Circuit Breaker for Equipment thermal, Threaded neck type, Reset type, Screw terminals



See below:

## **Approvals and Compliances**

#### Description

- Threaded neck type
- Thermal circuit breaker
- 1-pole
- Reset type
- Wide current range
- High breaking capacity
- Bolts and nuts

## **Unique Selling Proposition**

- Compact design
- Positively trip-free release
- Available with cover
- Different mounting possibilities

## **Applications**

- Power supplies
- Uninterruptible power supply
- Power tools
- Household appliances

#### Weblinks

pdf data sheet, html datasheet, General Product Information, Distributor-Stock-Check, Detailed request for product, Product News

#### **Technical Data**

Rated Voltage AC	AC 240/277 VAC, see approbations
Rated Voltage DC	28 VDC
Rated current range AC	0.05 - 30 A
Conditional short circuit capacity Inc	IEC 60934: PC1, AC 240 V: 1 kA
Short circuit capacity Icn	IEC 60934: at ln < 7 A/240 VAC : 8 x ln
	IEC 60934: at In ≥ 7 A/240 VAC : 400 A
	AC/DC 28 V : 400 A
Degree of Protection	from front side IP40 acc. to IEC 60529
Dielectric Strength	50 Hz: 1.5 kV
	Impulse 1.2/50 µs: > 2.5 kV
Insulation Resistance	$500\text{VDC} > 100\text{M}\Omega$
Endurance typical	2 x Ir: 3000 switching cycles
Endurance minimum	Reset type
	AC: 2 x lr, cos φ 0.6:
	DC: $2 \times Ir$ , $L/R = 2 - 3 \text{ ms}$ :
	50 switching cycles

Overload	IEC: min. 40 trips
	@ 6 x lr, cos φ 0.6
	UL / CSA: min. 50 trips
	@ 1.5 x lr, cos φ 0.75
Allowable Operation Temp.	-5°C to 60°C
Vibration Resistance	± 1.5 mm @ 10 - 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	100 G / 6ms
	acc. to IEC 60068-2-27, test Ea
Tripping Type	Thermal
Actuation Type	Reset type
Weight	ca. 10 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: T13

Approval Logo	Certificates	Certification Body	Description
_DVE	VDE Approvals	VDE	VDE Certificate Number: 123283
<b>A</b>	UL Approvals	UL	UL File Number: E71572
 <b>®</b>	CSA Approvals	CSA	CSA Certification Record: LR 37712
(W)	CCC Approvals	ccc	CCC Certificate Number: 2020970307003503

## **Product standards**

Product standards that are referenced

Organization	Design	Standard	Description
<u>IEC</u>	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
GF Group	Designed according to	CSA C22.2 No. 235	Supplementary Protectors
<b>(W)</b>	Designed according to	GB 17701	Circuit-breaker for equipment

## **Application standards**

Application standards where the product can be used

Organization	Design	Standard	Description
<u>IEC</u>	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

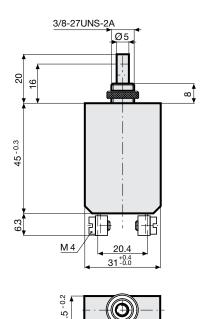
The product complies with following Guide Lines

Identification	Details	Initiator	Description
C€	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
<b>5</b>	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]

T13-212



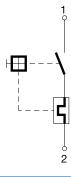






# **Diagrams**

T13-...



Approval		Rated current	Rated Voltage AC	Rated Voltage DC
<b>A1</b> °	UL 1077	0.0530 A	277 V	28 V
<b>(P</b>	CSA C22.2 No. 235	0.0530 A	277 V	28 V
<b>₽</b> VE	EN 60934	0.0530 A	240 V	
(W)	GB 17701	0.0530 A	240 V	-

