



# TECH CONTROLLERS EU-28N zPID Charging Boiler User Manual

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**TECH**  
CONTROLLERS

**TECH CONTROLLERS EU-28N zPID Charging Boiler**



## Product Information

### Specifications

- **Model:** EU-28N PID

### Device Description

The EU-28N zPID is a controller used in boilers. It is designed to regulate the temperature of the boiler and control various functions related to its operation. The controller must be set individually based on the type of fuel used in the boiler and the type of boiler itself. It has built-in memory that retains the set parameters even after a power loss. The controller features connectors for connecting sensors and devices operated by the controller.

## Product Usage Instructions

### Installing the Controller

- The controller should only be installed by a properly qualified person. Before starting the installation, ensure that the power supply to the controller is disconnected and secured against accidental switching on. Incorrect wiring may damage the controller.

### Controller Operation

- The controller has several buttons and menus for navigation and adjusting settings. The main menu includes options such as ignition/extinguishing, temperature settings, work settings, manual operation, pump operating mode, time settings, date settings, weekly schedule control, installer menu, service menu, language selection, factory defaults, and software info.

### Firing Up/Extinguishing

- This function allows the user to initiate the ignition or extinguishing process of the boiler.

### Screen View

- In this function, the user can select one of the available main screens for viewing the thermoregulator

operation.

## **Temperature Settings**

- The temperature settings menu includes options to set the boiler temperature (CH set temperature) and the domestic hot water temperature (DHW set temperature).

### **CH Set Temperature**

- This option is used to set the temperature range for the boiler.
- The user can adjust the temperature between 40°C to 80°C. The CH set temperature can also be changed directly from the main screen of the controller.

### **DHW Set Temperature**

- This option is used to set the temperature for the domestic hot water. The user can adjust this temperature in the range from 35°C to 60°C.

### **Work Setting\***

- When the PID adjustment function is disabled, the controller functions as a regular two-state controller. In this mode, additional functions appear in the main menu.

### **Blowing Force**

- This function controls the fan speed. The user can adjust the fan speed from 1% to 100%, where 1% represents the minimum speed and 100% represents the maximum speed.

## **FAQ**

### **Q: Can I install the controller myself?**

- **A:** No, the controller should be installed by a properly qualified person.

### **Q: What should I do if there is a power loss?**

- **A:** After the power supply is reconnected, the controller will return to operation with the previously set parameters thanks to its built-in memory. Lack of power supply does not delete the stored thermoregulator parameters.
- ALL IMAGES PUBLISHED SERVE ILLUSTRATION ONLY AND MAY DIFFER FROM THE ACTUAL APPEARANCE.

## **SAFETY**

- Before operating the device please read the following instructions carefully. Failure to observe these

instructions may cause personal injuries and damage to the device.

- To avoid unnecessary errors and accidents, make sure that all persons operating the device are thoroughly familiar with its operation and safety functions. Please retain the operating manual for future reference and make sure 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. For the safety of life and property, take precautions under the user manual, as the manufacturer is not responsible for damage 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 controller is not connected to the mains.
- Installation should be carried out by a person holding appropriate electrical qualifications.
- Before starting the controller, the ground resistance of electric motors and the insulation resistance of electric wires should be measured.
- The controller is not intended to be operated by children.

## **CAUTION**

- Atmospheric discharges can damage the controller, so during a thunderstorm, switch it off by unplugging the mains plug.
- The controller may not be used contrary to its intended purpose.
- Before and during the heating season, check the technical condition of the cables. Also check the installation of the controller, and clean dust and other soiling.
- There could be changes introduced in the products listed in the present manual, following its last revision of 03.02.2023. The manufacturer reserves the right to introduce design changes. Illustrations may contain optional equipment. Printing technology may affect differences in the presented colors.
- 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 of the used electronic parts and devices in a way that is safe for the environment. Therefore, the company 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 remains the user's responsibility to hand over used equipment to a designated collection point for recycling electrical and electronic equipment waste.

## **DEVICE DESCRIPTION**

- The EU-28N PID controller is designed for CH boilers. It controls the CH water circulation pump, DHW domestic hot water pump, and blowing (fan). If the boiler temperature is lower than the set temperature, the controller is in the operating cycle, in which the blower operates at all times.
- If the boiler temperature is equal to or higher than the set temperature, then the controller is in the temperature-maintaining cycle, and the controller works by switching on the purges at a frequency depending on the user's settings. The duration of operation and interruptions of purges in the maintenance cycle should be selected according to the type of fuel burned in the boiler.

