

## T13 Series

- Thermal release
- Positively trip-free
- Reset or manual actuation
- Manual trip lever



The T13 series of circuit breakers for equipment (CBE) consists of single-pole, thermally operated devices intended to provide protection against damage due to overcurrent conditions.

The T13 was specially designed for use in markets where the back-up breakers in the building installation may not trip instantaneously below currents of 400 A. This applies, for instance, for North America. To provide a protection ensuring fitness for further use after interrupting a short circuit in conjunction with the available back-up device, a CBE with a breaking capacity of at least 400 A is required.

The T13 not only has such a high breaking capacity, but offers also a wide rated current range, excellent conditional short circuit capacity and double-insulation for parts accessible in normal use.

Typical applications are the protection of single phase motors, internal wiring, power supplies, rectifiers and transformers.

### Available options

- Threaded neck type
- Snap-in type
- For resetting only or resetting plus manual trip with separate trip lever
- Terminals: Quick connect- or screw clamp terminals
- Setting indication on the reset button indicates the position of the contacts

### Special features

- High breaking capacity
- Wide rated current range
- Excellent conditional short circuit capacity
- Positively trip-free

### Effect of ambient temperature

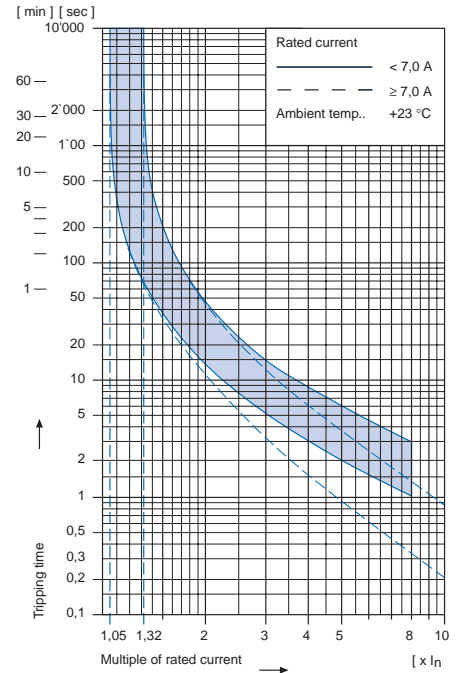
The unit is calibrated for an ambient temperature of +23°C. To determine the rated current for a lower or higher ambient temperature, use a correction factor from the table below:

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 at +23°C                    5,0 A  
 Ambient temperature                    +40°C  
 Correction factor                            1,1  
 Chosen rated current at  
 +40°C ambient temperature  
**5,0 A x 1,1 = 5,5 A**

