Circuit Breaker for Equipment thermal-magnetic, Threaded neck type, Manual ON/OFF, Quick connect terminals

Description
- Threaded neck type
- Thermal-magnetic circuit breaker
- 1-pole
- Manual ON/OFF type
- Insensitive to shock or vibration
- Quick connect terminals 6.3 x 0.8 mm

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

Standards
- Approval Reference Type: TM12
- IEC 60934
- UL 1077
- GB 17701

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

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; 50/60 Hz
Rated Voltage DC	28 V
Rated current range AC	0.05 - 15 A , see approbations
Conditional short circuit capacity	IEC: Inc, PC1, AC 240 V: 1 kA
Short circuit capacity Icn	AC 240 V : 200 A
	AC/DC 28 V : 400 A
Degree of Protection	from front side IP 40 acc. to IEC 60529
Dielectric Strength	50 Hz: > 1.5 kV Impulse 1.2/50 µs: > 2.5 kV
Insulation Resistance	500 VDC > 100 MΩ
Endurance typical	2 x Ir: 5000 switching cycles

Endurance minimum	Manual ON/OFF type
	  AC : 2 x Ir , cos φ 0.6 :
	
	  DC : 2 x Ir , L/R = 2 - 3 ms :
	  5000 switching cycles

|	
Overload	IEC: min. 40 trips @ 6 x Ir, cos φ 0.6
	UL / CSA: min. 50 trips @ 1.5 x Ir, cos φ 0.75
Ambient temperature	-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 / 6 ms acc. to IEC 60068-2-27, test Ea
Tripping Type	Thermal-Magnetic
Actuation Type	Manual ON/OFF
Weight	ca. 10 g

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

Dimension [mm]

TMx12-211

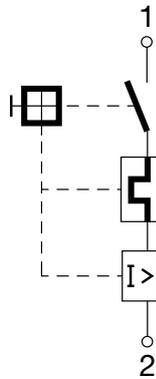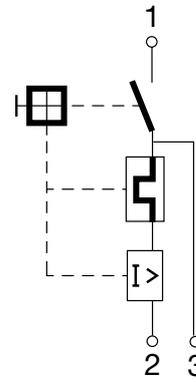TMx12-211N

8.1 $^{+0.1}_{-0.0}$

11

16   16
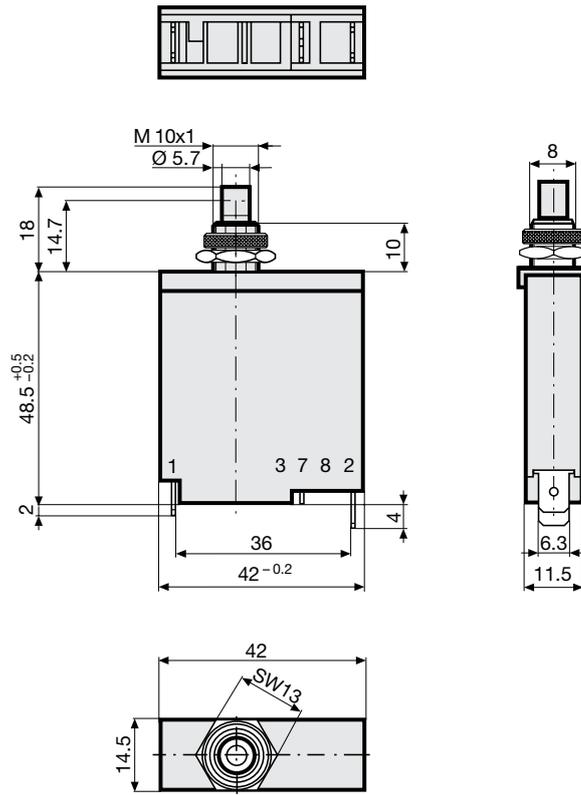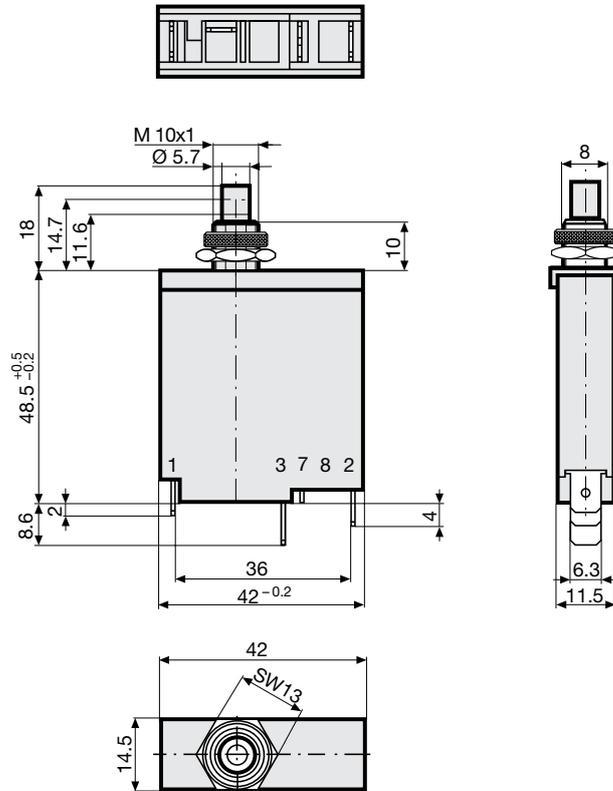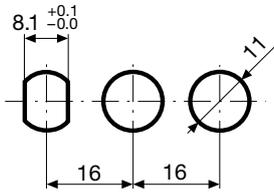
Diagrams

