AURATON Tucana

Instruction manual version 20201122
The document contains information on the safety, installation, and use of the AURATON Tucana.

Weekly, wired thermostat

AURATON Tucana is a weekly, wired thermostat designed to work with a gas or electric heating device.

|	
☀☾ ❄✋	**4 independently settable temperatures** Day, night, anti-freeze, holiday.
⌐🕐¬	**9 independent temperature programs** Including 6 user-modifiable programs.
LCD	**Backlit LCD display** Due to a backlit display, we can monitor the operation of the device even in a poorly lit room (3 backlight colours to choose from).

# Description of the AURATON Tucana

Weekly, wired thermostat

On the right side of the front part of AURATON Tucana you will find a sliding cover. Slide it open to see the buttons. The cover can be removed for battery replacement.
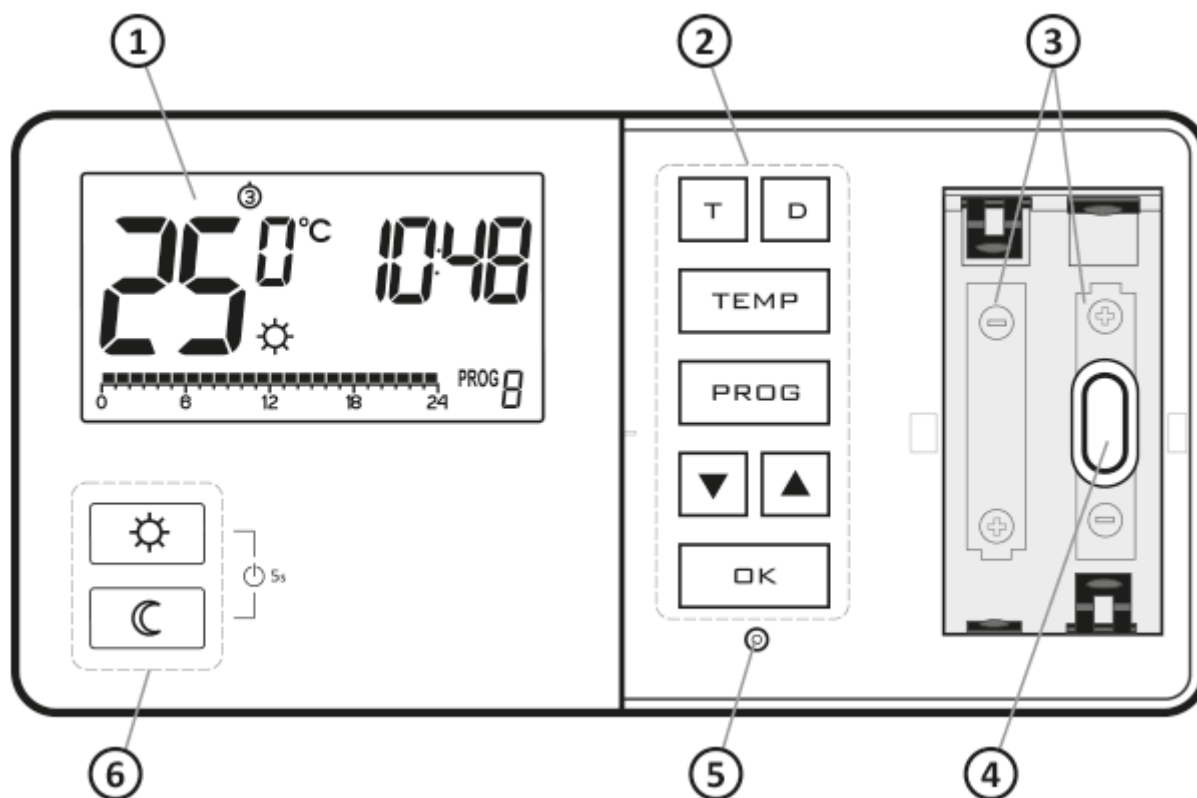
1. LCD display
2. Programming buttons
3. Place for 2 batteries (AA LR6 1.5 V)
4. Mounting hole
5. RESET button
6. Mode selection buttons:

    ☼ – day mode

    ☾ – night mode

Display
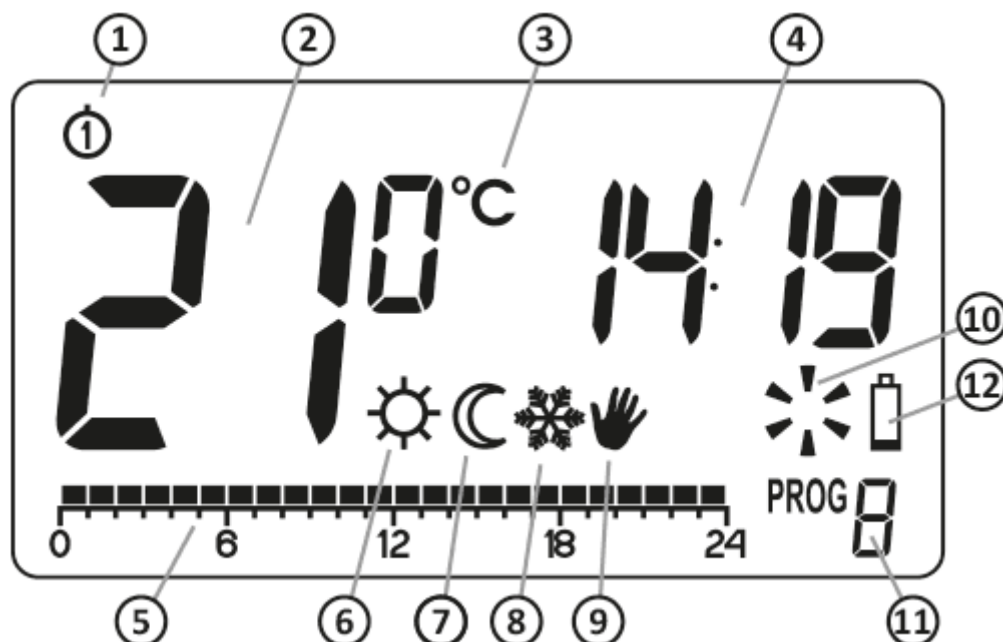
1. **Day of the week**(①-❼) – It indicates what day of the week it is. Each day has a number assigned to it.
2. **Temperature** – In its normal operating mode, AURATON Tucana displays the temperature in the room where it is installed.
3. **Temperature unit** – It indicates that the temperature is displayed in degrees Celsius (°C).
4. **Clock**
   The time is displayed in the 24-hour system.
5. **Timeline**
   Program sequence indicator. It is a line divided into 24 sections. Each section represents one hour. The line shows how the program will be executed *(see chapter: 'Timeline')*

6. **Day mode indicator (☼)**

   It indicates the operation of AURATON Tucana in day mode. *(see chapter: 'Temperature programming')*

7. **Night mode indicator (☾)**

   It indicates the operation of AURATON Tucana in night mode. *(see chapter: 'Temperature programming')*

8. **Anti-freeze mode indicator (❄)**

   It indicates the operation of AURATON Tucana in anti-freeze mode *(see chapter: 'Anti-freeze mode).*

9. **Manual control indicator (✋)**

It indicates the operation of AURATON Tucana in manual mode *(see chapters: 'Manual control' and 'Holiday mode')*

10. **AURATON Tucana power-on symbol (☀)**

The segment showing the working status of the device. Visible when the controlled device is switched on.

11. **Program number**

It indicates the current program number *(see chapters: 'Factory programs' and 'Weekly programming').*

12. **Dead batteries (▯)**

The indicator is visible when the minimum permissible battery voltage level is exceeded. The batteries need to be replaced as soon as possible.

> **IMPORTANT:**
>
> **In order to maintain any programmed parameters, the battery replacement operation should not exceed 30 seconds.**

Choosing the right location for AURATON Tucana
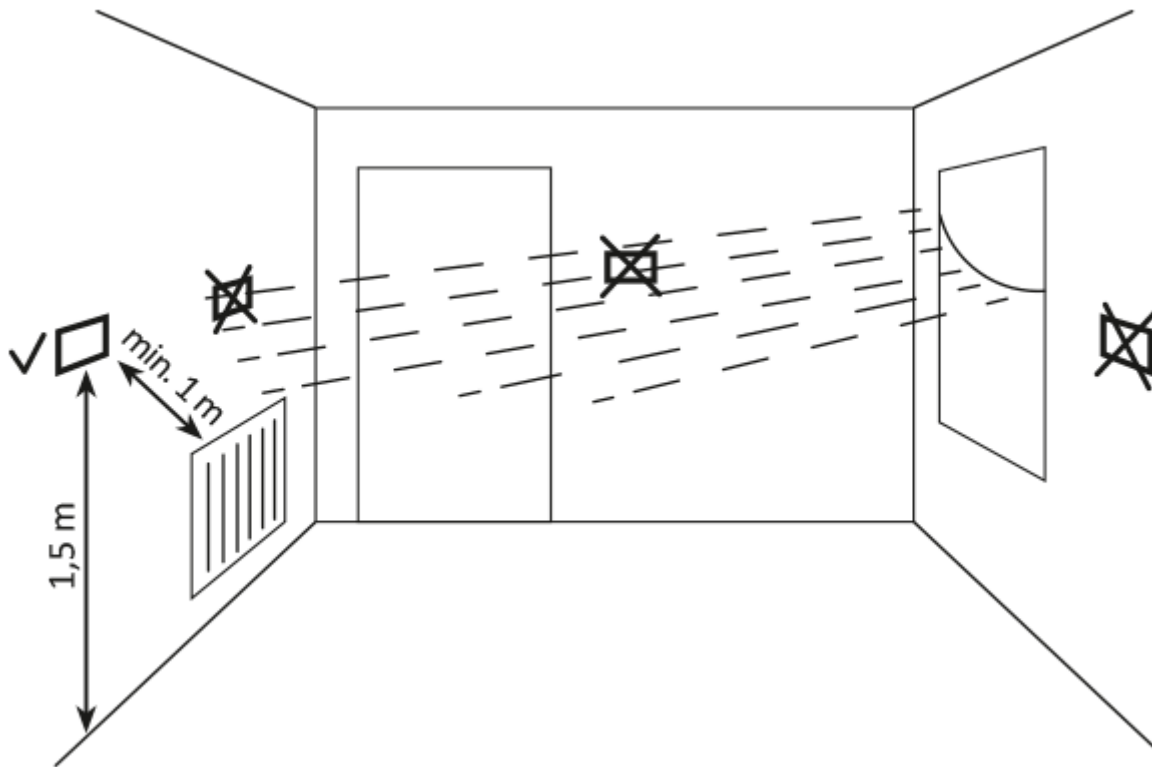
The correct operation of AURATON Tucana is largely influenced by its location. Using the device in a place with no air circulation or a place with direct sunlight may result in incorrect temperature control. AURATON Tucana should be installed on the internal wall of a building (a partition wall), in an environment with free air circulation. You should avoid proximity to heat-emitting devices (TV, heaters, refrigerators) or locations exposed to direct sunlight. The vicinity of doors and exposing AURATON Tucana to possible vibrations may also cause problems with proper operation of the device.

