TECH CONTROLLERS

USER'S MANUAL
EU-R-10S PLUS

TECH CONTROLLERS

Safety

Before using the device for the first time the user should read the following regulations carefully. Not obeying the rules included in this manual may lead to personal injuries or controller damage. The user's manual should be stored in a safe place for further reference. In order to avoid accidents and errors it should be ensured that every person using the device has familiarized themselves with the principle of operation as well as security functions of the controller. If the device is to be sold or put in a diff erent place, make sure that the user's manual is there with the device so that any potential user has access to essential information about the device.

The manufacturer does not accept responsibility for any injuries or damage resulting from negligence; therefore, users are obliged to take the necessary safety measures listed in this manual to protect their lives and property.

⚠ **WARNING**
• The regulator should not be operated by children.
• Any use other than specifi ed by the manufacturer is forbidden.

We are committed to protecting the environment. Manufacturing electronic devices imposes an obligation of providing for environmentally safe disposal of used electronic components and devices. Hence, we have been entered into a register kept by the Inspection For Environmental Protection. The crossed-out bin symbol on a product means that the product may not be disposed of to household waste containers. Recycling of wastes helps to protect the environment. The user is obliged to transfer their used equipment to a collection point where all electric and electronic components.

Technical data

Power supply	5V DC
Max. power consumption	0,1W
Temperature adjustment range	5ºC÷35ºC
Measurement error	± 0,5ºC

EU DECLARATION OF CONFORMITY

Hereby, we declare under our sole responsibility that **EU-R-10s Plus** manufactured by TECH STEROWNIKI II Sp. z o.o., head-quartered in Wieprz Biała Droga 31, 34-122 Wieprz, is compliant with Directive 2014/35/EU of the European Parliament and of the Council of 26 February 2014 on the harmonisation of the laws of Member States relating to the making available on the market of electrical equipment designed for use within certain voltage limits (EU OJ L 96, of 29.03.2014, p. 357), Directive 2014/30/EU of the European Parliament and of the Council of 26 February 2014 on the harmonisation of the laws of Member States relating to electromagnetic compatibility (EU OJ L 96 of 29.03.2014, p.79), Directive 2009/125/EC establishing a framework for the setting of ecodesign requirements for energy-related products as well as the regulation by the MINISTRY OF ENTREPRENEURSHIP AND TECHNOLOGY of 24 June 2019 amending the regulation concerning the essential requirements as regards the restriction of the use of certain hazardous substances in electrical and electronic equipment, implementing provisions of Directive (EU) 2017/2102 of the European Parliament and of the Council of 15 November 2017 amending Directive 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment (OJ L 305, 21.11.2017, p. 8).
For compliance assessment, harmonized standards were used:
PN-EN IEC 60730-2-9:2019-06, PN-EN 60730-1:2016-10, EN IEC 63000:2018 RoHS.

Pawel Jura   Janusz Master
Prezesi firmy

Wieprz, 06.11.2020

DESCRIPTION

The EU-R-10s Plus regulator is intended for controlling the heating device. Its main task is to maintain the pre-set room/floor temperature by sending a signal to the heating device or the external controller managing the actuators, when the room/floor temperature is too low.

Regulator functions:
• Maintaining pre-set floor/room temperature
• Manual mode
• Day/night mode

Controller equipment:
• Front panel made of glass
• Touch buttons
• Built-in temperature sensor
• Possibility of connecting a floor sensor

The device is controlled with the use of touch buttons: EXIT, MENU, ∨ ∧
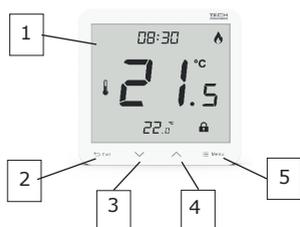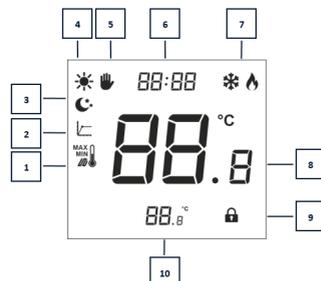
1. Display
2. EXIT – in the menu, the button is used to return to the main screen view. In the main screen view, press this button to display the room temperature value and the floor temperature value
3. ∨ – in the main screen view, press this button to decrease the pre-set room temperature. In the menu, use this button to adjust the button lock function.
4. ∧ – in the main screen view, press this button to increase the pre-set room temperature. In the menu, use this button to adjust the button lock function.
5. MENU – press this button to start editing the button lock function. Hold this button to enter the menu. Then, press the button to navigate around functions.

