

Circuit Breaker for Equipment thermal, 3 pole, Rocker actuation



See below:

#### Approvals and Compliances

#### Description

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

#### Technical Data

Rated Voltage AC	AC 400 VAC
Rated current range AC	0.05 - 12 A
Conditional short circuit capacity I <sub>nc</sub>	IEC 60934: PC1, AC 400 V: 1kA
Short circuit capacity I <sub>cn</sub>	IEC 60934: 400 VAC: 10x I <sub>n</sub> (max. 3 Zyk.)
Degree of Protection	from front side IP40 acc. to IEC 60529
Dielectric Strength	4 kVAC
Insulation Resistance	500 VDC > 100 MΩ
Lifetime	mechanical: 50'000 switching cycles AC: 1 x I <sub>r</sub> : 50'000 switching cycles

Overload	AC: min. 40 trips @ 6 x I <sub>r</sub>
Allowable Operation Temp.	-10 °C to 55 °C
Vibration Resistance	± 0.75 mm @ 10 - 60 Hzacc. to IEC 60068-2-6, test Tc10 G @ 60 - 500 Hzacc. to IEC 60068-2-6, test Tc
Shock Resistance	30 G / 18 msacc. to IEC 60068-2-27, test Ea
Tripping Type	Thermal
Actuation Type	Rocker
Weight	45 - 50 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: TA45

Approval Logo	Certificates	Certification Body	Description
	<a href="#">VDE Approvals</a>	VDE	VDE Certificate Number: 40019880
	<a href="#">UL Approvals</a>	UL	UL File Number: E71572
	<a href="#">CCC Approvals</a>	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.

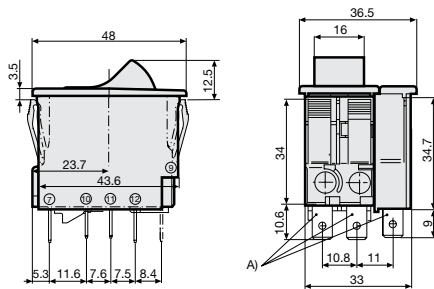
Compliances

The product complies with following Guide Lines

Identification	Details	Initiator	Description
	<a href="#">CE declaration of conformity</a>	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.
	<a href="#">RoHS</a>	SCHURTER AG	Directive RoHS 2011/65/EU, Amendment (EU) 2015/863
	<a href="#">China RoHS</a>	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.
	<a href="#">REACH</a>	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.

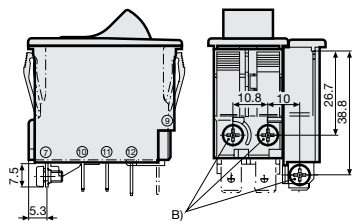
Dimension [mm]

Quick connect terminal



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

Screw terminal

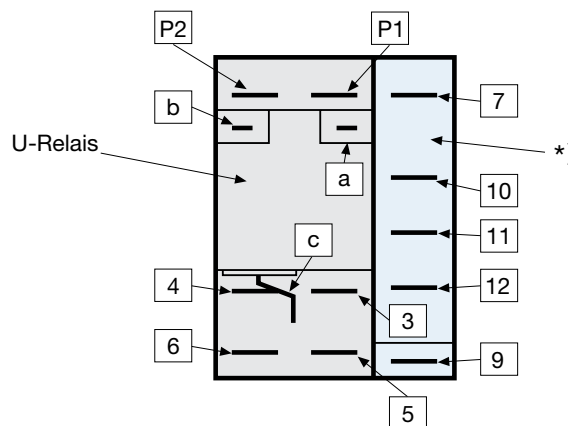
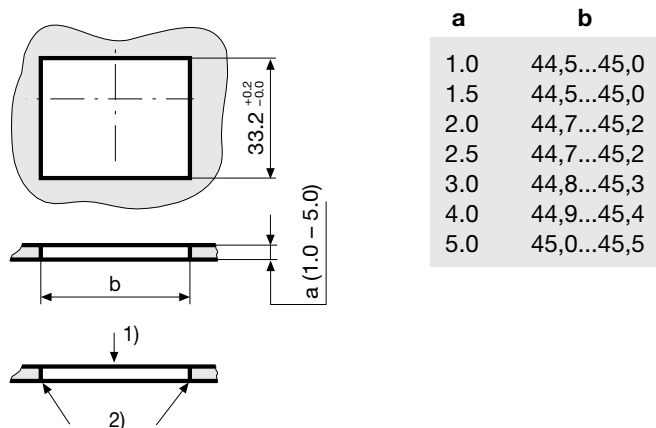