Connecting the wires to AURATON Tucana

The wire clips are located on the back of AURATON Tucana. It is a typical single-pole double-throw relay. In most cases, the NC clip is not used.
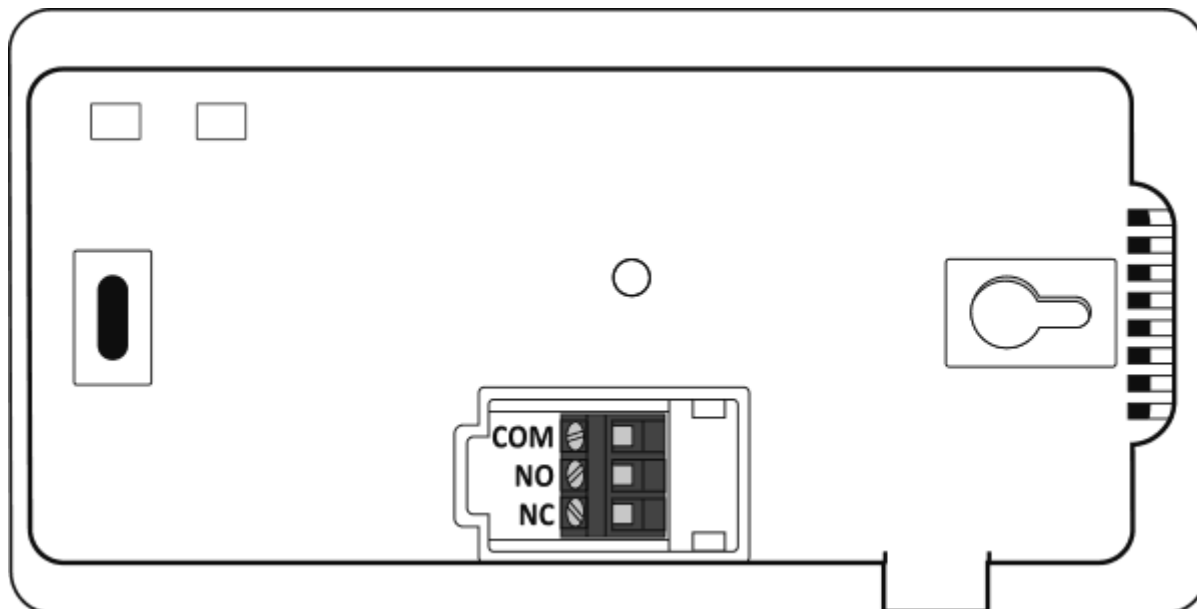
Battery replacement

If the low battery symbol (🔋) appears on the display, it means that the battery level has fallen to the minimum allowable level. Replace the batteries as soon as possible.

> **IMPORTANT:**
> In order to maintain any programmed parameters, the battery replacement operation should not exceed 30 seconds.

> **IMPORTANT:**
> We recommend using alkaline batteries to power AURATON regulators. Do not use "rechargeable batteries" because their rated voltage is too low.

Mounting AURATON Tucana – weekly, wired thermostat

To mount AURATON Tucana to the wall:

1. Drill two holes 6 mm in diameter in the wall (mark the hole spacing using the template attached to the manual).
2. Insert the wall plugs (included).
3. Tighten the left screw with a 3 mm clearance.
4. Place AURATON Tucana through the screw head and slide to the right (note the keyhole-like opening on the rear cover of AURATON Tucana).
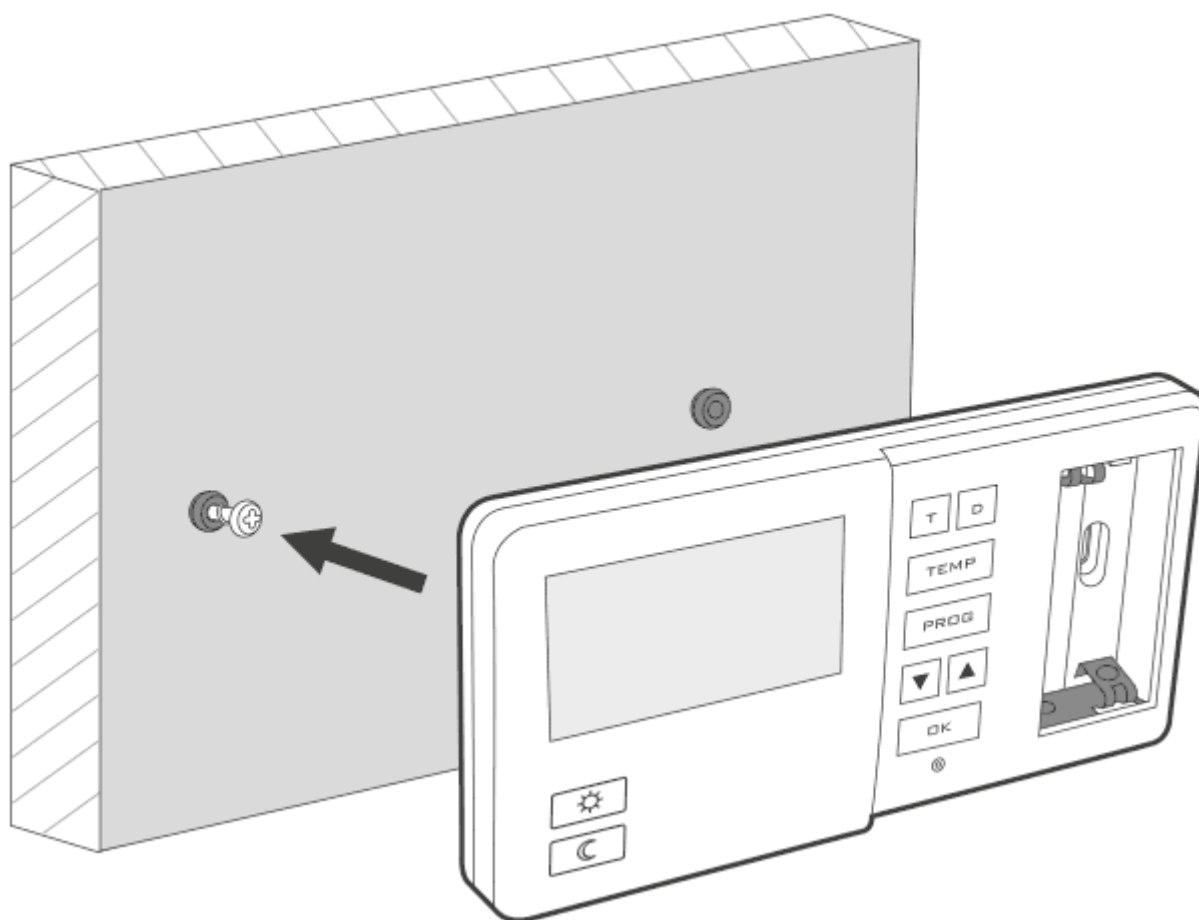
5. Tighten up the right screw so that it holds AURATON Tucana mounted securely.
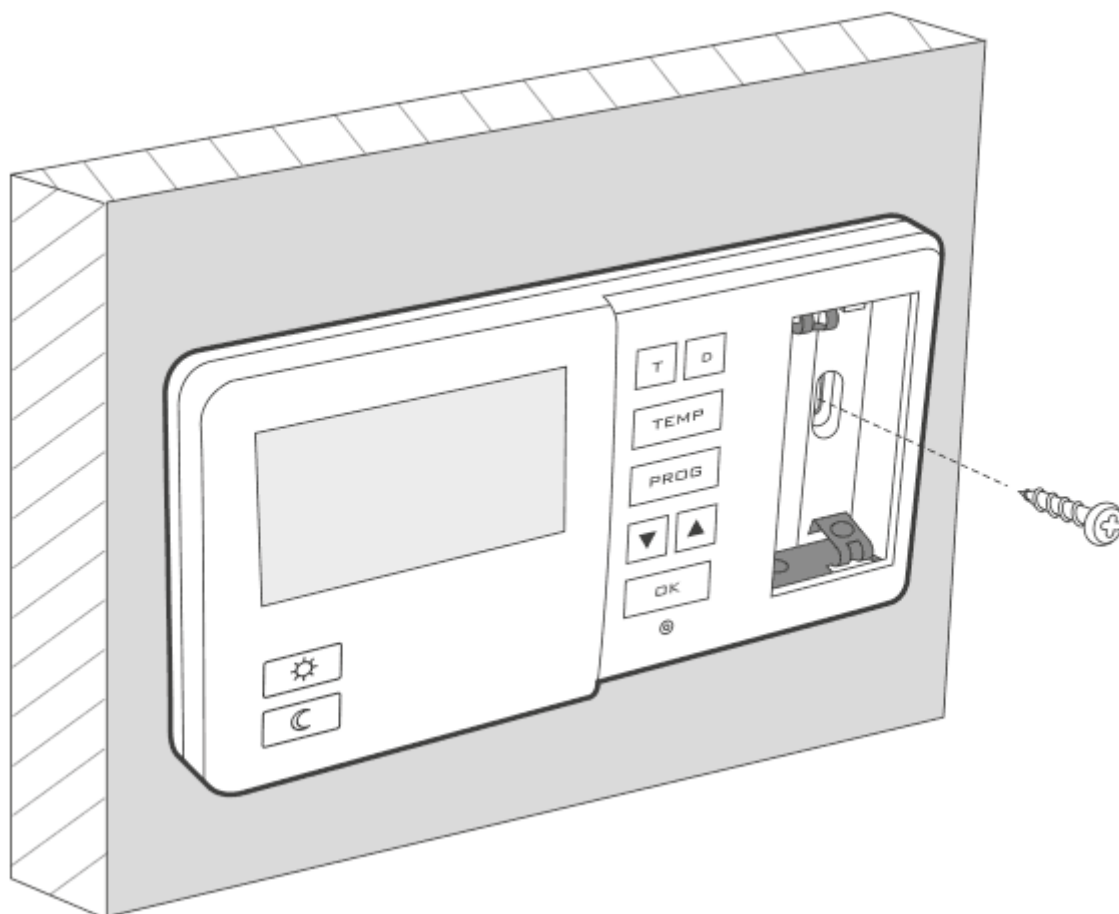
> **IMPORTANT:**
> In the case of a wooden wall, there is no need to use wall plugs. It is enough to drill holes with a diameter of 2.7 mm (instead of 6 mm) and screw the screws directly into the wood.

