

Circuit Breaker for Equipment thermal, 2 pole, Rocker actuation



## 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)

## Approvals

- Approval Reference Type: TA45
- IEC Standard: IEC 60934
- UL Standard: UL 1077
- CSA Standard: CSA C22.2 No. 235
- GB Standard: GB 17701

## Applications

- Power tools
- Industrial appliances
- Power supplies

## Weblinks

[pdf-datasheet](#), [html-datasheet](#), [General Product Information](#), [Approvals](#), [CE declaration of conformity](#), [RoHS](#), [CHINA-RoHS](#), [REACH](#), [Distributor-Stock-Check](#), [Detailed request for product](#), [Product News](#)

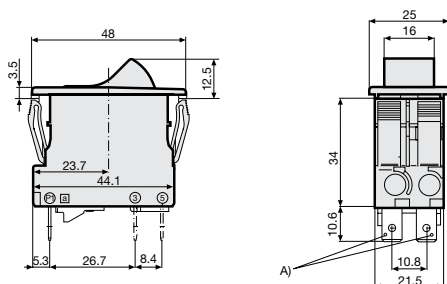
## Technical Data

|                                    |                                         |
|------------------------------------|-----------------------------------------|
| 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                                                                                                       |

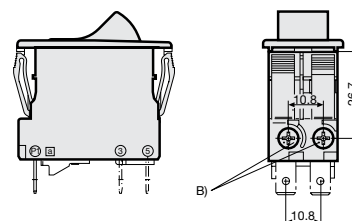
## Dimension

Quick connect terminal



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

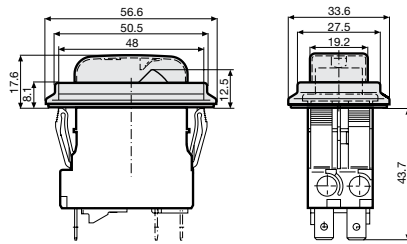
Screw clamp terminal



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

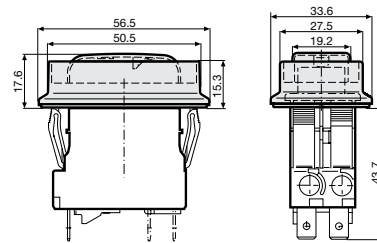
**Accessories / factory mounted**

AZM01 / Collar with cover, IP54

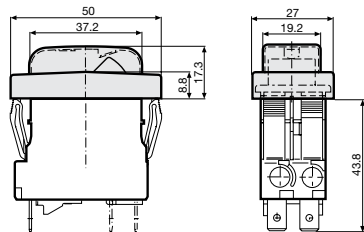


AZM02 / Raised collar with cover, narrow, IP54

AZM03 / Raised collar, IP40

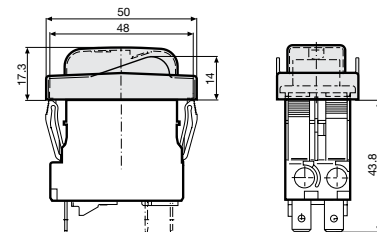


AZM10 / Collar with cover, narrow, IP54

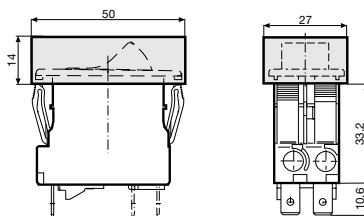


AZM11 / Partially raised collar with cover, narrow, IP54

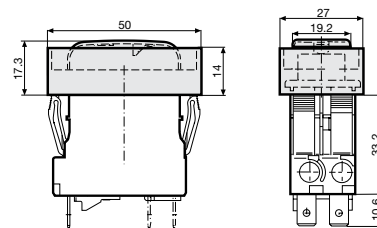
AZM12 / Partially raised collar without cover, narrow, IP40



AZM13 / Raised collar narrow, IP40



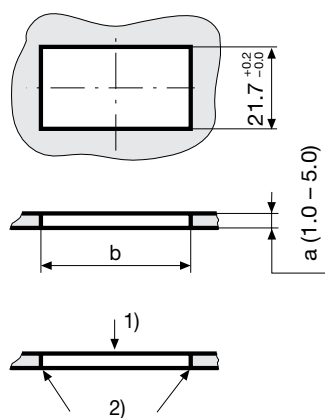
AZM14 / Raised collar with cover narrow, IP54



