TF – electromechanical antifreeze thermostats



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

TF SERIES

KEY FEATURES

The new antifreeze thermostat had been carefully designed, and it is equipped with a polymeric element. Main features are solidity, sturdiness typical for electromechanical units, the unit is quite light, indestructible, it can't be attacked by rust and is protected against error commutations due to vibration present on plant. The general standard protection IP65 is suitable for quite all applications.

APPLICATIONS

TFxx thermostat is a security unit, designed to control temperature of heating and cooling batteries, in air conditioning system, inside air pipe ventilation and in all applications in which it is necessary to avoid freeze formation.

The switching contact (SPDT) of 15(8) A allows usage in different functions such as:

- driving a fan,
- driving a damper,
- opening or closing a valve,
- driving an electric heater,
- driving a circulation pump,
- switching off a cooling system or a humidifier,
- indicating an alarm state by an acoustic or visual device.

TYPE	HYSTERESIS [K]	RESET	PROTECTION DEGREE	CAPILLARY LENGTH [m]
TF60	2	automatic	IP65	6
TF60R	FT	manual	IP65	6
TF18	2	automatic	IP65	1.8
TF18R	FT	manual	IP65	1.8
TF30	2	automatic	IP65	3
TF30R	FT	manual	IP65	3

TECHNICAL SPECIFICATION

Range:	-10..+12°C
Contact type:	SPDT micro-switch (fig. 1)
Switch capacity:	24..250 V_{AC} 15(8) A
Hysteresis:	2 K
Accuracy:	±1 K
Protection class:	II
Protection degree	IP 65
Zakres temperatur pracy:	-10..+70°C
Storage temperature range:	-30..+70°C
Obudowa:	Base in ABS, transparent PC cover
Dimensions:	122,5x73x61 (included cable gland)
Weight:	0.274 kg

MODE OF OPERATION

The thermostat TFxx switches when the temperature sensed by capillary for a minimum length of 30 cm drops below the temperature set by the knob. When temperature increases, the contact returns automatically to the initial position. For TFxxR 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 knob under the cover for setting the setpoint avoids any involuntary change of the set.

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DESIGN

The unit has a housing in ABS (base) and transparent PC (cover) with a self-extinguish V0 class. The internal part are in polymeric element to ensure mechanical stability. The sensible element is in brass full of gas.

ELECTRICAL WIRING

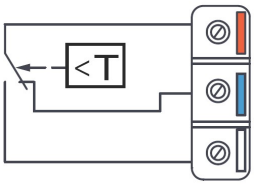


Fig. 1

INSTALLATION

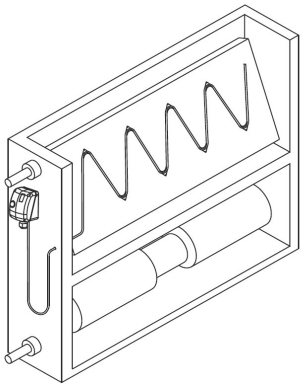
The thermostat is available with 3 different sensible elements that allow the use in different applications. The version with 1.8 m capillary length has a bulb that allows the use of a 120 mm pocket available as accessory in brass or inox. The versions with 3 and 6 m capillary can be used in air ducts or battery exchanger.

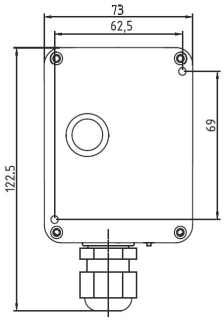
The capillary must be applied uniformly on the surface to control.

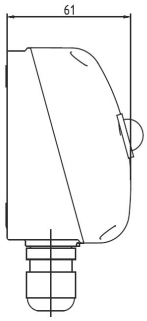
This surface must not be folded with a radius of curvature less than 2 cm and there must not be any bottleneck. So the use with DBZ-05 mounting bracket is recommended. In addition avoid to put the capillary across iron plate wall without any protection.

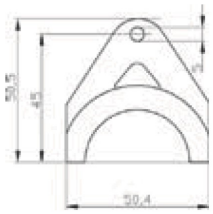
The room temperature around the unit must never be below the setpoint temperature.

DIMENSIONS [mm]









DBZ-05

Due to continuous product improvement, specifications are subject to change without notice.
Consult NENUTEC representatives for specific requirements and material selections for your intended application.
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