

DIGITAL ROOM THERMOSTAT



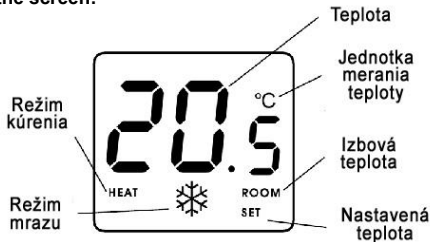
User manual

GENERAL NOTES

The AVANSA 2003 room thermostat is suitable for controlling most boilers sold in the Czech Republic. It can be easily connected to a boiler or air conditioning system, including a two-row thermostat, independently of the operating voltage of 24 or 230 V. The digital display compared to a simple traditional thermostat allows more accurate temperature measurement and setting of desired data. Based on the selected sensitivity of the thermostat switching below the set temperature, the boiler turns on and off above the set temperature. At high comfort, it also ensures reduced energy costs. The sensitivity of switching can be selected between ± 0.2 °C (basic factory setting, recommended for radiator heating) and ± 0.2 °C (recommended for floor heating).

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

Symbols displayed on the screen:



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

IMPORTANT NOTICE!

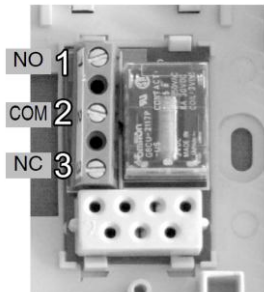
If in the room where you want to install the thermostat, radiators have thermostatic heads for valves, replace the valve heads and mount a manual controller, or set them to the maximum temperature level. Otherwise, temperature regulation may be disrupted.

2. THERMOSTAT CONNECTION Loosen the 2 screws in the lower part of the receiver as shown in the image. Then remove the back part as shown. Attach the back cover to the wall using the supplied screws. Using a smaller screwdriver, remove the terminal cover. The thermostat has relay contacts:

1 (NO), 2 (COM), 3 (NC) located on the back side of the thermostat back cover. Connect the heater to contacts 1 NO and 2 COM, the relay is in the idle state, the terminals are open and contacts 2 (COM) and 3 (NC) of the cooler relay are in the idle state, the terminals are closed. After connecting the power cables, insert the cover to prevent electric shock.



WARNING! For safety reasons, installation and wiring should be entrusted to a professional. When connecting a heater or cooler, always follow the manufacturer's instructions. The voltage on 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.



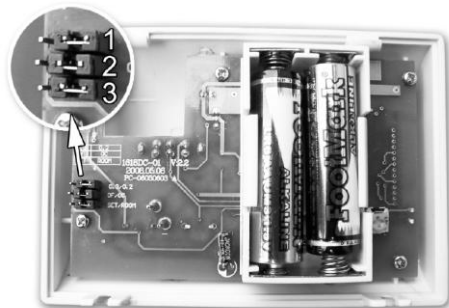
3. THERMOSTAT OPERATION The compartment for batteries is located on the inner side of the front cover. Insert 2 x AA batteries (type LR6) according to the specified polarity. After inserting the batteries, the following symbols appear on the display: Day, time, program number, difference between set 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 material 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 basic panel, there are jumpers (black plugs) that can be used to adjust the basic factory settings.

4.1 SENSITIVITY SETTING The topmost jumper can be set to adjust the switching sensitivity. The switching sensitivity is set in the factory range of $\pm 0.2\text{ }^{\circ}\text{C}$, which can be changed. By moving the plug to the left and central pin, you can set the temperature in the range of $\pm 0.3\text{ }^{\circ}\text{C}$.

4.2 CHANGE OF TEMPERATURE MEASUREMENT UNIT The middle jumper can be used to change the temperature measurement unit, which will appear on the display. The basic temperature setting is in °C (Celsius). The temperature can be set in °F (Fahrenheit) by shifting the plug to the left and middle shaft.



4.3 Changing the temperature display on the screen Using the lower jumper, the desired temperature can be set. According to the factory setting, the current room temperature will be displayed on the screen, which is visible in the lower right corner of the screen "ROOM". The set temperature is visible only during the setting (approximately 15 seconds). By shifting the plug to the left and middle shaft, you can set the device to alternate (approximately 4-4 seconds) between the set and current temperature. In this mode, "ROOM" and "SET" alternate in the lower right corner of the screen depending on whether it is the current or set temperature.

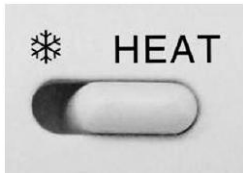
WARNING! If you want to set the factory settings after inserting the batteries, press the "RESET" button using a wooden or plastic stick.

5.SETTING THE REQUIRED TEMPERATURE The sensitivity of switching is set at the factory in the range of $\pm 0.2^{\circ}$, and the temperature value of 20°C . This means that the boiler will be turned on below 19.8°C and turned off above 20.2°C . The default factory setting can be set to $10\text{--}30^{\circ}\text{C}$, at 0.5°C as follows: Press the button or , the message "SET" (set value) will appear on the display, , while the measured temperature value will change to the factory setting (20.0°C), or to the last set value (the set temperature flashes on the display). Press the buttons (in this case, the change will be faster) until you reach the desired temperature at the thermostat installation site. Setting the required temperature is possible $\pm 0.5^{\circ}\text{C}$.

After setting the required room temperature, the device automatically switches to normal operation after about 15 seconds. "SET" disappears and the current room temperature is displayed.

6.THERMOSTAT OPERATION After connecting and setting the basic values of the required temperature, the thermostat is in operation. Press the “HEAT” button to switch to heating mode, or

frost mode, you can choose the operating mode. Thermostat ^{controls} heating unit ^{according to} setting.



6.1 HEATING MODE (RIGHT POSITION OF THE BUTTON) The thermostat controls the boiler based on the actual room temperature and the set temperature. If the device is on, contacts of relay 1 (NE) and 2 (COM) are closed and the device connected to the thermostat is in the on state. In this case, "HEAT" will be displayed on the screen and a red LED light will appear on the receiver.

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

In this mode, it is not possible to set the temperature.

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 set temperature location. If the symbol bA appears on the display, the batteries need to be replaced (see Section No. 3). After replacing the batteries, the temperature must be set again, as the device switches to the factory settings.

TECHNICAL DATA

- supply voltage:
- maximum current intensity:
- temperature measurement range:
- temperature setting range:
- temperature measurement accuracy:
- switching sensitivity:
- constant temperature in frost mode:
- recommended storage temperature:
- supply voltage:
- power –battery life:
- dimensions:
- weight:
- type of temperature sensor:
 - protection class:

24V AC / DC,..... 250V AC; 50Hz 8A
(inductive load 2A) 5–35°C (in steps of 0,1°C) 10–30°C (in steps of 0,5°C)
 $\pm 0,5^{\circ}\text{C}$ $\pm 0,2/\pm 0,3^{\circ}\text{C}$ $+7^{\circ}\text{C}$ -10°C ...
 $+60^{\circ}\text{C}$ 2x1,5 V batteries (LR6 type) 1,5
mW approx. 1 year 110 x 75 x 45 mm
154 g NTC 10k Ω $\pm 1\%$ at 25°C IP 30