

PROGRAMMABLE RADIO FREQUENCY
DIGITAL ROOM THERMOSTAT

AVANSA 2007

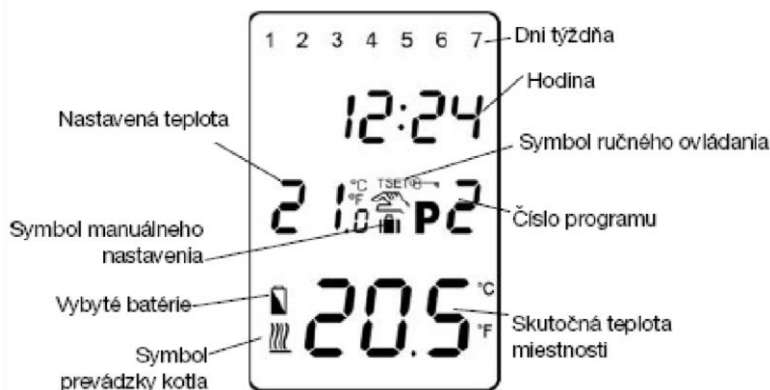


User manual

GENERAL DESCRIPTION OF THERMOSTAT

AVANSA 2007 room thermostat with operating switching is suitable for the regulation of most boilers sold in Slovakia. It can be connected to any gas boiler equipped with a room thermostat connection with double wiring or to a climate control system regardless of whether it has 24 V or 230 V operating voltage. The device can be individually programmed according to your needs so that the heating (cooling) system starts at the time and to the temperature you require, heats (cools) your apartment or office and, in addition to ensuring comfort, also contributes to reducing energy costs. A separate, independent temperature program can be created for each day of the week. Possibility to set 6 different switching times (in 10-minute increments) for each day with freely adjustable temperature

Zobrazené symboly na displeji:

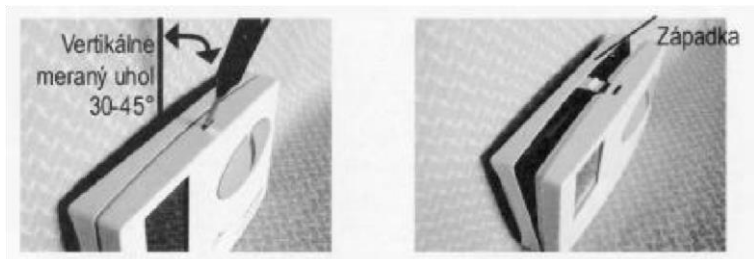


1. DEVICE INSTALLATION

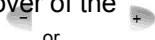
The AVANSA 2007 thermostat is freely portable within the apartment. In rooms where you regularly or for a longer period stay, it is advisable to place it in the direction of natural air flow in the room, but not exposed to drafts or excessive temperature influences (e.g. sunlight, refrigerator, chimney, etc.). Its optimal placement is at a height of 1.5 m above floor level. It can be placed either on its own stand or mounted on the wall. Important warning! If your rooms in the apartment are equipped with radiator valves with thermostatic heads, replace these radiator valves with manually adjustable controls or set them to the maximum temperature level in the room where you intend to install the thermostat. Otherwise, the thermostatic head may interfere with temperature regulation in the apartment.

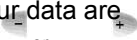
2. PUTTING THE THERMOSTAT INTO OPERATION, BASIC SETTINGS

2.1. INSERTING BATTERIES Press the latch located on the top side of the thermostat cover to separate the back of the thermostat as shown in the picture.



The battery holder is located on the inside of the front cover. Insert 2 alkaline AA batteries (type LR6) into the holder. Pay attention to the correct insertion according to the marked polarity. After inserting the batteries, blinking symbols for the day, hours, program number, as well as the set and measured internal temperature will appear on the display. (If the above information does not appear on the display, press the "RESET" button with a wooden or plastic stick. Do not use electrically conductive material or a graphite pencil to press the button.) To put the thermostat into the basic position, press the "SET" button after inserting the batteries. After pressing the "SET" button, the blinking on the display will stop, the thermostat will enter the factory basic position and the setting can begin.