## CAUTION

- Each controller must be set individually, depending on the type of fuel used in the boiler, and also the type of boiler. TECH is not responsible for incorrect controller settings.
- In case of voltage loss, the thermoregulator will stop working. After the power supply is reconnected, the controller returns to operation with previously set parameters thanks to its built-in memory. Lack of power supply does not delete the stored thermoregulator parameters.

## INSTALLING THE CONTROLLER

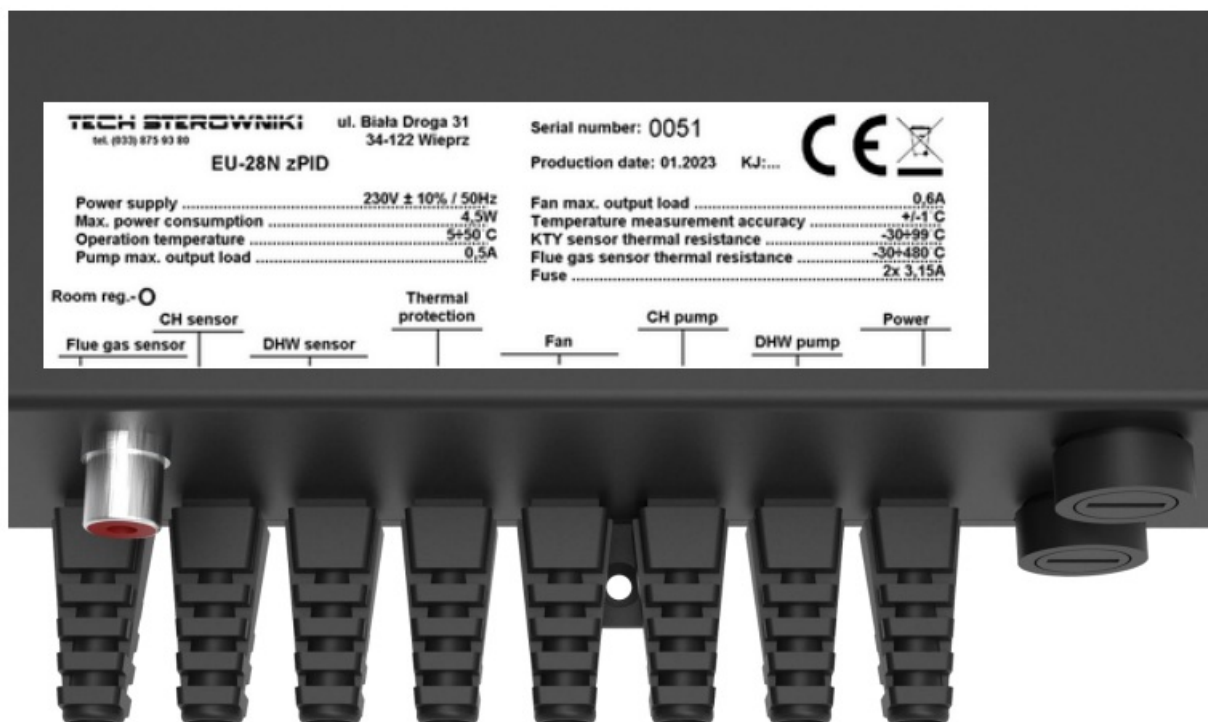
- The controller should be installed by a properly qualified person only.

## WARNING

- The danger of injury or death due to electric shock on live connections. Before working on the controller, disconnect its power supply and secure it against accidental switching on.

## CAUTION

- Incorrect wiring may damage the controller.
- In the back of the controller, there are connectors to which sensors and devices operated by the controller should be connected:



## CONTROLLER OPERATION



1. UP button – changes the set temperature from the main screen view, after entering the controller menu, this button is used to increase the operating settings.
2. DOWN button – changes the set temperature from the main screen view, after entering the controller menu, this button is used to reduce the operating settings.
3. Entering the controller menu, confirm the settings.
4. Power switch.
5. Exit from the controller menu, and cancel settings.

## CONTROLLER FUNCTIONS – MAIN MENU

### MAIN MENU

Ignition/ Extinguishing
Screen View
Temperature settings
Work Setting*
Manual operation
Pump operating mode
Time settings
Date settings
Weekly schedule control
Installer Menu
Service menu
Language selection
Factory defaults
Software info

\* Parameter visible when working with the zPID algorithm disabled

## FIRING UP/ EXTINGUISHING

- After the initial ignition of the boiler, the Ignition function must be activated. In this mode, the fan will start working to facilitate ignition (in a still-cold boiler).

