Circuit Breaker for Equipment thermal, 2 pole, Rocker actuation

See below:
Approvals and Compliances

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)

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	240 VAC
Rated Voltage DC	60 VDC
Rated current range AC	0.05 - 20 A
Conditional short circuit capacity Inc	IEC 60934: PC1, AC 240 V: 1 kA
Short circuit capacity Icn	IEC 60934: At In < 3 A/ 240 VAC: 10xIn (max. 3 cycles) At In ≥ 3 A/ 240 VAC: 300A (max. 3 cycles) At In < 3 A/ 60 VDC: 10xIn (max. 3 cycles) At In ≥ 3 A/ 48 VDC: 120A (max. 3 cycles)
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
	DC: 1 x Ir: 50'000 switching cycles
Overload	AC: min. 40 trips @ 6 x Ir
	DC: min. 40 trips @ 4 x Ir
Allowable Operation Temp.	-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	Rocker
Weight	30 - 35 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
	VDE Approvals	VDE	VDE Certificate Number: 40019880
	UL Approvals	UL	UL File Number: E71572
	CCC Approvals	CCC	CCC Certificate Number: 2020970307001847

Product standards

Product standards that are referenced

Organization	Design	Standard	Description
IEC	Designed according to	IEC 60934	Circuit-breakers for equipment (CBE)
UL	Designed according to	UL 1077	Standard for Supplementary Protectors for Use in Electrical Equipment
CSA Group	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
IEC	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.

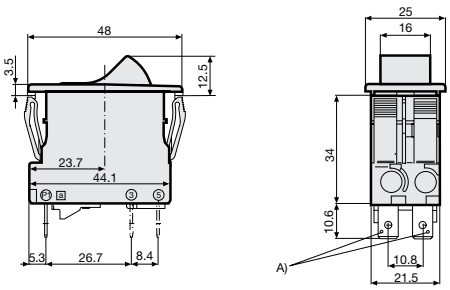
Compliances

The product complies with following Guide Lines

Identification	Details	Initiator	Description
CE	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	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	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.

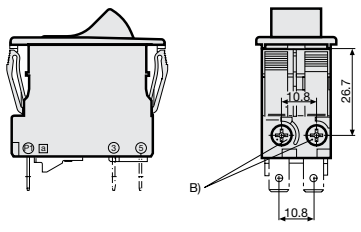
Dimension [mm]

Quick connect terminal



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

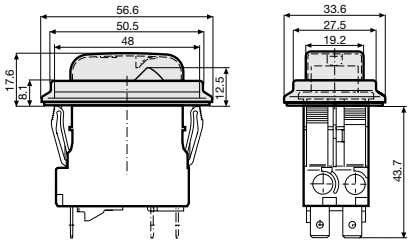
Screw terminal



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

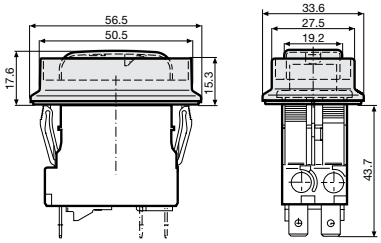
Accessories / factory mounted

AZM01 / Collar with cover, IP54

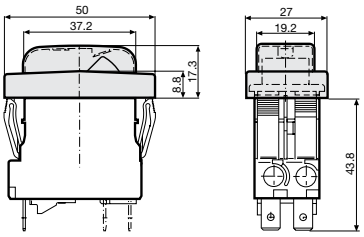


AZM02 / Raised collar with cover, narrow, IP54

AZM03 / Raised collar, IP40

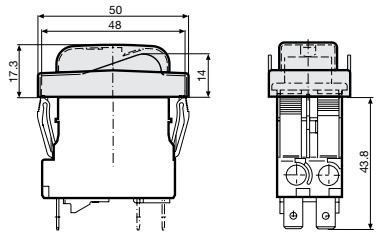


AZM10 / Collar with cover, narrow, IP54

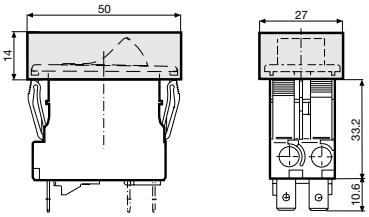


AZM11 / Partially raised collar with cover, narrow, IP54

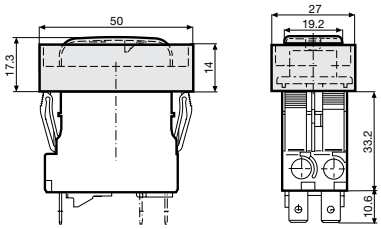
AZM12 / Partially raised collar without cover, narrow, IP40



