TECH
CONTROLLERS

USER MANUAL

EU-T-9.1

EN

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JG. 01.07.2025

Images and diagrams contained in the document serve illustrative purposes only.

The manufacturer reserves the right to introduce changes.

I. SAFETY

Please read the following regulations carefully before using the appliance! Failure to observe the instructions may cause personal injuries and damage the device! Please store this manual for future reference!

Ensure that all persons operating the device have thoroughly familiarized themselves with its operation and safety functions. Please retain the operating manual for future reference and ensure that it stays with the device if it is transferred or sold, so that everyone using it will have sufficient information concerning the operation and safety of the device.

Please observe the life, health and property precautions listed in the operating manual - the manufacturer will not be held liable for any damages caused by negligence!

WARNING

- Live electrical equipment! Before carrying out any operations related to the power supply (connecting cables, installing the device, etc.), make sure that the device is not connected to the mains!
- Installation should only be carried out by a person holding appropriate electrical qualifications!
- The device is not intended for use by children!

CAUTION

- Atmospheric discharges can damage the controller, during thunderstorms, switch it off by unplugging the mains plug.
- The device may not be used contrary to its intended purpose!
- It is recommended to periodically check the condition of the device.

There could be changes introduced in the products listed in the present manual following its last revision. The manufacturer reserves the right to introduce changes in design or deviations from the established colours. Illustrations may contain optional equipment. Printing technology may affect differences in the presented colours.

Care for the natural environment is of paramount importance to us. The awareness that we manufacture electronic devices is linked with our obligation to dispose the used electronic parts and devices in a way that is safe for the environment. Therefore, the company requested and received a registration number issued by the Polish Chief Inspector for Environmental Protection. The symbol of the crossed wheeled bin on the product indicates that the product must not be disposed of with municipal waste. By segregating waste for recycling, we help protect the environment. It is the user's responsibility to hand over used equipment to a designated collection point for recycling electrical and electronic equipment waste.

II. DEVICE DESCRIPTION

The EU-T-9.1 wire room controller is designed to control the heating or cooling device according to pre-programmed time and temperature settings.

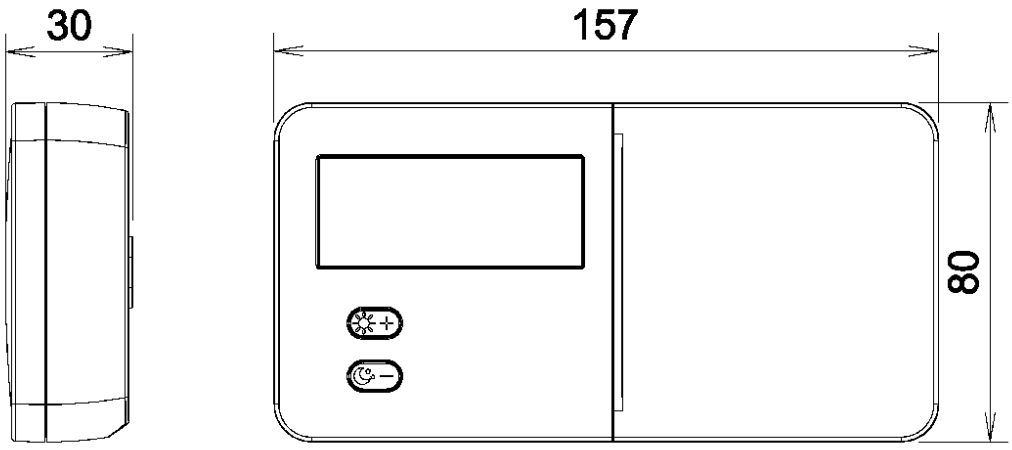
The controller is designed to maintain the set temperature in the room (economic and comfortable) by sending a signal to the heating/cooling device with feedback about the need of heating or cooling the room to the required temperature.

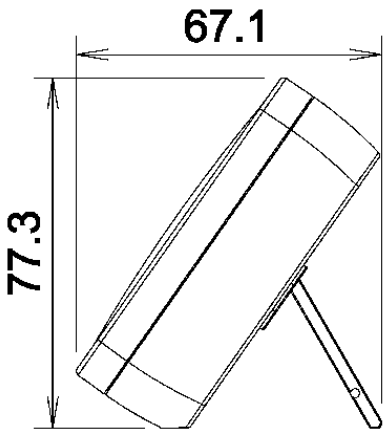
The controller features:

- Weekly schedule control
- 9 control programs
- Heating/cooling
- Manual program

In order for controller to achieve optimal efficiency, the difference between the comfortable and economic temperature should not exceed 3°C, as with too much cooling of the rooms, much more energy will be expended to reheat than to maintain a slightly higher temperature. It is recommended to set the comfort temperature at 21°C and the economy temperature at 19°C and, if necessary, correct these levels during use.