Turning AURATON Tucana on for the first time

After inserting the batteries correctly into the battery compartment, the LCD screen will display all the segments for a second (display test) and then the software version number.
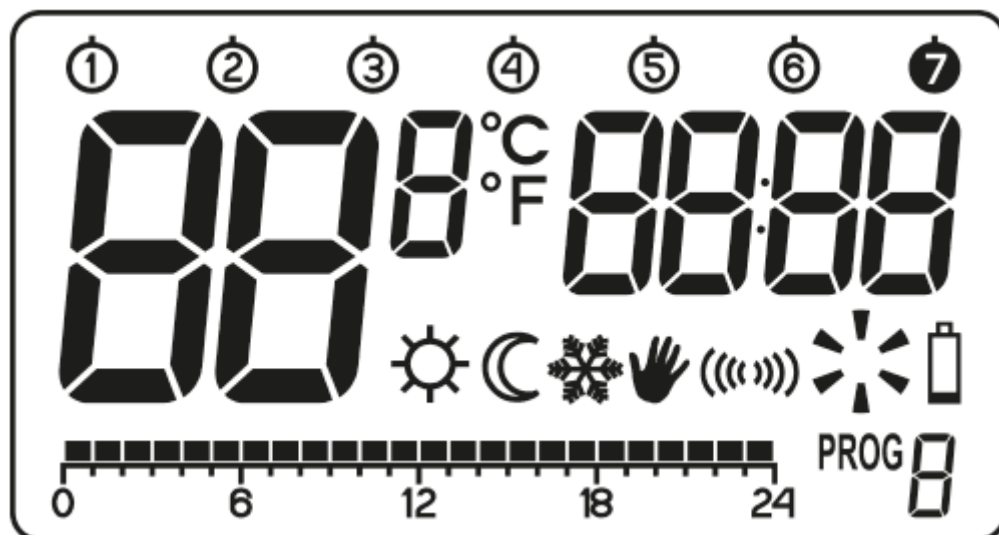
After a while, AURATON Tucana will automatically go to the hour setting. An item flashing on the screen indicates that it is currently in editing mode. Use the ▼▲ buttons to set the desired hour and confirm the setting with the OK button.
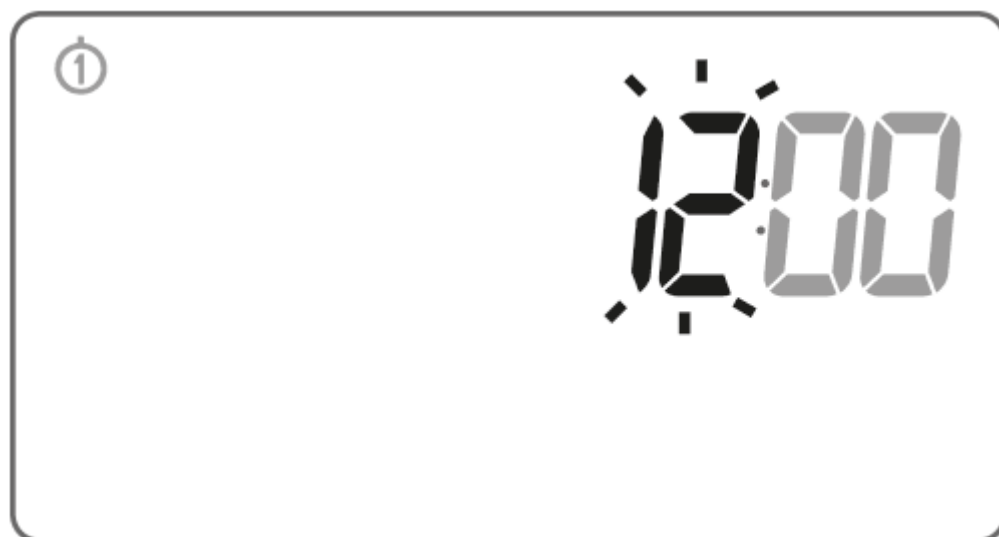
AURATON Tucana will go to the minute setting. Use the ▼▲ buttons again to set the desired minute value and confirm the setting by pressing the OK button.

A flashing day of the week symbol appears in the upper left corner. Use the ▼▲ buttons to set the desired day and confirm the selection with the OK button. AURATON Tucana will enter its normal operating mode.

Setting the clock

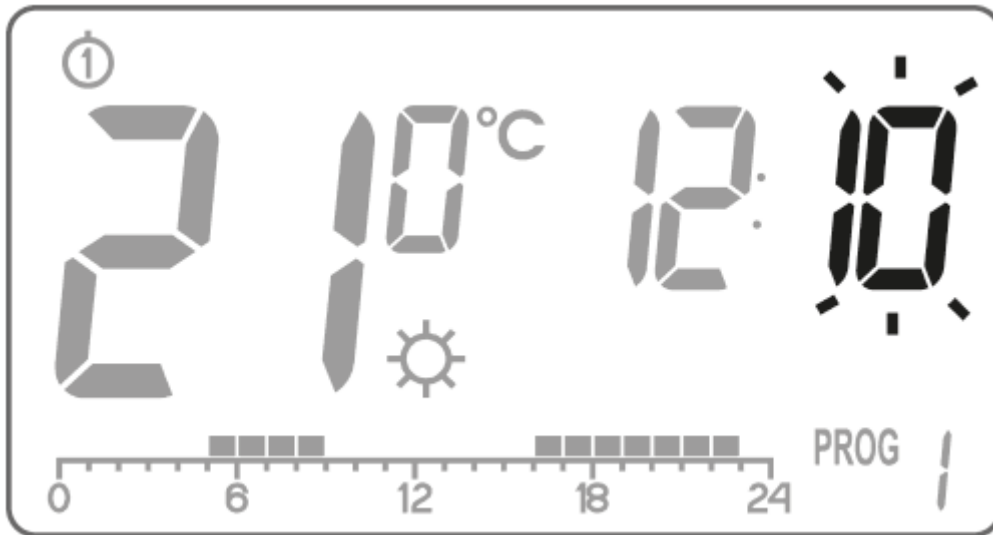To set the clock:

1. Press the ⬚T. button. The hour segment will start flashing on the display.

2. Use the ▼▲ buttons to set the correct hour.
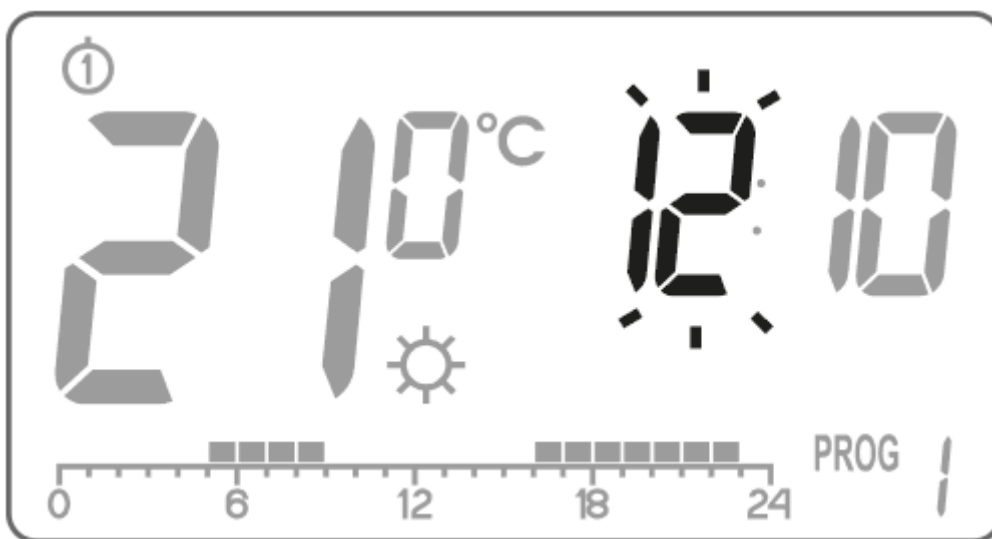
3. Then press the T button again. The minute segment starts flashing.

