

## TR... Industrial thermostats



TR 040, 060



TR-F



TR 04040U

### Summary

The TR... is a series of mechanical thermostats for water, hot water, gases, and room air.

### Applications

- HVAC systems – heat exchange stations, DHW preparation, safety elements at heating circuits, room temperature controls, industrial cooling, etc.

### Functions

The measuring element actuates changeover contacts. Contacts 2 – 3 open if the temperature is higher than the setpoint.

The devices do not need any servicing or maintenance and can be mounted in any position except those when condensate may cumulate at operating elements or cable glands.

The temperature sensing elements, torsion element with liquid filling, are mounted into pockets which are part of delivery.

### Technical data

Recommended measuring circuit	24...250 V AC+ 10 %, 16 A, $\cos \phi = 1.0$
	24...250 V AC + 10 %, 1.5 A, $\cos \phi = 0.6$
	min. 150 mA at 24 V AC

<b>Contact</b>	dustproof contact block with potential-free one- or two-pole changeover contact
<b>Cover</b>	polyamide, 30% glass fiber, color white, similar to RAL 9010
<b>Dimensions</b>	108 x 70 x 73,5 mm
<b>Cable gland</b>	M20x 1,5
<b>Ambient temperature</b>	TR-040, 060, 22    -35...65 °C TR-04040, 04040U, F    -10...65°C
<b>Capillary</b>	see below
<b>Tolerance</b>	Tmin +/- 3 K, Tmax +/- 3 K
<b>Terminals</b>	screw terminals for wires 0,14 – 2,5 mm <sup>2</sup>
<b>Protection class</b>	I (according to EN 60730)
<b>Protection type</b>	IP65 (according to EN 60529)

## Type overview

Type	Temp. range (°C)		Hysteresis, fixed (K)		Max. capillary temperature (°C)	Capillary	Function
TR-040	0...+40		2		+65	stainless steel, 1,4303, V2A	TR
TR-040U	0...+40		2		+65	stainless steel, 1,4303, V2A	TW
TR-060	0...+60		2		+75	stainless steel, 1,4303, V2A	TR
TR-060-U	0...+60		2		+75	stainless steel, 1,4303, V2A	TW
TR-22	-35...+35		3 ±1		+60	copper	TR
TR-22-U	-35...+35		3 ±1		+60	copper	TW
TR-04040	0...+40	0...+40	2	2	+65	stainless steel, 1,4303, V2A	TR+TW
TR-04040U	0...+40	0...+40	2	2	+65	stainless steel, 1,4303, V2A	TW+TW
TR-1-F	-35...+35		3 ±1		+60	copper tube, length of capillary =1m *	TR
TR-060-F	0...+60		3 ±1		+75	copper tube, length of capillary =1m *	TR
TR-090-F	0...+90		3 ±1		+120	copper tube, length of capillary =1m *	TR
TR-0120-F	0...+120		5 ±1		+135	copper tube, length of capillary =1m *	TR
TR-50140-F	+50...+140		5 ±1		+150	copper tube, length of capillary =1m *	TR

**TR:** temperature controller (setpoint external)

**TW:** temperature monitor (setpoint internal)

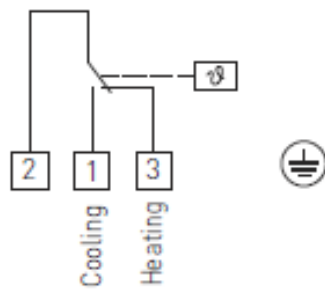
**Optional:** TR-...-F-U = internal setting

...**U** models feature internal setpoint knob, accessible after removing the cover

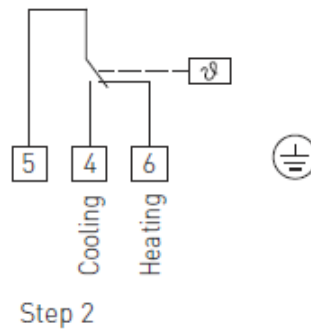
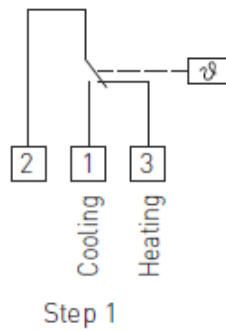
\* In immersion sleeves is inserted terminal part  $\varnothing 6.5 \times 73$  mm (see below). Recommended dimensions immersion sleeves  $\varnothing 8 \times 150$  or  $200$  mm.