#### Typical internal resistance per pole

Typical internal resistance per pole		
Rated Current [A]	Internal Resistance [ $\Omega$ ]	
0.05	376.500	
0.50	4.40	
1.00	1.10	
2.00	0.31	
3.00	0.14	
4.00	0.068	
5.00	0.048	
6.00	0.033	
8.00	0.026	
9.00	0.0125	
10.00	0.0125	
11.00	0.0085	
12.00	0.0085	
13.00	0.0085	
14.00	0.007	
15.00	0.007	
16.00	0.007	
17.00	0.0047	
18.00	0.0047	
19.00	0.0047	
20.00	0.004	
21.00	0.0035	
22.00	0.003	
23.00	0.003	
24.00	0.003	
25.00	0.003	
26.00	0.0022	
27.00	0.002	
28.00	0.002	
29.00	0.002	
30.00	0.002	

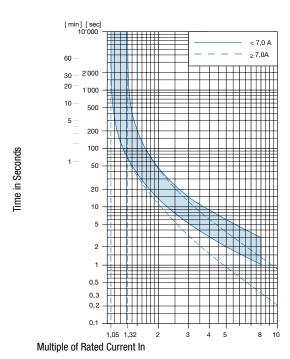
#### Effect of ambient temperature

The units are calibrated for an ambient temperature of  $\pm 23^{\circ}$ 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
-5	0.88
0	0.90
10	0.95
23	1.00
30	1.05
40	1.10
50	1.18
60	1.26

Example: Rated current = 5 A, Environmental temperature = 40 °C, --> Correction factor = 1.1, Resulting current = 5.5 A --> Fount to next higher rated current: 6 A

## **Time-Current-Curves**

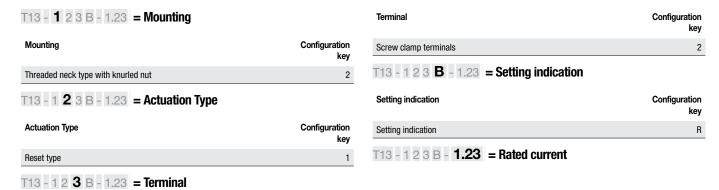


Reference Temperature +23°

# Config. Code

T13 - 1 2 3 B - 1.23

The characters are placeholders for the correspondingly keys of selections from the key tables.



