

Circuit Breaker for Equipment thermal, 2 pole, Push button actuation



Description

- Thermal circuit breaker
- 1 or 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)

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](#)

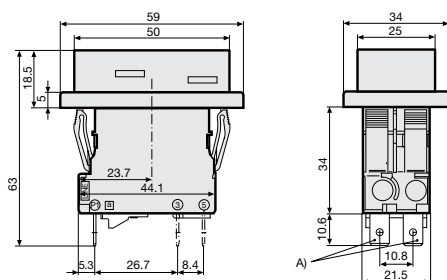
Technical Data

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 kV
Insulation resistance	500 VDC > 100 MΩ
Endurance typical	mechanical: 50'000 switching cycles
	AC: 1 x Ir:
	50'000 switching cycles
	DC: 1 x Ir:
	50'000 switching cycles

Overload	AC: min. 40 trips @ 6 x Ir
	DC: min. 50 trips @ 4 x Ir
Ambient temperature	-10 °C to 55 °C
Vibration Resistance	± 0.75 mm @ 5 - 60 Hz acc. to IEC 60068-2-6, test Fc 10 G @ 60 - 500 Hz acc. to IEC 60068-2-6, test Fc
Shock Resistance	30 G / 18 ms acc. to IEC 60068-2-27, test Ea
Tripping Type	Thermal
Actuation Type	Pushbutton
Weight	35 - 40 g

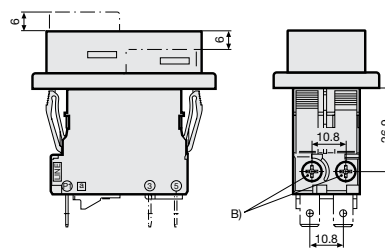
Dimension

Snap-in type and quick connect terminal



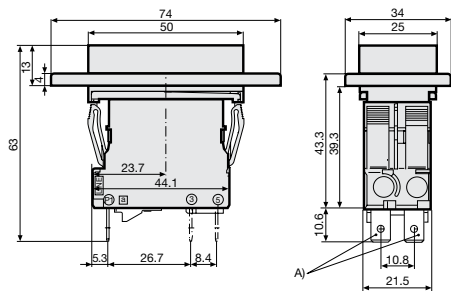
A) Quick connect terminal, IEC 61210, A6.3-0.8 mm

Snap-in type and screw clamp terminal



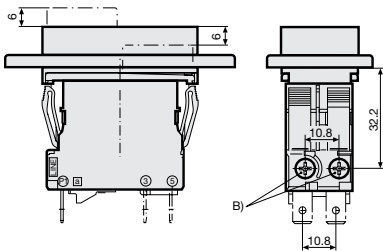
B) Screw type M3, 5x6 (Philips Form H), maximum torque 1 Nm

