

# TECH CONTROLLERS EU-20 Water Circulation Pump User Manual

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## WARRANTY CARD

TECH company ensures to the Buyer proper operation of the device for the period of 24 months from the date of sale. The Guarantor undertakes to repair the device free of charge if the defects occurred through the manufacturer's fault. The device should be delivered to its manufacturer. Principles of conduct in the case of a complaint are determined by the Act on specific terms and conditions of consumer sale and amendments of the Civil Code (Journal of Laws of 5 September 2002).

**CAUTION! THE TEMPERATURE SENSOR CANNOT BE IMMERSSED IN ANY LIQUID (OIL ETC). THIS MAY RESULT IN DAMAGING THE CONTROLLER AND LOSS OF WARRANTY! THE ACCEPTABLE RELATIVE HUMIDITY OF THE CONTROLLER'S ENVIRONMENT IS 5÷85% REL.H. WITHOUT THE STEAM CONDENSATION EFFECT. THE DEVICE IS NOT INTENDED TO BE OPERATED BY CHILDREN.**

Activities related to setting and regulation of the controller parameters described in the Instruction Manual and parts wearing out during normal operation, such as fuses, are not covered by warranty repairs. The warranty does not cover damages arising as a result of improper operation or through the user's fault, mechanical damage or damage created as a result of fire, flood, atmospheric discharges, overvoltage or short-circuit. The interference of an unauthorized service, wilful repairs, modifications and construction changes cause the loss of Warranty. TECH controllers have protective seals. Removing a seal results in the loss of Warranty.

The costs of unjustifiable service call to a defect will be borne exclusively by the buyer. The unjustifiable service call is defined as a call to remove damages not resulting from the Guarantor's fault as well as a call considered unjustifiable by the service after diagnosing the device (e.g. damage of the equipment through the fault of the client or not subject to Warranty), or if the device defect occurred for reasons lying beyond the device.

In order to execute the rights arising from this Warranty, the user is obliged, at his own cost and risk, deliver the device to the Guarantor along with a correctly filled-in warranty card (containing in particular the sale date, the seller's signature and a description of the defect) and sales proof (receipt, VAT invoice, etc.). The Warranty Card is the only basis for repair free of charge. The complaint repair time is 14 days.

When the Warranty Card is lost or damaged, the manufacturer does not issue a duplicate.

## **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.

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.

## **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.



- 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.



## Principle of operation

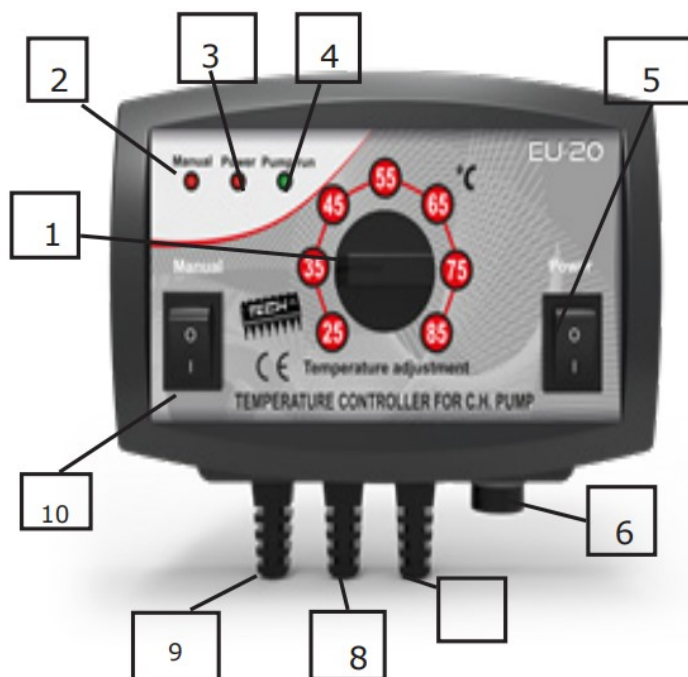
The task of the regulator is to switch the pump on when the temperature exceeds the pre-set value and to switch the pump off when the boiler cools down (as a result of damping). It prevents unnecessary operation of the device which, in turn, helps to save electricity (up to 60%, depending on the boiler use) and prolongs the life of the device. Consequently, the device is more reliable and the maintenance costs are reduced.