### Tripping characteristics








### Technical data

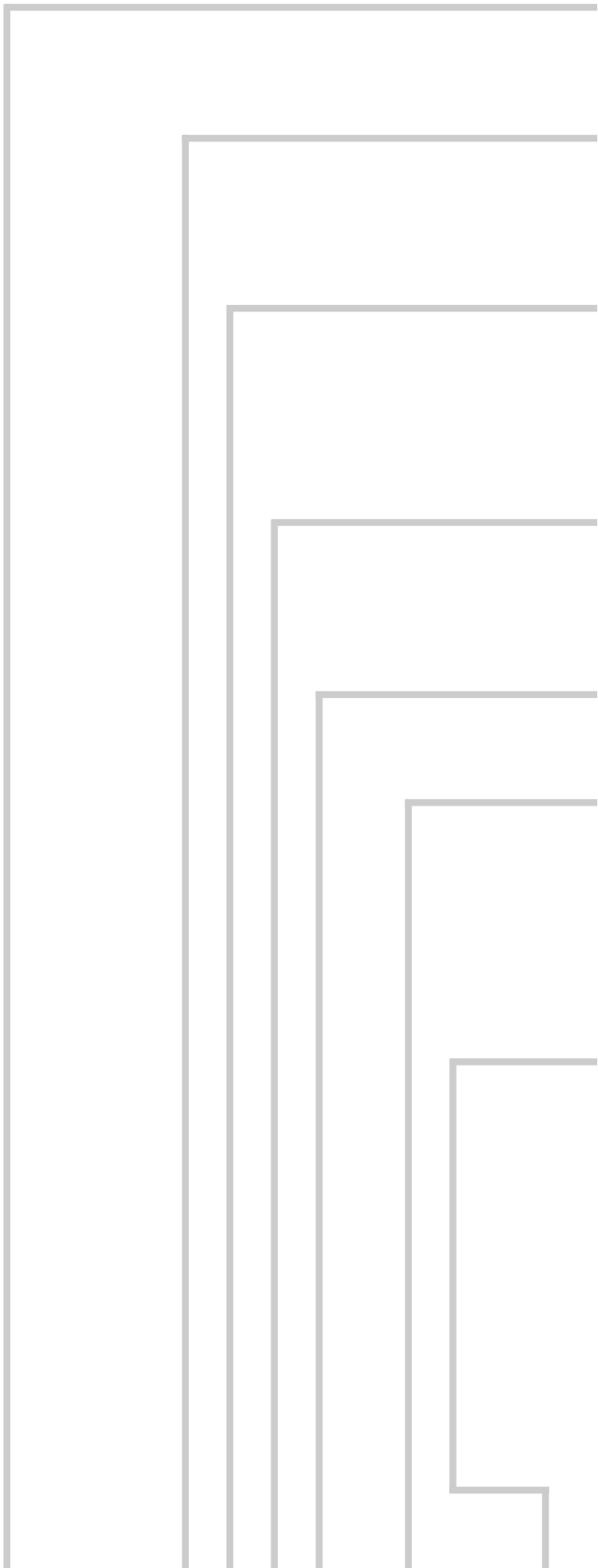
Rated voltage U <sub>e</sub>	See approvals, page 32	AC 240; 277 V, DC 28 V
Rated current I <sub>n</sub>	See approvals, page 32	AC/DC 0,05 – 30 A
Conditional short circuit current I <sub>nc</sub> (UL 1077, IEC 934 – PC1)	AC 277 V with I <sub>n</sub> < 7 A AC 277 V with I <sub>n</sub> ≥ 7 A DC 28 V with I <sub>n</sub> ≤ 30 A	1000 A 5000 A 1000 A
Short circuit capacity I <sub>cN</sub> EN 60934	AC 240 V with I <sub>n</sub> < 7 A AC 240 V with I <sub>n</sub> ≥ 7 A AC/DC 28 V	8 x I <sub>n</sub> 400 A 400 A
Class of protection	• Between live parts and accessible parts • Other parts	II I
Degree of protection	Accessible range Termination range	IP40 IP00
Dielectric strength	Accessible range	AC 4000 V
Insulation resistance	DC 500 V	>100 MΩ

<b>Technical data (continued)</b>		
Endurance	Number of cycles at $2 \times I_n$ (AC)	3000
	Number of cycles at $I_n$	10000
Permissible ambient temperature		-5°C to +60°C
Vibration resistance	IEC 68-2-6, Test Fc, 1,5 mm amplitude 5-60 Hz, 60-500 Hz	10 g
Shock resistance	IEC 68-2-6, Test Ea	100 g
Type of actuation	• Reset type	R
	• Reset plus manual trip with separate trip release lever	S
Type of tripping	• Thermal	TO
	• Positively trip-free	
Weight		approx. 25 g

**Approvals**

			Rated current range	Rated voltage AC	Rated voltage DC
	UL	1077	0,05 – ≤20 A (with quick connect terminals)	277 V	28 V
			0,05 – 30 A (with screw clamp terminals)	277 V	28 V
	CSA	C 22,2	0,05 – 30 A	277 V	28 V
	VDE	VDE 0631	0,05 – ≤20 A (with quick connect terminals)	250 V	
			0,05 – 30 A (with screw clamp terminals)	250 V	
	DEMKO		0,05 – ≤20 A (with quick connect terminals)	240 V	
			0,05 – 30 A (with screw clamp terminals)	240 V	
	FEMKO		0,1 – 30 A	250 V	

**Order code**



**Basic type**

T13 Single pole thermal overload protection switch, positively trip-free

**Mounting style**

- 2 Threaded neck type 3/8 – 27 UNS – 2 A, with knurled
- 6 Snap-in type

**Actuation type**

- 1 Reset type
- 7 Reset type plus manual trip with separate trip release lever, only available with snap-in type.