In order for the controller to operate effectively, the comfort ☼ and economic temperatures must be programmed (no icon) and an appropriate program for changing these temperatures for each day of the week must be set. Programming of temperatures is described in a separate section.





III. INSTALLING THE CONTROLLER

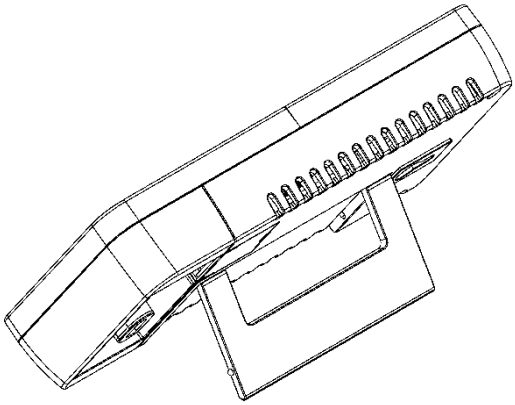
PLEASE NOTE!

The controller must only be installed by a properly qualified person! Before installing the controller, please read the operating manual and safety rules!

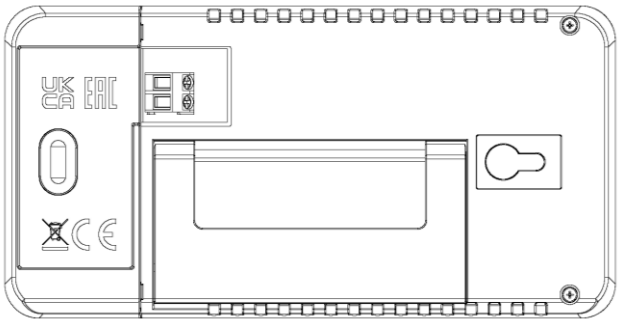
Choose a convenient place to install the controller. To guarantee proper operation, the controller should be installed on the wall in a place that allows air to circulate freely. Avoid places located near heat generating devices (e.g. TV, heater, fridge, fireplace) or that are exposed to direct sunlight. Do not install the device near a door. It is also not recommended to install the controller in separated rooms such as cellars. Avoid installing the device in places directly exposed to moisture and air condensation. The controller should be installed at a height of ca. 1.5 m above the floor level.

The EU-T-9.1 controller can be placed anywhere (1) or mounted as a wall panel (2).

1).



2). Drill two ø6 mm holes in the wall, insert the plugs and tighten the left screw, leaving a 3 mm gap. Hang the regulator on the screw and move it to the right (there is a key-shaped hole in the back of the controller). Tighten the second screw so that the device is stable.



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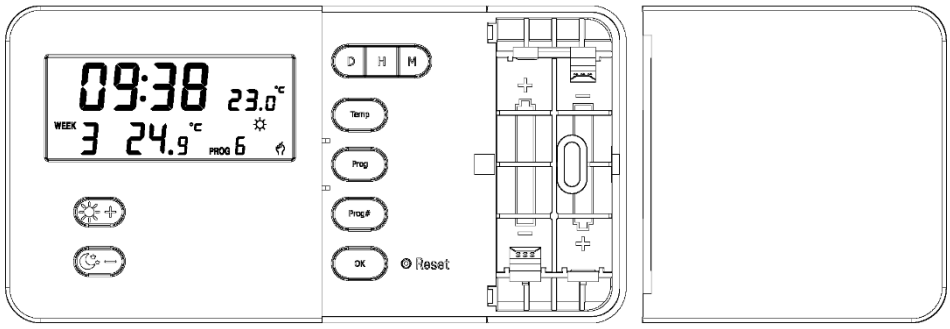
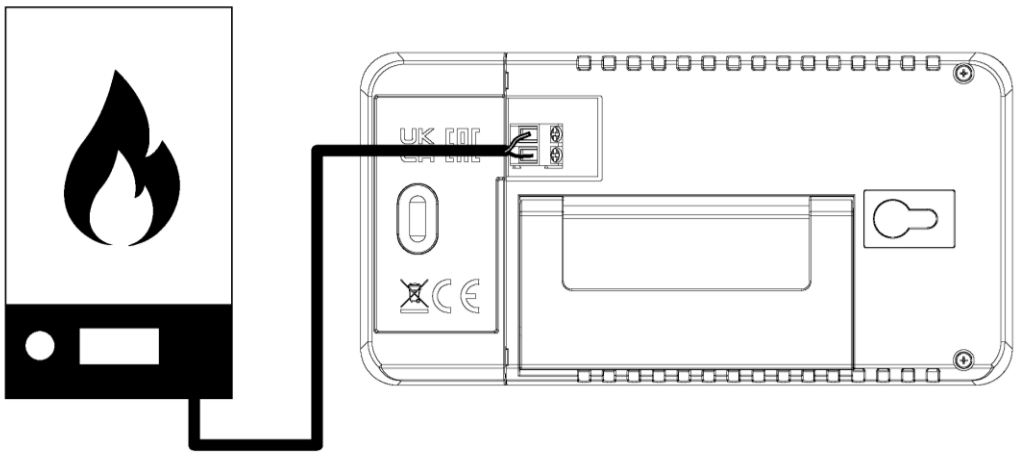
To insert/replace the battery, pull out the regulator cover as fully as possible.