4. Use the ▼▲ buttons to set the desired minute value.

5. Confirm the above settings with the OK button.

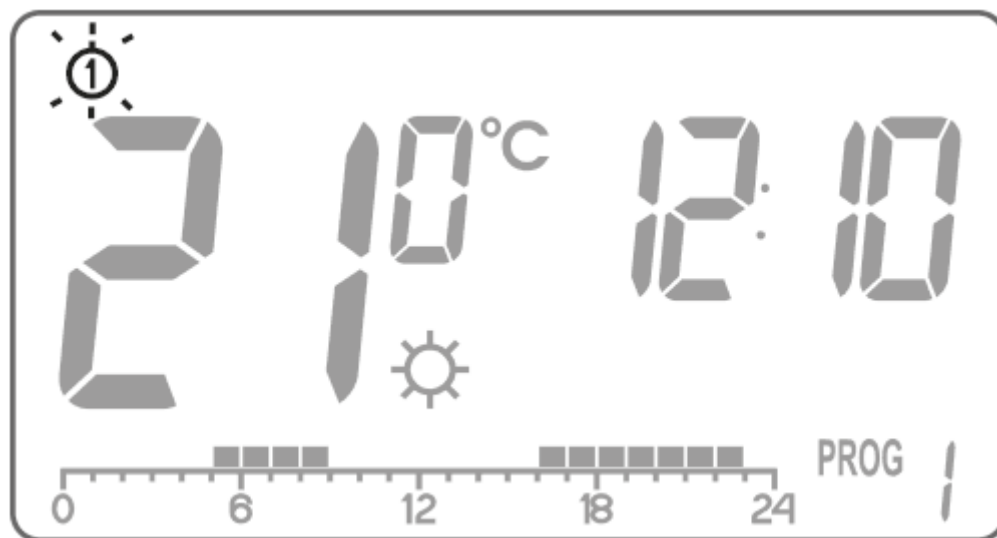## Selecting the day of the week

①-❼

To set the day of the week:

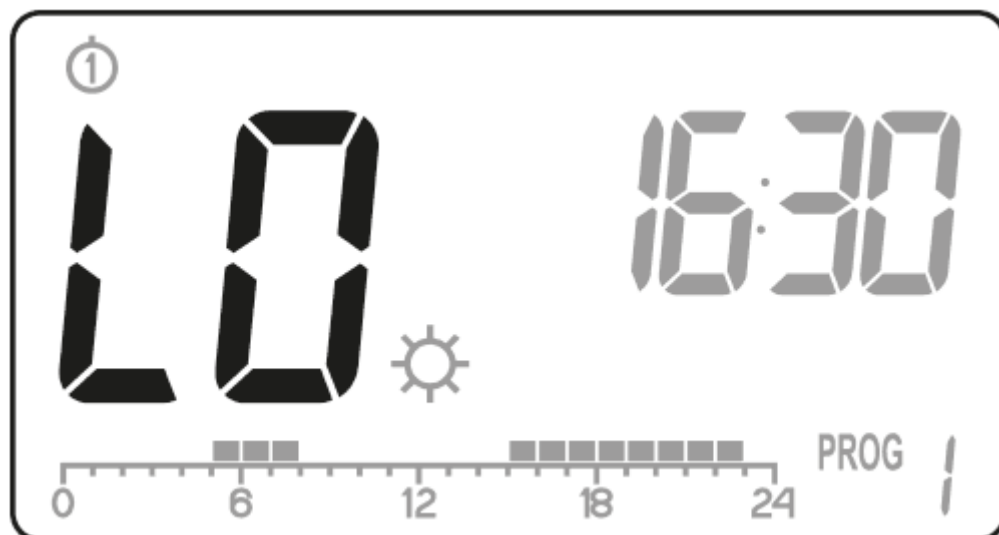1. Press the ▱ button. One of the digits symbolising the relevant day of the week will start flashing on the display.

2. Use the ▼▲ buttons to select the correct day of the week.

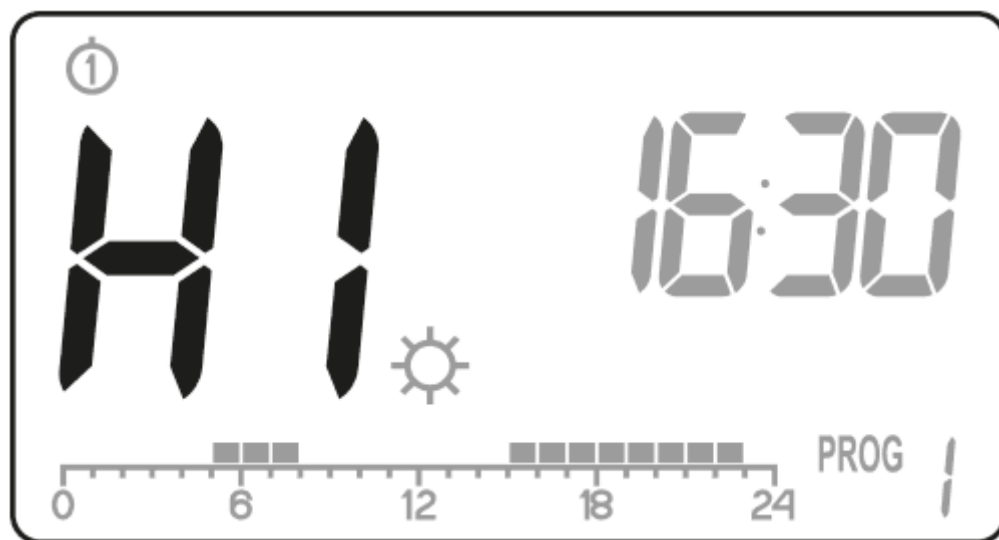3. Confirm the above settings with the � button.

LO HI temperature

If the ambient temperature is below **5°C** the display will show **„LO"**.

If the ambient temperature is above **35°C** the display will show **„HI"**.

Default program settings

- **Monday – Friday:**
  The heating device maintains the day temperature (☼) from **05:00 to 8:00 A.M.** and from **3:00 to 11:00 P.M.**
- **Saturday – Sunday:**
  The heating device maintains the day temperature (☼) from **06:00 A.M. to 11:00 P.M.**
- **default temperature settings:**
  ☼ day temperature – 21,0°C
  ☾ night temperature – 19,0°C
  ❄ anti-freeze temperature – 7,0°C

Programming the day, night and anti-freeze temperatures

AURATON Tucana allows you to program 3 types of temperature:

- Day temperature (☼) – from 5 to 30°C
- Night temperature (☾) – from 5 to 30°C
- Anti-freeze temperature (❄) – from 4 to 10°C

To set one of the above temperatures:

1. Press the `TEMP` button.

   The display will show the currently set temperature with the following symbol:
   ☼ **– day temperature,,**
   ☾ **– night temperature,**
   ❄ **– anti-freeze temperature.**

3. Use the ▼▲ buttons to set the desired temperature.

4. By pressing the TEMP button again, toggle between the subsequent types of temperatures to be set (☼, ☾, ❄).

5. After setting all the 3 temperatures, confirm the settings with the OK button.

> **IMPORTANT:**
> The night temperature setting can be equal to or lower than the day temperature. It is impossible for the night temperature to be higher than the day temperature.

Deactivating the anti-freeze temperature

To deactivate the anti-freeze temperature in AURATON Tucana, set the 'dash symbol' *(below 0 °C or above 10 °C) on the display when programming this temperature.*
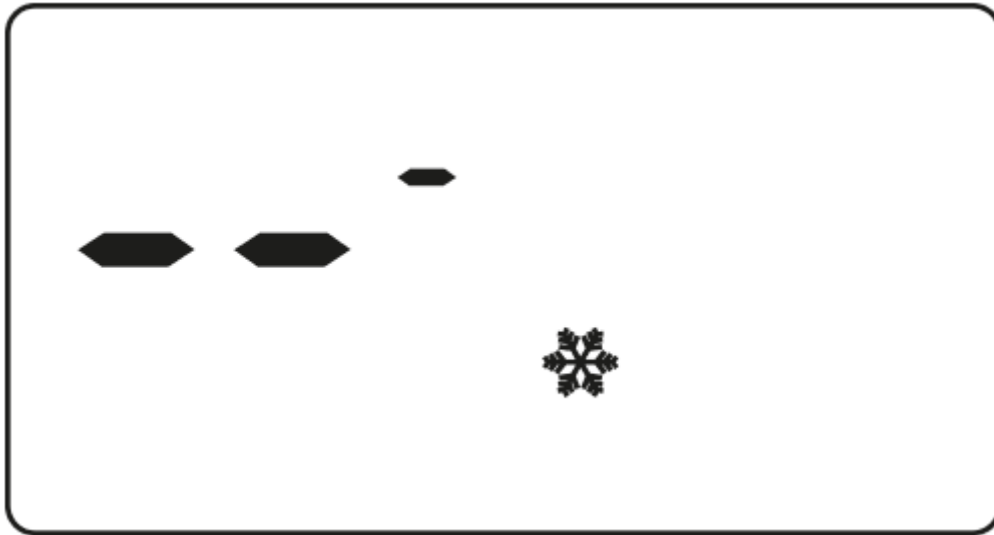
Introduction to programming

Timeline

The timeline on the LCD display is divided into 24 sections. Each of them symbolizes 1 hour of the day. Black rectangles above the timeline mean that the day temperature has been programmed for specific hours, and that there is no night temperature.

Example:

The figure above shows that from 6.00 A.M. to 11.00 P.M. Auraton Tucana will control the heating device in such a way that the room temperature will be day temperature (☼). AURATON Tucana will switch to night temperature from 11.00 P.M. to 6.00 A.M. (☾).

Factory programs

In order for AURATON Tucana to know when to turn on the day and night temperatures, you should be set to an appropriate program for each day of the week. For this purpose, you can use one of the three factory programs (from 0 to 2):

Program no. 0 – anti-freezing ❄️

Unmodifiable factory program. Designed for all-day anti-freezing temperature setting.

Program no. 1 – weekly

Unmodifiable factory program. Sets day temperature from 5:00 to 8:00 A.M. and from 3:00 to 11:00 P.M.

Program no. 2 – weekend

Unmodifiable factory program. Sets day temperature from 6:00 A.M. to 11:00 P.M.

