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Thermal (T- and TA-Line) www.schurter.com /PG17\_20

Circuit Breaker for Equipment thermal, 2 pole, Rocker actuation





#### 

TA45-2R

#### 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

#### **Technical Data**



- Applications - Power tools
- Industrial appliances
- Power supplies

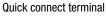
#### Weblinks

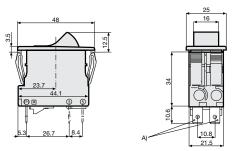
pdf datasheet, html-datasheet, General Product Information, Approvals, CE declaration of conformity, RoHS, CHINA-RoHS, REACH, Distributor-Stock-Check, Detailed request for product, Product News

lecilita Dala			
Rated Voltage AC	240 V	Overload	AC: min. 40 trips
Rated Voltage DC	60 V		@ 6 x lr
Rated current range AC	0.05 - 20 A		DC: min. 40 trips
Conditional short circuit ca-	IEC: Inc, PC1, AC 240 V: 1 kA		@ 4 x lr
pacity		Ambient temperature	-10 °C to 55 °C
Degree of Protection	from front side IP 40 acc. to IEC 60529	Vibration Resistance	± 0.75 mm @ 5 - 60 Hz
Dielectric Strength	4 kVAC		acc. to IEC 60068-2-6, test Fc
Insulation Resistance	$500 \text{ VDC} > 100 \text{ M}\Omega$		10 G @ 60 - 500 Hz
Endurance typical	mechanical: 50'000 switching cycles		acc. to IEC 60068-2-6, test Fc
	AC: 1 x lr:	Shock Resistance	30 G / 18ms
	50'000 switching cycles		acc. to IEC 60068-2-27, test Ea
	DC: 1 x lr:	Tripping Type	Thermal
	50'000 switching cycles	Actuation Type	Rocker
		Weight	30 - 35 g

Detailed information on product approvals, code requirements, usage instructions and detailed test conditions can be looked up in General Product Information

## Dimension [mm]

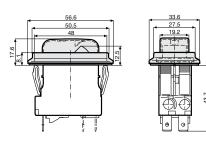




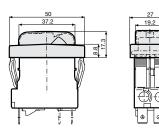
A) Quick connect terminal, IEC 61210, A6.3-0.8 mm

### Accessories / factory mounted

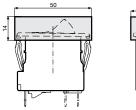
AZM01 / Collar with cover, IP 54



AZM10 / Collar with cover, narrow, IP 54

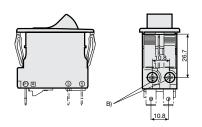


AZM13 / Raised collar narrow, IP40



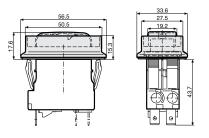


Screw clamp terminal

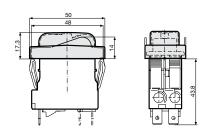


B) Screw type M3, 5x6 (Philips Form H), maximum torque 1 Nm

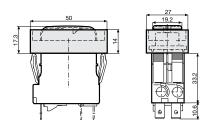
AZM02 / Raised collar with cover, narrow, IP 54 AZM03 / Raised collar, IP 40  $\,$ 



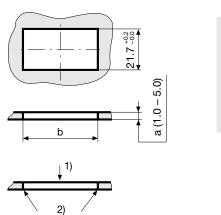
AZM11 / Partially raised collar with cover, narrow, IP 54 AZM12 / Partially raised collar without cover, narrow, IP 40



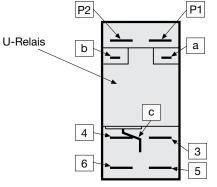
AZM14 / Raised collar with cover narrow, IP 54



#### **Cut-out and pin-out** Cut-out snap-in type



Pin-out

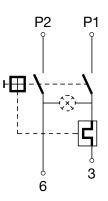


1) Assemble

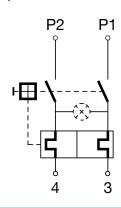
2) edge must be sharp

#### Diagrams

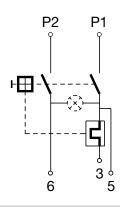
1 pole thermal overload protection



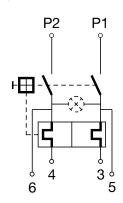
2 pole thermal overload protection



1 pole thermal overload protection, Shunt terminal



2 pole thermal overload protection, Shunt terminal



### Effect of ambient temperature

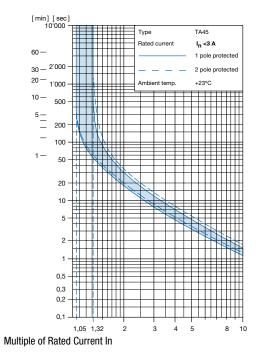
The units are calibrated for an ambient temperature of  $+23^{\circ}$ C. To determine the rated current for a lower or higher ambient temperature, use a correction factor (typical value) from the table below:

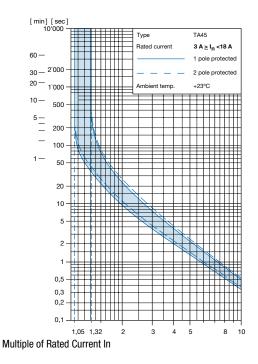
Ambient temperature [°C]	Correction factor
-10	0.89
-5	0.91
0	0.92
+23	1.00
+30	1.03
+40	1.08
+55	1.16

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**

Time in Seconds



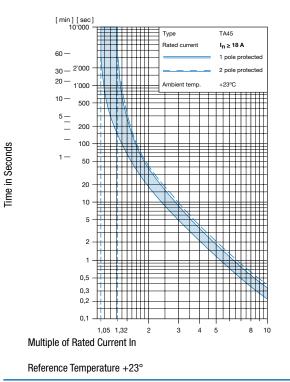


Reference Temperature +23°

Reference Temperature +23°

Time in Seconds

Configuration



#### 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 functionConfiguration key2-pole, rocker, 2pole overload protection, flat connection, illuminated 4A392-pole, rocker, 1pole overload protection, flat connection, illuminated 220A122-pole, rocker, 2pole overload protection, shunt terminal, flat connection, illuminated 4A392-pole, rocker, 1pole overload protection, flat connection, illuminated 110A142-pole, rocker, 2pole overload protection, shunt terminal, flat connection, illuminated 110A442-pole, rocker, 1pole overload protection, flat connection, illuminated 20A172-pole, rocker, 2pole overload protection, shunt terminal, flat connection, illuminated 10A472-pole, rocker, 1pole overload protection, flat connection, illuminated 10A182-pole, rocker, 2pole overload protection, shunt terminal, flat connection, illuminated 10A482-pole, rocker, 1pole overload protection, flat connection, illuminated 10A182-pole, rocker, 2pole overload protection, shunt terminal, flat connection, illuminated 10A482-pole, rocker, 1pole overload protection, flat connection, illuminated 10A182-pole, rocker, 2pole overload protection, shunt terminal, flat connection, illuminated 10A482-pole, rocker, 1pole overload protection, flat connection, illuminated 10A192-pole, rocker, 2pole overload protection, shunt terminal, flat connection, A492-pole, rocker, 1pole overload protection, flat connection, illuminated 4A192-pole, rocker, 2pole overload protection, shunt terminal, flat connection, A49				key
V240 V illuminated 220 V240 V   2-pole, rocker, 1pole overload protection, flat connection, illuminated 110 A14   2-pole, rocker, 1pole overload protection, flat connection, illuminated 20 A14   2-pole, rocker, 1pole overload protection, flat connection, illuminated 20 A17   2-pole, rocker, 1pole overload protection, flat connection, illuminated 20 A17   2-pole, rocker, 1pole overload protection, flat connection, illuminated 10 A18   2-pole, rocker, 2pole overload protection, shunt terminal, flat connection, illuminated 10 A18   2-pole, rocker, 2pole overload protection, shunt terminal, flat connection, illuminated 10 A18	Basic function	•		A39
V120 V illuminated 110 V120 V   2-pole, rocker, 1pole overload protection, flat connection, illuminated 20 A17   2-pole, rocker, 2pole overload protection, shunt terminal, flat connection, illuminated 10 A17   2-pole, rocker, 1pole overload protection, flat connection, illuminated 10 A18   2-pole, rocker, 2pole overload protection, shunt terminal, flat connection, illuminated 10 A18   2-pole, rocker, 1pole overload protection, shunt terminal, flat connection, illuminated 10 A18		A12		A42
V26 V illuminated 20 V26 V   2-pole, rocker, 1pole overload protection, flat connection, illuminated 10 V13 V A18		A14		A44
V13 V illuminated 10 V13 V		A17		A47
2-pole rocker 1 pole overload protection flat connection illuminated 4 A19 2-pole rocker 2 pole overload protection shuft terminal flat connection A49		A18		A48
V7 V illuminated 4 V7 V	2-pole, rocker, 1pole overload protection, flat connection, illuminated 4 $\textrm{V}\textrm{7}\textrm{V}$	A19	2-pole, rocker, 2pole overload protection, shunt terminal, flat connection, illuminated 4 $\mbox{W.7}$ V	A49
2-pole, rocker, 1pole overload protection, shunt terminal, flat connection, illuminated 220 V240 V A62		A22		A62
2-pole, rocker, 1 pole overload protection, shunt terminal, flat connection, illuminated 110 V120 V A64		A24		A64
2-pole, rocker, 1 pole overload protection, shunt terminal, flat connection, illuminated 20 V26 V A67		A27		A67
2-pole, rocker, 1 pole overload protection, shunt terminal, flat connection, illuminated 10 V13 V A68		A28		A68
2-pole, rocker, 1 pole overload protection, shunt terminal, flat connection, illuminated 4 V7 V A29 2-pole, rocker, 1 pole overload protection, screw connection, illuminated 4 A69 V7 V		A29		A69
2-pole, rocker, 2pole overload protection, flat connection, illuminated 220 A32 2-pole, rocker, 1pole overload protection, shunt terminal, screw connection, A72 illuminated 220 V240 V		A32		A72
2-pole, rocker, 2pole overload protection, flat connection, illuminated 110 A34 2-pole, rocker, 1pole overload protection, shunt terminal, screw connection, illuminated 110 V120 V A74		A34		A74
2-pole, rocker, 2pole overload protection, flat connection, illuminated 20 A37 2-pole, rocker, 1pole overload protection, shunt terminal, screw connection, A77 illuminated 20 V26 V		A37		A77
2-pole, rocker, 2pole overload protection, flat connection, illuminated 10 A38 2-pole, rocker, 1pole overload protection, shunt terminal, screw connection, illuminated 10 V13 V A78		A38		A78

