



.U type

## 1. General features

- The thermostats TR 040/060.. are designed for monitoring and regulating temperature.
- They are used in cold storage rooms, greenhouses, industrial halls, wet rooms and outside.

## 2. Technical data

	TR 040/060..
Switching capacity	24 ... 250 Vac + 10 % 16A, $\cos \varphi = 1,0$ ; 24 ... 250 Vac + 10 % 1,5A, $\cos \varphi = 0,6$ at 24 V 150 mA min
Contact	dustproof switch block unit as potential-free single-pole or two-pole changeover contact
Enclosure	plastic, material polyamide, 30 % glass-globe-reinforced, with quick-locking screws, colour pure white (similar RAL 9010)
Dimensions	108 x 72.5 x 70 mm
Cable union	M20, including strain relief
Operating temperature	-35°C ... +65°C
Capillary	stainless steel, 1.4303, V2A
Tolerance	$T_{\min} \pm 3K$ ; $T_{\max} \pm 3K$ ; at 20°C $\pm 1K$
Electrical connection	0.14-2.5 mm <sup>2</sup> via terminal screws
Protection class	I according to EN 60730
Protection type	IP 65 according to EN 60529
Standards	CE conformity, EMC directive 2004/108/CE, low-voltage directive 73/23/EEC

Ref.	Temperature range	Thermal operating difference (fixed) ca.	Max. capillary temperature	Function*
TR 040	0°C ... +40°C	2K	+65°C	external adjustment, TR
TR 040.U	0°C ... +40°C	2K	+65°C	internal adjustment, TW
TR 060	0°C ... +60°C	2K	+75°C	external adjustment, TR
TR 060.U	0°C ... +60°C	2K	+75°C	internal adjustment, TW

### \*Function

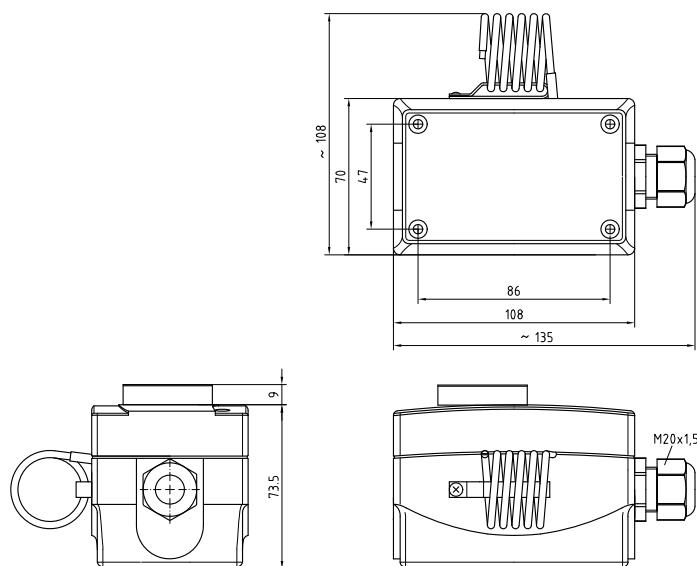
TR = temperature controller (external adjustment)

TW = temperature controller (internal adjustment)

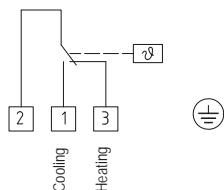
## Operation

- **Heating** : The preset setpoint (scale value) is equivalent to the switch-off value of the heating. The switch-on value is lower by the amount of operating difference. Contact 2 - 3 breaks when temperature rises to the preset value.
- **Cooling** : The preset setpoint (scale value) is equivalent to the switch-on value of the heating. The switch-off value is lower by the amount of operating difference. Contact 1 - 2 closes when temperature rises to the preset value.

## Dimensional drawing



## Connecting diagram



## Recommendations

Devices are to be connected under dead-voltage condition. Devices must only be connected to safety extra-low voltage. Consequential damages caused by a fault in this device are excluded from warranty or liability. Installation of these devices must only be realized by authorized qualified personnel. The technical data and connecting conditions shown on the device labels and in the mounting and operating instructions delivered together with the device are exclusively valid. Deviations from the catalogue representation are not explicitly mentioned and are possible in terms of technical progress and continuous improvement of our products. In case of any modifications made by the user, all warranty claims are forfeited.

Operating this device close to other devices that do not comply with EMC directives may influence functionality. This device must not be used for monitoring applications, which solely serve the purpose of protecting persons against hazards or injury, or as an EMERGENCY STOP switch for systems or machinery, or for any other similar safety-relevant purposes.

Dimensions of enclosures or enclosure accessories may show slight tolerances on the specifications provided in these instructions.

Modifications of these records are not permitted.

In case of a complaint, only complete devices returned in original packing will be accepted.