B) Screw type M3, 5x6 (Philips Form H), maximum torque 1 Nm

## Cut-out and pin-out

Cut-out snap-in type

Pin-out

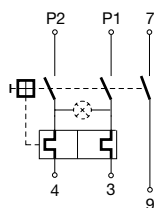


- 1) Assemble
- 2) edge must be sharp

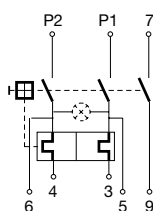
\*) Auxiliary contact / 3 pole

## Diagrams

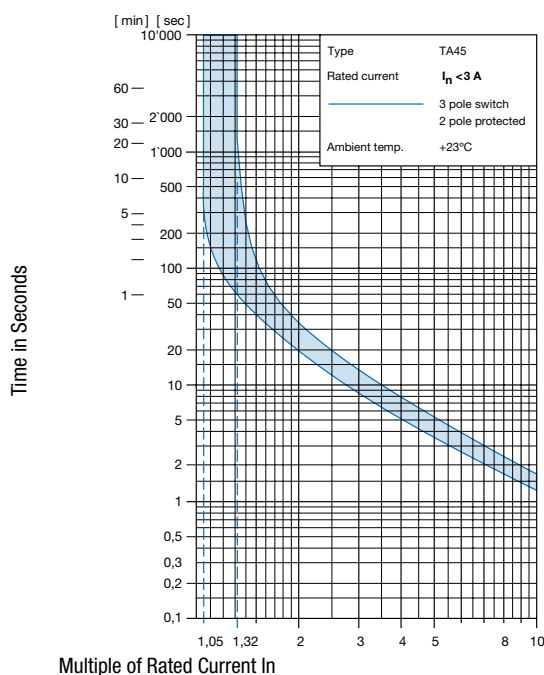
2 pole thermal overload protection



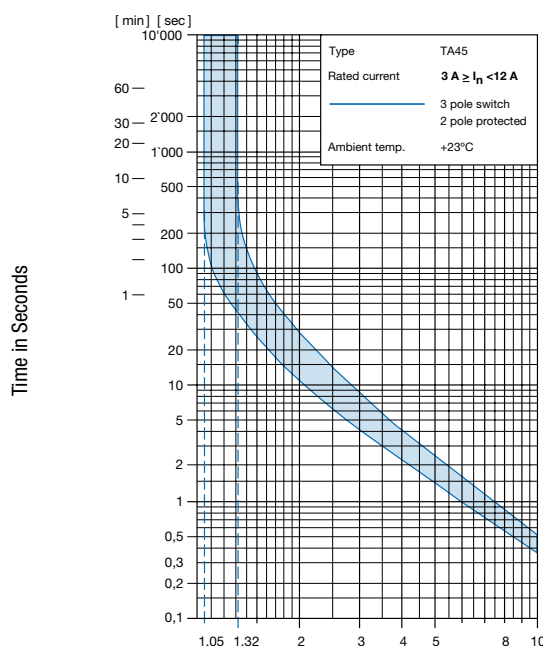
2 pole thermal overload protection,  
Shunt terminal



## Time-Current-Curves

Multiple of Rated Current  $I_n$ 

Reference Temperature +23°

Multiple of Rated Current  $I_n$ 

Reference Temperature +23°

## 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

## 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
3-pole, rocker, 2pole overload protection, screw connection, illuminated 380 V...400 V	A1D
3-pole, rocker, 2pole overload protection, shunt terminal, screw connection, illuminated 380 V...400 V	A1G
3-pole, rocker, 2pole overload protection, quick connect terminal, illuminated 380 V...400 V	AD1
3-pole, rocker, 2pole overload protection, shunt terminal, quick connect terminal, illuminated 380 V...400 V	AG1
3-pole, rocker, 2pole overload protection, quick connect terminal, without illumination	AKD
3-pole, rocker, 2pole overload protection, shunt terminal, quick connect terminal, without illumination	AKG

## Basic function










3-pole, rocker, 2pole overload protection, quick connect terminal, momentary switch, without illumination	ALD
3-pole, rocker, 2pole overload protection, shunt terminal, quick connect terminal, momentary switch, without illumination	ALG
3-pole, rocker, 2pole overload protection, screw connection, without illumination	AMD
3-pole, rocker, 2pole overload protection, shunt terminal, screw connection, without illumination	AMG
3-pole, rocker, 2pole overload protection, screw connection, momentary switch, without illumination	AND
3-pole, rocker, 2pole overload protection, shunt terminal, screw connection, momentary switch, without illumination	ANG

## Configuration key

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

Other rated currents on request

\* The approved current range is 0.05 to 12 A. We recommend to limit the range to max. 8 A at AC 400 V.  
For the current range 9 to 12 A the voltage should be limited to AC 240 V.

Rated current	Configuration key
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
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

\* The approved current range is 0.05 to 12 A. We recommend to limit the range to max. 8 A at AC 400 V.  
For the current range 9 to 12 A the voltage should be limited to AC 240 V.

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:

[https://www.schurter.com/pdf/english/typ\\_TA45-ACC.pdf](https://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
2-pole		Quick connect terminal	without illumination	Black	white printed	4.0 A	Without cover	TA45-AKDBH040C0	<a href="#">4430.2827</a>
2-pole		Quick connect terminal	without illumination	Red	white printed	4.0 A	Without cover	TA45-AKDRLO40C0	<a href="#">4430.3400</a>

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

# Mouser Electronics

Authorized Distributor

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[4430.2827](#) [4430.3142](#) [4430.3257](#) [4430.3400](#)