MAIN SCREEN DESCRIPTION

1. Maximum/minimum floor temperature - the icon is displayed only when the floor sensor has been enabled in the controller menu.
2. Hysteresis
3. Night mode
4. Day mode
5. Manual mode
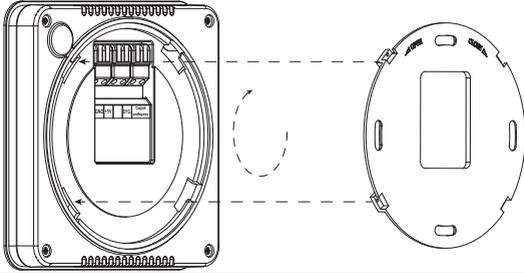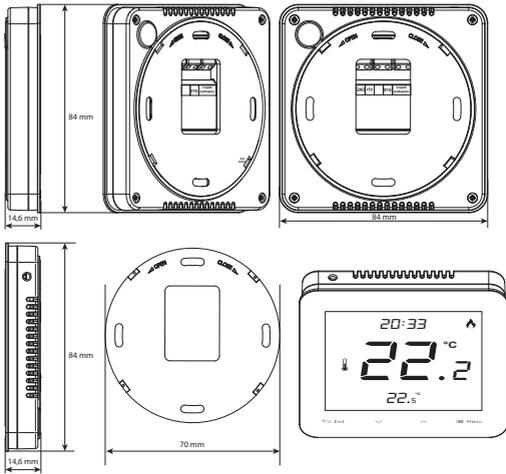6. Current time
7. Cooling/heating
8. Current temperature
9. Button lock
10. Pre-set temperature

HOW TO INSTALL THE CONTROLLER

The controller should be installed by a qualified person.
The room regulator should be connected to the main controller with the use of a three-core cable. The wire connection is illustrated below:

OPERATION MODES

The room regulator may operate in one of the following modes:

• **Day/night mode** – In this mode, the pre-set temperature depends on the time of day - the user sets a separate temperature for the day and night, as well as the time when the controller will enter each mode. To activate this mode, press the Menu button until the day / night mode icon appears on the main screen. The user may adjust the pre-set temperature and (after pressing the Menu button again) the time when the day and night mode will be activated.
• **Manual mode** - In this mode, the user defines the pre-set temperature manually directly from the main screen view using the buttons ∧ or ∨. Manual mode may be activated by pressing the Menu button. When the manual mode is activated, the previously active operating mode enters sleep mode until the next pre-programmed change of the pre-set temperature. Manual mode can be disabled by pressing and holding the EXIT button.

5. NIGHT FROM ... - This function enables the user to define the exact time of entering the night mode when the pre-set night temperature applies. To configure this parameter, press MENU until a flashing night mode icon appears on the screen.
Use the buttons ∧ or ∨ to set the time of night mode activation.

6. HYSTERESIS - Room temperature hysteresis defines the pre-set temperature tolerance in order to prevent undesired oscillation in case of small temperature fluctuation (within the range of 0,2 - 5°C).

Example:
Pre-set temperature : 23°C
Hysteresis: 1°C
The room regulator reports that the temperature is too low when the room temperature drops to 22 °C.
In order to set the hysteresis, press MENU until a flashing hysteresis icon appears on the screen.
Use the buttons ∧ or ∨ to set the desired hysteresis value.

7. FLOOR HEATING ON/OFF - This function is used to enable (ON) or disable (OFF) the underfloor heating, with the use of the buttons ∧ and ∨.

When the underfloor heating is enabled (icon 🌡) the user may configure the following parameters:

• **Maximum temperature** - in order to set the maximum floor temperature, press MENU until the floor heating icon appears on the screen. Next, use the buttons ∧ or ∨ to enable the heating, and then use the buttons ∧ or ∨ to set the maximum temperature.

8. BUTTON LOCK ON/OFF - It is possible to activate button lock. In order to do it, press the MENU button until the button lock icon appears on the screen and select ON. In order to unlock the buttons, press and hold the buttons ∧ , ∨

MENU BUTTON FUNCTIONS

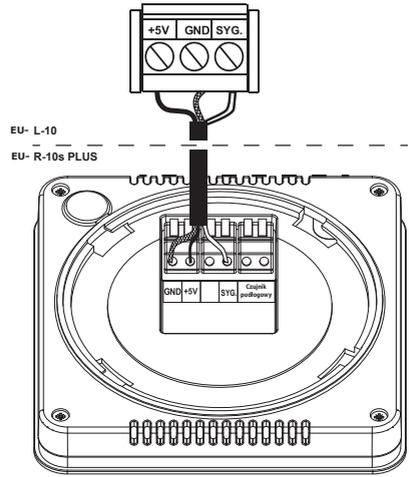By holding the MENU button the user may enter particular functions in the Menu.