Flange type and quick connect terminal



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

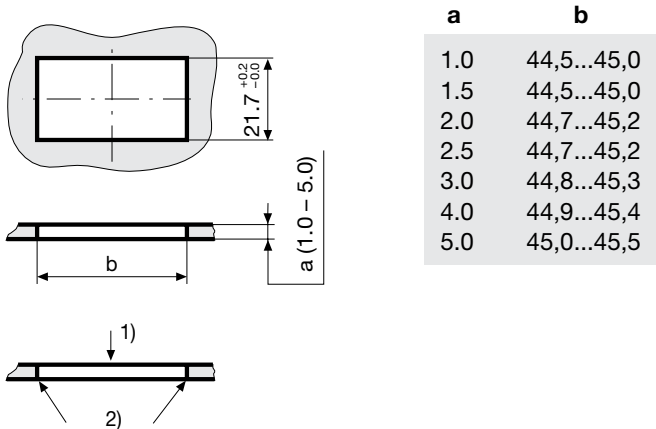
Flange type and screw clamp terminal



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

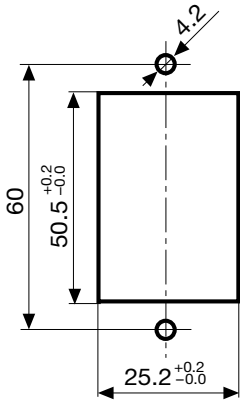
Cut-out and pin-out

Cut-out snap-in type

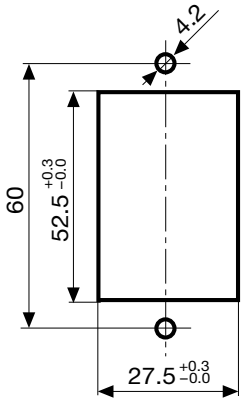


- 1) Assemble
- 2) edge must be sharp

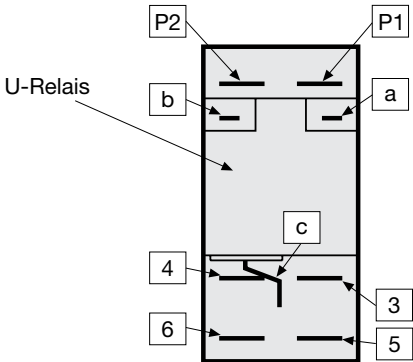
Cut-out flange type / Installation from rear



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

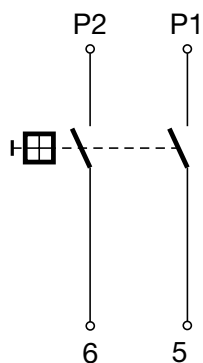


Pin-out

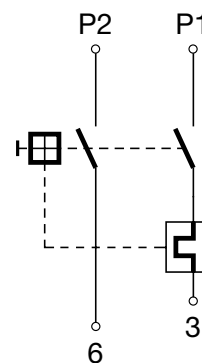


Diagrams

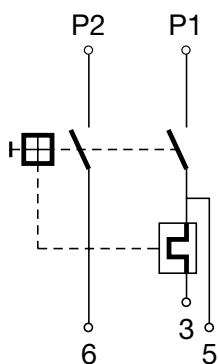
Without thermal overload protection



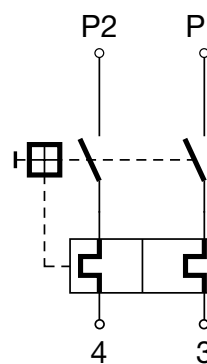
1 pole thermal overload protection



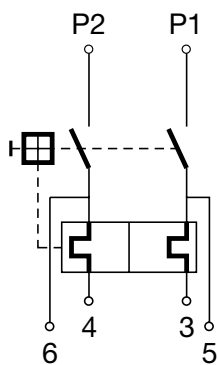
1 pole thermal overload protection, Shunt terminal



