

DIGITAL ROOM THERMOSTAT
AVANSA 2003



User manual

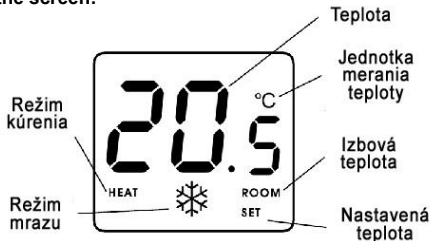
GENERAL NOTES

AVANSA 2003 room thermostat is suitable for controlling most boilers available in Slovakia. It can be easily connected to boilers or to air conditioning units with a thermostat having dual wiring and connection points, regardless of 24 or 230 V, operating voltage. The digital display compared to simple,
traditional thermostats allows more precisely

temperature measurement and setting the required data. Based on the selected sensitivity, the thermostat turns the boiler on below the set temperature and off above the set temperature. At high comfort, it also reduces energy costs. The switching sensitivity can be selected between $\pm 0.2^{\circ}\text{C}$ (basic factory setting, recommended for radiator heating) and $\pm 0.2^{\circ}\text{C}$ (recommended for floor heating).

This means the difference between the set and the actually measured room temperature when the thermostat is turned on. If the factory setting is, for example, 20°C, the device will turn the boiler on at 19.8°C or a lower temperature, and turn it off at 20.2°C or a higher temperature.

Symbols displayed on the screen:

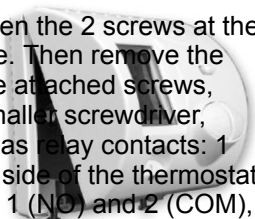


1. INSTALLATION OF THE DEVICE Install the thermostat on the wall in a room where you usually spend a longer time. Make sure it is not exposed to direct sunlight or drafts. Do not place it near a refrigerator or a chimney. The optimal location is 1.5 m high from the floor of the room.

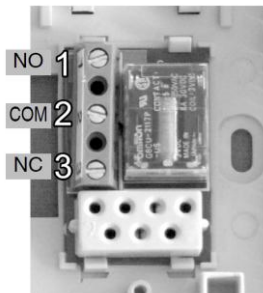
IMPORTANT WARNING!

If in the room where you want to install the thermostat, the radiators have thermostatic heads for valves, replace the valve heads and mount a manual controller, or set them to the maximum temperature level. Otherwise, temperature regulation may be disrupted.

2. CONNECTING THE THERMOSTAT Loosen the 2 screws at the bottom of the receiver as shown in the image. Then remove the back cover as shown in the image. Using the attached screws, attach the back cover to the wall. Using a smaller screwdriver, remove the terminal cover. The thermostat has relay contacts: 1 (NO), 2 (COM), 3 (NC), located on the inner side of the thermostat's back cover. Connect your heater to contacts 1 (NO) and 2 (COM), the relay is inactive, the terminals are open. Connect your cooler to contacts 2 (COM) and 3 (NC), the relay is inactive, the terminals are closed. After connecting the supply cables, put back the removed cover, thus you can avoid the risk of electric shock.



WARNING! For safety reasons, installation and connection should be done by a professional. When connecting a heater or cooler, always follow the manufacturer's instructions. The voltage at terminals 1, 2, or 3 depends only on the control system, so the parameters of the used wiring will be determined by the controlled device. The length of the wiring is not important.



3. THERMOSTAT OPERATION The battery compartment is located on the inner side of the front cover. Insert 2X AA power batteries (type LR6, see page 8a 14) into the holder according to the specified polarity. After inserting the batteries, the following symbols are displayed on the screen. Day, time, program number, difference between set and actual temperature. (If the mentioned information does not appear on the display

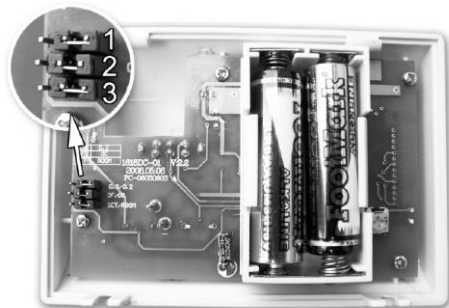
press the “RESET” button with a wooden or plastic stick. Do not use metal materials or a graphite pencil. The pencil may break and cause a short circuit in the device).

4. BASIC SETTINGS Remove the back cover of the device. On the inner side of the front cover, on the base panel, there are jumpers (black plugs) that can be used to modify the following basic factory settings.

