

Circuit Breaker for Equipment thermal, Rocker actuation, 2 pole



1-pole
 Rocker red
 Flange black



1-pole
 Rocker green
 Flange white



2-pole
 Rocker black
 Flange black

See below:

Approvals and Compliances

Description

- Thermal circuit breaker
- 1-1/2 pole
- Snap-in version
- Positively trip-free release
- Method of operation acc. to IEC: S-type
- Different rocker and flange colours
- Wide current range

Unique Selling Proposition

- Unique UL rating of 277 VAC
- Finely graded rated currents
- High configurability (rocker colours, lettering)
- Appealing design

Applications

- Power tools
- Medical and laboratory equipment
- Industrial appliances
- Equipment for construction
- Cleaning equipment
- Commercial and household kitchen appliances
- Industrial Power
- Industrial lighting arrays

Weblinks

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

Technical Data

| | |
|--|--|
| Rated Voltage AC | IEC: 240 VAC UL/CSA : 277 VAC |
| Rated Voltage DC | 1-pole: 32 VDC / 2-pole: 60 VDC |
| Rated current range AC | 0.05 - 20 A |
| Conditional short circuit capacity Inc | IEC 60934: 0.05...20 A: 2 kA, SC (C1) @ 240 VAC |
| Degree of Protection | front side IP40 acc. to IEC 60529 |
| Dielectric Strength | 50Hz: > 2.5 kV Impulse 1.2/50 µs: > 4 kV |
| Insulation Resistance | 500VDC > 100 MΩ |
| Lifetime | mechanical: 50'000 switching cycles AC: 1 x I _r , cos φ 0.6: 50'000 switching cycles DC: 1 x I _r , L/R = 2 - 3 ms: 50'000 switching cycles |

| | |
|---------------------------|--|
| Overload | IEC: min. 40 trips @ 6 x I _r , cos φ 0.6 UL / CSA: min. 50 trips @ 1.5 x I _r , cos φ 0.75 |
| Allowable Operation Temp. | -30°C to 60°C |
| Vibration Resistance | ± 0.75 mm @ 10 - 60 Hz acc. to IEC 60068-2-6, test Tc 10 G @ 60 - 500 Hz acc. to IEC 60068-2-6, test Tc |
| Shock Resistance | 30 G / 18ms acc. to IEC 60068-2-27, test Ea |
| Tripping Type | Thermal |
| Actuation Type | Rocker |
| Weight | 1-pole 19 g - 2-pole 32 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](#)

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: TA36

| Approval Logo | Certificates | Certification Body | Description |
|--|-------------------------------|--------------------|----------------------------------|
|  | VDE Approvals | VDE | VDE Certificate Number: 40019754 |
|  | UL Approvals | UL | UL File Number: E71572 |
|  | CCC Approvals | CCC | CCC Certificate Number: pending |


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

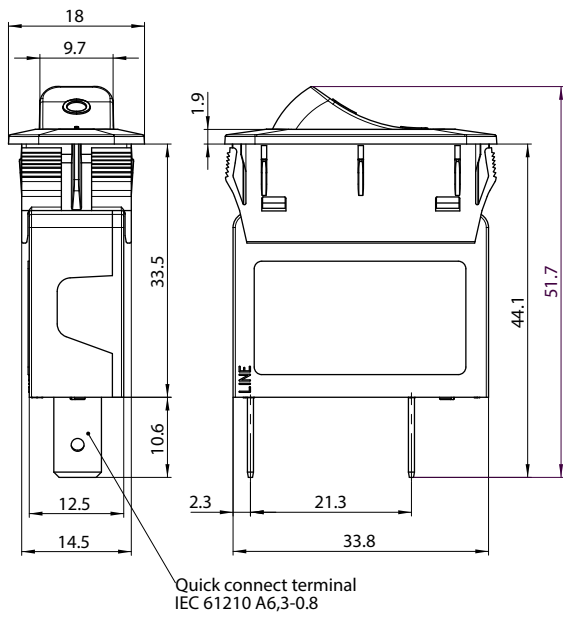
| Organization | Design | Standard | Description |
|---|--------------------------------|----------------|--|
|  | Designed for applications acc. | IEC/UL 62368-1 | IEC 62368-1 includes the basic requirements for safety of audio, video, information technology and office equipment. |