**Terminal type**

- 1 6,3 x 0,8 mm quick connect terminals DIN 46244-A, max. 20 A
- 2 Screw clamp terminals

**Construction variants**

- R Setting indication on reset button

**Rated current**

0,05	0,1	0,15	0,2	0,3	0,4	0,5	0,6	0,7	0,8	0,9	1,0
1,1	1,2	1,3	1,4	1,5	1,6	1,7	1,8	1,9	2,0	2,1	2,3
2,5	2,8	3,0	3,3	3,5	4,0	4,5	5,0	5,5	6,0	6,5	7,0
7,5	8,0	8,5	9,0	9,5	10	11	12	13	14	15	16
17	18	19	20	22	25	28	30				

See approvals, page 33  
Other rated currents by request

**Accessories**

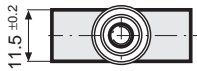
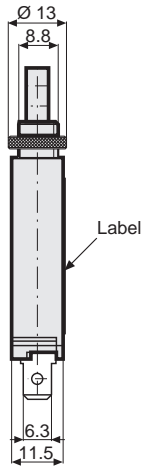
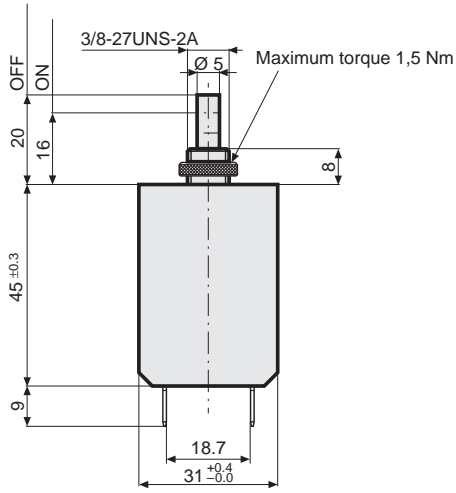
- TZZ 01 Protective cover for threaded neck mounted front side IP 54
- TZZ 06 Protective cover for rear side IP41

T 1 3 - 2 1 1 R - 0,15 - T Z Z 0 1 **Order example**

# 1 CIRCUIT BREAKERS FOR EQUIPMENT T13

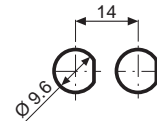
## Threaded neck type

T13-211

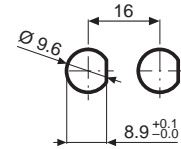


Cut-out

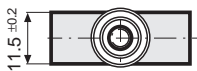
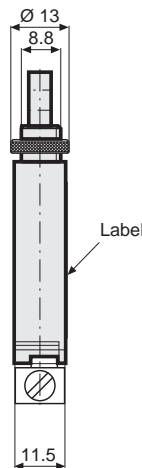
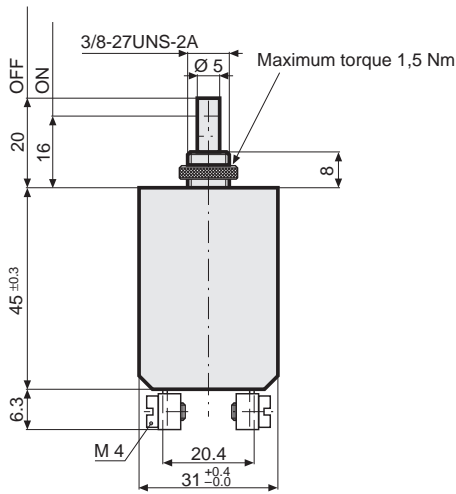
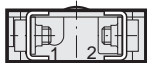
T13-...1



