

## Description



The frost protection thermostat serie TD is suitable for the protection of hot-water heating registers, downstream air heaters in ventilation and climate control systems as well as heat exchangers in cooling systems. The thermostats can also be used to control electrical heating systems and to switch acoustic or optical alarm signals and measure temperature in non aggressive gases or liquid medium.

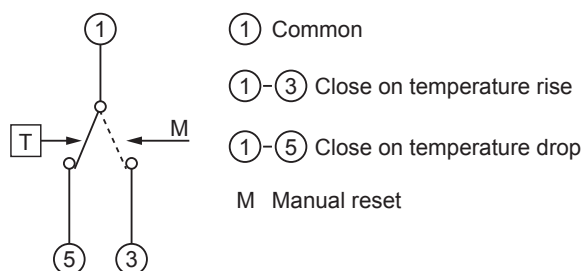
## Technical specifications



<b>Measurement range</b>	-15...+15°C
<b>Factory calibration</b>	on 5°C, off 0°C
<b>Differential</b>	adjustable from 1 to 15° C
<b>Electrical rating</b>	8 A, 250 V AC
<b>Reset</b>	Automatic, the switching contact moves back to its normal position if temperature moves to normal range. Manual, the switching contact is moved back by pressing the reset button on the housing.
<b>Sensibile element</b>	Gas-filled copper capillary
<b>Cable entry</b>	Cable gland Ø6...13 mm
<b>Housing</b>	Metal base with ABS cover
<b>Wiring terminals</b>	Screw terminals for wires of up to 1,5 mm <sup>2</sup> cross-section
<b>Cooling of capillary coil</b>	The 3 and 6 m capillaries are sensitive over the entire length and detect, with a minimum length of 30 cm, a temperature change from the set point. The 1,8 m capillary is only sensitive on the bulb.
<b>Max. overload temperature</b>	150°C (max. 1 hour)
<b>Dimensions</b>	See drawing
<b>Protection type</b>	IP55
<b>Protection class</b>	I
<b>Working range RH</b>	5...95% RH, non-condensing
<b>Working temperature °C</b>	-20...+55°C
<b>Storage temperature</b>	-30...+60°C
<b>Accessories (optionally)</b>	Set of 6 pieces mounting brackets, model ATD1
<b>Installation</b>	See drawing
<b>Standards</b>	CE-conformity, RoHS

Models	Reset	Capillary length m
TD1	automatic	1,8
TD2	automatic	3,0
TD3	automatic	6,0
TDR1	manual	1,8
TDR2	manual	3,0
TDR3	manual	6,0
<b>Accessories:</b>	<b>ATD1</b> Set of 6 pieces mounting brackets	

## Electrical wirings

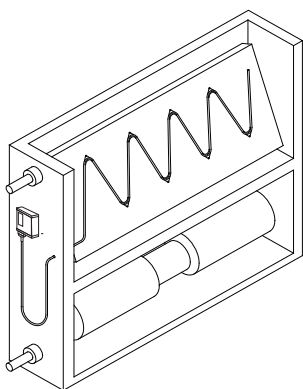


## Function

The frost protection thermostat switches when the temperature sensed by capillary for a minimum length of 30 cm drops below the temperature set on the knob. When temperature increases, the contact returns automatically to the initial position. For TDR versions it is necessary a manual reset from user to allow the contact to return to the initial position.

The gas inside the sensible element increases his volume and with a mechanism acts on the microswitch. The capillary is sensible to temperature for the whole length.

## Installation



The thermostat is available with 3 different sensible elements that allow the use in different applications.

The version with 1,8 m capillary length has a bulb that allows the use of a pocket.

The versions with 3 and 6 m can be used in air ducts or battery exchanger.

The capillary must be applied uniformly on the surface to be controlled, see drawing besides.

This surface must not be folded with a radius of curvature lower than 20 mm and there must not be any bottlenecks. Therefore the use with mounting bracket model ATD1 is recommended.

In addition avoid to put the capillary across iron plate wall without any protection.

The room temperature around the unit must never be below the setpoint temperature.

## Dimensions (mm)