Tap 4,8 x 0,8 mm

1

2

Tap 4,8 x 0,8 mm

1

2 3

Tap 4,8 x 0,8 mm

1 5 4

2 6

Tap 4,8 x 0,8 mm

1 5 4

2 3 6
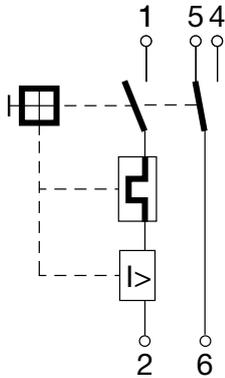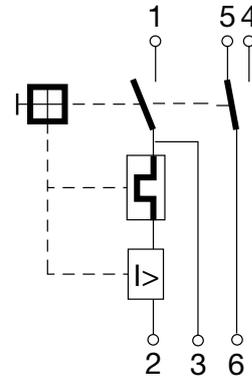
Approval		Main circuit			Auxiliary circuit		
		Rated current	Rated voltage AC	Rated voltage DC	Rated current	Rated voltage AC	Rated voltage DC
	UL 1077 CSA C22.2 No. 235	0.05...15 A	240 V	28 V	2 A 3 A	120 V -	- 28 V
	CSA C22.2 No. 235	0.05...16 A	240 V	28 V	1 A	240 V	-
	EN 60934	0.05...16 A	240 V	28 V	1 A	240 V	28 V
	GB 17701	0.05...16 A	240 V	28 V	1 A	240 V	28 V

Typical internal resistance TMF12

Rated Current [A]	Internal Resistance [Ω]
0.05	335.00
0.50	4.37
1.00	1.23
2.00	0.369
3.00	0.181
4.00	0.097
5.00	0.055
6.00	0.044
7.00	0.0231
8.00	0.0227
9.00	0.0142
10.00	0.0123
11.00	0.012
12.00	0.012
13.00	0.0108
14.00	0.0091
15.00	0.0089
16.00	0.0071

Typical internal resistance TMT12

Rated Current [A]	Internal Resistance [Ω]
0.05	260.00
0.50	4.03
1.00	1.006
2.00	0.323
3.00	0.161
4.00	0.086
5.00	0.0494
6.00	0.0396
7.00	0.0257
8.00	0.0249
9.00	0.0129
10.00	0.0112
11.00	0.0111
12.00	0.0111
13.00	0.0109
14.00	0.0092
15.00	0.0090
16.00	0.0075

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
-5	0.87
0	0.90
10	0.95
23	1.00
30	1.05
40	1.12
50	1.20
60	1.30

Example: Rated current = 5 A; Environmental temperature = 50 °C; --> Correction factor = 1.2; Resulting current = 6.0 A

Time-Current-Curves

Time in Seconds

[min] [sec]