Compliances

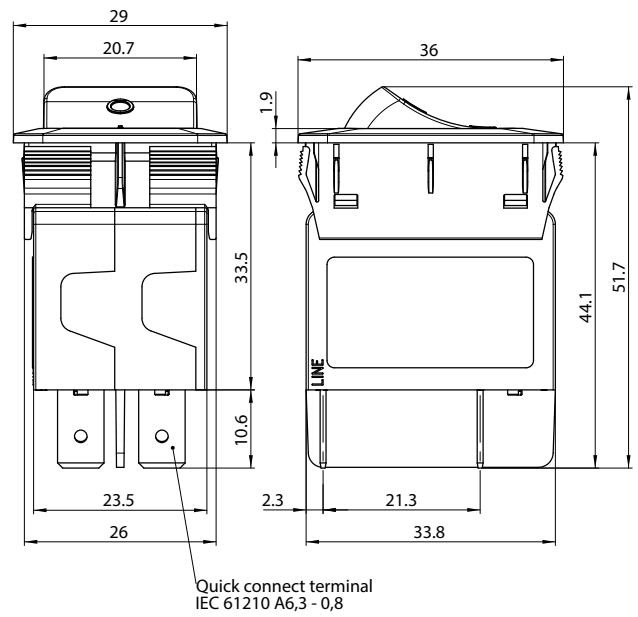
The product complies with following Guide Lines

| 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]

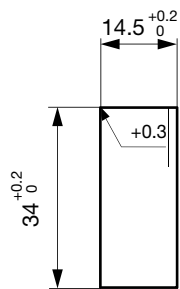


1-pole



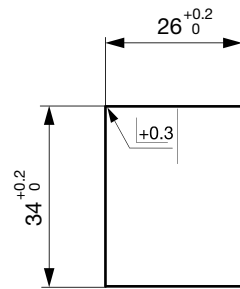
2-pole

Panel cut-out



Panel 1.0 – 3.5 mm

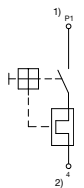
Panel cut-out
2 Pole



Panel 1.0 – 3.5 mm

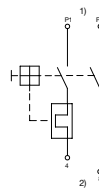
Diagrams

1-pole, 1 bimetal, non illuminated



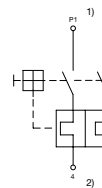
1) Line, 2) Load
 Codepos AAA = CFT, CGT

2-pole, 1 bimetal, non illuminated



1) Line, 2) Load

2-pole, 2 bimetal, non illuminated



1) Line, 2) Load

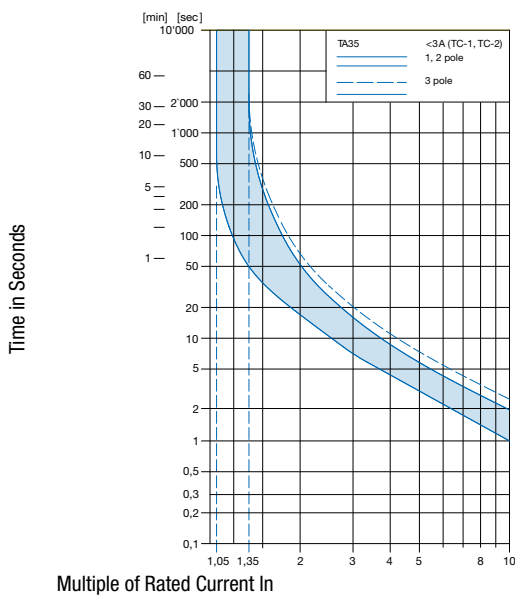
| Approval | Rated current | Rated Voltage AC | Rated Voltage DC |
|---------------|---------------|------------------|------------------|
| UL 1077 | 0.05...20 A | 277 V | 32/60 V |
| CSA C22.2 235 | 0.05...20 A | 277 V | 32/60 V |
| IEC 60934 | 0.05...20 A | 240 V | 32/60 V |