0.05A   0.05   3.5A     0.1A   0.1   4.0A     0.15A   0.15   4.5A     0.2A   0.2   5.0A     0.3A   0.3   5.5A     0.4A   0.4   60     0.5A   0.5   6.5A     0.6A   0.6   7.0A     0.7A   0.7   7.5A     0.8A   0.8   8.0A     0.9A   0.9   8.5A     1.0   1   9.0A     1.1A   1.1   9.5A     1.2A   1.2   10.0A     1.3A   1.3   11.0A     1.4A   1.4   12.0A     1.5A   1.5   13.0A     1.8A   1.6   14.0A     1.7A   1.7   15.0A     1.8A   1.8   16.0A     1.9A   1.9   17.0A     2.0A   2   18.0A     2.1A   2.1   19.0A     2.3A   2.0   2.0A     2.5A   2.5   2.0A     2.5A   2.5   2.0A	Rated current	Configuration key	Rated current	Configuration key
0.15A   0.15   4.5A     0.2A   0.2   5.0A     0.3A   0.3   5.5A     0.4A   0.4   6.0     0.5A   0.5   6.5A     0.6A   0.6   7.0A     0.7A   0.7   7.5A     0.8A   0.8   8.0A     0.9A   0.9   8.5A     1.0   1   9.0A     1.1A   1.1   9.5A     1.2A   1.2   10.0A     1.3A   1.3   11.0A     1.4A   1.4   12.0A     1.5A   1.5   13.0A     1.6A   1.6   14.0A     1.7A   1.7   15.0A     1.8A   1.8   16.0A     1.9A   1.9   17.0A     2.0A   2   18.0A     2.1A   2.1   19.0A     2.3A   2.3   20.0A     2.5A   2.5   22.0A     2.8A   2.5   25.0A	0.05 A	0.05	3.5 A	3.5
02A   02   50A     03A   03   55A     04A   04   60     05A   05   65A     06A   06   7.0A     07A   07   7.5A     08A   0.8   80A     0.9A   0.9   8.5A     1.0   1   9.5A     1.2A   1.1   9.5A     1.2A   1.2   10.0A     1.3A   1.3   11.0A     1.4A   1.4   12.0A     1.5A   1.5   13.0A     1.6A   1.6   14.0A     1.7A   1.7   15.0A     1.8A   1.8   16.0A     1.9A   1.9   17.0A     2.0A   2   18.0A     2.1A   2.1   19.0A     2.3A   2.3   20.0A     2.5A   2.5   22.0A     2.8A   2.8   25.0A	0.1 A	0.1	4.0 A	4
0.3A   0.3   5.5A     0.4A   0.4   6.0     0.5A   0.5   6.5A     0.6A   0.6   7.0A     0.7A   0.7   7.5A     0.8A   0.8   8.0A     0.9A   0.9   8.5A     1.0   1   9.0A     1.1A   1.1   9.5A     1.2A   1.2   10.0A     1.3A   1.3   11.0A     1.4A   1.4   12.0A     1.5A   1.5   13.0A     1.6A   1.6   14.0A     1.7A   1.7   15.0A     1.8A   1.8   16.0A     1.9A   1.9   17.0A     2.0A   2   18.0A     2.1A   2.1   19.0A     2.3A   2.3   20.0A     2.5A   2.5   22.0A     2.8A   2.5   25.0A	0.15 A	0.15	4.5 A	4.5
0.4A   0.4   6.0     0.5A   0.5   6.5A     0.6A   0.6   7.0A     0.7A   0.7   7.5A     0.8A   0.8   8.0A     0.9A   0.9   8.5A     1.0   1   9.0A     1.1A   1.1   9.5A     1.2A   1.2   10.0A     1.3A   1.3   11.0A     1.4A   1.4   12.0A     1.5A   1.5   13.0A     1.6A   1.6   14.0A     1.7A   1.7   15.0A     1.8A   1.8   16.0A     1.9A   1.9   17.0A     2.0A   2   18.0A     2.1A   2.1   19.0A     2.3A   2.3   20.0A     2.5A   2.5   22.0A     2.8A   2.8   25.0A	0.2 A	0.2	5.0 A	5
0.5A   0.5   6.5A     0.6A   0.6   7.0A     0.7A   0.7   7.5A     0.8A   0.8   8.0A     0.9A   0.9   8.5A     1.0   1   9.0A     1.1A   1.1   9.5A     1.2A   1.2   10.0A     1.3A   1.3   11.0A     1.4A   1.4   12.0A     1.5A   1.5   13.0A     1.6A   1.6   14.0A     1.7A   1.7   15.0A     1.8A   1.8   16.0A     1.9A   1.9   17.0A     2.0A   2   18.0A     2.1A   2.1   19.0A     2.3A   2.3   20.0A     2.5A   2.5   22.0A     2.8A   2.5   0.2A	0.3 A	0.3	5.5 A	5.5
0.6A   0.6   7.0A     0.7A   0.7   7.5A     0.8A   0.8   8.0A     0.9A   0.9   8.5A     1.0   1   9.0A     1.1A   1.1   9.5A     1.2A   1.2   10.0A     1.3A   1.3   11.0A     1.4A   1.4   12.0A     1.5A   1.5   13.0A     1.6A   1.6   14.0A     1.7A   1.7   15.0A     1.8A   1.8   16.0A     1.9A   1.9   17.0A     2.0A   2   18.0A     2.1A   2.1   19.0A     2.3A   2.3   2.00A     2.5A   2.5   22.0A     2.8A   2.5 0A   2.0A	0.4 A	0.4	6.0	6
0.7A   0.7   7.5A     0.8A   0.8   8.0A     0.9A   0.9   8.5A     1.0   1   9.0A     1.1A   1.1   9.5A     1.2A   1.2   10.0A     1.3A   1.3   11.0A     1.4A   1.4   12.0A     1.5A   1.5   13.0A     1.6A   1.6   14.0A     1.7A   1.7   15.0A     1.8A   1.8   16.0A     1.9A   1.9   17.0A     2.0A   2   18.0A     2.1A   2.1   19.0A     2.3A   2.3   20.0A     2.5A   2.5   22.0A     2.8A   2.8   25.0A	0.5 A	0.5	6.5 A	6.5