Programs no. 3, 4,...., 9 – user-defined programs

Programs from 3 to 9 are user-defined programs. They can be freely modified and adapted to specific requirements.
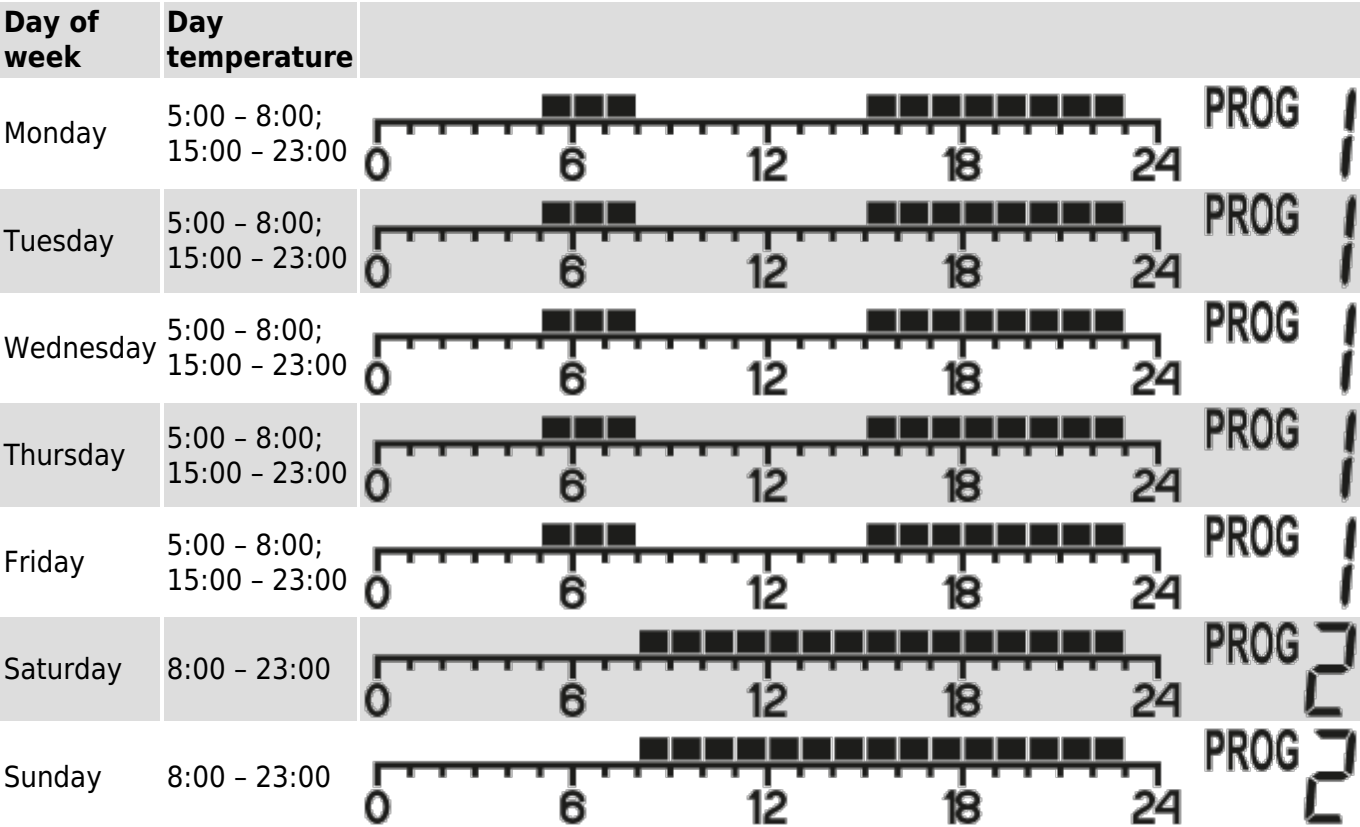
Programming

Weekly programming

To program AURATON Tucana, set the day temperature intervals for individual days of the week. At other time, night temperature will be set.

*Sample AURATON Tucana setting from Monday to Sunday. Outside the*

intervals programmed, the night temperature will be set.

| Day of week	Day temperature		
Monday	5:00 – 8:00; 15:00 – 23:00		PROG 1
Tuesday	5:00 – 8:00; 15:00 – 23:00		PROG 1
Wednesday	5:00 – 8:00; 15:00 – 23:00		PROG 1
Thursday	5:00 – 8:00; 15:00 – 23:00		PROG 1
Friday	5:00 – 8:00; 15:00 – 23:00		PROG 1
Saturday	8:00 – 23:00		PROG 2
Sunday	8:00 – 23:00		PROG 2

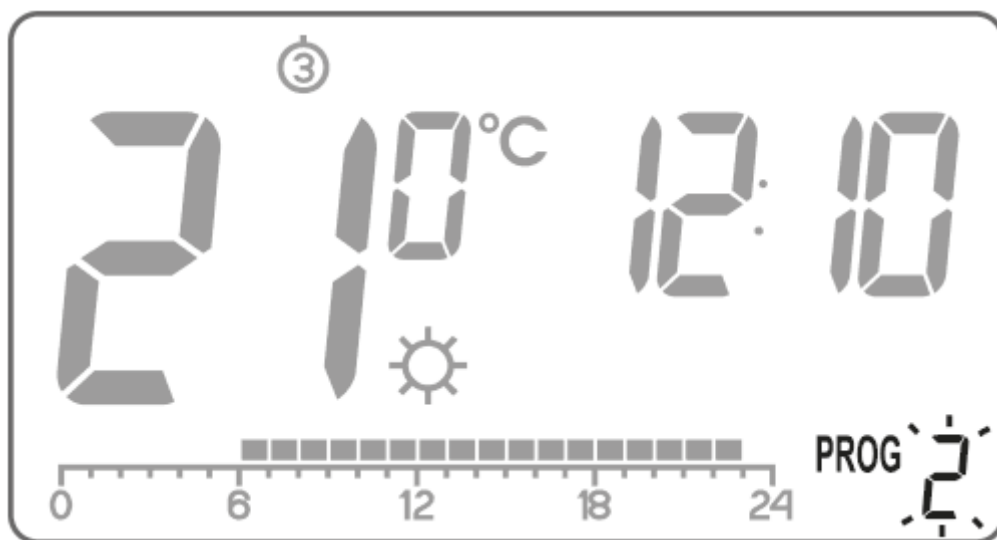## Program selection

To set a program:

Press the ⬚PROG button. The program number segment will start flashing.
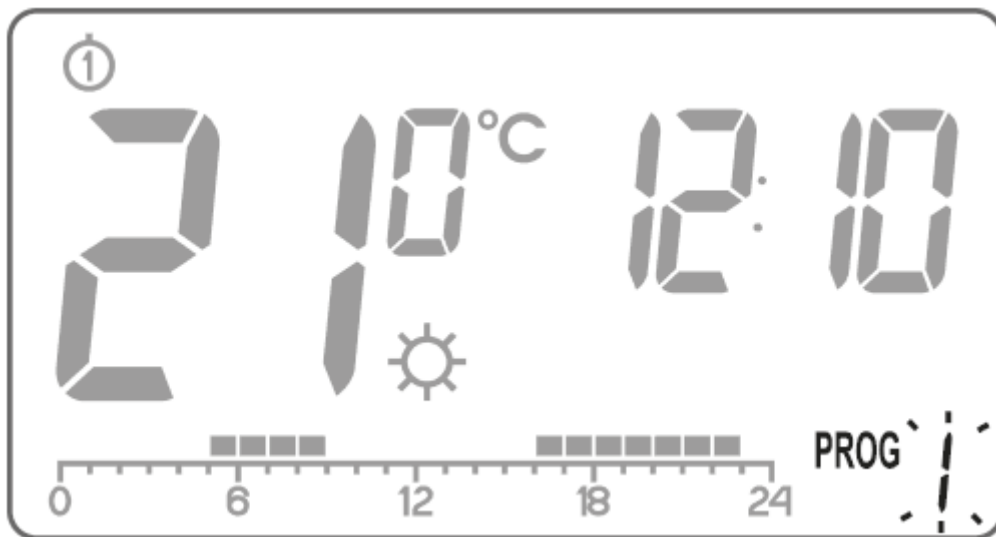
Press the ⌷ button and then use the ▼▲ or ⌷ buttons to select the day of the week on which the program is to be executed.
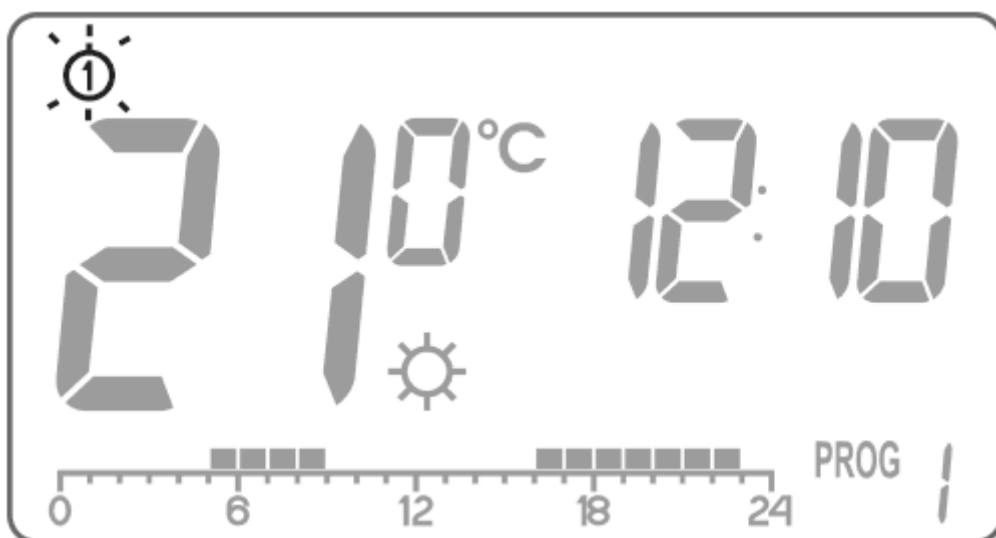
Press the PROG button several times and select the desired program number. Programs **0-2** are factory ones, programs **3-9** can be modified by the user.
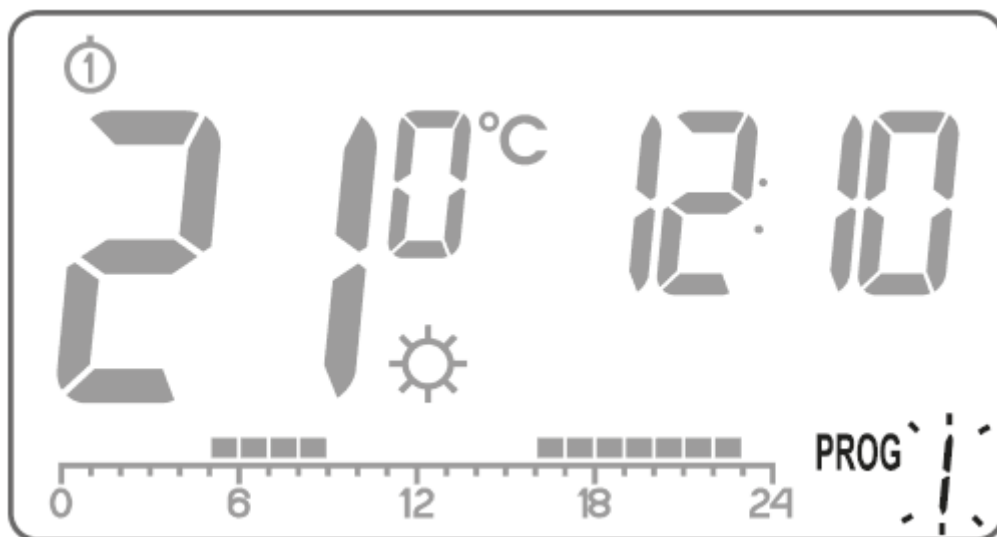