2.2 SETTING THE CURRENT DATE AND TIME Press the "DAY" button. Only the day number is flashing on the display, while the hour and minute values are visible. On the front cover of the device there are large buttons  or

using which you can set the current day order (e.g. 1. Monday, 2. Tuesday, 3. Wednesday, etc.). Press the "DAY" button again, which stops the day number from flashing. Meanwhile, the hour data are continuously flashing. Using the button  or

set the current time (hour). Press again the "DAY" button. Now the hour data will stop blinking. Meanwhile, the minute and second data will keep blinking. Using the or button, set

the current minutes and seconds. By repeatedly pressing the "DAY" button you will return to the beginning of the setting and you can change already set data. Press the "SET" button to save your settings and exit the programming mode. The display is back to the basic position. (The programming mode will turn off automatically if no value is entered within 10 seconds, and the display is in the basic position.)

2.3 SETTING THE SWITCHING SENSITIVITY Switching sensitivity is factory set in the range $\pm 0.2^{\circ}\text{C}$ (this value appears on the display as the symbol "5:1"), but it can be changed to $+0/-0.2^{\circ}\text{C}$ (this value appears on the display as the symbol "5:2"). To set the required switching sensitivity, proceed as follows: Press the "SET" button to put the thermostat into the basic position. Press the "DAY" and "COPY" buttons in succession and the large buttons

or . The set values will appear on display either as symbol "5:1", (sensitivity range $\pm 0.2^{\circ}\text{C}$), or

"5:2" (sensitivity range $+0/-0.2^{\circ}$). Press the "SET" button to save your settings and exit the programming mode. (The programming mode will turn off automatically if no value is entered within 10 seconds, and the display is in the basic position.) Pressing "RESET" sensitivity will be set back to the original value $\pm 0.2^{\circ}\text{C}$ ("5:1"). Sensitivity setting, factory set $\pm 0.2^{\circ}\text{C}$ (this value will appear on the display as symbol "5:1"), we recommend for central heating (radiators) setting $+0/-0.2^{\circ}\text{C}$ (this value will appear on the display as symbol "5:2") we recommend for underfloor heating.

2.4 ACTIVATION OF PUMP PROTECTION FUNCTION This function is set as inactive at the factory. Activation of the function, or turning off the device is possible if the device is in the basic position and you press the buttons: "SET", "DAY",

“PROG” and large buttons



. Possible settings: “HP:OF”

(off) or “HP:On” (activated). Press the “SET” button to save your settings and exit the programming mode. The display is back to the basic position. (The programming mode is automatically turned off if no value is entered for 10 seconds, and the display is in the basic position.) Pressing the “RESET” button, the pump protection function is again inactive “HP:OF” (off).

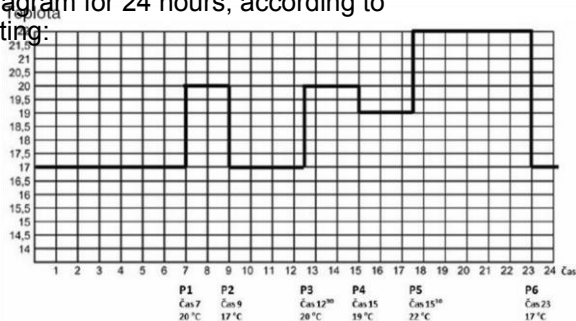
3. PROGRAMMING THE THERMOSTAT In the programming mode, the on-time can be set with the corresponding temperature value. The device can be set for a weekly period. Operation is automatic, programs are repeated cyclically. The thermostat can be turned on 6 times a day, always at a specified (different) temperature. The set temperatures are valid until the next activation. E.g.: the set temperature belonging to program P1 is valid until the activation time of program P2. If program P2 is activated, the temperature set for program P2 will be valid.