## Terminals

TR 040, 060, 22, F

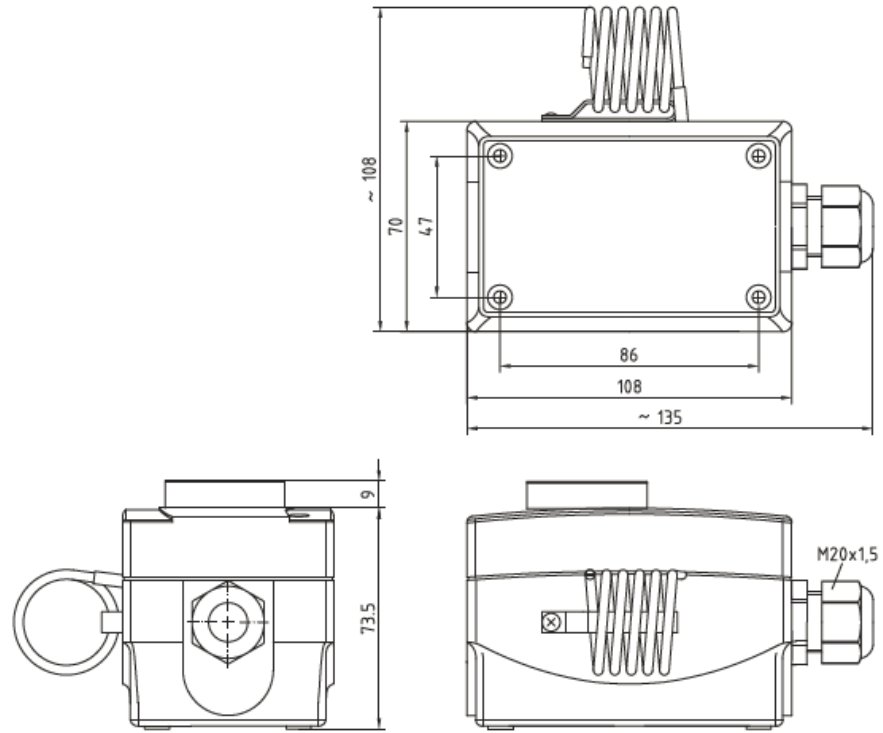


TR 04040, 04040U

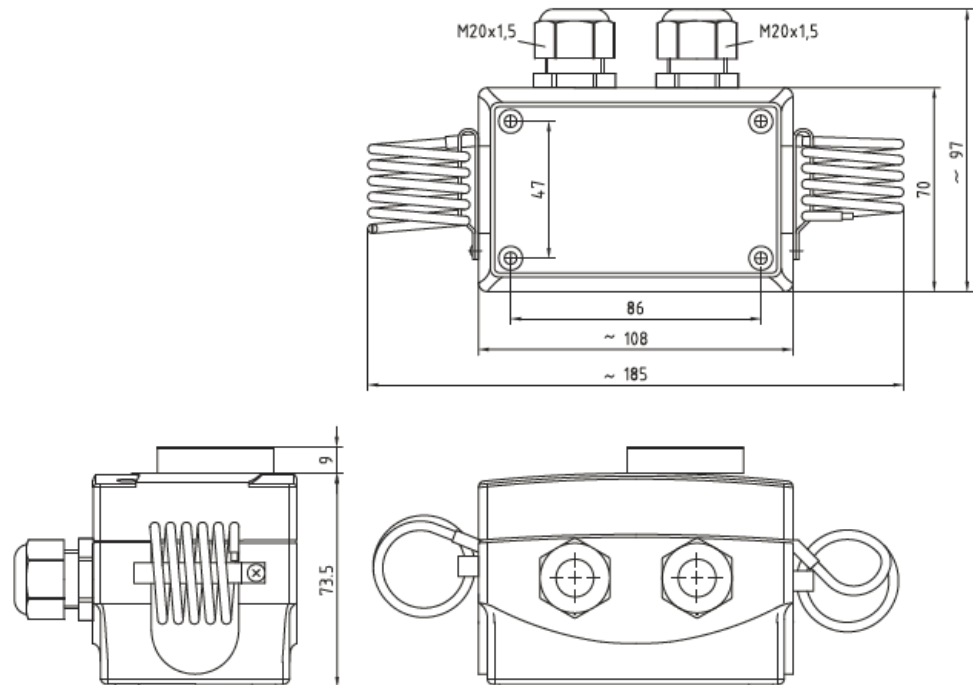


## Dimensions

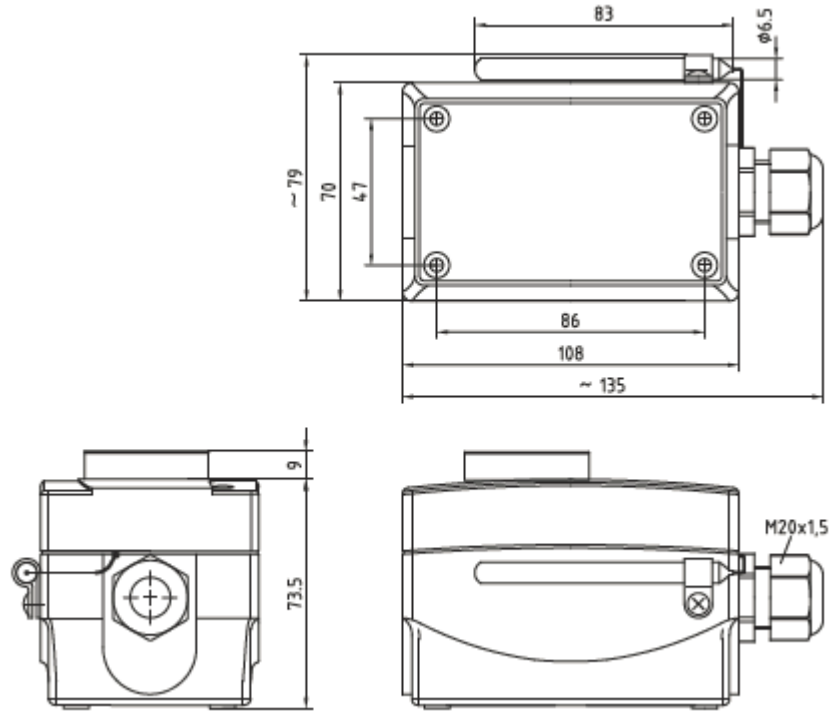
### TR 040, 060



### TR 04040(U)



TR 22



TR F