4. Confirm the selection with the OK button.
5. Return to step 1 and repeat the procedure for the next day of the week. When each day of the week has been assigned an appropriate program, we can finish the programming.
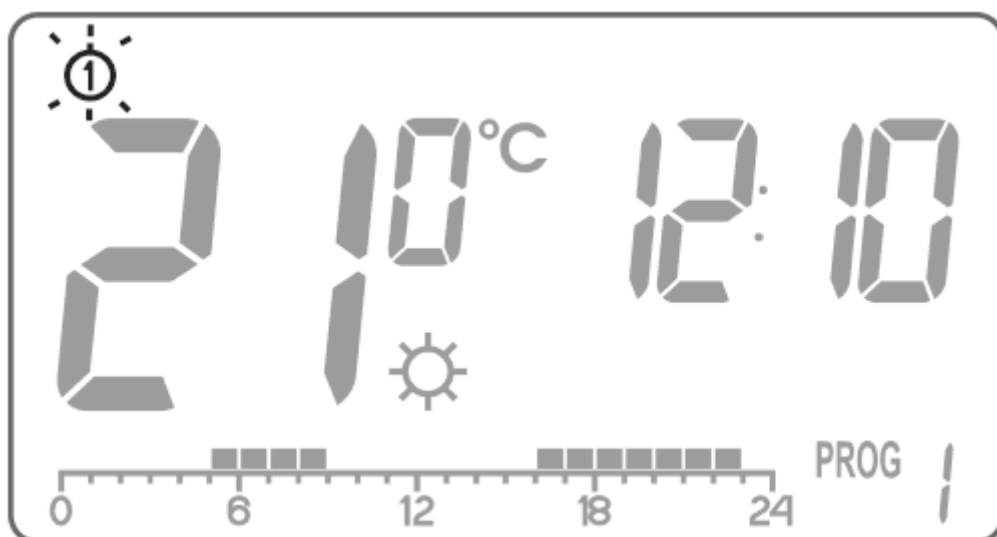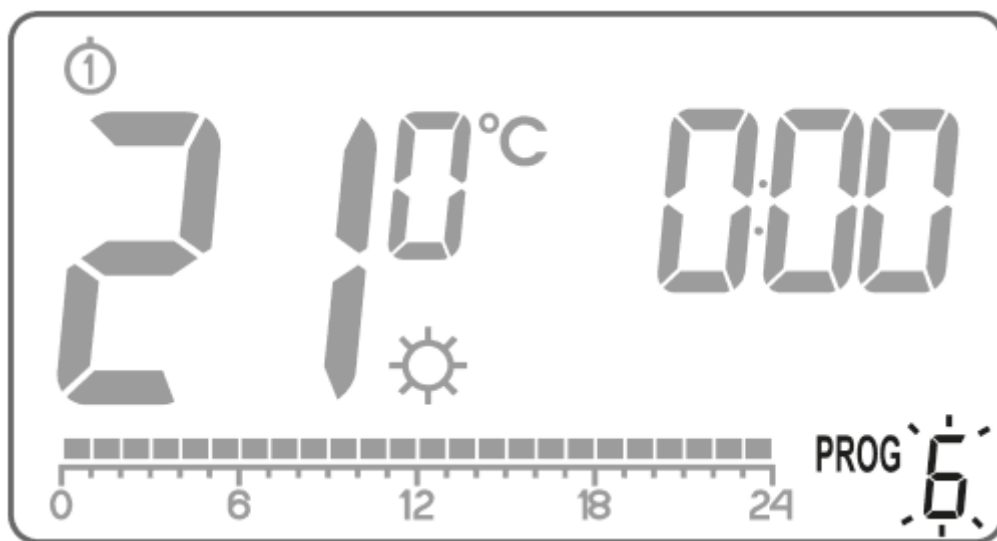
Modifying user programs

To set a program:

Press the PROG button. The program number segment will start flashing.

Press the ▣ button and then use the ▼▲ or ▣ buttons to select the day of the week on which the program is to be executed.

Press the ⌷PROG⌷ button several times and select program number 3 to 9 (user modifiable).

All (24) black rectangles will be lit on the timeline, each symbolising 1 hour. A visible rectangle means that the day temperature is to be achieved during a given hour. No rectangle above the timeline is tantamount to planning the night temperature.

A flashing rectangle indicates the place where changes are being made on the timeline.
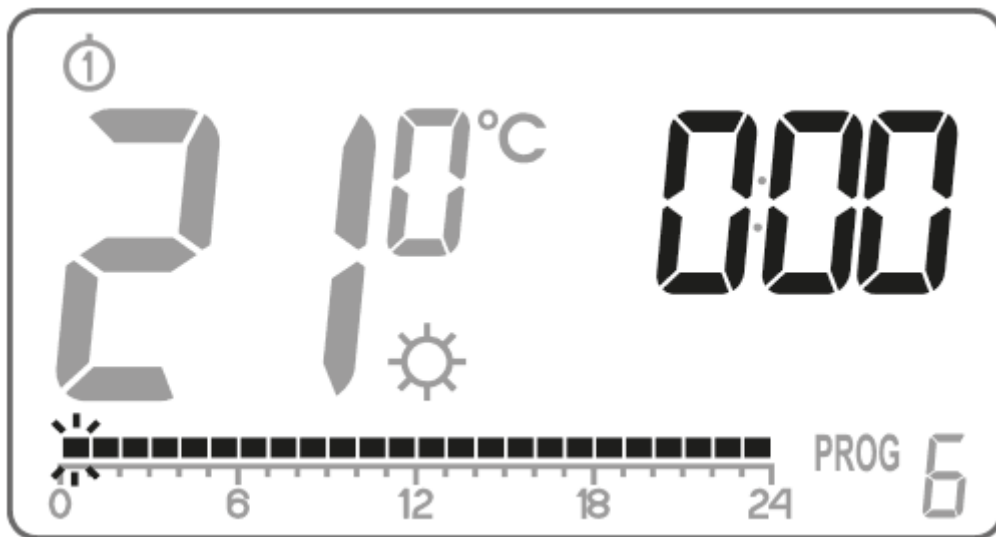
Press the ☾ or ☼ button to select the day temperature (a lit rectangle) or the night temperature (no rectangle) on the timeline.
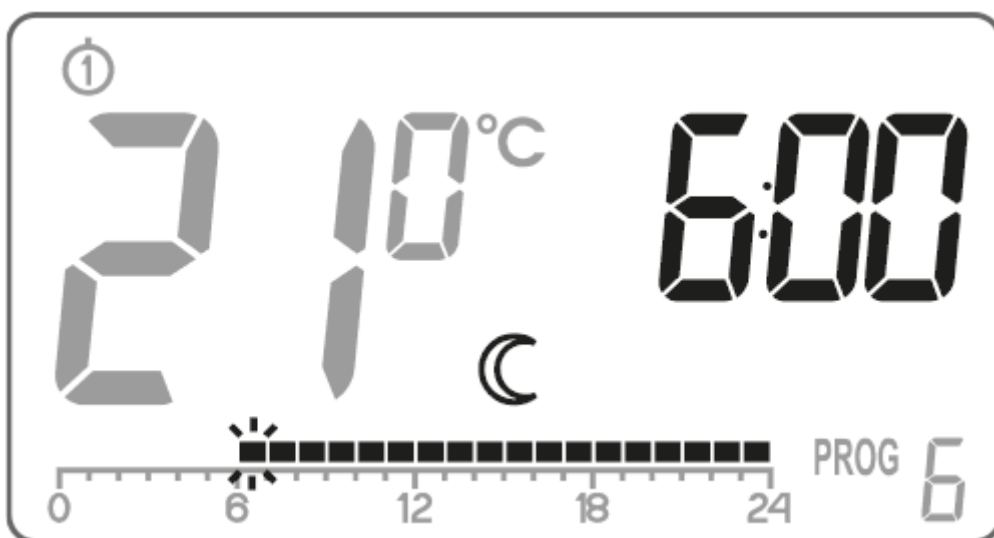
Use the ▼▲ buttons to highlight subsequent hours on the timeline and select the day or night temperature for each hour (we toggle between a lit rectangle and no rectangle with the ☾ ☼) button.
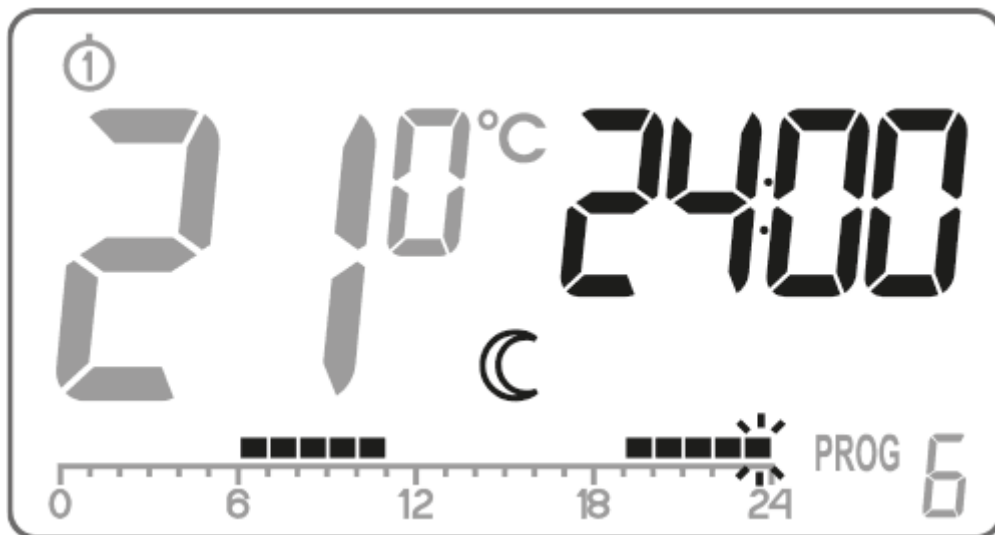
7. After modifying the whole timeline, save the program with the ⟦OK⟧ button.