- Once the CH temperature rises to 30°C (the so-called fan threshold), the Fan On/ Off function will appear on the display instead of the Ignition option the Manual Operation diode will turn off and the boiler will enter the operating mode.
- Using the Fan On/ Off function, the fan can be switched on or off (e.g. when adding fuel). Turning off the fan is indicated by an asterisk on the main screen in the lower right corner of the display.
- This function allows for the safe operation of the boiler. Never open the furnace door with the fan on. If the boiler reaches a temperature of 35°C, the pump (or both pumps depending on the operating mode) will start.

## **SCREEN VIEW**

- In this function, the user can select one of the available main screens of the thermoregulator operation.

### **These are:**

- CH screen (the current boiler operating mode is displayed)
- Service screen (allows you to view the parameters available in the service menu)

## **TEMPERATURE SETTINGS**

### **CH SET TEMPERATURE**

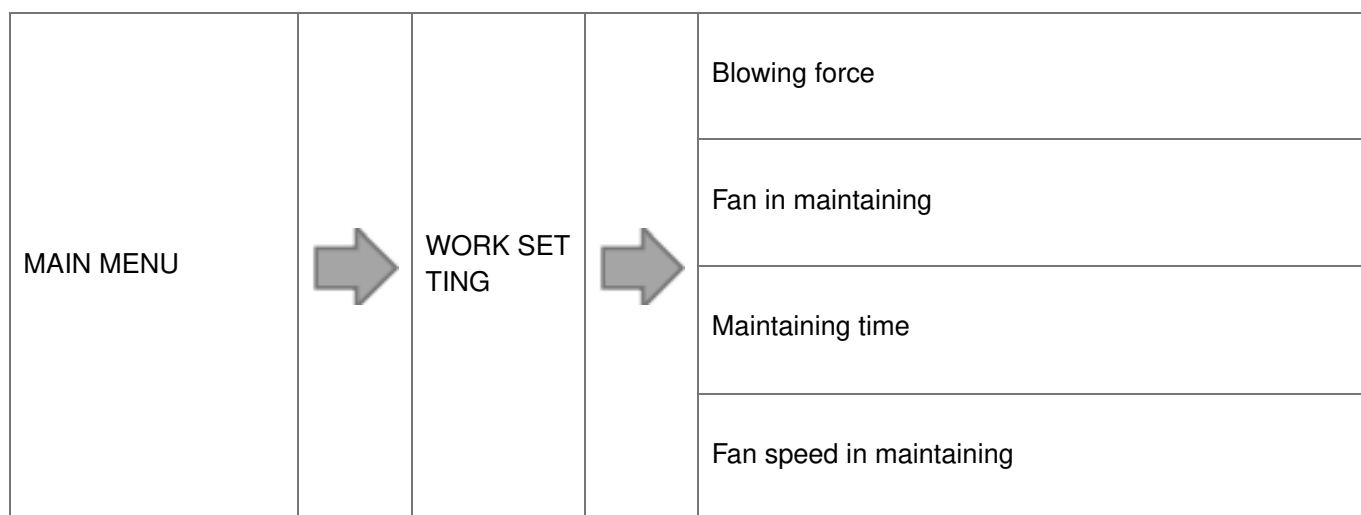
- This option is used to set the boiler temperature. The user can change the boiler temperature range from 40 to 80. The set CH can also be changed directly from the main screen of the controller.

### **DHW SET TEMPERATURE**

- This option is used to set the temperature of domestic hot water. The user can adjust this temperature in the range from 35OC to 60OC.

### **WORK SETTING\***

- After disabling the PID adjustment function, the controller will work as a regular two-state controller, and the following additional functions will appear in the main menu.



## BLOWING FORCE

- This function controls the fan speed. The adjustment range is from 1 to 100%, (it can be assumed that these are fan speeds). The higher the speed, the faster the fan works, where 1% is the minimum fan speed and 100% is the maximum.

## FAN IN MAINTAINING

- In this function, the user sets the running time and the fan pause time during the operation in the temperature-maintaining cycle.

## MAINTAINING TIME

- This option is used to set the fan's idle time during the maintenance period.

## CAUTION

- Incorrect setting of this option may cause a constant increase in temperature! The maintenance interval should not be too short.

## FAN SPEED IN MAINTAINING

- This option allows you to select the appropriate fan speed (blowing power) to maintain the cycle.