Factory settings for daily programs are as follows:

P1	7:00	20°C	P4	15:00	19°C
P2	9:00	17°C	P5	17:30	22°C
P3	12:30	20°C	P6	23:00	17°C

Daily temperature diagram for 24 hours, according to the basic factory setting:

Of course, this setting can be changed according to your needs, in order to obtain the most advantageous diagram.



3.1 INDIVIDUAL PROGRAMMING STEPS • Pressing “SET” thermostat goes to the basic position. • Press again “SET” and press the button, while also pressing the “PROG” button. This way you will enter the programming mode and the display will show numbers indicating individual days in the week (1 2 3 4 5 6 7). • Using the button



or



choose a day or all days

of the week for which you want to write a program. If you plan the same program for the whole week, select all individual days at once (1 2 3 4 5 6 7), so you do not have to program each day separately. If you want a different program for each day, you must program each day separately. If you want the same program for some days, you only need to write it once, and if you press the “COPY” button, the program will be copied to the desired day, according to point 3.2. • Press the “PROG” button again. Now follows the next programming step, i.e. setting the program P1 start time, and the time signal is blinking on the display. • Pressing the



or



set

time

release

program P1. (setting the time is possible after 10 min.)

- Press the “PROG” button again. The next programming step follows, i.e. setting the temperature of program P1, the temperature symbol is blinking on the display.
- Press the “PROG” button again. The next programming step follows, i.e. setting the start time of program P2, and the time symbol is blinking on the display.
- In a similar way as in the previous steps, program the settings of program P6.
- After setting the temperature of P6, by repeatedly pressing the “PROG” button you can check the set values, or by repeating the previous steps you can change them.
- If you have set all values, press the “SET” button, which will save your settings and exit the programming mode, returning the device to the basic position. (The programming mode will turn off automatically if no value is entered within 10 seconds, and the thermostat is in the basic position.)
- By repeating the programming steps, at any time and arbitrarily, you can modify the set values.

3.2 COPYING A PROGRAM USING THE "COPY" BUTTON •

Pressing the “SET” button will return the thermostat to the basic position.

Press and hold the “COPY” button for approximately 5 seconds, during which the “COPY” function is activated. If the display shows the word “COPY” and the number 1 (the day's sequence number) instead of the clock symbols, the device is ready for copying.

-  By pressing large buttons  or  on the front

Using the device cover, select the day (e.g. 2), whose program you want to copy to another day or other days. •

Pressing buttons you can perform

the copying of the selected day's program. After copying the program, the blinking signal indicating the day's sequence number will stop, the number will be continuously visible, and the word “COPY” will also be lit.

By pressing large buttons

or on the front

Using the device cover, select the day (e.g. 3) to which you want to copy the selected program (e.g. 2). Then, by pressing the "COPY" button, you can perform the copying of the selected day's program.

By pressing large buttons or on the front

Using the device cover, you can select any day of the week and by pressing "COPY" you can perform the copying of the selected day's program (e.g. 2).

If you have completed the programming, press button

press "SET", which will save your settings and exit the programming mode, returning the device to the basic position. (The programming mode will turn off automatically if no value is entered within 15 seconds and the thermostat returns to the basic position.)

If the thermostat is back in the basic position, using

the above steps you can copy the program of another day/other days.

3.3 PROGRAM CHECK

Press the "PROG" button. The following is displayed on the screen:

day number, symbol for program P1 activation, and corresponding time and temperature data. (No value is blinking). By repeatedly pressing the "PROG" button you can check the correctness of programs P2, P3, etc.

You can view the set data of individual days

by pressing the button

or and "PROG".

After checking the programs, by pressing the "SET" button you

can return to the basic display position. (Approximately after 10 seconds the display will automatically return to the basic position).

3.4 DELETING THE PROGRAM By pressing the "RESET" button, the set programs are deleted and it is possible to reset the thermostat to the factory settings. After "resetting", the values set at the factory are valid.