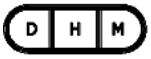


Connection diagram of the controller to the heating device



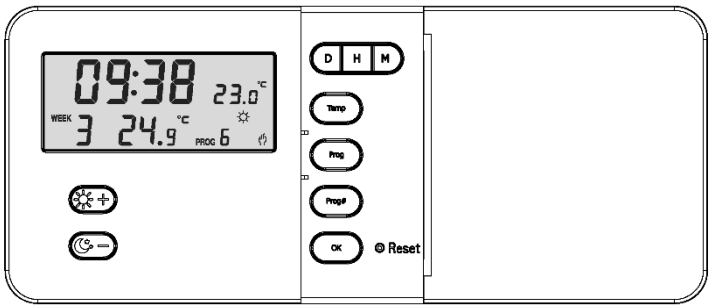
IV. FIRST STARTUP

In order for the controller to operate correctly, the following steps must be followed for the first start-up:

1. Install the batteries – pull out the controller cover as completely as possible for this purpose.
2. Connect the regulator to the heating device using a two-core cable.
3. Set the current day and time – buttons under the cover 

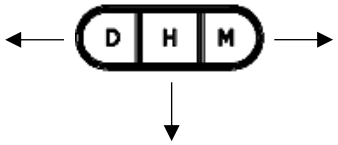
   Press the **D** button, the parameter on the screen will start flashing, press as many times as necessary until the corresponding day of the week appears. Confirm with **OK**. Set the hour in the same way by pressing **H** and **M** (respectively) to set the minutes.
4. Select heating or cooling mode. The heating mode is the default setting.
5. Program the comfort and economic temperatures (no icon) and set an appropriate program for changing these temperatures for each day of the week. A detailed description of programming can be found later in the manual.

V. SCREEN AND BUTTON DESCRIPTION



Button functions - **PRESSING**

change current day



change current minute

change current hour

change of the set temperature for the currently selected mode

start schedule programming, selection of the day to be programmed

select a program

confirm data

reset to factory defaults

Time – 00:00; day – 1; temperature – comfort: 19°C, economy: 15°C; programs – all 7 days of the week set to PROG 1; user-defined programs – set to comfort; manual control – all off; output – off, mode - heating; delay – off, hysteresis – 1°C

Do not use a pencil to press the reset button. Graphite deposits from the tip can lead to a short circuit and damage the controller!

change the current temperature(comfort/economy)

change the current temperature(comfort/economy)

Additional functions of the buttons – **HOLDING DOWN**

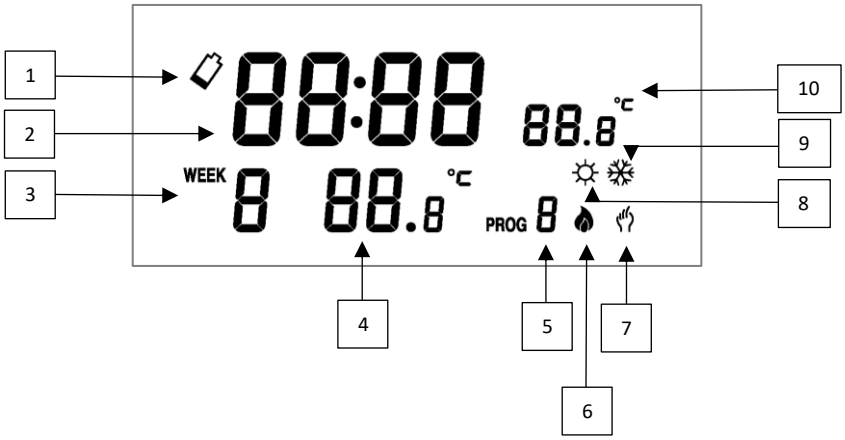
(longer than a second) - enter the program pause menu