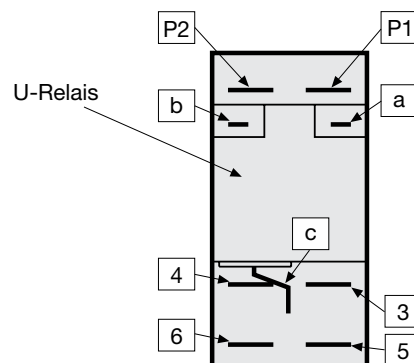
## Cut-out and pin-out

Cut-out snap-in type

Pin-out



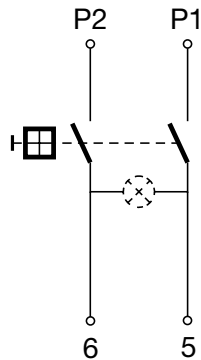
| a   | b           |
|-----|-------------|
| 1.0 | 44,5...45,0 |
| 1.5 | 44,5...45,0 |
| 2.0 | 44,7...45,2 |
| 2.5 | 44,7...45,2 |
| 3.0 | 44,8...45,3 |
| 4.0 | 44,9...45,4 |
| 5.0 | 45,0...45,5 |



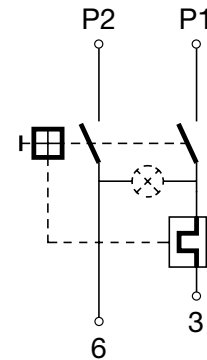
- 1) Assemble
- 2) edge must be sharp

## Diagrams

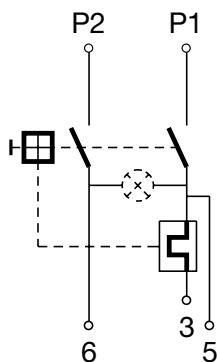
Without thermal overload protection



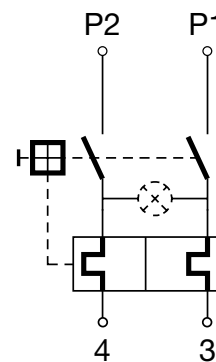
1 pole thermal overload protection



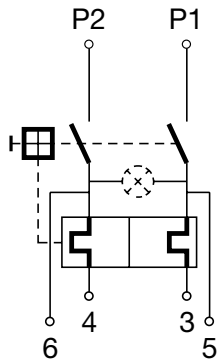
1 pole thermal overload protection, Shunt terminal



2 pole thermal overload protection



2 pole thermal overload protection, Shunt terminal



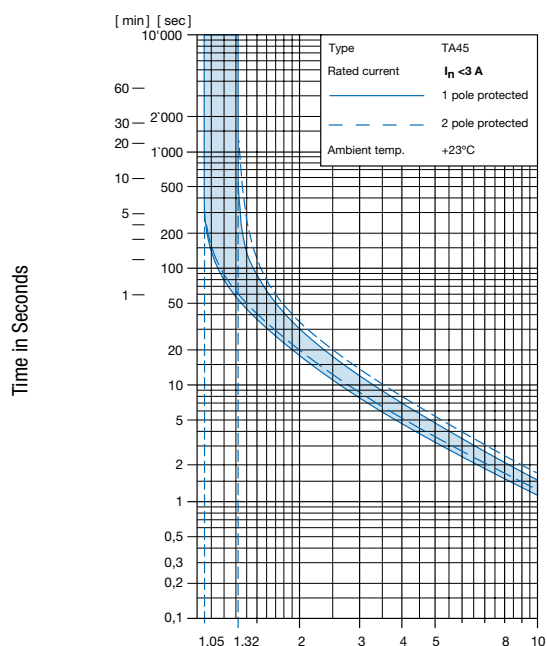
## Effect of ambient temperature

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              |

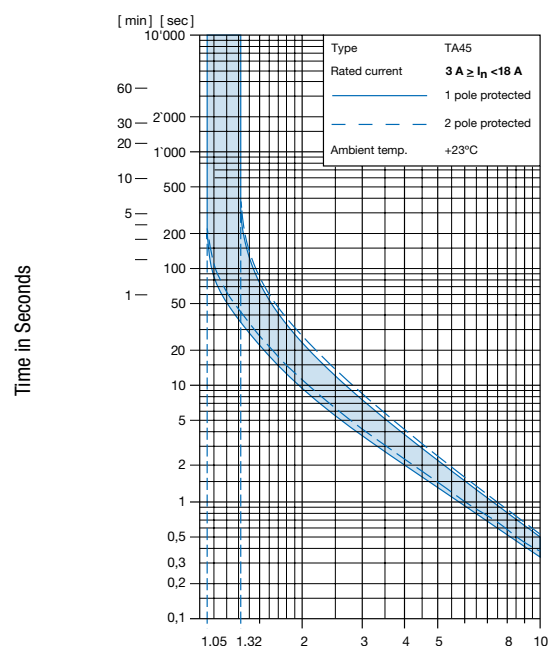
Example: Rated current = 5 A; Environmental temperature = 40 °C; --> Correction factor = 1.08; Resulting current = 5.5 A --> Fount to next higher rated current: 6 A

