

Circuit Breaker for Equipment thermal, 3 pole, Push button actuation, with auxiliary contact



Thermal circuit breaker
 Snap-in or flange mounted
 Pushbutton actuation

See below:

Approvals and Compliances

Description

- Thermal circuit breaker
- 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 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
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 Ir: 50'000 switching cycles

Overload	AC: min. 40trips @ 6 x Ir
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 / 18msacc. to IEC 60068-2-27, test Ea
Tripping Type	Thermal
Actuation Type	Pushbutton
Weight	60 - 65g

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
	VDE Approvals	VDE	VDE Certificate Number: 40019880
	UL Approvals	UL	UL File Number: E71572
	CCC Approvals	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 60950	IEC 60950-1 includes the basic requirements for the safety of information technology equipment.

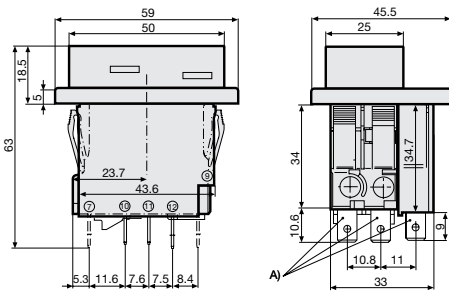
Compliances

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	Directive RoHS 2011/65/EU, Amendment (EU) 2015/836
	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.

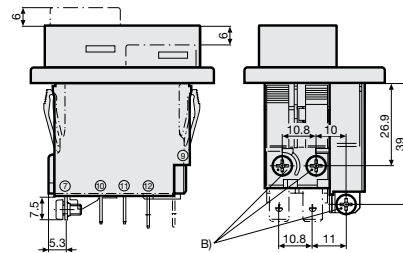
Dimension [mm]

Snap-in type and quick connect terminal with auxiliary contact



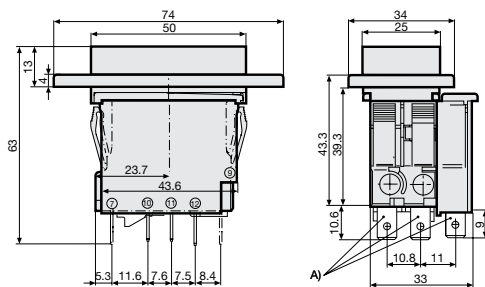
A) Quick connect terminal, IEC 61210, A6.3-0.8 mm

Snap-in type and screw clamp terminal with auxiliary contact



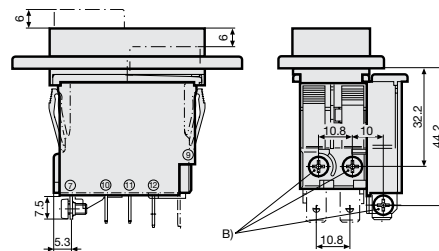
B) Screw type M3, 5x6 (Philips Form H), maximum torque 1 Nm

Flange type and quick connect terminal with auxiliary contact



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

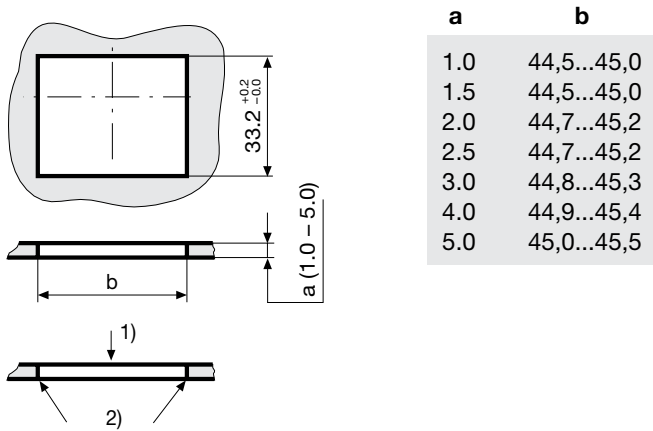
Flange type and screw clamp terminal with auxiliary contact