0.8A   0.8   8.0 A     0.9A   0.9   8.5 A     1.0   1   9.0 A     1.1A   1.1   9.5 A     1.2A   1.2   10.0 A     1.3A   1.3   11.0 A     1.4A   1.4   12.0 A     1.5A   1.5   13.0 A     1.6A   1.6   14.0 A     1.7A   1.7   15.0 A     1.8A   1.8   16.0 A     1.9A   1.9   17.0 A     2.0A   2   18.0 A     2.1A   2.1   19.0 A     2.3A   2.3   20.0 A     2.5A   2.5   22.0 A     2.8A   2.8   25.0 A	0.6 A	0.6	7.0 A	7
0.9A   0.9   8.5A     1.0   1   9.0A     1.1A   1.1   9.5A     1.2A   1.2   10.0A     1.3A   1.3   11.0A     1.4A   1.4   12.0A     1.5A   1.5   13.0A     1.6A   1.6   14.0A     1.7A   1.7   15.0A     1.8A   1.8   16.0A     1.9A   1.9   17.0A     2.0A   2   18.0A     2.1A   2.1   19.0A     2.3A   2.3   20.0A     2.5A   2.5   22.0A     2.8A   2.8   25.0A	0.7 A	0.7	7.5 A	7.5
1.0   1   9.0 A     1.1 A   1.1   9.5 A     1.2 A   1.2   10.0 A     1.3 A   1.3   11.0 A     1.4 A   1.4   12.0 A     1.5 A   1.5   13.0 A     1.6 A   1.6   14.0 A     1.7 A   1.7   15.0 A     1.8 A   1.8   16.0 A     1.9 A   1.9   17.0 A     2.0 A   2   18.0 A     2.1 A   2.1   19.0 A     2.3 A   2.3   20.0 A     2.5 A   2.5   22.0 A     2.8 A   2.8   25.0 A	0.8 A	0.8	8.0 A	8
1.1 A   1.1 9.5 A     1.2 A   1.2 10.0 A     1.3 A   1.3 11.0 A     1.4 A   1.4 12.0 A     1.5 A   1.5 13.0 A     1.6 A   1.6 14.0 A     1.7 A   1.7 15.0 A     1.8 A   1.8 16.0 A     1.9 A   1.9 17.0 A     2.0 A   2 18.0 A     2.1 A   2.1 19.0 A     2.3 A   2.3 20.0 A     2.5 A   2.5 22.0 A     2.8 A   2.8 25.0 A	0.9 A	0.9	8.5 A	8.5
1.2 A   1.2 DOA     1.3 A   1.3 DOA     1.4 A   1.4 DOA     1.5 A   1.5 DOA     1.6 A   1.6 DOA     1.7 A   1.7 DOA     1.8 A   1.8 DOA     1.9 A   1.9 DOA     2.0 A   2 DOA     2.1 A   2.1 DOA     2.3 A   2.3 DOA     2.5 A   2.5 DOA	1.0	1	9.0 A	9
1.3A   1.3   11.0A     1.4A   1.4   12.0A     1.5A   1.5   13.0A     1.6A   1.6   14.0A     1.7A   1.7   15.0A     1.8A   1.8   16.0A     1.9A   1.9   17.0A     2.0A   2   18.0A     2.1A   2.1   19.0A     2.3A   2.3   20.0A     2.5A   2.5   22.0A     2.8A   2.8   25.0A	1.1 A	1.1	9.5 A	9.5
1.4 A   1.4 DA     1.5 A   1.5 DA     1.6 A   1.6 DA     1.7 A   1.7 DA     1.8 A   1.8 DA     1.9 A   1.9 DA     2.0 A   2 DA     2.1 A   2.1 DA     2.3 A   2.3 DA     2.5 A   2.5 DA	1.2 A	1.2	10.0 A	10
1.5 A   1.5   13.0 A     1.6 A   1.6   14.0 A     1.7 A   1.7   15.0 A     1.8 A   1.8   16.0 A     1.9 A   1.9   17.0 A     2.0 A   2   18.0 A     2.1 A   2.1   19.0 A     2.3 A   2.3   20.0 A     2.5 A   2.5   22.0 A     2.8 A   2.8   25.0 A	1.3 A	1.3	11.0 A	11
1.6 A   1.6 I   14.0 A     1.7 A   1.7 I   15.0 A     1.8 A   1.8 I   16.0 A     1.9 A   1.9 I   17.0 A     2.0 A   2 I   18.0 A     2.1 A   2.1 I   19.0 A     2.3 A   2.3 I   20.0 A     2.5 A   2.5 I   22.0 A     2.8 A   2.8 I   25.0 A	1.4 A	1.4	12.0 A	12
1.7 A   1.7 DA     1.8 A   1.8 DA     1.9 A   1.9 DA     2.0 A   2 DA     2.1 A   2.1 DA     2.3 A   2.3 DA     2.5 A   2.5 DA     2.8 A   2.8 DA	1.5 A	1.5	13.0 A	13
1.8 A   1.8   16.0 A     1.9 A   1.9   17.0 A     2.0 A   2   18.0 A     2.1 A   2.1   19.0 A     2.3 A   2.3   20.0 A     2.5 A   2.5   22.0 A     2.8 A   2.5 OA	1.6 A	1.6	14.0 A	14
1.9 A 1.9 17.0 A   2.0 A 2 18.0 A   2.1 A 2.1 19.0 A   2.3 A 2.3 20.0 A   2.5 A 2.5 22.0 A   2.8 A 2.8 25.0 A	1.7 A	1.7	15.0 A	15
2.0 A 2 18.0 A   2.1 A 2.1 19.0 A   2.3 A 2.3 20.0 A   2.5 A 2.5 22.0 A   2.8 A 2.8 25.0 A	1.8 A	1.8	16.0 A	16
2.1 A   2.1 19.0 A     2.3 A   2.3 20.0 A     2.5 A   2.5 22.0 A     2.8 A   2.8 25.0 A	1.9 A	1.9	17.0 A	17
2.3 A 2.3 Z 20.0 A   2.5 A 2.5 Z 22.0 A   2.8 A 2.8 Z 25.0 A	2.0 A	2	18.0 A	18
2.5 A 2.5 D   2.8 A 2.8 D	2.1 A	2.1	19.0 A	19
2.8 A 2.8 25.0 A	2.3 A	2.3	20.0 A	20
	2.5 A	2.5	22.0 A	22
3.0 A 28.0 A	2.8 A	2.8	25.0 A	25
	3.0 A	3	28.0 A	28
3.3 A 30.0 A	3.3 A	3.3	30.0 A	30