Typical internal resistance per pole

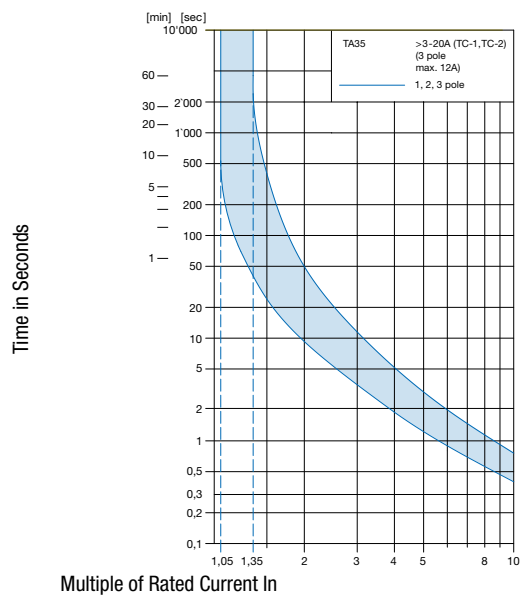
| Rated Current [A] | Internal Resistance [Ω] |
|-------------------|----------------------------------|
| 0.05 | 200.0000 |
| 0.1 | 70.0000 |
| 0.2 | 18.8000 |
| 0.3 | 8.6500 |
| 0.4 | 4.4000 |
| 0.5 | 2.7500 |
| 0.8 | 0.9100 |
| 1.0 | 0.7200 |
| 1.2 | 0.5000 |
| 1.5 | 0.3400 |
| 2.0 | 0.1870 |
| 2.5 | 0.1150 |
| 3.0 | 0.0590 |
| 3.5 | 0.0590 |
| 4.0 | 0.0590 |
| 5.0 | 0.0440 |
| 6.0 | 0.0280 |
| 7.0 | 0.0142 |
| 8.0 | 0.0142 |
| 10.0 | 0.0109 |
| 12.0 | 0.0086 |
| 13.0 | 0.0072 |
| 14.0 | 0.0072 |
| 15.0 | 0.0056 |
| 16.0 | 0.0056 |
| 18.0 | 0.0052 |
| 20.0 | 0.0052 |

Time-Current-Curves

Tripping Characteristics $I_n < 3 A$



Tripping Characteristics $I_n 3 - 20 A$



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 | |
|--------------------------|-------------------|--------|
| | 1-pole | 2-pole |
| -30 | 0.77 | 0.76 |
| -20 | 0.81 | 0.81 |
| 0 | 0.90 | 0.90 |
| +23 | 1.00 | 1.00 |
| +40 | 1.03 | 1.03 |
| +50 | 1.04 | 1.04 |
| +60 | 1.06 | 1.06 |

Example: Rated current = 5 A, Environmental temperature = 50 °C --> Correction factor = 1.04, Resulting current = 5.2 A --> Found to next higher rated current: 6 A

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|----|----|----|----|---|---|---|---|---|---|---|---|---|--|
| T | A | 3 | 6 | - | R | S | 1 | 4 | F | Q | 1 | 0 | 0 | W | B | F | W | Z | 0 | 5 | 0 | 0 | 0 | - | 0 | 0 | 0 | |
| | | | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | | | | | | | | | | |

| | | | |
|-----------------------|---|---|----------|
| Actuation type | | | 1 |
| Rocker | = | R | |

| | | | |
|-----------------|---|---|----------|
| Mounting | | | 2 |
| Snap in | = | S | |

| | | | |
|--------------|---|---|----------|
| Poles | | | 3 |
| 1-pole | = | 1 | |
| 2-pole | = | 2 | |

| | | | |
|----------------------|---|---|----------|
| IP protection | | | 4 |
| IP40 | = | 4 | |