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

Cut-out and pin-out

Cut-out snap-in type

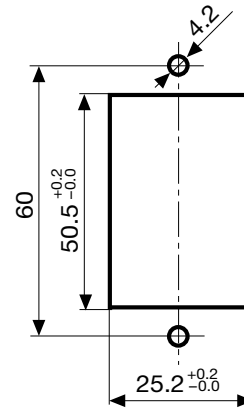


1) Assemble

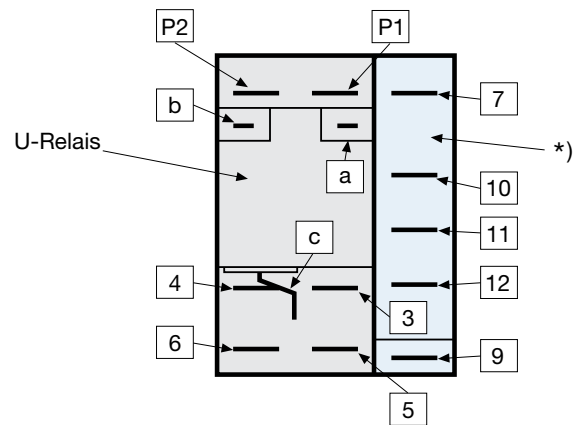
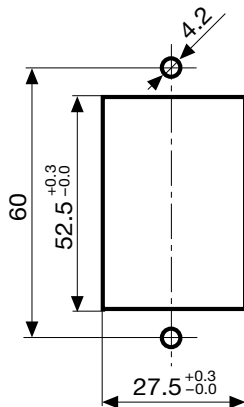
2) edge must be sharp

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

Cut-out flange type / Installation from rear



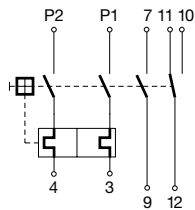
Pin-out



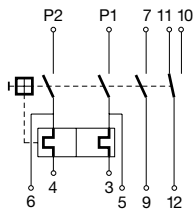
*) Auxiliary contact / 3 pole

Diagrams

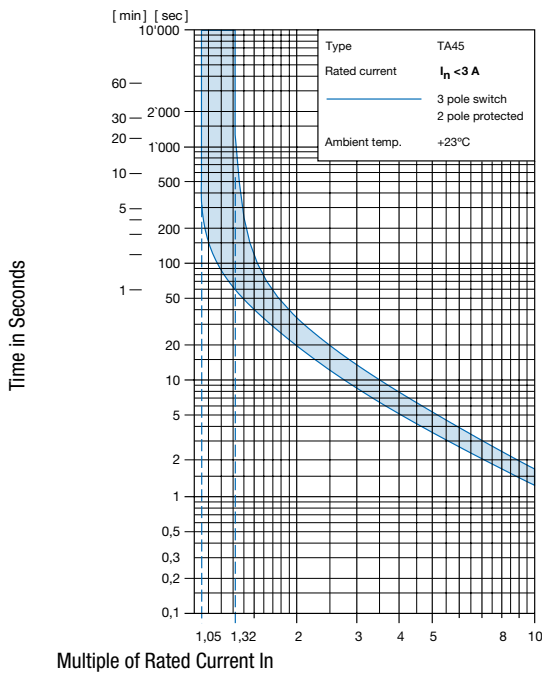
2pole thermal overload protection,
Auxiliary contact



