 V                  | A32               |
| 2-pole, rocker, 2pole overload protection, flat connection, illuminated 110 V...120 V                  | A34               |
| 2-pole, rocker, 2pole overload protection, flat connection, illuminated 20 V...26 V                    | A37               |
| 2-pole, rocker, 2pole overload protection, flat connection, illuminated 10 V...13 V                    | A38               |
| 2-pole, rocker, 2pole overload protection, flat connection, illuminated 4 V...7 V                      | A39               |
| 2-pole, rocker, 2pole overload protection, shunt terminal, flat connection, illuminated 220 V...240 V  | A42               |
| 2-pole, rocker, 2pole overload protection, shunt terminal, flat connection, illuminated 110 V...120 V  | A44               |
| 2-pole, rocker, 2pole overload protection, shunt terminal, flat connection, illuminated 20 V...26 V    | A47               |
| 2-pole, rocker, 2pole overload protection, shunt terminal, flat connection, illuminated 10 V...13 V    | A48               |
| 2-pole, rocker, 2pole overload protection, shunt terminal, flat connection, illuminated 4 V...7 V      | A49               |
| 2-pole, rocker, 1pole overload protection, screw connection, illuminated 220 V...240 V                 | A62               |
| 2-pole, rocker, 1pole overload protection, screw connection, illuminated 110 V...120 V                 | A64               |
| 2-pole, rocker, 1pole overload protection, screw connection, illuminated 20 V...26 V                   | A67               |
| 2-pole, rocker, 1pole overload protection, screw connection, illuminated 10 V...13 V                   | A68               |
| 2-pole, rocker, 1pole overload protection, screw connection, illuminated 4 V...7 V                     | A69               |
| 2-pole, rocker, 1pole overload protection, shunt terminal, screw connection, illuminated 220 V...240 V | A72               |
| 2-pole, rocker, 1pole overload protection, shunt terminal, screw connection, illuminated 110 V...120 V | A74               |
| 2-pole, rocker, 1pole overload protection, shunt terminal, screw connection, illuminated 20 V...26 V   | A77               |
| 2-pole, rocker, 1pole overload protection, shunt terminal, screw connection, illuminated 10 V...13 V   | A78               |
| 2-pole, rocker, 1pole overload protection, shunt terminal, screw connection, illuminated 4 V...7 V     | A79               |
| 2-pole, rocker, 2pole overload protection, screw connection, illuminated 220 V...240 V                 | A82               |
| 2-pole, rocker, 2pole overload protection, screw connection, illuminated 110 V...120 V                 | A84               |
| 2-pole, rocker, 2pole overload protection, screw connection, illuminated 20 V...26 V                   | A87               |
| 2-pole, rocker, 2pole overload protection, screw connection, illuminated 10 V...13 V                   | A88               |

| Basic function                                                                                                      | Configuration key |
|---------------------------------------------------------------------------------------------------------------------|-------------------|
| 2-pole, rocker, 2pole overload protection, screw connection, illuminated 4 V...7 V                                  | A89               |
| 2-pole, rocker, 2pole overload protection, shunt terminal, screw connection, illuminated 220 V...240 V              | A92               |
| 2-pole, rocker, 2pole overload protection, shunt terminal, screw connection, illuminated 110 V...120 V              | A94               |
| 2-pole, rocker, 2pole overload protection, shunt terminal, screw connection, illuminated 20 V...26 V                | A97               |
| 2-pole, rocker, 2pole overload protection, shunt terminal, screw connection, illuminated 10 V...13 V                | A98               |
| 2-pole, rocker, 2pole overload protection, shunt terminal, screw connection, illuminated 4 V...7 V                  | A99               |
| 2-pole, rocker, 2pole overload protection, flat connection, without illumination                                    | ABD               |
| 2-pole, rocker, 1pole overload protection, shunt terminal, flat connection, without illumination                    | ABF               |
| 2-pole, rocker, 2pole overload protection, shunt terminal, flat connection, without illumination                    | ABG               |
| 2-pole, rocker, 1pole overload protection, flat connection, without illumination                                    | ABT               |
| 2-pole, rocker, 2pole overload protection, flat connection, momentary switch, without illumination                  | AED               |
| 2-pole, rocker, 1pole overload protection, shunt terminal, flat connection, momentary switch, without illumination  | AEF               |
| 2-pole, rocker, 2pole overload protection, shunt terminal, flat connection, momentary switch, without illumination  | AEG               |
| 2-pole, rocker, 1pole overload protection, flat connection, momentary switch, without illumination                  | AET               |
| 2-pole, rocker, 2pole overload protection, screw connection, without illumination                                   | AHD               |
| 2-pole, rocker, 1pole overload protection, shunt terminal, screw connection, without illumination                   | AHF               |
| 2-pole, rocker, 2pole overload protection, shunt terminal, screw connection, without illumination                   | AHG               |
| 2-pole, rocker, 1pole overload protection, screw connection, without illumination                                   | AHT               |
| 2-pole, rocker, 2pole overload protection, screw connection, momentary switch, without illumination                 | AJD               |
| 2-pole, rocker, 1pole overload protection, shunt terminal, screw connection, momentary switch, without illumination | AJF               |
| 2-pole, rocker, 2pole overload protection, shunt terminal, screw connection, momentary switch, without illumination | AJG               |
| 2-pole, rocker, 1pole overload protection, screw connection, momentary switch, without illumination                 | AJT               |

#### 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                 |
| 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               |

Other rated currents on request

| Rated current | Configuration key |
|---------------|-------------------|
| 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               |
| 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                                       |                   |
| Collar with cover, IP54                             | AZM01             |
| Raised collar with cover, IP54                      | AZM02             |
| Raised collar, IP40                                 | AZM03             |
| Raised collar with cover narrow, IP54               | AZM10             |
| Partially raised collar with cover, narrow, IP54    | AZM11             |
| Partially raised collar without cover, narrow, IP40 | AZM12             |
| Raised collar narrow, IP40                          | AZM13             |
| Raised collar with cover narrow, IP54               | AZM14             |

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 |
|-----------------------------|----------|------------------------|----------------------|-----------------|---------------|---------------|---------------|-----------------|--------------|
| 1-pole                      |          | Quick connect terminal | without illumination | White           | embossed      | 10.0 A        | Without cover | TA45-ABTWF100C0 | 4430.0022    |
| 2-pole                      |          | Quick connect terminal | without illumination | Black           | white printed | 15.0 A        | Without cover | TA45-ABDBL150C0 | 4430.1089    |
| 2-pole                      |          | Quick connect terminal | without illumination | Black           | white printed | 15.0 A        | Without cover | TA45-ABDBS150C0 | 4430.1328    |

Most Popular:

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                                                                                                                                             |
|---------------------------------------------------------------------------------------------------------------------------------------------------------|
| <div>  <div> <p>TA45-ACC</p> <p>Accessories to TA45</p> </div> </div> |