2 pole thermal overload protection



2 pole thermal overload protection, Shunt terminal



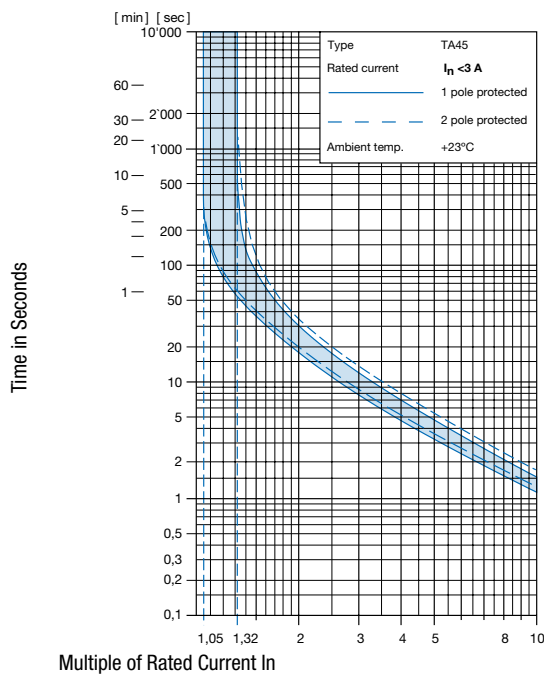
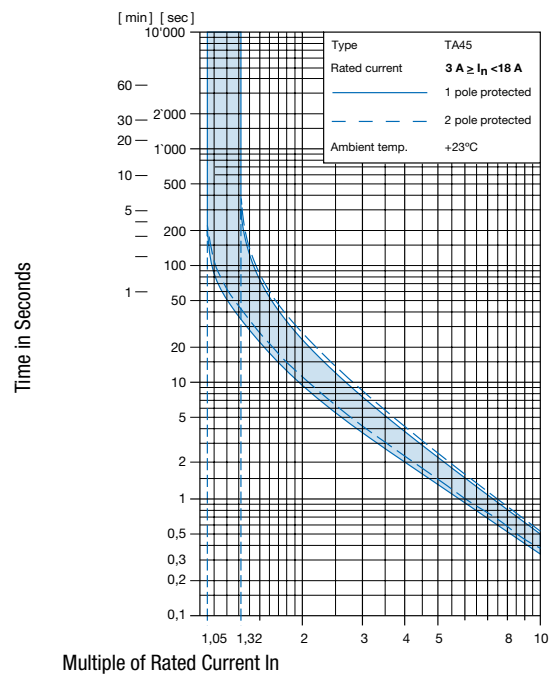
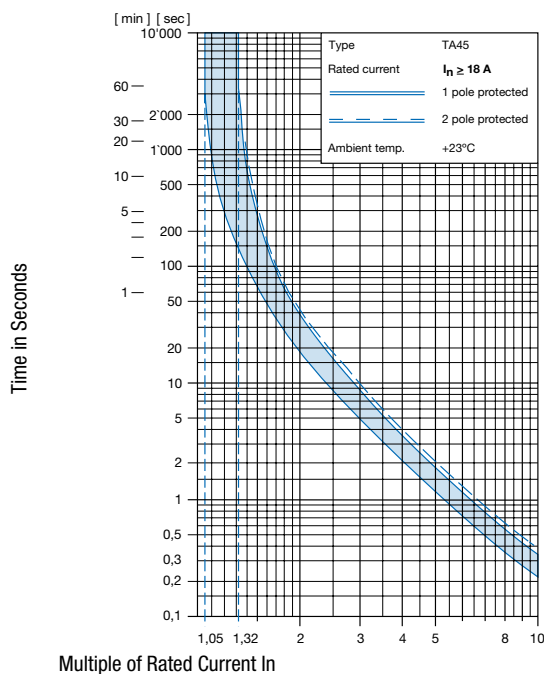
Effect of ambient temperature

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 $+23^\circ$ Multiple of Rated Current I_n Reference Temperature $+23^\circ$ Multiple of Rated Current I_n Reference Temperature $+23^\circ$