| | | | |
|--------------------|---|---|----------|
| Switch type | | | 5 |
| ON/OFF | = | F | |
| Momentary Switch | = | M | |

| | | | |
|------------------|---|---|----------|
| Connector | | | 6 |
| Quick connector | = | Q | |

| | | | |
|----------------------------|---|---|----------|
| Overload protection | | | 7 |
| 1-pole protected | = | 1 | |
| 2-pole protected | = | 2 | |

| | | | |
|-----------------------------|---|---|----------|
| Illumination voltage | | | 8 |
| n/a | = | 0 | |

| | | | |
|---------------------------|---|---|----------|
| Illumination color | | | 9 |
| n/a | = | 0 | |

| | | | |
|--------------------|---|---|-----------|
| Front bezel | | | 10 |
| black | = | B | |
| white | = | W | |
| grey | = | G | |

| | | | |
|---------------|---|---|-----------|
| Rocker | | | 11 |
| black | = | B | |
| white | = | W | |
| red | = | R | |
| green | = | G | |
| yellow | = | Y | |
| orange | = | A | |
| blue | = | L | |

| | | | |
|---|---|---|-----------|
| Marking | | | 12 |
| Not marked* | = | N | |
| <i>(*marking to be applied by the customer)</i> | | | |

| | | | |
|-----|---|---|--|
| — ○ | = | H | |
|-----|---|---|--|

| | | | |
|---|---|---|--|
| $\begin{matrix} \text{Z} \\ \text{O} \end{matrix} \begin{matrix} \text{L} \\ \text{O} \end{matrix}$ | = | F | |
|---|---|---|--|

| | | | |
|----------------------|---|---|-----------|
| Marking color | | | 13 |
| nothing | = | N | |
| black | = | B | |
| white | = | W | |
| embossed | = | E | |

| | | | |
|---|--|--|-----------|
| Rated current terminal overload protection | | | 14 |
|---|--|--|-----------|

| In | | In | |
|--------|-------|--------|-------|
| 0.05 A | = Z05 | 3.0 A | = 030 |
| 0.1 A | = J01 | 3.5 A | = 035 |
| 0.15 A | = Z15 | 4.0 A | = 040 |
| 0.2 A | = J02 | 5.0 A | = 050 |
| 0.25 A | = Z5 | 6.0 A | = 060 |
| 0.3 A | = J03 | 7.0 A | = 070 |
| 0.35 A | = Z35 | 8.0 A | = 080 |
| 0.4 A | = J04 | 10.0 A | = 100 |
| 0.45 A | = Z45 | 12.0 A | = 120 |
| 0.5 A | = J05 | 13.0 A | = 130 |
| 0.8 A | = J08 | 14.0 A | = 140 |
| 1.0 A | = J10 | 15.0 A | = 150 |
| 1.2 A | = J12 | 16.0 A | = 160 |
| 1.5 A | = J15 | 18.0 A | = 180 |
| 2.0 A | = J20 | 20.0 A | = 200 |
| 2.5 A | = J25 | | |

(additional current ratings on request)

