

# TECH CONTROLLERS

## USER MANUAL EU-i-1M

EN



## 1 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 different 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

- High voltage! Make sure the regulator is disconnected from the mains before performing any activities involving the power supply (plugging cables, installing the device etc.)
- The device should be installed by a qualified electrician.
- Before starting the controller, the user should measure earthing resistance of the electric motors as well as the insulation resistance of the cables.
- The regulator should not be operated by children.



### WARNING

- The device may be damaged if struck by a lightning. Make sure the plug is disconnected from the power supply during storm.
- Any use other than specified by the manufacturer is forbidden.
- Before and during the heating season, the controller should be checked for condition of its cables. The user should also check if the controller is properly mounted and clean it if dusty or dirty.

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Changes in the merchandise described in the manual may have been introduced subsequent to its completion on 28.09.2021. The manufacturer retains the right to introduce changes to the structure. The illustrations may include additional equipment. Print technology may result in differences in colours shown.

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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 will be recycled.

## 2 DESCRIPTION OF THE DEVICE



**EU-iM** module is intended for controlling a three- or four-way mixing valve with the possibility of connecting additional valve pump. The controller features weather-based control, weekly control schedule and it may cooperate with a room regulator. Another asset of the device is return temperature protection against too cold water returning to the CH boiler.

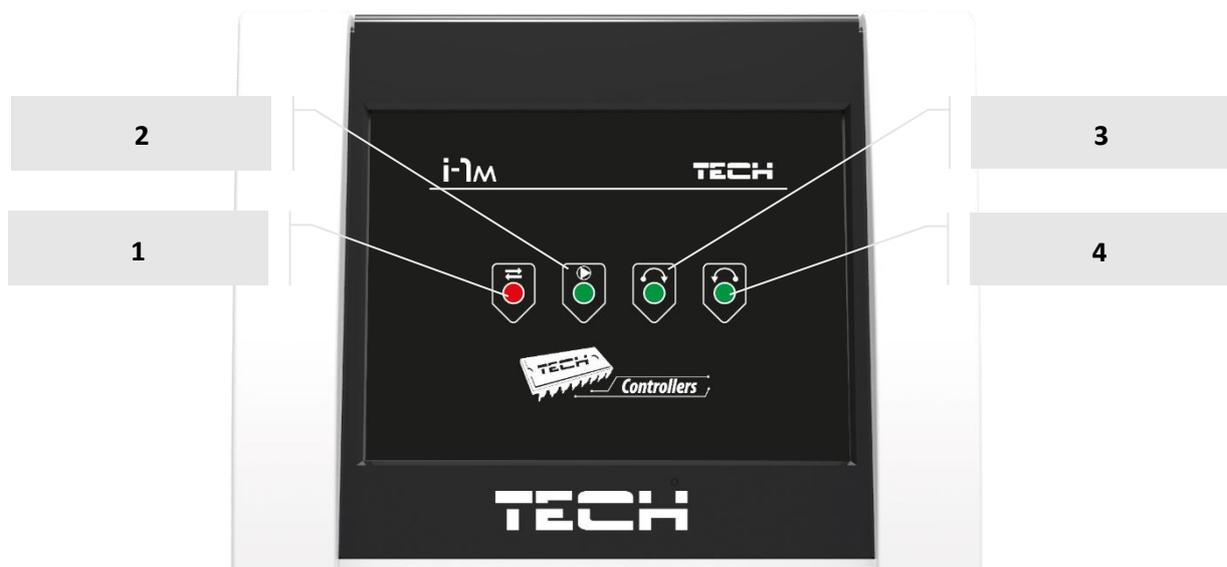
Functions offered by the controller:

- smooth control of a three- or four-way valve
- pump control
- return temperature protection
- weekly control and weather-based control
- compatible with RS and two-state room regulators

Controller equipment:

- CH boiler temperature sensor
- valve temperature sensor
- return temperature sensor
- external weather sensor
- wall-mountable casing

### 2.1 PRINCIPLE OF OPERATION



- ⇒ Control light **1 - COMMUNICATION** - it informs about current status of the module. In the event of an alarm, the control light remains on. During standard operation it flashes. If there is no communication, the light goes off.
- ⇒ Control light **2 - PUMP** – it indicates pump operation.
- ⇒ Control lights **3 and 4 – CLOSING/OPENING** - they inform about valve closing or opening