1. COOLING/HEATING - This function enables the user to enable (ON) or disable (OFF) cooling. Depending on the selected heating/cooling mode (if the room needs to be heated or cooled), the main screen will display the icon of a given mode.

2. BUILT-IN SENSOR CALIBRATION - Calibration should be performed while mounting or after the regulator has been used for a long time, if the room temperature measured by the sensor differs from the actual temperature. Calibration setting range is from -9,9 to +9,9 ºC with the accuracy of 0,1ºC.
To calibrate the built-in sensor, press the MENU button until the temperature sensor calibration screen appears. Use the buttons ∧ or ∨ to set the desired correction. To confirm, press the MENU button (confirm and move on to edit the next parameter).

3. FLOOR SENSOR CALIBRATION - Floor sensor calibration (an additional floor sensor icon is displayed) should be performed if the floor temperature measured by the sensor differs from the actual temperature.

The EU-R-10s Plus regulator can be mounted on the wall. In order to do it, put the rear part of the controller into the flush-mounting box in the wall. Next, insert the regulator and twist it slightly.

REGULATOR MENU FUNCTIONS

The user navigates in the menu structure using touch buttons. In order to edit particular parameters, press MENU. By pressing MENU the user may preview the controller functions. The edited parameter is flashing. Use the buttons ∧ and ∨ to change the parameter settings. Press MENU to confirm the changes and move on to edit the next parameter.

1. CLOCK - In order to set the time, press the MENU button until a digital clock appears at the top of the screen. The settings concern the flashing parameter.
Use the buttons ∧ or ∨ to set the hour. Next, press MENU to move on to the next parameter - minutes.

2. PRE-SET DAY TEMPERATURE - In order to define the pre-set day temperature, press MENU button until a flashing icon
Use the buttons ∧ or ∨ to set the day temperature.

3. DAY FROM... - This function enables the user to define the exact time of entering the day mode when the pre-set day temperature applies. To configure this parameter, press MENU until a flashing icon appears on the screen.
Use the buttons ∧ or ∨ to set the time of day mode activation.

4. PRE-SET NIGHT TEMPERATURE - In order to define the pre-set night temperature, press MENU button until a flashing night mode icon appears on the screen.
Use the buttons ∧ or ∨ to set the night temperature.

• **Minimalna temperatura** - in order to set the minimum floor temperature, press MENU until the floor heating icon appears on the screen. Next, use the buttons ∧ or ∨ to enable the heating, and then use the buttons ∧ or ∨ to set the minimum temperature.

• **Hysteresis** - underfloor heating hysteresis defines the tolerance for the maximum and minimum temperature. The settings range is from 0,2°C to 5 °C.

If the floor temperature exceeds the maximum temperature, the underfloor heating will be disabled. It will be enabled only after the temperature has dropped below the maximum floor temperature minus the hysteresis value.

Example:
Maximum floor temperature: 33°C
Hysteresis: 2°C
When the floor temperature reaches 33°C, the underfloor heating will be disabled. It will be activated again when the temperature drops to 31°C.
When the floor temperature reaches 33°C, the underfloor heating will be disabled. It will be activated again when the temperature drops to 31°C.
If the floor temperature drops below the minimum temperature, the underfloor heating will be enabled. It will be disabled after the floor temperature has reached the minimum value plus the hysteresis value

Example:
Minimum floor temperature: 23°C
Hysteresis: 2°C
When the floor temperature drops to 23°C, the underfloor heating will be enabled. It will be disabled when the temperature reaches 25°C.

Calibration setting range is from -9,9 to +9,9 ºC with the accuracy of 0,1ºC.
To calibrate the built-in sensor, press the MENU button until the floor sensor calibration screen appears. Use the buttons ∧ or ∨ to set the desired correction. To confirm, press the MENU button (confirm and move on to edit the next parameter).

4. SOFTWARE VERSION - After pressing the MENU button the user may check the software version number. The number is necessary while contacting the service staff.

5. DEFAULT SETTINGS - This function is used to restore factory settings. In order to do it, change the flashing digit 0 to 1.