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, push button, flat connection, snap-in type, push button gasket IP40	ABK
2-pole, push button, 1pole overload protection, flat connection, snap-in type, push button gasket IP40	ABL
2-pole, push button, 1pole overload protection, shunt terminal, flat connection, snap-in type, push button gasket IP40	ABM
2-pole, push button, 2pole overload protection, flat connection, snap-in type, push button gasket IP40	ABN
2-pole, push button, 2p overload protection, shunt terminal, flat connection, snap-in type, push button gasket IP40	ABP
2-pole, push button, flat connection, snap-in type, push button gasket IP65	ABS
2-pole, push button, 1pole overload protection, flat connection, snap-in type, push button gasket IP65	ABU
2-pole, push button, 1pole overload protection, shunt terminal, flat connection, snap-in type, push button gasket IP65	ABV
2-pole, push button, 2pole overload protection, flat connection, snap-in type, push button gasket IP65	ABW
2-pole, push button, 2p overload protection, shunt terminal, flat connection, snap-in type, push button gasket IP65	ABX
2-pole, push button, screw connection, snap-in type, push button gasket IP40	AEK
2-pole, push button, 1pole overload protection, screw connection, snap-in type, push button gasket IP40	AEL
2-pole, push button, 1p overload protection, shunt terminal, screw connection, snap-in type, push button gasket IP40	AEM
2-pole, push button, 2pole overload protection, screw connection, snap-in type, push button gasket IP40	AEN
2-pole, push button, 2p overload protection, shunt terminal, screw connection, snap-in type, push button gasket IP40	AEP
2-pole, push button, screw connection, snap-in type, push button gasket IP65	AES
2-pole, push button, 1pole overload protection, screw connection, snap-in type, push button gasket IP65	AEU
2-pole, push button, 1p overload protection, shunt terminal, screw connection, snap-in type, push button gasket IP65	AEV
2-pole, push button, 2pole overload protection, screw connection, snap-in type, push button gasket IP65	AEW
2-pole, push button, 2p overload protection, shunt terminal, screw connection, snap-in type, push button gasket IP65	AEX
2-pole, push button, flat connection, flange type, push button gasket IP40	AHK
2-pole, push button, 1pole overload protection, flat connection, flange type, push button gasket IP40	AHL
2-pole, push button, 1pole overload protection, shunt terminal, flat connection, flange type, push button gasket IP40	AHM
2-pole, push button, 2pole overload protection, flat connection, flange type, push button gasket IP40	AHN
2-pole, push button, 2p overload protection, shunt terminal, flat connection, flange type, push button gasket IP40	AHP
2-pole, push button, flat connection, flange type, push button gasket IP65	AHS
2-pole, push button, 1pole overload protection, flat connection, flange type, push button gasket IP65	AHU
2-pole, push button, 1pole overload protection, shunt terminal, flat connection, flange type, push button gasket IP65	AHV
2-pole, push button, 2pole overload protection, flat connection, flange type, push button gasket IP65	AHW
2-pole, push button, 2p overload protection, shunt terminal, flat connection, flange type, push button gasket IP65	AHX
2-pole, push button, screw connection, flange type, push button gasket IP40	AJK
2-pole, push button, 1pole overload protection, screw connection, flange type, push button gasket IP40	AJL
2-pole, push button, 1p overload protection, shunt terminal, screw connection, flange type, push button gasket IP40	AJM
2-pole, push button, 2pole overload protection, screw connection, flange type, push button gasket IP40	AJN
2-pole, push button, 2p overload protection, shunt terminal, screw connection, flange type, push button gasket IP40	AJP

Basic function	Configuration key
2-pole, push button, screw connection, flange type, push button gasket IP65	AJS
2-pole, push button, 1pole overload protection, screw connection, flange type, push button gasket IP65	AJU
2-pole, push button, 1p overload protection, shunt terminal, screw connection, flange type, push button gasket IP65	AJV
2-pole, push button, 2pole overload protection, screw connection, flange type, push button gasket IP65	AJW
2-pole, push button, 2p overload protection, shunt terminal, screw connection, flange type, push button gasket IP65	AJX

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
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

Other rated currents on request

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

Other rated currents on request

Rated current	Configuration key
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	

For subsequent fitting accessories see:

http://www.schurter.ch/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		Quick connect terminal	Flange type	IP65	Front Black: Green/Red	white printed	20.0 A	Without cover	TA45-AHWTL200C0	4430.3513
2-pole		Quick connect terminal	Snap-in type	IP40	Front Black: Green/Red	embossed	12.0 A	Without cover	TA45-ABNTF120C0	4430.3516
1-pole		Quick connect terminal	Snap-in type	IP65	Front Black: Green/Red	black printed	10.0 A	Without cover	TA45-ABUTM100C0	4430.3608

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