NENUTEC®

INNOVATIVE MEMBER OF SWISTEC

TD – antifreeze thermostats



The appearance of the product may differ from the illustration. Technical specifications are subject to change.

TD SERIES

APPLICATION AND USE

The frost protection thermostats TD series are 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.

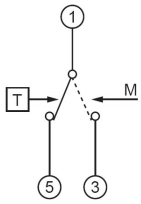
TECHNICAL SPECIFICATION

Technical data	
Measurement range	-15...+15°C
Factory calibration	on 5°C, off 0°C
Hysteresis	adjustable from 1 to 15°C
Power supply	16 (8) A, 24...250 V_{AC}
Reset	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.
Sensibile element	Gas-filled copper capillary
Cable entry	Cable gland ∅6...13 mm
Housing	Metal base with ABS cover
Terminal block	Screw terminals, wire cross-section max. 1.5 mm^2
Cooling of capillary coil	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.
Max. overload temperature	150°C (max. 1 hour)
Dimensions	See drawing
Protection degree	IP55
Protection class	I
Working range rH	5...95% rH (non condensing)
Working temperature range	-20...+55 °C
Storage temperature	-30...+60 °C
Accessories (optional)	Set of 6 pieces mounting brackets, model ATD1
Installation	See drawing
Standards	CE-conformity, RoHS

MODEL SELECTION TABLE

Models	Reset	Capillary length
TD1	automatic	1.8
TD2	automatic	3.0
TD3	automatic	6.0
TDR1	manual	1.8
TDR2	manual	3.0
TDR3	manual	6.0
Accessories	**ATD1**, set of 6 pieces mounting brackets	

ELECTRICAL WIRING



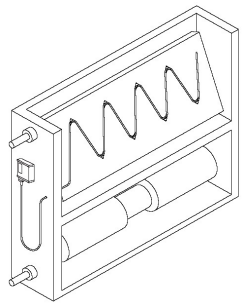
①	Common
① – ③	Close on temperature rise
① – ⑤	Close on temperature drop
M	Manual reset

TD – antifreeze thermostats

OPERATIONS

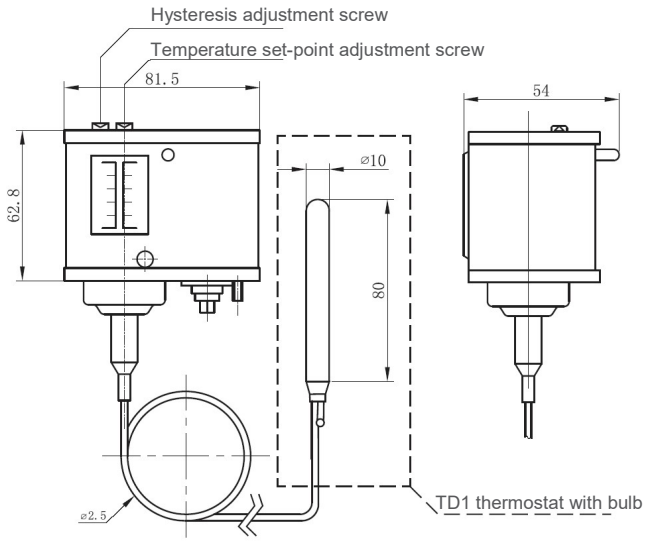
The frost protection thermostat switches when the temperature sensed by capillary for a minimum length of 30 cm drops below the temperature set on the knob. When temperature increases, the contact returns automatically to the initial position. For TDR versions it is necessary a manual reset from user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

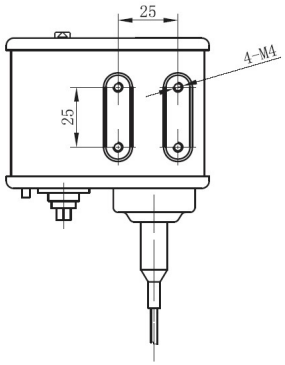
INSTALLATION



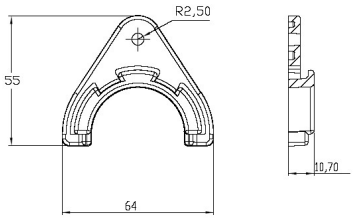
The thermostat is available with 3 different sensible elements that allow the use in different applications.
The version with 1,8 m capillary length has a bulb that allows the use of a pocket.
The versions with 3 and 6 m capillary can be used in air ducts or battery exchanger.
The capillary must be applied uniformly on the surface to be controlled, see drawing besides.
This surface must not be folded with a radius of curvature less 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]





Mounting bracket, model ATD1



Due to continuous product improvement, specifications are subject to change without notice.

Nenutec Polska

00-236 Warszawa
ul. Świętojerska 5/7
tel.: +48-(0)-504-050225
nenutec@nenutec.pl