4. TEMPORARY MODIFICATION OF TEMPERATURE SET ACCORDING TO THE PROGRAM

To perform a simpler manual modification of temperature, in the basic, factory preset setting to the large button

an assigned value of 18°C and to the button the value is 22°C.

If you want to modify the temperature manually, by pressing the button once

or buttons

of course it is possible to increase or decrease the temperature of 22°C, preset by the manufacturer, in steps of 0.5°C according to current requirements.

with a step of 0.5°C.

Repeatedly pressing the buttons

or is

To the large buttons

set the required level of saving temperature.

a

assigned by the manufacturer energy-saving

temperature, respectively, the assigned comfort temperature can be freely changed according to the following procedure:

-To set the energy-saving temperature, press and hold the "SET" button and then press the button once

and then using the button

or

set the required level of comfortable

and then using the button

OR

temperature. After setting the desired temperature level, press the "SET" button again to save the set temperature level (approximately after

15 seconds the copying of programs will be automatically confirmed and the thermostat will switch to the basic position). In case you wish your device to temporarily function differently from the set program (e.g. during holidays or winter vacation period), choose from the following options:

4.1 TEMPERATURE MODIFICATION UNTIL THE NEXT PROGRAM ACTIVATION By pressing the large buttons

of the device

According to you can set  or  on the front cover desired temperature.

, which means that the thermostat is manually controlled. On

symbol  the display will alternately appear the exact time and the time remaining for the manual control function to be active (e.g. 1H:02, i.e. 1

displeji sa striedavo objavia jednak presný čas, a čas, za ktorý je ešte aktívna funkcia ručného ovládania (napr. 1H:02, t.j. 1

hour and 2 minutes.) After this time has passed, the symbol disappears  , a

the device returns to the set program. If you want to return to the original program before the next activation, press the “SET” button.

4.2 MODIFICATION OF TEMPERATURE FOR 1 ... 9-HOUR PERIOD (PARTY PROGRAM) Press the button

or set the desired temperature and  press the “DAY” button. The symbol appears on the display and digit 1,

which means the adjustment time (in hours). In this case, the program number does not appear on the display (e.g. P3). By repeatedly pressing the “DAY” button, the required hours are set from 1 to 9. Then, during the set time (e.g. 4 hours), the device maintains the adjusted temperature (e.g. 24°C).

On the display, the exact time and the time during which the manual control function is still active alternate (e.g. 3H: 20 , i.e. 3 hours and 20 minutes). After the set time has passed, the symbol disappears  , and the device will

return to the set program. If you press the “SET” button before the modified temperature time has elapsed, the set temperature will be interrupted, and the device will return to the original program.

4.3 MODIFICATION OF TEMPERATURE FOR 1 ... 99-DAY PERIOD (VACATION PROGRAM) Using the buttons

or

 set the desired temperature.

Manual control is symbolized by  . Press the  “HOLD” button for at least 2 sec. The symbol appears on the display and at the place of the time d:01, i.e. the number of days. Blinking means that the number of days can be set arbitrarily. Using the buttons  set the number of re-

quired days (e.g. 10). On the display, the exact time and the days during which the manual control function is still active alternate.  After the set days have passed, the symbol disappears

the device returns to the set program. If you want to return to the original program before the next activation, pressing the “SET” button interrupts the temperature adjustment for the programmed time and the device will operate according to the program.

4.4 TEMPERATURE MODIFICATION UNTIL THE NEXT MANUAL INTERVENTION

Using buttons

or

 set the desired temperature.

Manual control is symbolized by  . Press the “HOLD” button. The symbol appears on the display at the temperature and the symbol disappears



. The device maintains the set temperature until the next manual intervention. You can adjust the set temperature by pressing the buttons or without canceling the manual control function. By pressing the “SET” button, you cancel the temperature adjustment and the device will operate according to the program.

5. TURNING ON THE DISPLAY BACKLIGHT Pressing the “LIGHT” button turns on the display backlight for 10 sec. If you press other buttons during this time, the backlight turns off after 10 sec. from the last button press.