(longer than a second) - enter the program pause menu

(longer than 4s) – enter additional settings (heating/cooling, ON/OFF delays, hysteresis)

(longer than 4s) – software version number

SCREEN DETAILS



1. Low Battery Icon – Displays when the battery voltage drops below a certain level. Replace the batteries as soon as possible.
2. Current time
3. Current day of the week
4. Current temperature
5. Current program number
6. Heating mode icon
7. Manual operation icon
8. Comfort temperature icon. Its absence means that the economic temperature applies.
9. Cooling mode icon/antifreeze protection
10. Set temperature

VI. CONTROLLER FUNCTIONS

1. SET POINT TEMPERATURE CHANGE

If ☼ is displayed on the screen, it is possible to change the comfort temperature. When this icon is missing, the economic temperature can be changed.

To change the comfort temperature, press the TEMP button. When the comfort temperature value starts flashing, its value can be changed by 0.2°C by pressing the / buttons. Confirm the settings with **OK**.

2. MANUAL TEMPERATURE SETTINGS

To select the comfort temperature, press the button. To select the economic temperature, press . The current temperature mode will be overwritten until the next set point of the set program.
During this time, the ☝ symbol will appear on the display.

Example:

In the normal operating mode, press the button to change the current setting from comfort temperature to economy temperature.
The temperature is now manually set to economy mode. This mode will be set until 23:00 (this is because the daily schedule is PROG 1. At 23:00, there will be a change from the comfort temperature to the economic temperature, which coincides with the manual setting).

3. PAUSING A PROGRAM

An alternative to manually changing the parameters is the function of pausing the timer schedule. Press and hold for approx. 2 seconds, the or button, then the pause time expressed in hours will appear. To set the hold time, press this button several times until reaching the desired hold value in hours. Press the **OK** button to return to the normal operating mode. The maximum hold time for the selected temperature is 24 hours. During the pause period, the program will not change the temperature setting.

If the timer pause function is enabled, pressing the corresponding temperature mode button (e.g. while the comfort mode is paused) will display the time remaining until the pause function ends. The remaining hold time can then be changed by using the same button. If another temperature mode button is pressed (e.g. when the comfort mode is paused) the timer pause will be disabled.

Example:
1. To change the current setting from comfort temperature to economy temperature for 5 hours, press and hold the button for ca. 2 seconds. The hold time will be displayed.
2. The hold time is 1 hour. Press the button 4 times to change the hold time to 5 hours.
3. Press the **OK** button or do not press any buttons for 15 seconds. The controller will return to the normal operating mode.

4. OPERATING MODES

In the controller, the option exists of setting two temperature levels for different time periods. Users have 9 programs at their disposal. Programs from 0 to 5 are factory set and it is not possible to edit them with the / buttons, while programs from 6 to 8 can be defined by users according to individual needs. Each program can be assigned to a different day.

- **Program 0** – ❄ – special program. Throughout the day, the freezing protection temperature will be set at 7°C.

Programs 1-3 – typical configurations for the day. Users can employ the ready-made settings if they fit their needs.

- **Program 1**

  00.00 – 06.00 – economic temp.
  06.00 – 23.00 – comfort temp.

- **Program 2**

  00.00 – 06.00 – economic temp.
  06.00 – 08.00 – comfort temp.
  08.00 – 16.00 – economic temp.
  16.00 – 23.00 – comfort temp.

- **Program 3**

  00.00 – 06.00 – economic temp.
  06.00 – 08.00 – comfort temp.
  08.00 – 11.00 – economic temp.
  11.00 – 13.00 – comfort temp.
  13.00 – 16.00 – economic temp.
  16.00 – 23.00 – comfort temp.

- **Program 4**

  00.00 – 23.00 – comfort temp.

- **Program 5**

  00.00 – 23.00 – economic temp.

- **Programs 6-8** – defined by the user according to their own needs.