AZM13 / Raised collar narrow, IP40

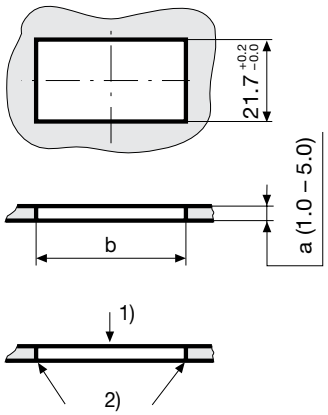


AZM14 / Raised collar with cover narrow, IP54



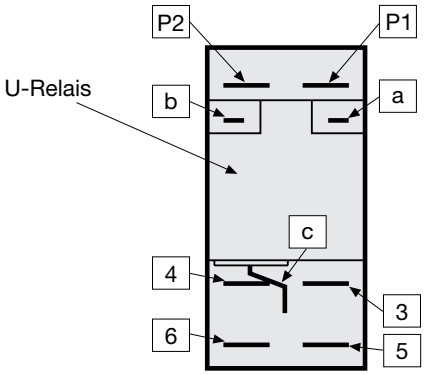
Cut-out and pin-out

Cut-out snap-in type



a	b
1.0	44,5...45,0
1.5	44,5...45,0
2.0	44,7...45,2
2.5	44,7...45,2
3.0	44,8...45,3
4.0	44,9...45,4
5.0	45,0...45,5

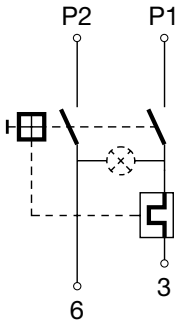
Pin-out



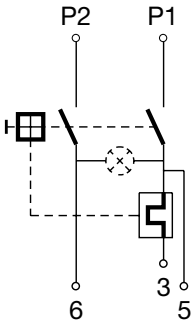
1) Assemble
2) edge must be sharp

Diagrams

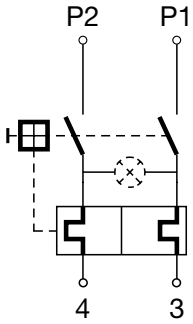
1 pole thermal overload protection



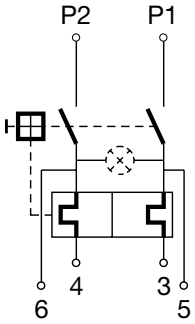
1 pole thermal overload protection, Shunt terminal



2 pole thermal overload protection



2 pole thermal overload protection, Shunt terminal



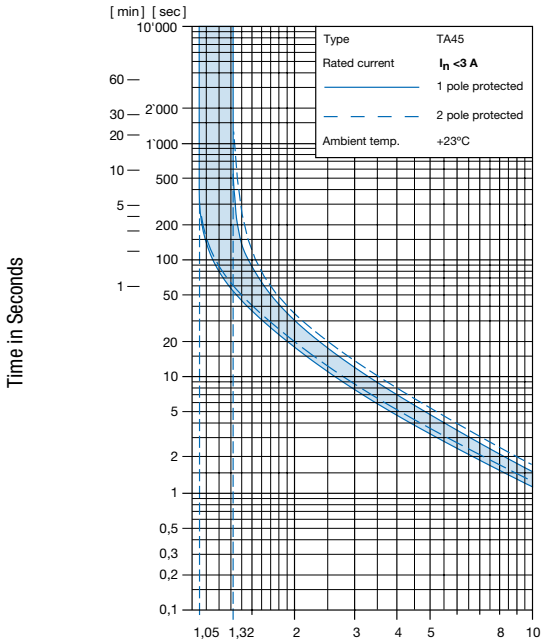
Effect of ambient temperature

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:

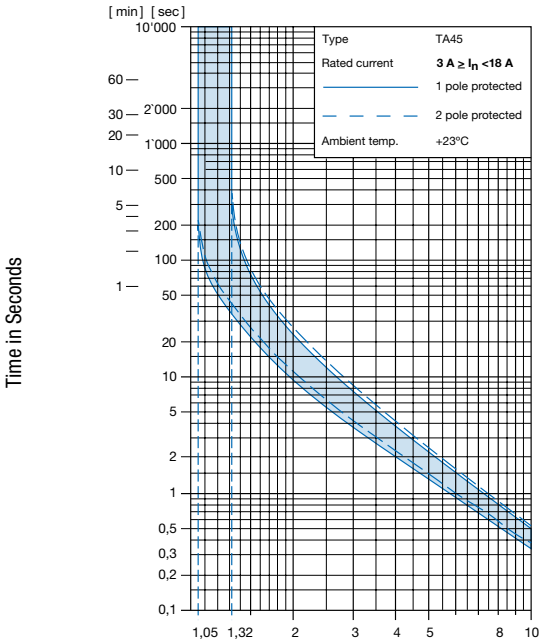
Ambient Temperature [°C]	Correction factor
-10	0.89
-5	0.91
0	0.92
+23	1.00
+30	1.03
+40	1.08
+55	1.16

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

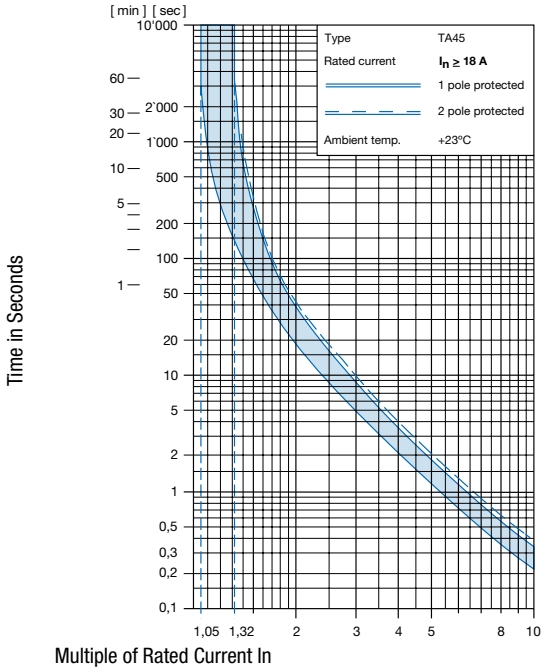
Time-Current-Curves



Reference Temperature +23°



Reference Temperature +23°



Reference Temperature +23°

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, rocker, 1pole overload protection, quick connect terminal, illuminated 220 V...240 V	A12
2-pole, rocker, 1pole overload protection, quick connect terminal, illuminated 110 V...120 V	A14
2-pole, rocker, 1pole overload protection, quick connect terminal, illuminated 20 V...26 V	A17
2-pole, rocker, 1pole overload protection, quick connect terminal, illuminated 10 V...13 V	A18
2-pole, rocker, 1pole overload protection, quick connect terminal, illuminated 4 V...7 V	A19
2-pole, rocker, 1pole overload protection, shunt terminal, quick connect terminal, illuminated 220 V...240 V	A22
2-pole, rocker, 1pole overload protection, shunt terminal, quick connect terminal, illuminated 110 V...120 V	A24
2-pole, rocker, 1pole overload protection, shunt terminal, quick connect terminal, illuminated 20 V...26 V	A27
2-pole, rocker, 1pole overload protection, shunt terminal, quick connect terminal, illuminated 10 V...13 V	A28
2-pole, rocker, 1pole overload protection, shunt terminal, quick connect terminal, illuminated 4 V...7 V	A29
2-pole, rocker, 2pole overload protection, quick connect terminal, illuminated 220 V...240 V	A32
2-pole, rocker, 2pole overload protection, quick connect terminal, illuminated 110 V...120 V	A34
2-pole, rocker, 2pole overload protection,quick connect terminal, illuminated 20 V...26 V	A37
2-pole, rocker, 2pole overload protection, quick connect terminal, illuminated 10 V...13 V	A38

