

The **terneo kt** thermostat efficiently manages snow melting systems, ensuring safe movement for people and vehicles during the winter season without the need for snow-clearing equipment or salt.

The thermostat activates the load when the air temperature sensor readings fall within the specified range.

To ensure the durability of the power relay and the reliability of its contacts, the thermostat is equipped with protection against frequent switching. The load is activated as close as possible to the moment when the voltage sine wave crosses zero. Minor deviations from the zero-crossing point may occur due to variations in the disconnection time across different power relay samples.

Please read this document in its entirety before installing and using the temperature controller. This helps to avoid possible hazards, errors and misunderstandings.

TECHNICAL DATA

The limits of regulation	upper: 0...10 °C, lower: -20...-1 °C
Maximum load current (for category AC-1)	16 A
Maximum power load (for category AC-1)	3 000 VA
Input voltage	230 V ±10 %
Supported sensor types:	analog NTC 4.7, 6.8, 10, 12, 15, 33, 47 kOhm at 25 °C digital D18
Temperature sensor	NTC thermo-resistor 10 kOhm 25 °C (R10)
Length of the sensor cable	3 m
The number of switches under the load, at least	50 000 cycles
The number of switches without the load, no less than	20 000 000 cycles
Temperature hysteresis	0,1...10 °C
Measured temperature range	analog -30...+130 °C digital -55...+125 °C
Overall dimensions	85 × 80 × 35 mm
Weight in the complete set	0,18 kg ±10 %
Protection degree according to GOST 14254	IP20

IN THE BOX

Thermostat, frame	1 piece
Temperature sensor with connected wire	1 piece
Technical data sheet and installation and operation manual and warranty card	1 piece
The packing box	1 piece

INSTALLATION

The thermostat is designed for indoor installation at a height ranging from 1,4–1,6 meters from the floor level. The ambient temperature during installation should be within -5...+45 °C. When installing in a bathroom, toilet, kitchen, or pool, place the thermostat in a location not exposed to accidental splashes. Exclude the risk of moisture and liquids entering the installation area.

To protect against short circuits, install an automatic circuit breaker (CB) with a rating of up to 16 A in the phase wire break before the thermostat.

To protect against electric shock, install an SSD (safety shutdown device). See diagram 1.

For installation you need:

- make a hole in the wall with a diameter of 60 mm for the mounting box and channels for power supply and sensor wires;
- bring the heating system power and sensor wires to the mounting box;
- make connections according to this manual;
- secure the thermostat in the mounting box.

The terminals of the thermostat are designed for wires with a cross-section of no more than 2.5 mm². It is recommended to use soft copper wire, which can be tightened in the terminals using a screw-driver with a blade width not exceeding 3 mm and a torque of 0.5 N·m. The use of aluminum is not desirable. A screwdriver with a blade width greater than 3 mm may cause mechanical damage to the terminals, which can result in the loss of warranty service rights.

It is necessary for the temperature controller to switch the current to no more than 2/3 of the maximum current specified in the specification. If the current exceeds this value, the load must be connected through a contactor (magnetic actuator, power relay), which is optimized for this current (Wiring 2).

Air temperature sensor installation

Air temperature sensor should be mounted on the wall or under the edge of the roof in order to ensure its protection from direct sunlight, rain and snow, and ensure the opportunity for easy replacement in the event of a malfunction or damage (Fig. 1).

If necessary, it is allowed to shorten and expand sensor connecting wires (separate cable not more than 20 m long with a cross-section greater than 0,75 mm²). Power wires should not be placed near connection wire of sensor otherwise they may cause interference.

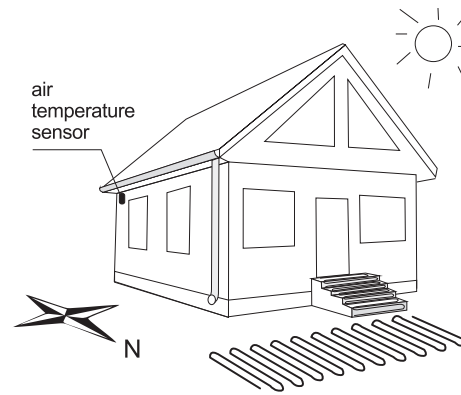


Figure 1. Air temperature sensor installation

WIRING

The thermostat supports two types of sensors: analog (R10) and digital (D18). The analog sensor is supplied with the thermostat and is connected to terminals 1 and 2.

The digital sensor (D18) is connected with the blue wire to terminal 2 and the white wire to terminal 1. If the thermostat switches to Emergency Timer Mode (pages 7–8), try connecting the blue wire to terminal 1 and the white wire to terminal 2. If the terneo thermostat does not detect the sensor after both attempts, please contact the Service Center.

The supply voltage (230 V ±10%, 50 Hz) is applied to terminals 4 (N, neutral) and 5 (L, phase).

Connect the load to terminals 3 and 6 (connecting wires from the heating element).

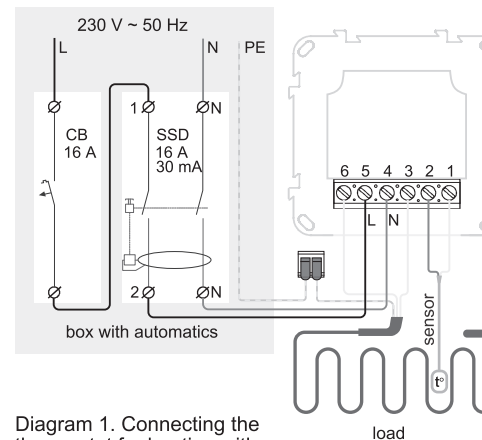


Diagram 1. Connecting the thermostat for heating with a twin-core cable

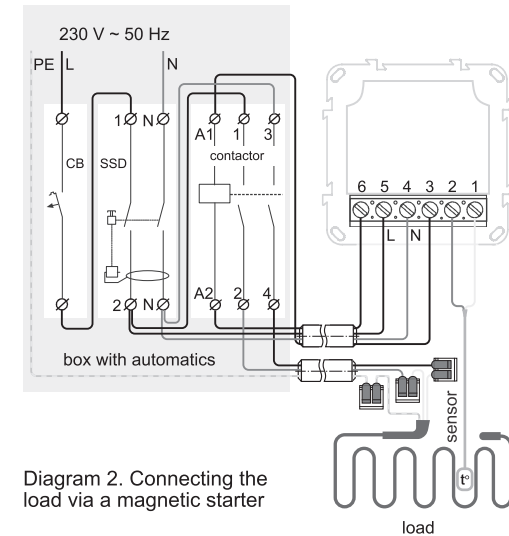


Diagram 2. Connecting the load via a magnetic starter

WARRANTY TERMS

The warranty for devices is valid for 36 months from the date of sale, provided that the instructions are followed. The warranty period for products without a warranty certificate is counted from the date of production.

If your device is not working properly, we recommend that you first read the section "Possible problems". If you cannot find an answer, contact Service Center, in most cases, these actions resolve all issues.

If you continue to have issues with the device, please, contact the General distributor in your area or the store where you purchased the device. If your device is defective due to our fault, we will repair or replace it under warranty within 14 business days.

Please check the full text of the warranty and the data you need to send to your Service Center on the website <https://www.ds-electronics.company>

WARRANTY CARD

serial Nr:	date of sale:
a seller, a seal:	place of a seal
an owner contact for a service center:	