5. DISPLAYING AND SETTING OF PROGRAMS

1. Press **PROG** to view and change the current program.
2. Press **PROG** again to display the next day.
3. Press **PROG#** to set the program for that day.
4. Confirm with **OK**.
5. Similarly, press **PROG** to display the next day and **PROG#**to set the program for that day.

6. SETTING TEMPERATURES FOR PROGRAMS 6-8

1. Press **PROG** to enter the programming function.
2. Press **PROG** to select the day for which the program will be set.
3. Press **PROG#** to select program 6, 7 or 8.
4. Press the  button as many times as the hours for which the comfort temperature should last. The screen will display the sum.
5. Press the  button as many times as as the hours the economic temperature should last.

Example:

To set program 6 for Saturday, with the following temperatures:

00.00 – 13.00 – economic temp.
13.00 – 19.00 – comfort temp.
19.00 – 00.00 – economic temp.

1. Press **PROG** to enter the programming mode.
2. Press **PROG** until the 6th day of week is displayed.
3. Press **PROG#** until the 6th program is displayed.
4. Press  13 times to set the economy temp for 00.00 - 13.00
5. Press  6 times to set the comfort temperature for the hours of 13.00 - 19.00
6. Press  5 times to set the economy temp for 19.00 - 00.00

7. HEATING/COOLING

To select the mode, hold the **OK** button for ca. 5 seconds. Changing the mode takes place after changing with the  /  buttons and confirming with the **OK** button.

This mode allows users to select if the heating or cooling system is to be controlled. Usually, in a heating system, the comfort temperature is higher than the economic temperature, and vice versa in a cooling system. In the cooling mode, the controller relay works in reverse, i.e. it shorts the NO and COM contacts when the measured temperature is higher than the set point and opens the contacts when the measured temperature is lower than the set point. In addition, in the cooling mode, the freezing protection temperature is inactive (if program 0 is selected – the controller will switch off the cooling system). The heating mode is the factory default setting.

8. ON/OFF DELAY

After selecting the heating/cooling mode and pressing the **OK** button, the display will show DL OF/DL ON. Employing the  /  buttons, users can change the delay state.

- DL OF – the "delay" DL function is disabled. To switch it on, press the  button.
- DL ON - the "delay" DL function is enabled. The heating device will switch on only if it has been switched off for a minimum of 5 minutes. Confirm the setting with **OK**.

9. HYSTERESIS

After confirming the setting of the delay function (DL) with the **OK** button, the display will show SPAN 1.0°C. This means that the hysteresis of the controller is 1.0°C (factory setting). The hysteresis value can be changed to 0.5°C – in which case the controller will react faster to the temperature change in the room. To change the hysteresis value, press the  or the  button when the display shows SPAN 1.0°C. Then confirm the setting of the hysteresis value with the **OK** button.

Example:
If the temperature is set to 20°C and hysteresis is 1°C, the heating will be switched on when the temperature drops to 19°C and off when the temperature reaches 20°C. However, it should be remembered that the temperature is displayed every 0.2°C, therefore, the heating device will switch on when the temperature of 19°C/18.8°C is displayed, while it will switch off when the temperature of 20°C/20.2°C is displayed.

10. TEMPERATURE CORRECTION

Another option is to correct the measured temperature (OFFS). It allows users to adjust the room temperature by ±3.0°C in 0.2°C steps. The function may be useful if the controller is located in a place with a slightly different temperature than the general room temperature. The factory default is 0.0°C.

Enter the additional settings menu by holding down the **OK** button. Subsequently, press the **OK** button as many times as necessary until the OFFS function appears. Use the / buttons to set the correction for the temperature and confirm with the **OK** button.

VII. TECHNICAL SPECIFICATIONS

EU-T-9.1	
Power supply	2xAA 1.5V batteries
Potential-free cont. nom. out. load	230V AC / 0,5A (AC1) * 24V DC / 0,5A (DC1) **
Room temp. adjustment range	5°C ÷ 30°C
Measurement error	± 0.5°C

** AC1 load category: single-phase, resistive or slightly inductive AC load.*

*** DC1 load category: DC, resistive or slightly inductive load.*

EU Declaration of Conformity

Hereby, we declare under our sole responsibility that **EU-T-9.1** manufactured by TECH STEROWNIKI II Sp. z o.o., headquartered 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,

PN EN IEC 63000:2019-01 RoHS.

Wieprz**, 01.07.2025**

Paweł Jura Janusz Master

Prezesi firmy

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