**Basic function** 

Basic function	Configuration key
2-pole, rocker, 1pole overload protection, shunt terminal, screw connection, illuminated 4 V7 V	A79
2-pole, rocker, 2pole overload protection, screw connection, illuminated 220 V240 V $$	A82
2-pole, rocker, 2pole overload protection, screw connection, illuminated 110 V120 V $$	A84
2-pole, rocker, 2pole overload protection, screw connection, illuminated 20 V26 V $$	A87
2-pole, rocker, 2pole overload protection, screw connection, illuminated 10 V13 V $$	A88
2-pole, rocker, 2pole overload protection, screw connection, illuminated 4 $\ensuremath{V7}\ensuremath{V}$	A89
2-pole, rocker, 2pole overload protection, shunt terminal, screw connection, illuminated 220 V240 V	A92
2-pole, rocker, 2pole overload protection, shunt terminal, screw connection, illuminated 110 V120 V $$	A94
2-pole, rocker, 2pole overload protection, shunt terminal, screw connection, illuminated 20 V26 V $$	A97
2-pole, rocker, 2pole overload protection, shunt terminal, screw connection, illuminated 10 V13 V $$	A98
2-pole, rocker, 2pole overload protection, shunt terminal, screw connection, illuminated 4 $\text{V7}$ $\text{V}$	A99
2-pole, rocker, 2pole overload protection, flat connection, without illumi- nation	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 illumi- nation	ABT
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, 2pole overload protection, screw connection, without illu- mination	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 illu- mination	AHT
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
Red transparent	3
Green transparent	4
Orange transparent	6
Black	В
Green	G
Red	R

Actuator colour	Configuration key
White	W
Orange	Х
Yellow	Y

### TA45 - AK2 W **F** 120 A2 - AZM11 **= Legend**

Legend		Configuration key
embossed	- 0	F
white printed	OFF	Н
black printed	OFF	к
white printed	- 0	L
black printed	- 0	М
white printed	I 0	Р
black printed	I 0	R
white printed	ON OFF	S
black printed	OFF OFF	т

#### 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
1.8A	J18

Other rated currents on request

Rated current	Configuration key
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

Rated current	Configuration key
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	CO

### 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
Raised collar with cover narrow, IP54	AZM10
Partially raised collar with cover, narrow, IP54	AZM11
Partially raised collarwithout cover, narrow, IP40	AZM12
Raised collar narrow, IP40	AZM13
Raised collar with cover narrow, IP54	AZM14
For subsequent fitting accessories see:	

http://www.schurter.com/pdf/english/typ\_TA45-ACC.pdf

#### Variants

Thermal overload pro- tection	Addition	connection type	Illumination	Actuator colour	Legend	Rated current	Accessories	Config. Code	Order Number
1-pole		Quick connect terminal	without illu- mination	White	embossed	10.0 A	Without cover	TA45-ABTWF100C0	4430.0022
2-pole		Quick connect terminal	without illu- mination	Black	white printed	15.0 A	Without cover	TA45-ABDBL150C0	4430.1089
2-pole		Quick connect terminal	without illu- mination	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/en/Stock-Check/Stock-Check-SCHURTER

**Packaging Unit** 1 Pcs

#### Accessories

Description



TA45-ACC Accessories to TA45