6. BATTERY REPLACEMENT Battery life is approximately 1 year, but frequent use of the backlight can significantly shorten it. If the low battery voltage symbol appears on the display

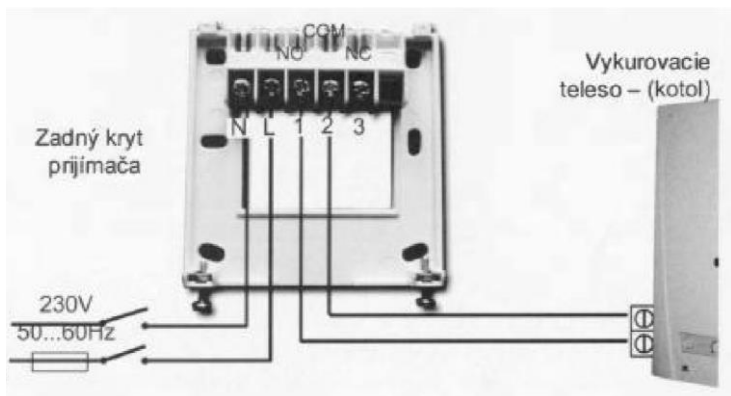


, it means that the batteries need to

be replaced. (see section no. 2) After replacing the batteries, the exact time must be set again. However, the pre-programmed programs remain saved also without batteries, no need to them re-

program. However, if you press the “RESET” button, the programmed programs will be deleted and the device will be reset to the factory settings.

7. RECEIVER 7.1 INSTALLATION AND CONNECTION OF THE RECEIVER Install the receiver on the wall near the boiler (but not under the boiler cover). The receiver must not be exposed to moisture. For safety reasons, connecting the receiver to the boiler should be entrusted to a professional. Loosen the 2 screws located at the bottom of the receiver. Do not remove them completely. Then separate the front cover of the receiver and then attach the rear cover of the receiver using the attached screws to the wall near the boiler. The markings of the connection points N, L, 1, 2, 3 are visible and embossed into the plastic above the terminals.



Phase The receiver must be connected to a 230V power supply. To create the power connection, we recommend building a fixed wiring instead of using a plug. This prevents accidental power interruption. Connect the neutral power line to point N and the phase line to point L. We also recommend installing a switch so that the receiver can be turned off if necessary. The boiler is controlled by relay contacts, whose connection points are as follows: 1 (NO), 2 (COM), 3 (NC). To control the heating unit, it is necessary to connect the boiler's connecting wires to terminal 1 (NO) and to terminal 2 (COM). To control the cooling unit, it is necessary to connect the cooling unit's connecting wires to terminal 2 (COM) and to terminal 3 (NC).

WARNING! When creating connections for the heating and cooling device, always strictly follow the manufacturer's instructions!

The voltage that appears on terminal 1, 2, or 3 depends only on the controlled system. Therefore, the parameter of the used wiring is determined based on the type of controlled device. Dĺžka

The length of the wiring is not essential. You can mount the receiver either next to the boiler or also at a more distant location. However, in no case should you mount it under the boiler cover. If, due to various circumstances, the distance between the transmitter and the receiver is too large and as a result the radio frequency connection may become unreliable, place the receiver closer to the thermostat.

7.2 PUTTING THE RECEIVER INTO OPERATION Connect the receiver to the power supply. Within a few seconds, the radio frequency systems (thermostat and receiver) will connect to the set frequencies. For testing purposes, press the button several times



located on the thermostat until

the set temperature exceeds the actual room temperature by 2-3°C. Then, within a few seconds, the icon should appear on the display



indicating the on state. On the receiver

zobrazujúca zapnutý stav. Na prijímači sa má

at the same time turn on the red LED, which indicates that the receiver has received the signal from the transmitter (thermostat). If this does not happen, it is necessary to re-synchronize the entire system. To re-synchronize it, press and hold the "M/A" button on the receiver until (approx. 10 seconds) the green LED starts blinking. Then first press and hold the "SET" button on the thermostat, then press and hold the "DAY" button on the thermostat until (approx. 10 seconds) the green LED stops blinking and turns off, so that the receiver "learns" the security code of the transmitter (thermostat). The security code is automatically stored by the system and will not be lost even in the case of a power outage. Warning! Simultaneously pressing and holding the "SET" and "DAY" buttons for 10 seconds results in generating a new security code for the thermostat. The receiver will recognize this new code only after re-synchronization. After a successful synchronization of the two units, do not simultaneously hold the "SET" and "DAY" buttons on the thermostat or the "M/A" button on the receiver without reason.