— < 7,0 A
--- ≥ 7,0 A

TMF   TMT

Multiple of Rated Current In
Reference Temperature +23°
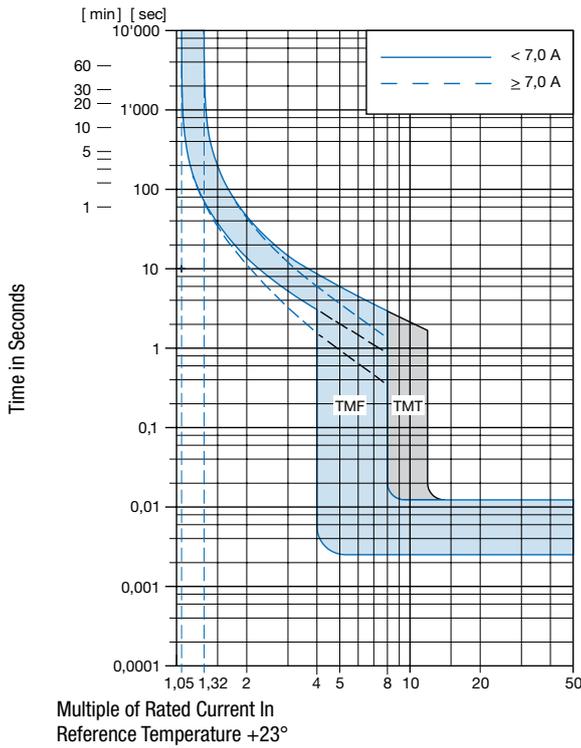
Config. Code

TM F 14 - 1 2 3 A B C - 1.23

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

TM **F** 14 - 1 2 3 A B C - 1.23 = **Magnetic release range**

Magnetic release range	Configuration key
Fast	F
Slow	T

TM F 14 - **1** 2 3 A B C - 1.23 = **Mounting**

Mounting	Configuration key
Threaded neck type with hexagonal- and knurled nut	2

TM F 14 - 1 **2** 3 A B C - 1.23 = **Actuation Type**

Actuation Type	Configuration key
Manual ON/OFF (push/push)	2

TM F 14 - 1 2 **3** A B C - 1.23 = **Terminal**

Terminal	Configuration key
Quick connect terminal 6.3x0.8mm	1

TM F 14 - 1 2 3 **A** B C - 1.23 = **Auxiliary contact**

Auxiliary contact	Configuration key
Auxiliary contact	S

TM F 14 - 1 2 3 A **B** C - 1.23 = **Shunt terminal**

Shunt terminal	Configuration key
Shunt terminal	N

TM F 14 - 1 2 3 A B **C** - 1.23 = **Setting indication**

Setting indication	Configuration key
Setting indication	R

TM F 14 - 1 2 3 A B C - **1.23** = **Rated current**

Rated current	Configuration key
0.05 A	0.05
0.1 A	0.1
0.15 A	0.15
0.2 A	0.2
0.3 A	0.3
0.4 A	0.4

Other rated currents on request

Rated current	Configuration key	Rated current	Configuration key
0.5 A	0.5	3.3 A	3.3
0.6 A	0.6	3.5 A	3.5
0.7 A	0.7	4.0 A	4
0.8 A	0.8	4.5 A	4.5
0.9 A	0.9	5.0 A	5
1.0	1	5.5 A	5.5
1.1 A	1.1	6.0	6
1.2 A	1.2	6.5 A	6.5
1.3 A	1.3	7.0 A	7
1.4 A	1.4	7.5 A	7.5
1.5 A	1.5	8.0 A	8
1.6 A	1.6	8.5 A	8.5
1.7 A	1.7	9.0 A	9
1.8 A	1.8	9.5 A	9.5
1.9 A	1.9	10.0 A	10
2.0 A	2	11.0 A	11
2.1 A	2.1	12.0 A	12
2.3 A	2.3	13.0 A	13
2.5 A	2.5	14.0 A	14
2.8 A	2.8	15.0 A	15
3.0 A	3	16.0 A	16

Other rated currents on request

Other rated currents on request

Variants

Rated current	Construction variants			Config. Code	Order Number
	Auxiliary contact	Shunt terminal	Setting indication		
0.3 A				TMF12-221-0.3	4410.0437
1.2 A				TMF12-221-1.2	4410.0157
1.2 A				TMT12-221-1.2	4410.0003
2.0 A				TMF12-221-2	4410.0166
2.5 A	●			TMT12-221S-2.5	4410.0087
3.5 A	●			TMF12-221S-3.5	4410.0397
4.0 A			●	TMF12-221R-4	4410.0625
10.0 A				TMT12-221-10	4410.0024
16.0 A				TMT12-221-16	4410.0142

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

Packaging Unit   20 Pcs

Accessories

Description

T-Linie Zubehör
Accessories to T-Line

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

[Schurter](#):

[4410.0049](#) [4410.0473](#) [4410.0566](#) [4410.0159](#) [4410.0329](#) [4410.0409](#) [4410.0437](#) [4410.005](#) [4410.0050](#)