## How to use the regulator

The pump activation temperature is set using a potentiometer (within the range of 25°C-85°C). The pump is disabled if the actual temperature drops by 2°C below the pre-set value. It prevents regular pump activation (which affects its durability) due to small temperature fluctuation. Apart from the potentiometer, the regulator is equipped with a power switch (if the device is switched on, the control light power goes on), a switch to enable the pump manually (when the pump is enabled, Manual mode control light goes on) and a control light labelled manual which signals the pump operation.

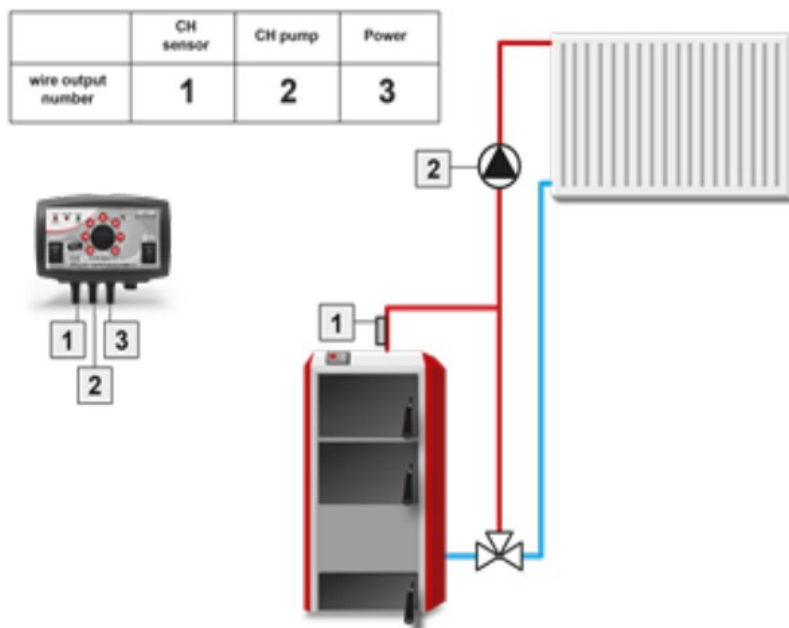
The regulator has a WT 1,6A tube fuse-link protecting the network

1. Potentiometer
2. Control light indicating manual mode
3. Control light indicating power supply
4. Control light indicating pump operation
5. Power switch
6. Fuse 1,6A
7. Power supply
8. CH pump output
9. Temperature sensor
10. Manual mode switch



## How to install the regulator

The sensor should be installed in a proper place with the use of a cable tie and protected from the influence of external factors with an insulating tape. The device power cord should be connected in the following way: blue (N) and brown (L) – 230V AC/50 Hz, yellow-green (protective) should be earthed.



## TECHNICAL DATA

NO	SPECYFIKATION	
1	Power supply	230V $\pm$ 10% /50Hz
2	Maximum power consumption	2W
3	Ambient temperature	5÷50
4	Pump max. output load	0,5A
5	Temperature measurement accuracy	1°C
6	Sensor thermal resistance	-30÷99°C
7	Fuse	1,6A

## EU Declaration of conformity

Hereby, we declare under our sole responsibility that EU-20 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

Wieprz, 06.05.2019

  
PAWEŁ JURA

  
JANUSZ MASTER

**TECH**  
**CONTROLLERS**

The thumbnail shows the front cover of a user manual. At the top left is a small image of the pump unit. Below it, the text 'EU-20 WATER CIRCULATION PUMP' is visible. The 'TECH CONTROLLERS' logo is prominently displayed in the center. Below the logo, there is a 'WARRANTY CARD' section with some text. At the bottom left, there is a 'Safety' section with a warning triangle icon. The overall layout is clean and professional.

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EU-20 Water Circulation Pump, EU-20, Water Circulation Pump, Circulation Pump, Pump