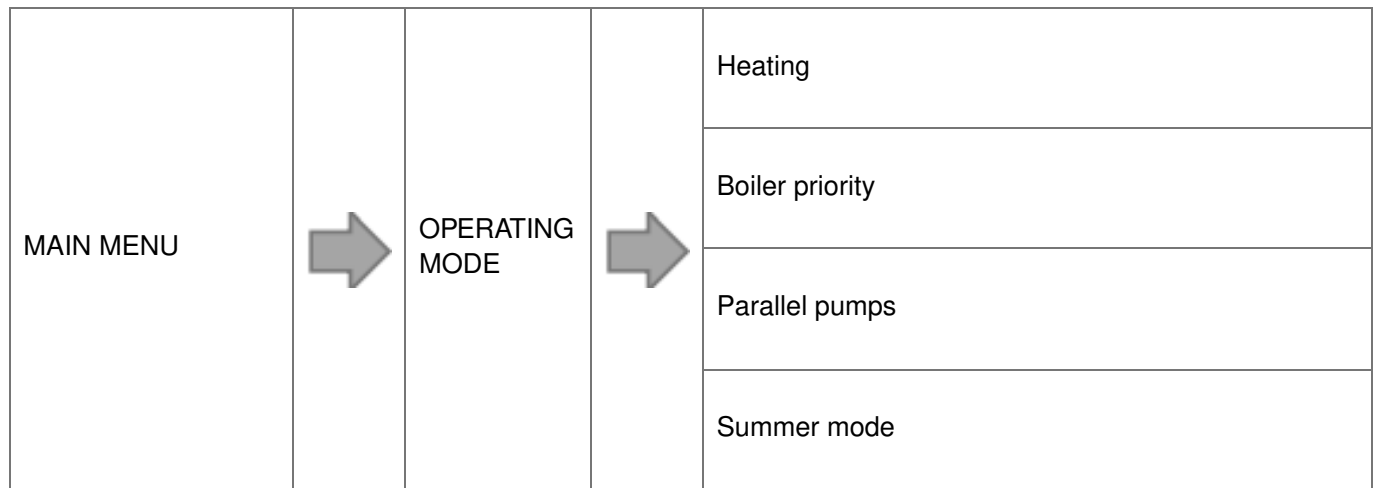
## MANUAL OPERATION

- For the convenience of the user, the controller has been equipped with a Manual Operation module. In this function, each actuator (fan, CH pump, DHW pump) is switched on and off independently of the others.
- Pressing the OPTIONS button starts the motor of the selected device. This device remains running until the OPTIONS button is pressed again.
- The blowing speed option is also available, enabling the user to set any fan speed in manual operation.

## PUMP OPERATING MODE



In this function, the user selects one of the available boiler operation modes.



## HEATING

- After selecting this option, the controller enters the “only heating” state. The CH pump will start operating above the CH pump start-up temperature. Below this temperature (minus the hysteresis value) the pump stops working.

## BOILER PRIORITY

- In this mode, the DHW pump operates until the boiler is heated (the valves close to the maximum and the valve pumps are switched off). At the moment of obtaining the set temperature on the boiler, the previously operating pump will be switched off, while the CH pump will be switched on and the mixing valves will be switched on. The moment the boiler temperature drops below the set point temperature by the hysteresis value, the DHW pump will switch on again and the valves will stop working.

## CAUTION

- The boiler should have check valves installed in the CH and DHW pump circuits. The valve mounted on the DHW pump prevents the extraction of hot water from the boiler. The valve mounted on the circuit of the CH pump does not let the hot water that heats the boiler to the home heating system.

## PARALLEL PUMPS

- Mode in which the CH pump operates above the pump start-up threshold. The DHW pump switches on in parallel and reheats the boiler, while after reheating the DHW, the pump switches off. The pump will restart after the temperature drops by the DHW hysteresis value.

## CAUTION

- If the boiler's current temperature is lower than the current temperature on the boiler, the DHW pump will not switch on to protect against cooling of the boiler water.

## SUMMER MODE

- When this function is activated, the CH pump is switched off and the DHW pump is switched on above the pump switch-on threshold.
- When the threshold temperature is exceeded, the DHW pump operates all the time until the boiler temperature drops below the pump start-up threshold (by DHW hysteresis value).
- In the summer function, only the set temperature of the DHW vessel is set, which is also the set temperature of the boiler.

## TIME SETTINGS

- Time settings are used to set the current time.