T13-...2

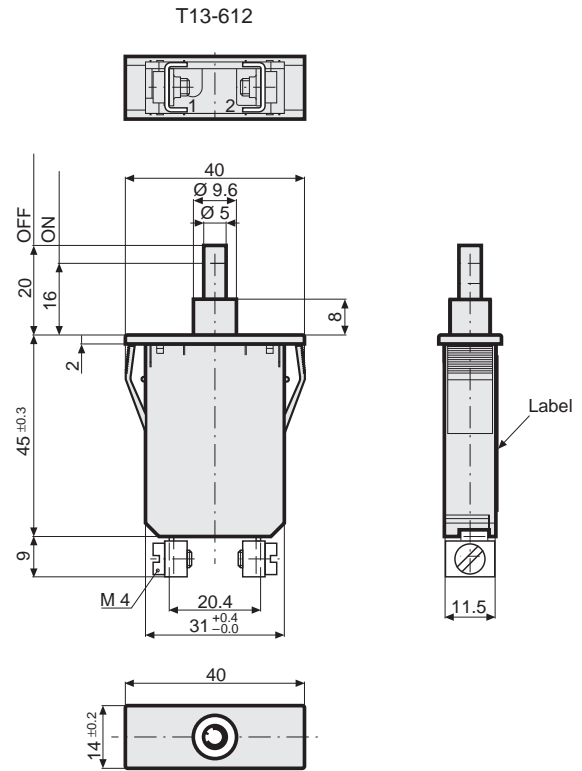
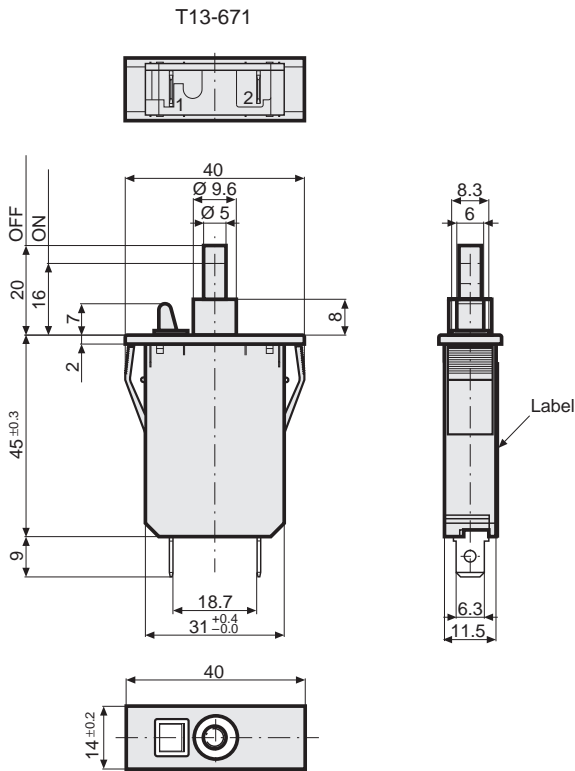


T13-212

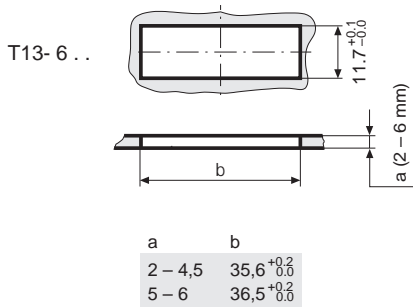


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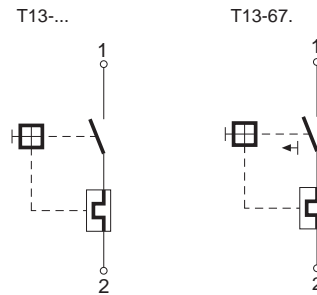
Snap-in type



Cut-out

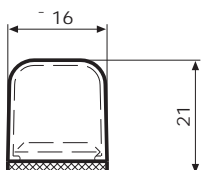


Schematic diagrams

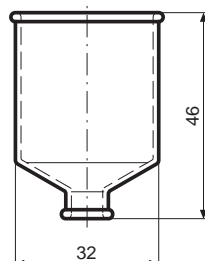


Accessories

Protective transparent cover  
Degree of protection IP54  
TZZ02



Protective cover rear side  
IP41  
TZZ06



Colors