All Variants

| Basic function | Rocker | Marking | Front bezel | Rated Current [A] | Config. Code | Order Number |
|-------------------|--------|---------------|-------------|-------------------|------------------------------|--------------|
| 1 pole, 1 bimetal | white | I/O; embossed | black | 20 | TA36-RS14FQ100BWHE200000-000 | 3-125-263 |
| 1 pole, 1 bimetal | white | I/O; embossed | grey | 20 | TA36-RS14FQ100GWHE200000-000 | 3-128-204 |
| 1 pole, 1 bimetal | green | I/O; embossed | black | 20 | TA36-RS14FQ100BGHE200000-000 | 3-128-208 |
| 1 pole, 1 bimetal | black | ON/OFF; white | black | 16 | TA36-RS14FQ100BBFW160000-000 | 3-128-211 |
| 1 pole, 1 bimetal | black | I/O; white | black | 16 | TA36-RS14FQ100BBHW160000-000 | 3-128-212 |
| 1 pole, 1 bimetal | black | I/O; embossed | black | 10 | TA36-RS14FQ100BBHE100000-000 | 3-128-197 |
| 1 pole, 1 bimetal | yellow | I/O; black | black | 10 | TA36-RS14FQ100BYHB100000-000 | 3-128-198 |
| 1 pole, 1 bimetal | black | I/O; embossed | black | 6 | TA36-RS14FQ100BBHE060000-000 | 3-128-199 |
| 1 pole, 1 bimetal | green | ON/OFF; white | white | 5 | TA36-RS14FQ100WGFW050000-000 | 3-128-213 |
| 1 pole, 1 bimetal | red | I/O; black | black | 5 | TA36-RS14FQ100BRHB050000-000 | 3-128-200 |
| 1 pole, 1 bimetal | white | I/O; embossed | black | 3 | TA36-RS14FQ100BWHE030000-000 | 3-128-201 |
| 2 pole, 2 bimetal | black | I/O; white | black | 20 | TA36-RS24FQ200BBHW200000-000 | 3-128-214 |
| 2 pole, 2 bimetal | black | I/O; white | grey | 20 | TA36-RS24FQ200GBHW200000-000 | 3-128-215 |
| 2 pole, 2 bimetal | green | I/O; embossed | black | 20 | TA36-RS24FQ200BGHE200000-000 | 3-128-216 |
| 2 pole, 2 bimetal | white | I/O; black | black | 20 | TA36-RS24FQ200WBHW200000-000 | 3-128-240 |
| 2 pole, 2 bimetal | black | ON/OFF; white | black | 16 | TA36-RS24FQ200BBFW160000-000 | 3-128-230 |
| 2 pole, 2 bimetal | black | I/O; white | black | 16 | TA36-RS24FQ200BBHW160000-000 | 3-128-231 |
| 2 pole, 2 bimetal | white | I/O; embossed | black | 15 | TA36-RS24FQ200BWHE150000-000 | 3-128-217 |
| 2 pole, 2 bimetal | white | I/O; black | black | 15 | TA36-RS24FQ200WBHW150000-000 | 3-128-218 |
| 2 pole, 2 bimetal | black | I/O; white | black | 10 | TA36-RS24FQ200BBHW100000-000 | 3-128-327 |
| 2 pole, 2 bimetal | black | I/O; embossed | black | 10 | TA36-RS24FQ200BBHE100000-000 | 3-128-232 |
| 2 pole, 2 bimetal | white | I/O; embossed | black | 10 | TA36-RS24FQ200BWHE100000-000 | 3-128-233 |
| 2 pole, 2 bimetal | green | I/O; white | white | 10 | TA36-RS24FQ200BGHW100000-000 | 3-128-234 |
| 2 pole, 2 bimetal | black | I/O; white | white | 10 | TA36-RS24FQ200WBHW100000-000 | 3-128-235 |
| 2 pole, 2 bimetal | white | I/O; black | white | 10 | TA36-RS24FQ200WWHW100000-000 | 3-128-219 |
| 2 pole, 2 bimetal | white | I/O; embossed | black | 6 | TA36-RS24FQ200BWHE060000-000 | 3-128-236 |
| 2 pole, 2 bimetal | white | I/O; embossed | black | 5 | TA36-RS24FQ200BWHE050000-000 | 3-128-221 |
| 2 pole, 2 bimetal | green | I/O; embossed | black | 3 | TA36-RS24FQ200BGHE030000-000 | 3-128-238 |
| 2 pole, 2 bimetal | black | I/O; embossed | black | 3 | TA36-RS24FQ200BBHE030000-000 | 3-128-239 |
| 2 pole, 2 bimetal | black | I/O; white | black | 3 | TA36-RS24FQ200BBHW030000-000 | 3-128-243 |
| 2 pole, 2 bimetal | white | I/O; black | black | 3 | TA36-RS24FQ200WBHW030000-000 | 3-128-244 |

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

| Packaging Unit | 1-pole | 20 pcs. |
|----------------|--------|---------|
| | 2-pole | 10 pcs. |