Basic function	Configuration key
2-pole, rocker, 2pole overload protection, quick connect terminal, illuminated 4 V...7 V	A39
2-pole, rocker, 2pole overload protection, shunt terminal, quick connect terminal, illuminated 220 V...240 V	A42
2-pole, rocker, 2pole overload protection, shunt terminal, quick connect terminal, illuminated 110 V...120 V	A44
2-pole, rocker, 2pole overload protection, shunt terminal, quick connect terminal, illuminated 20 V...26 V	A47
2-pole, rocker, 2pole overload protection, shunt terminal, quick connect terminal, illuminated 10 V...13 V	A48
2-pole, rocker, 2pole overload protection, shunt terminal, quick connect terminal, illuminated 4 V...7 V	A49
2-pole, rocker, 1pole overload protection, screw connection, illuminated 220 V...240 V	A62
2-pole, rocker, 1pole overload protection, screw connection, illuminated 110 V...120 V	A64
2-pole, rocker, 1pole overload protection, screw connection, illuminated 20 V...26 V	A67
2-pole, rocker, 1pole overload protection, screw connection, illuminated 10 V...13 V	A68
2-pole, rocker, 1pole overload protection, screw connection, illuminated 4 V...7 V	A69
2-pole, rocker, 1pole overload protection, shunt terminal, screw connection, illuminated 220 V...240 V	A72
2-pole, rocker, 1pole overload protection, shunt terminal, screw connection, illuminated 110 V...120 V	A74
2-pole, rocker, 1pole overload protection, shunt terminal, screw connection, illuminated 20 V...26 V	A77
2-pole, rocker, 1pole overload protection, shunt terminal, screw connection, illuminated 10 V...13 V	A78

Basic function	Configuration key
2-pole, rocker, 1pole overload protection, shunt terminal, screw connection, illuminated 4 V...7 V	A79
2-pole, rocker, 2pole overload protection, screw connection, illuminated 220 V...240 V	A82
2-pole, rocker, 2pole overload protection, screw connection, illuminated 110 V...120 V	A84
2-pole, rocker, 2pole overload protection, screw connection, illuminated 20 V...26 V	A87
2-pole, rocker, 2pole overload protection, screw connection, illuminated 10 V...13 V	A88
2-pole, rocker, 2pole overload protection, screw connection, illuminated 4 V...7 V	A89
2-pole, rocker, 2pole overload protection, shunt terminal, screw connection, illuminated 220 V...240 V	A92
2-pole, rocker, 2pole overload protection, shunt terminal, screw connection, illuminated 110 V...120 V	A94
2-pole, rocker, 2pole overload protection, shunt terminal, screw connection, illuminated 20 V...26 V	A97
2-pole, rocker, 2pole overload protection, shunt terminal, screw connection, illuminated 10 V...13 V	A98
2-pole, rocker, 2pole overload protection, shunt terminal, screw connection, illuminated 4 V...7 V	A99
2-pole, rocker, 2pole overload protection, quick connect terminal, without illumination	ABD
2-pole, rocker, 1pole overload protection, shunt terminal, quick connect terminal, without illumination	ABF
2-pole, rocker, 2pole overload protection, shunt terminal, quick connect terminal, without illumination	ABG
2-pole, rocker, 1pole overload protection, quick connect terminal, without illumination	ABT
2-pole, rocker, 2pole overload protection, quick connect terminal, momentary switch, without illumination	AED
2-pole, rocker, 1pole overload protection, shunt terminal, quick connect terminal, momentary switch, without illumination	AEF
2-pole, rocker, 2pole overload protection, shunt terminal, quick connect terminal, momentary switch, without illumination	AEG
2-pole, rocker, 1pole overload protection, quick connect terminal, momentary switch, without illumination	AET
2-pole, rocker, 2pole overload protection, screw connection, without illumination	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 illumination	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	B
Green	G
Red	R
White	W
Orange	X
Yellow	Y

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

Legend		Configuration key
embossed	– 0	F
white printed	ON OFF	H
black printed	ON OFF	K
white printed	– 0	L
black printed	– 0	M
white printed	I 0	P
black printed	I 0	R
white printed	ON – I 0 OFF	S
black printed	ON – I 0 OFF	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

Other rated currents on request