

TF

Frost protection thermostat

Frost protection thermostat for use in cooling, heating and ventilation systems.

- Easy installation and wiring
- Manual or automatic reset
- Protection class IP65
- Capillar length 1,8 - 3 - 6 - 15m

Applications

TF...(R) is a device with the task of controlling the temperature of heating and cooling batteries, ventilation ducts and all those applications where frost damage can be prevented.

The 15 (8) A switching contact (SPDT) allows use in a variety of functions such as controlling a fan, a shutter, an electric resistance, open or close a heating circuit or cooling circuit, start or stop a circuit pump for heating or cooling, switch off a refrigerator unit or a humidifier, signal an alarm condition through a visual or acoustic device.

Function

The thermostat TF switches when the temperature sensed by capillary for a minimum length of 50 cm drops below the temperature set on the knob. When temperature increases, the contact returns automatically to the initial position. For R 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.

The models with range under the cover for setting the set-point avoids any involuntary change of the set.

Appearance

The device consists of an ABS base and a transparent polycarbonate self-extinguishing cover, V0 class. The internal parts are made of technopolymer and stainless steel to guarantee its mechanical stability. The sensitive element is in copper filled with gas.

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Technical data

Sensitive element	Copper capillar filled with gas
Contact	SPDT microswitch
Breaking capacity	15 (8) A, 24...250 V AC
Accuracy	± 1K
Ambient temperature	Max. 55 °C
Ambient humidity	10...90 % UR (non-condensing)
Storage temperature	-30...+60 °C
Storage humidity	< 95 % UR
Max. bulb temperature	150 °C
Casing	Base in ABS, cover in transparent polycarbonate (PC)
Weight	340g
Protection class	IP65
Isolation class	I

Models and accessories

Article	Temperature range	Hysteresis	Reset	Capillary length
TF18	-10...+10 °C	2 K	Automatic	1,8 m
TF18R	-10...+10 °C	Minimum manual reset	Manual	1,8 m
TF30	-10...+10 °C	2 K	Automatic	3 m
TF30R	-10...+10 °C	Minimum manual reset	Manual	3 m
TF60	-10...+10 °C	2 K	Automatic	6 m
TF60R	-10...+10 °C	Minimum manual reset	Manual	6 m
TF150	-10...+10 °C	2 K	Automatic	15 m
TF150R	-10...+10 °C	Minimum manual reset	Manual	15 m
Article	Description			
DBZ-01	Brass pocket 120 mm, Øexternal 11mm, Øinternal 10mm, connection R 1/2"			
DBZ-02	Stainless steel AISI 304 pocket 120 mm, Øexternal 12mm, Øinternal 10mm, connection R 1/2			
DBZ-05	Set of 6 mounting brackets for capillary of antifrost thermostats			

CE

Low Voltage Directive (LVD) & EMC emissions & immunity standards: This product conforms to the requirements of the European Low Voltage Directive (LVD) 2006/95/EC and to the requirements of the EMC Directive 2004/108/EC through product standard EN 60335-1.

RoHS: This product conforms to the Directive 2011/65/EU of the European Parliament and of the Council.

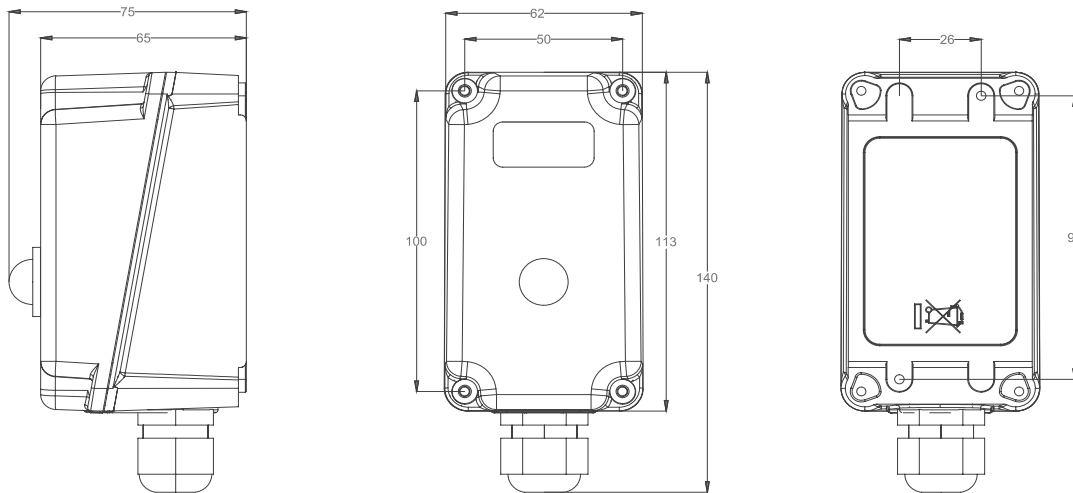
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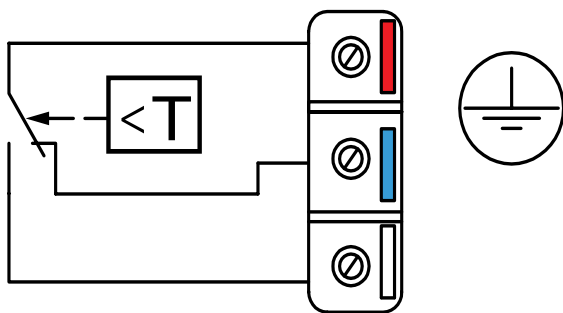
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Dimensions



Wiring



Heating: Connect to the red and blue terminal. The contact will open when the temperature rises..

Cooling: Connect to the red and white terminal. The contact will open when the temperature drops.

Signal function: For service functions, connect a signal lamp to the corresponding opposite contact. The free contact will then close simultaneously (thus acting as a signal contact).

Documentation

Document	Description
Instruction TF	Instruction for commissioning & start-up

The document can be downloaded from www.industrietechnik.it

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