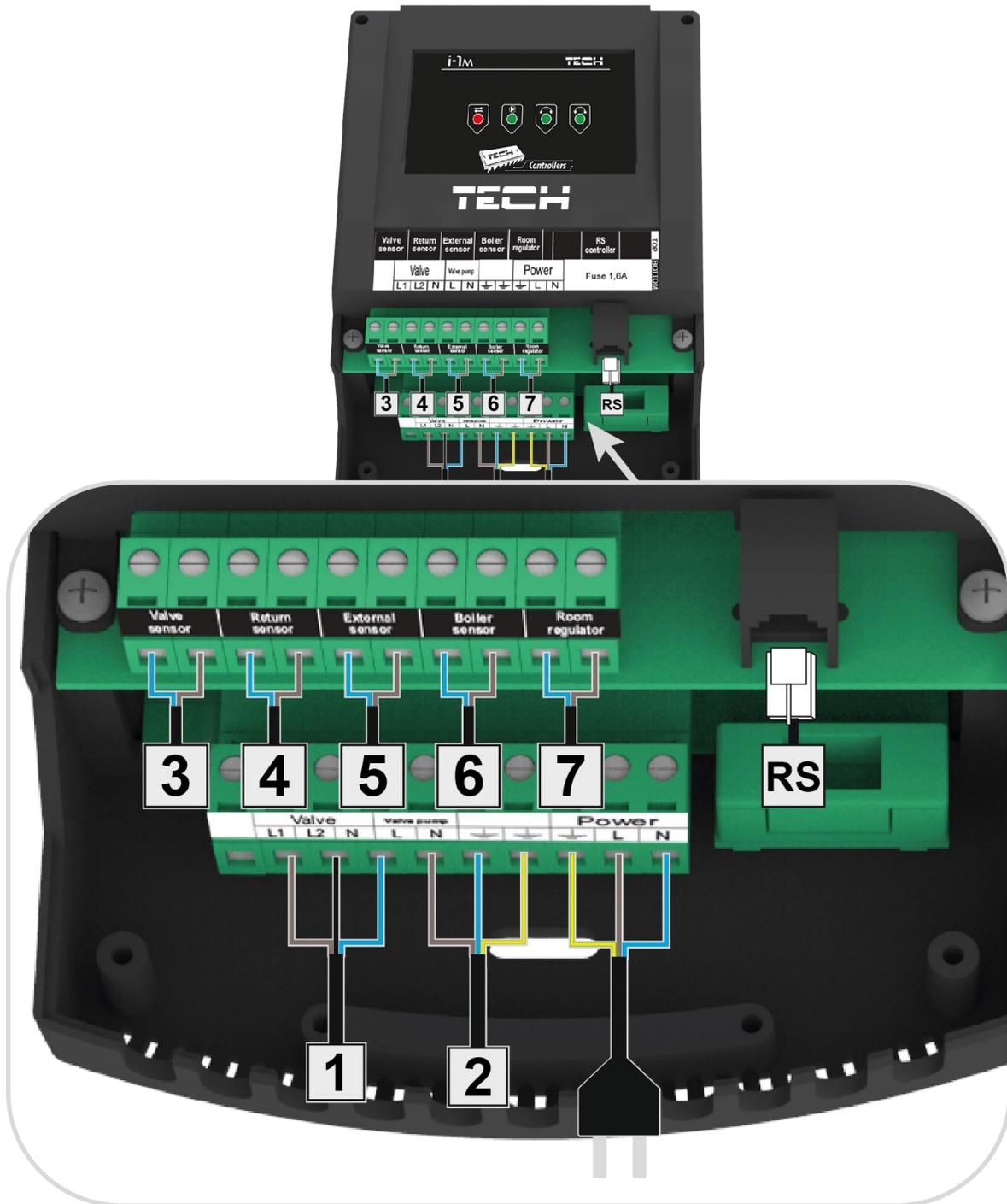
### 3 INSTALLATION



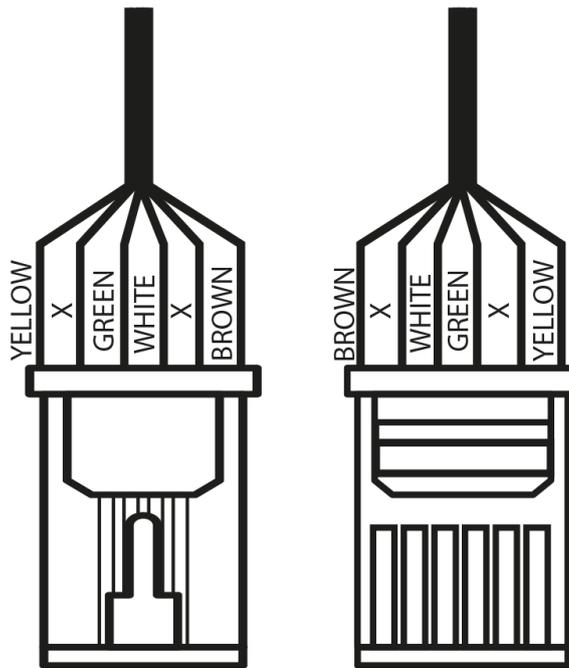
The controller should be installed by a qualified person.

**! WARNING**  
Risk of fatal electric shock from touching live connections. Before working on the controller switch off the power supply and prevent it from being accidentally switched on.