4.1 ADJUSTING THE TURN-ON SENSITIVITY

The highest jumper self can be adjusted, set sensitivity of turn-on. The turn-on sensitivity is set in the factory in the range of $\pm 0.2^{\circ}\text{C}$, which can be changed. By moving the plug to the left and middle pins, you can set the temperature in the range of $\pm 0.3^{\circ}\text{C}$.

4.2 CHANGING THE TEMPERATURE MEASUREMENT UNIT The middle jumper can be used to change the temperature measurement unit, which will appear on the display. The basic factory setting for temperature is in °C (Celsius). By moving the plug to the left and middle pins, you can set the temperature in °F (Fahrenheit).



4.3 CHANGING THE DISPLAYED TEMPERATURE ON THE SCREEN

The lower jumper can be used to set the desired temperature(s). According to the factory setting, the current room temperature is displayed on the screen, with the word "ROOM" visible in the lower right corner of the display. The set temperature is visible only during the setting (approx. 15 seconds). By moving the plug to the left and middle pins, you can set the device to alternately (approx. 4-4 seconds) display the set and current temperature. In this alternating mode, the word "ROOM" and "SET" are alternately visible in the lower right corner of the display, depending on whether it is the current or set temperature.

WARNING! If you want to adjust the factory settings after inserting the batteries, press the "RESET" button with a wooden or plastic stick.

5. SETTING THE DESIRED TEMPERATURE The turn-on sensitivity is set in the factory in the range of $\pm 0.2^{\circ}$, and the temperature value is 20°C . This means that the boiler will be turned on below 19.8°C and turned off above 20.2°C . The basic factory setting can be adjusted to $10\text{--}30^{\circ}\text{C}$, in increments of 0.5°C as follows: Press the button

 or , the word "SET" (set value) appears on the display, at the same time the measured temperature value is converted to the factory setting or on subsequently set value

(set temperature value flashes on the display). Press the buttons (in this case the values will change faster) until you reach the required temperature you want to maintain at the thermostat installation site. Setting the required temperature is possible in $\pm 0.5^{\circ}\text{C}$ increments.

After setting the required room temperature, the device automatically switches to normal operation after about 15 seconds. The word „SET“ will disappear from the display and the current room temperature will appear.

6. THERMOSTAT OPERATION After connecting and setting the basic values, the required

temperature, thermostat is

operational.

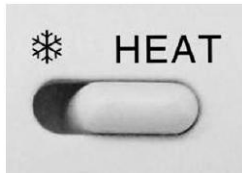
Pressing buttons „

“HEAT” heating mode, or “

frost mode, you can choose the operating mode.

Thermostat will be control

the heating unit according to the settings.



6.1 HEATING MODE (RIGHT POSITION OF THE BUTTON) The thermostat controls the boiler based on the actual room temperature and the set temperature. When the device is turned on, the relay contacts 1 (NO) and 2 (COM) close, and the device connected to the thermostat is in the on state. In this case, the word “HEAT” (heating) appears on the display and the red LED on the receiver is lit.

6.2 FROST MODE (LEFT POSITION OF THE BUTTON) If the button is in the left position, it means you are in frost mode. The thermostat will attempt to maintain a constant temperature of +7.0°C. Below this value, the boiler or other connected heating device will turn on, and above this value, it will turn off. In frost mode, the relay contacts 1 (NO) and 2 (COM) close, and the device connected to the thermostat is in the on state. In this case, the symbol ““

In this mode, temperature setting is not possible.

7. BATTERY REPLACEMENT Battery life is approximately 1 year. Low battery voltage on the display is indicated by the flashing symbol bA. This symbol appears at the location of the set temperature. If the symbol bA appears on the display, the batteries need to be replaced (see section 3). After replacing the batteries, the temperature must be set again, as the device will revert to the factory settings.

TECHNICAL DATA

- supply voltage: 24V AC / DC,..... 250V AC; 50Hz
- connectable current intensity: 8A (inductive load 2A)
- range of measured temperature: 5–35°C (in steps of 0.1°C)
- range of set temperature: 10–30°C (in steps of 0.5°C)
 $\pm 0,5^{\circ}\text{C}$
- accuracy of measured temperature: $\pm 0,2/\pm 0,3^{\circ}\text{C}$
- switching sensitivity:
- constant temperature in frost mode: +7°C – recommended storage temperature –10°C ...+60°C
- supply voltage: 2x1.5 V batteries (LR6 type)
- power: 1.5 mW
- battery life: approx. 1 year
- dimensions: 110 x 75 x 45 mm
- weight: 154 g
- type of temperature sensor: NTC 10k Ω $\pm 1\%$ at 25°C
- protection class: IP 30