NOTE:

A program once modified can be assigned to different days of the week by selecting it on the desired day of the week.

Manual control

✋

If you want to discontinue the current program operation and extend maintaining the day temperature for any reason, you can do it manually. To do this, you should:

1. Press the ☼ button. The ✋. symbol appears on the display. The comfort temperature will then be maintained until the next change of temperature to be achieved by the program.

2. To deactivate the above-mentioned function, press the ☐OK button located under the battery cover – the ✋ symbol will then disappear from the display.

Similarly, if you want to discontinue the current program operation and extend maintaining the night temperature for any reason, you should:

1. Press the ☾ button. The ✋ symbol appears on the display. The comfort temperature will then be maintained until the next change of temperature to be achieved by the program.

2. Press the ☐OK button to deactivate the above-mentioned function.

Holiday mode

We sometimes leave our homes for longer periods. To avoid reprogramming the whole AURATON Tucana device, we can use the holiday mode, which makes AURATON Tucana achieve only one temperature during our absence. The holiday mode can last from a minimum of 1 hour and to a maximum of 99 days.

To activate the holiday mode:

1. Press and hold the ☼ or ☾ button for 3 seconds. The display will show the temperature and

a flashing time field for setting the holiday mode duration.

2. Use the ▼▲ buttons to set the duration at 1 to 23 hours and then 1 to 99 days. Confirm the setting with the ⌑OK⌑ button.

3. The temperature field starts flashing. It can be set with the ▼▲ buttons. Confirm the selection with the ⌑OK⌑ button.

If the selection is not confirmed, AURATON Tucana will automatically switch to the holiday mode set after 10 seconds. Press the ☐OK button to exit the holiday mode.

<table>
<tr><td>
NOTE:
The holiday temperature is independent of the day, night or anti-freeze temperatures.
</td></tr>
</table>

Setting the anti-freeze temperature program

❄

In AURATON Tucana, you can set the anti-freeze temperature in the range of 0°C to 10°C (the factory setting of the anti-freeze temperature is 7°C).

In the case of a prolonged period of absence, it is possible to activate the anti-freeze temperature mode. It allows to avoid unpleasant consequences of the freezing of water in the heating system by automatically setting the temperature in the range of 0°C to 10°C. To set up the anti-freeze program, simply select program **program 0** on the desired day of the week.

Heating device operating time meter

AURATON Tucana has a function of measuring the operating time of the heating device. It is activated by pressing and holding the ☐OK button for 5 seconds. For 10 seconds, the thermostat display will show the operating time of the heating device since the last reset of the device.

> **NOTE:**
> The time may be different from the actual operating time of the heating device, e.g. due to the existence of internal thermostats installed in heating devices.

Turning off the relay temporarily

After the heating season, to avoid accidental switching on of the heating device, you can turn off the relay in AURATON Tucana.

Pressing and holding the ☼ and ☾ buttons simultaneously for 5 seconds will turn off the relay (a minimum temperature of 4°C will be maintained) and all display elements except the current temperature, time and day of the week will fade out.

To restore all the AURATON Tucana functions, press and hold the ☼ and ☾ buttons again for 5 seconds.

The RESET function of AURATON Tucana

Pressing the **RESET** (◎) RESET button clears the time and day and restarts AURATON Tucana.

The MASTER RESET function of AURATON Tucana

The MASTER RESET function restores factory settings. It is activated by pressing the ⊡OK⊡ and

RESET (◎) RESET buttons simultaneously.

NOTE:

All user programs will be deleted!

Configuration settings

Configuration settings are set one after another:

> changing
> the backlight colour

➡

> changes
> in hysteresis

➡

> changes
> in the delay

➡

> offset
> change

➡

> clock
> calibration
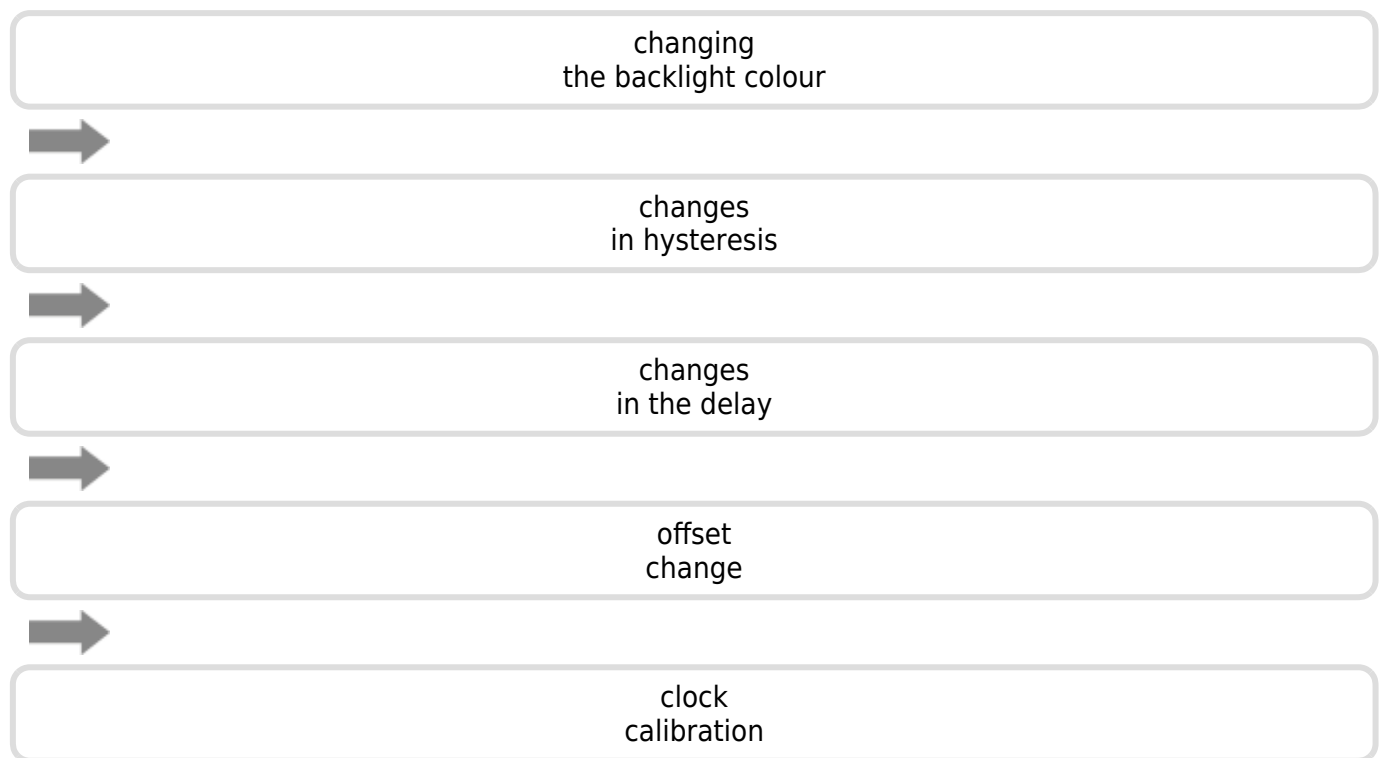
To enter the edit mode of the configuration settings, hold the ▼ and ▲ buttons simultaneously for 5 seconds until the settings menu is displayed.

Changing the backlight colour

A flashing backlight means that the ▼▲ buttons can be used to change the backlight colour. Confirm the selection with the ▭OK▭ button. AURATON Tucana will go to the next parameter changing mode.

Changes in hysteresis

Hysteresis is supposed to prevent too frequent activation of the actuator due to small temperature fluctuations.
*For example, in the case of **HI 2** hysteresis, when the temperature is set to 20 °C, the boiler will be switched on at 19.8 °C, and switched off at 20.2 °C. In the case of **HI 4** hysteresis, when the temperature is set to 20 °C, the boiler will be switched on at 19.6 °C, and switched off at 20.4 °C.*
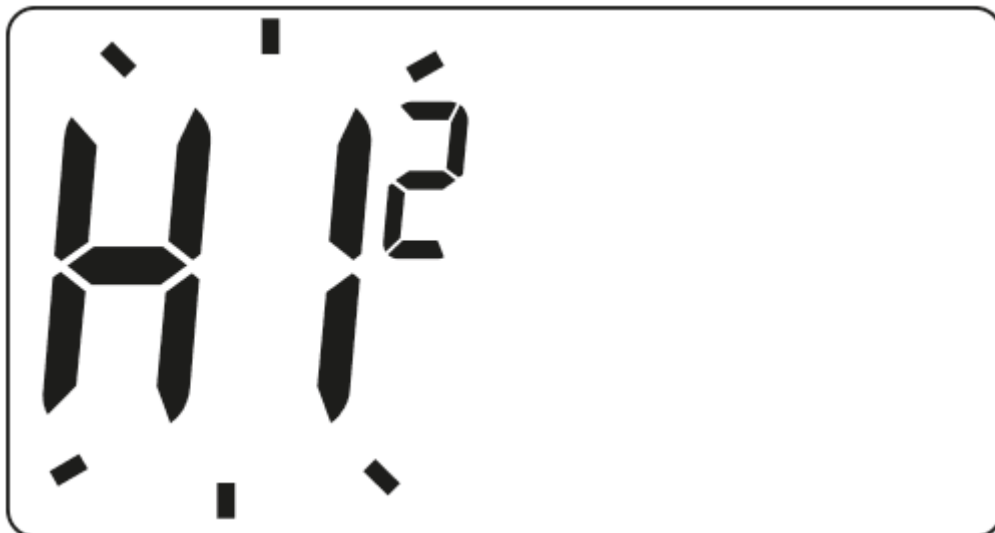
The hysteresis change mode is signaled by a flashing **HI**. Use the ▼▲ buttons to set the desired hysteresis.