2pole thermal overload protection,
Auxiliary contact, Shunt terminal

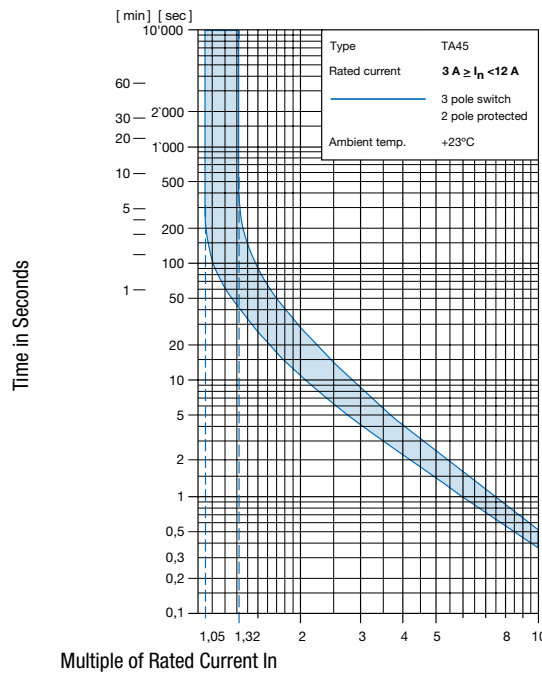


Time-Current-Curves



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

Auxiliary contact (changeover)

Rated Voltage	28 VDC	60 VDC	240 VAC
Rated current	max. 10 A resistive load	max. 2 A resistive load	max. 2 A $\cos \phi$ 0.7

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	Basic function	Configuration key
3-pole, push button, 2p overload protection, auxiliary contact, quick connect terminal, flange type, push button gasket IP40	AMN	3-pole, push button, 2p overload protection, auxiliary contact and shunt terminal, quick connect terminal, flange type, push button gasket IP65	AMX
3-pole, push button, 2p overload protection, auxiliary contact and shunt terminal, quick connect terminal, flange type, push button gasket IP40	AMP	3-pole, push button, 2p overload protection, auxiliary contact, screw connection, flange type, push button gasket IP40	ARN
3-pole, push button, 2p overload protection, auxiliary contact, quick connect terminal, flange type, push button gasket IP65	AMW	3-pole, push button, 2p overload protection, auxiliary contact and shunt terminal, screw connection, flange type, push button gasket IP40	ARP
		3-pole, push button, 2p overload protection, auxiliary contact, screw connection, flange type, push button gasket IP65	ARW

Basic function	Configuration key
3-pole, push button, 2p overload protection, auxiliary contact and shunt terminal, screw connection, flange type, push button gasket IP65	ARX
3-pole, push button, 2p overload protection, auxiliary contact, quick connect terminal, snap-in type, push button gasket IP40	AVN
3-pole, push button, 2p overload protection, auxiliary contact and shunt terminal, quick connect terminal, snap-in type, push button gasket IP40	AVP
3-pole, push button, 2p overload protection, auxiliary contact, quick connect terminal, snap-in type, push button gasket IP65	AWW
3-pole, push button, 2p overload protection, auxiliary contact and shunt terminal, quick connect terminal, snap-in type, push button gasket IP65	AVX
3-pole, push button, 2p overload protection, auxiliary contact, screw connection, snap-in type, push button gasket IP40	AYN
3-pole, push button, 2p overload protection, auxiliary contact and shunt terminal, screw connection, snap-in type, push button gasket IP40	AYP
3-pole, push button, 2p overload protection, auxiliary contact, screw connection, snap-in type, push button gasket IP65	AYW
3-pole, push button, 2p overload protection, auxiliary contact and shunt terminal, screw connection, snap-in type, push button gasket IP65	AYX

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 	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
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
Remote trip release, rated voltage 400 V AC	A1
without release / lock-out latch	C0
Undervoltage release with additional contact, rated voltage 400 V AC	E1
Undervoltage release, rated voltage 400 V AC	U1
Undervoltage release with 2 additional contacts, rated voltage 400 V AC	Z1

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

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	Auxiliary contact	Quick connect terminal	Snap-in type	IP40	Front Black: Green/Red	black printed	0.3 A	Without cover	TA45-AVNTMJ03C0	4430.3332
2-pole	Auxiliary contact	Quick connect terminal	Snap-in type	IP40	Front Black: Green/Red	black printed	2.5 A	Without cover	TA45-AVNTMJ25C0	4430.3333

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