7.3 RANGE CHECKING EFFECTIVENESS Using the "TEST" button, it is possible to check whether both units are within the range of the radio frequency connection. To check them, press and hold (approximately for 2 seconds) the "TEST" button. The thermostat will then for 2 minutes alternately transmit a control signal for turning off and on the receiver in 5-second intervals (alternately appears and

flickers symbol ). Receiving the control signal is indicated on the receiving

unit by turning on or off the red LED. In the case that the receiving unit does not register signals transmitted by the thermostat,

self both units are located outside

the radio frequency transmitter and it is necessary to place both units closer to each other.

7.4 MANUAL CONTROL OF THE RECEIVER UNIT Pressing the "MANUAL" button disconnects the thermostat from the receiver unit and the boiler connected to the receiver unit can be turned on or off manually without the possibility of controlling the temperature level. Continuous green LED lighting indicates the active state of the "MANUAL" function. Turning on or off the boiler is possible by pressing the "M/A" button. (In the on state, the red LED is lit.) Repeated pressing of the "MANUAL" button restores the operation of the thermostat (the green LED turns off).

7.5 HOW TO AVOID EXTERNAL INFLUENCES The operation of the device is practically not affected by any external factors (radio, mobile phone, etc.). If you nevertheless register any operational fault, it is necessary to retune the entire system according to the description given in point 7.2.a.

TECHNICAL DATA

Thermostat (transmitter) technical data:

-temperature measuring range:	0-35°C (with 0.1°C increments)
- adjustable temperature measurement range:	7-35°C (with 0.5°C increments)
-measured temperature accuracy:	±0,5°C
- optional switching sensitivity:	±0.2°C (for radiator heating) +0/-0.2°C (for floor heating)
-recommended storage temperature: -10°C ... +60°C	
-supply voltage:	2x1.5V alkaline batteries (type LR6; size AA)
- power:	1.3mW
-battery life:	approx. 1 year
-dimensions:	130 x 80 x 35 mm (without bracket)
-operating frequency:	868,35 MHz
-weight:	155 g
- type of thermal sensor:	NTC 10kΩ ±1% at 25°C
- protection class:	IP 30

Receiver technical data:

- power:	6W
-supply voltage:	230 V AC, 50 Hz
-supply voltage:	24V AC / DC... 250V AC
- adjustable current intensity:	6A (inductive load 2A)
- range:	approx. 50m in indoor space
-weight:	150 g
Total weight of the device:	approx. 500 g (thermostat+receiver+bracket)

PROGRAMMING IN BRIEF

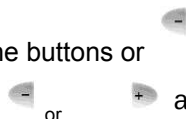
Setting the date and time: using the "DAY" and buttons or
Programming: pressing and holding the "SET" button,
simultaneously pressing the "PROG" button, then setting the
temperature level by pressing the "PROG" button and

repeating programs using the "COPY" button Program
check: using the "PROG" and

or

Re-learning: using the "M/A", "SET" and "DAY" buttons (see section 7.2) Range effectiveness check: pressing the "TEST" button for longer than 2 seconds Temporary modification of the temperature set by the program:

- until the next program activation: by pressing the buttons or
-for 1...9 hour period: by pressing the buttons



pressing the "DAY" button -for 1...99 day period: by
pressing the buttons



pressing the "HOLD" button for 2 seconds -until the
next intervention: by pressing the buttons



pressing the "HOLD" button