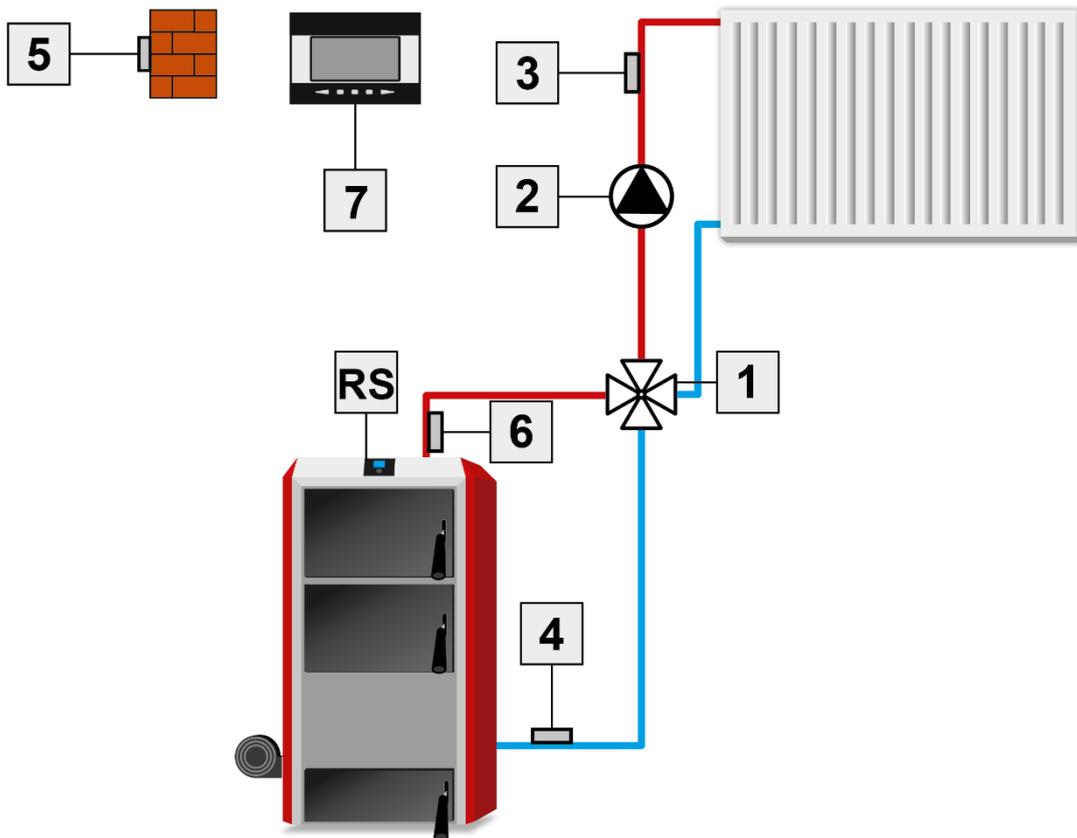
**! WARNING**  
Incorrect connection of wires may damage the regulator.



**! NOTE**  
Plug RS cable to RS socket labelled RS while connecting EU-i-1M valve module to the main controller, controlling additional valves via RS communication.



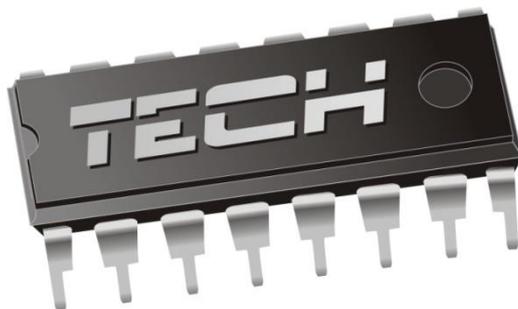
Example installation schemes:



- |                 |                     |                   |
|-----------------|---------------------|-------------------|
| 1. Valve        | 4. Return sensor    | 7. Room regulator |
| 2. Valve pump   | 5. Weather sensor   |                   |
| 3. Valve sensor | 6. CH boiler sensor |                   |

## 4 TECHNICAL DATA

No.	Specification	Unit	
1	Power supply	V	230 ±10% /50Hz
2	Power consumption	W	Max 4
3	Ambient temperature	°C	5÷50
4	Pump output load	A	0,5
5	Valve output load	A	0,5
6	Measurement accuracy	°C	1
7	Thermal resistance of sensors	°C	-30÷99
8	Fuse	A	1,6



## EU DECLARATION OF CONFORMITY

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Hereby, we declare under our sole responsibility that **EU-i-1M** manufactured by TECH, 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 February 26, 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 Journal of Laws L 96, of 29.03.2014, p. 357)**,
- Directive 2014/30/EU of the European Parliament and of the Council of February 26, 2014 on the harmonisation of the laws of Member States relating to **electromagnetic compatibility** (EU Journal of Laws 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,
- the regulation by the Ministry of Economy of May 8, 2013 concerning the essential requirements as regards *the restriction of the use of certain hazardous substances in electrical and electronic equipment*, implementing provisions of **RoHS directive 2011/65/EU**.

For compliance assessment, harmonized standards were used:

**PN-EN 60730-2-9:2011, PN-EN 60730-1:2016-10.**

  
PAWEŁ JURA

  
JANUSZ MASTER

WŁAŚCICIELE TECH SPÓŁKA Z OGRANICZONĄ ODPOWIEDZIALNOŚCIĄ SP. K.

Wieprz, 28.09.2021

# **TECH STEROWNIKI**

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