## Time-Current-Curves



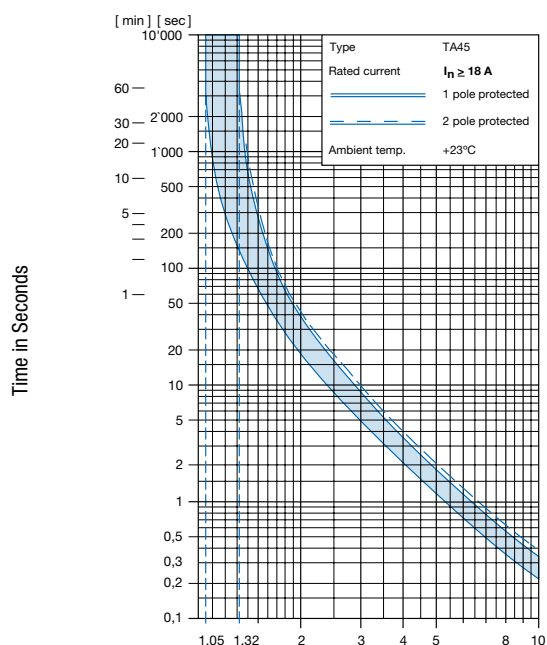
Multiple of Rated Current  $I_n$

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, flat connection, illuminated 220 V...240 V                                             | A02               |
| 2-pole, rocker, flat connection, illuminated 110 V...120 V                                             | A04               |
| 2-pole, rocker, flat connection, illuminated 220 V...26 V                                              | A07               |
| 2-pole, rocker, flat connection, illuminated 10 V...13 V                                               | A08               |
| 2-pole, rocker, flat connection, illuminated 4 V...7 V                                                 | A09               |
| 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, screw connection, illuminated 220 V...240 V                                            | A52               |
| 2-pole, rocker, screw connection, illuminated 110 V...120 V                                            | A54               |
| 2-pole, rocker, screw connection, illuminated 20 V...26 V                                              | A57               |
| 2-pole, rocker, screw connection, illuminated 10 V...13 V                                              | A58               |
| 2-pole, rocker, screw connection, illuminated 4 V...7 V                                                | A59               |
| 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               |

| Basic function                                                                                                      | Configuration key |
|---------------------------------------------------------------------------------------------------------------------|-------------------|
| 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               |
| 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, flat connection, without illumination                                                               | ABC               |
| 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, flat connection, momentary switch, without illumination                                             | AEC               |
| 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, screw connection, without illumination                                                              | AHC               |
| 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, screw connection, momentary switch, without illumination                                            | AJC               |
| 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                 |

| Actuator colour    | Configuration key |
|--------------------|-------------------|
| 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 |
|------------------------------------------------------------------------|-------------------|
| without thermal overload protection / temporarily without VDE approval | C00               |
| 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               |

Other rated currents on request

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

For subsequent fitting accessories see:

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

## Factory mounted accessories

Configuration  
key

|                                                     |       |
|-----------------------------------------------------|-------|
| Raised collar with cover narrow, IP54               | AZM10 |
| Partially raised collar with cover, narrow, IP54    | AZM11 |
| Partially raised collar without cover, narrow, IP40 | AZM12 |

For subsequent fitting accessories see:

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

## Factory mounted accessories

Configuration  
key

|                                       |       |
|---------------------------------------|-------|
| Raised collar narrow, IP40            | AZM13 |
| Raised collar with cover narrow, IP54 | AZM14 |

For subsequent fitting accessories see:

[http://www.schurter.ch/pdf/english/typ\\_TA45-ACC.pdf](http://www.schurter.ch/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: <http://www.schurter.com/Stock-Check/Stock-Check-SCHURTER>

## Packaging Unit

1 Pcs

## Accessories

## Description



TA45-ACC  
Accessories to TA45