## **Variants**

Rated current	Setting indication	Config. Code	Order Number
16.0 A		T13-212-16	4411.0012
30.0 A		T13-212-30	4411.0067
12.0 A		T13-212-12	4411.0099
11.0 A	•	T13-212R-11	4411.0210
15.0 A	•	T13-212R-15	4411.0211

Availability for all products can be searched real-time:https://www.schurter.com/en/Stock-Check/Stock-Check-SCHURTER

**Packaging Unit** 20 Pcs

#### **Accessories**

Description



T-Line Accessories Accessories to T-Line

# **X-ON Electronics**

Largest Supplier of Electrical and Electronic Components

Click to view similar products for Circuit Breakers category:

Click to view products by Schurter manufacturer:

Other Similar products are found below:

LUGZX66-1-61-20.0-44 M39019/01-201S M39019/01-221 M39019/01-323 M39019/01-333 M39019/01-336 M39019/02-248 M39019/02-311 M39019/02-316 M39019/04-249S M39019/05-246S M39019/06-254S M55629/1-016 M55629/1-018 M55629/1-021 M55629/1-033 M55629/1-036 M55629/1-046 M55629/1-048 M55629/1-058 M55629/1-067 M55629/1-070 M55629/1-079 M55629/1-084 M55629/1-085 M55629/1-101 M55629/1-109 M55629/11-102 M55629/1-120 M55629/12-045 M55629/12-046 M55629/1-330 M55629/1-366 M55629/1-387 M55629/1-401 M55629/1-450 M55629/2-022 M55629/2-030 M55629/2-072 M55629/2-082 M55629/2-099 M55629/2-101 M55629/2-102 M55629/21-BM-BM M55629/21-HM-HM M55629/21-NS-NS M55629/22-NR-NR-NR M55629/22-RS-RS-RS M55629/2-347 M55629/2-401