HI 2 – ±0.2 °C (preset),
HI 4 – ±0.4 °C,
HI P – PWM operating mode (see chapter "PWM operating mode").

Confirm your choice by pressing the ⊡OK AURATON Tucana will proceed to change the next parameter.

Changes in the delay

The delay prevents too frequent activation of the actuator, e.g. due to temporary drafts (caused by opening the window, etc.).

The delay change mode is signaled by a flashing **90:SE**

Use the ▼▲ buttons to activate or deactivate the delay.

90:SE – delay of 90 s. *(preset)*

0:SE – no delay

Confirm your choice by pressing the ⊡OK AURATON Tucana will proceed to change the next parameter.

Offset change

The offset function allows you to calibrate the temperature indications with a tolerance of ± 3°C. For example, AURATON Tucana indicates that the room temperature is 23°C and a standard wall thermometer hanging next to it indicates 24°C. Changing the offset by +1 degree will make AURATON Tucana indicate the same temperatures as the wall thermometer.

The offset changing mode is signalled by the flashing text OFFS. Use the ▼▲ buttons to set the desired value between -3.0 and 3.0 (the factory setting is 0.0). Confirm the selection with the ⊡OK button. AURATON Tucana will return to its normal operating mode.

Clock calibration

This function is used to correct the clock indications in case of any deviations. If the clock is working incorrectly within a week, the extent of incorrect clock indications should be determined. This value should be entered in AURATON Tucana in the form of seconds.

Example 1:
After a week of operation, AURATON Tucana shows time accelerated by 1 minute and 20 seconds (60 + 20 = 80). In this case you should slow down the clock by setting C -80.

Example 2:
After a week of operation, the clock in AURATON Tucana is 2 minutes slow (2 x 60 = 120). In this case you should speed up the clock by setting C 120.

<div style="border:1px solid red;padding:10px;">

IMPORTANT:

The number of seconds should be determined after one week of operation of AURATON Tucana for the clock calibration function to work correctly (7 days = the number of seconds to be added or subtracted, maximum 294 seconds).

</div>

<div style="border:1px solid red;padding:10px;">

IMPORTANT:

If no button is pressed for 10 seconds while changing the configuration settings, AURATON Tucana will return to the normal operating mode.

</div>

PWM operating mode

 (Pulse-Width Modulation)

By changing the hysteresis settings (chapter "Configuration settings"), you can turn on the PWM operating mode. In this mode, AURATON Tucana cyclically turns on the heating device in order to minimize temperature fluctuations. AURATON Tucana checks temperature rise times and temperature drop times.

Knowing these values makes AURATON Tucana turn on and off the heating device in appropriate cycles to maintain the temperature to the set value as close as possible.
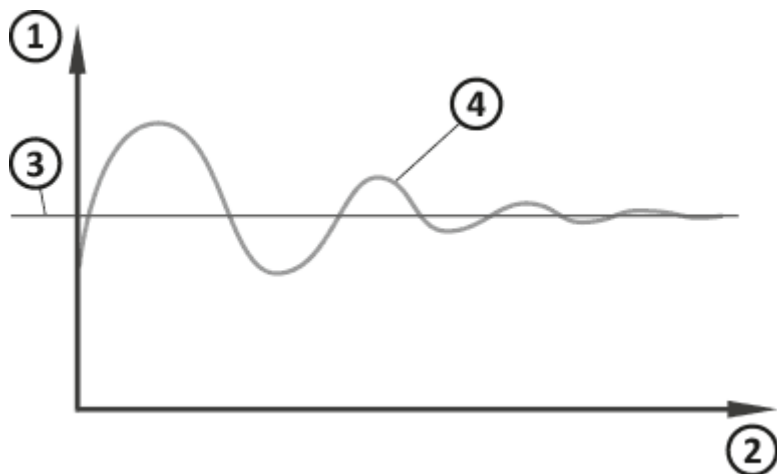
1. Temperature
2. Time
3. Set temperature
4. Room temperature

<div style="border: 1px solid red;">

IMPORTANT:

AURATON Tucana can turn on the heating device despite the fact that the temperature in the room is higher than the set temperature in the PWM mode. This is caused by the PWM algorithm aiming at maintaining the set temperature and anticipating the behavior of the thermal system.

</div>

The AURATON Tucana connection schematics
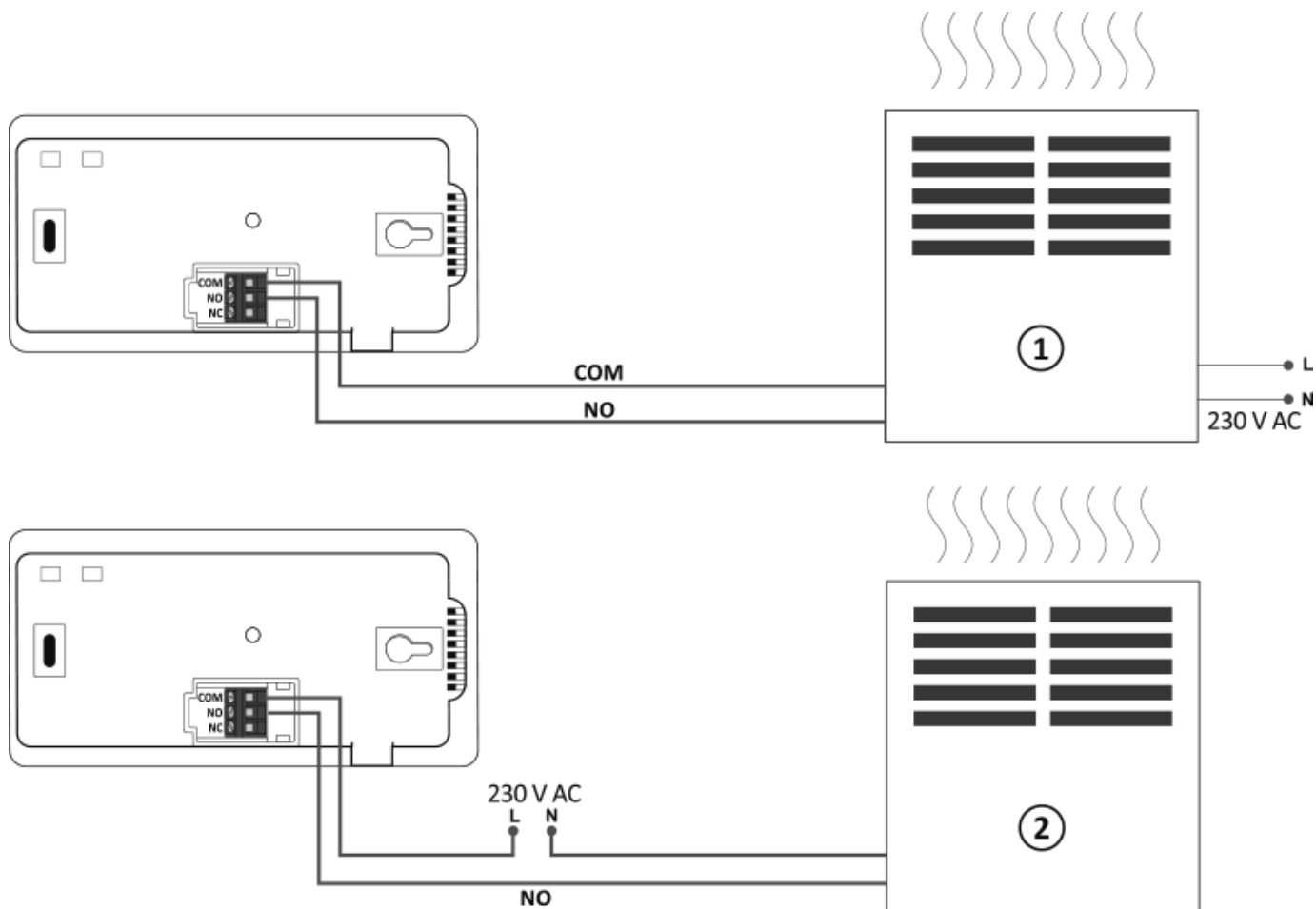
1. Heating device *e.g. a gas furnace*
2. Electric heating device (MAX 230 V AC, 8 A)

⚠ IMPORTANT!

⚡ **During the installation of AURATON Tucana, the power supply should be disconnected. It is recommended to have the receiver installed by a specialist.**

NOTE:
The fixed building installation must have a switch and overcurrent protection.

Cleaning and maintenance

- The outside part the device should be cleaned with a dry cloth. Do not use solvents (such as benzene, thinner or alcohol).
- Do not touch the device when your hands are wet. It may cause electric shock or serious damage to the device.
- Do not expose the device to excessive smoke or dust.
- Do not touch the screen with a sharp object.
- Keep the device away from liquids or moisture.

Technical specifications

Power supply:	2 x AA (2 x 1,5 V), alkaline
Working temperature range:	0 – 45°C
Signalling the working status:	LCD display
Number of temperature levels:	3 + vacation
Anti-freeze temperature:	0 – 10°C
Temperature control range:	5 – 30°C
Hysteresis:	±0,2°C / ±0,4°C / PWM
Relay load capacity:	Max. 250 V AC, max. 8 A
Working cycles:	Weekly programmable
Level of security:	IP20
Dimensions [mm]:	155 x 80 x 25

Disposing of the devices

The devices are marked with the crossed-out wheeled bin. According to European Directive 2012/19/EU and the Waste Electrical and Electronic Equipment Act, this kind of marking indicates that the equipment, after its operational life must not be

disposed of together with other waste from households. **The user shall return it to a collection point for electrical and electronic waste.**

Contact and address of the manufacturer:
LARS, ul. Świerkowa 14
64-320 Niepruszewo
www.auraton.pl

Download

- [User manual](#)
- [Declaration of conformity](#)