## DATE SETTINGS

- Used to set the current date.

## WEEKLY SCHEDULE CONTROL

- The function allows you to program deviations of the boiler set temperature (submenu Boiler week) on individual days of the week at specific times.

## CAUTION

- For the correct operation of this function, it is necessary to set the current date and time.
- To enable weekly control, select and check Mode 1 or Mode 2. Detailed settings of these modes can be found in the following sections of the submenu: Set Mode 1 and Set Mode 2.
- When one of the modes is activated, a digit with the value of the currently set deviation will be displayed on the main page of the controller,
- below the set temperature (alternatively with the inscription Set) (at the same time informing about the active weekly control).

### Changing weekly control settings:

- In the EU-28N PID controller, you can program the weekly control in two different modes:
- **MODE 1** – in this mode, it is possible to program deviations of the set temperature for each day of the week separately.
- **MODE 2** – in this mode, the user programs temperature deviations for weekdays (Monday – Friday) and for the weekend (Saturday – Sunday).

### Mode 1 programming:

- To program mode 1, the user starts the Set mode 1 parameter – a screen with individual days of the week appears on the display.

- After selecting the day of the week and the settings that we wish to change, the edit screen appears: the current deviation setting is displayed in the upper line and the lower displays the time interval.
- Use the UP/DOWN buttons to navigate to the next time frame. To edit a setting, click OPTIONS, and then click Change.
- To copy the settings for the subsequent hours, set the parameter, and then select the Copy function.

### **Example Monday**

- **settings:** 3 00, temp -100C (weekly control setting: –100C)
- **settings:** 4 00, temp -100C (weekly control setting: –100C)
- **settings:** 5 00, temp -100C (weekly control setting: –100C)
- In this case, if the setpoint temperature on the boiler is 600C, then from 300 hours on Monday to 600 hours the setpoint temperature on the boiler will drop by 100C, i.e. it will be 500C.

### **Mode 2 programming:**

- To program mode 2, the user starts the Set mode 2 parameter – the display shows a screen with two intervals for days of the week:
- Monday – Friday and Saturday – Sunday. After selecting the interval that we want to change, we go to their editing – a procedure such as in the mode 1 programming.

### **Example Monday-Friday**

- **settings:** 3 00, temp -100C (weekly control setting: –100C)
- **settings:** 4 00, temp -100C (weekly control setting: –100C)
- **settings:** 5 00, temp -100C (weekly control setting: –100C)

### **Saturday-Sunday**

- **settings:** 16 00, temp 50C (weekly control setting: +50C)
- **settings:** 1700 , temp 50C (weekly control setting: +50C)
- **settings:** 1800 , temp 50C (weekly control setting: +50C)
- In this case, if the setpoint temperature on the boiler is 600C, then from 300 hours to 600 hours.
- Monday to Friday the setpoint temperature on the boiler will drop by 100C, i.e. it will be 500C. On the other hand, during the weekend (Saturday, and Sunday) from 1600 to 1900, the set temperature on the boiler will increase by 50C, i.e. it will be 650C.

## **INSTALLER MENU**

- The installer menu is intended for use by people with appropriate qualifications and is mainly used for setting additional controller functions. Detailed parameters found in the Installer Menu are described later in the manual.

## **SERVICE MENU**

- To enter the service functions of the EU-28N PID controller, enter the four-digit code. This code is owned by Tech.

## LANGUAGE SELECTION

- Function that enables the user to select their preferred language version. This change is also possible using the flag button located on the controller.

## FACTORY DEFAULTS

- The controller is pre-configured for operation. However, it needs to be adapted to the needs of the user. It is possible to return to the factory settings at any time.
- By enabling the factory settings options, all the boiler's settings (stored in the user menu) are deleted and the manufacturer's settings are restored. From now on, you can set your boiler parameters again.

## SOFTWARE INFO

- The option allows you to view the controller software version number – this information is necessary when contacting the service technician.

## CONTROLLER FUNCTIONS – INSTALLER MENU

- The installer menu is intended for use by suitably qualified persons and is mainly used for setting additional controller functions such as boiler parameters, additional valves, additional pumps, etc., and for adjusting the basic functions in detail.

### INSTALLER MENU

Reduction by the room controller

Room controller

Operating algorithm

Pump switch-on temperature

DHW hysteresis

Disinfection of the boiler

Anti-stop for pumps

Antifreeze temperature

Boiler hysteresis\*

Screen setup

Display contrast

Factory defaults

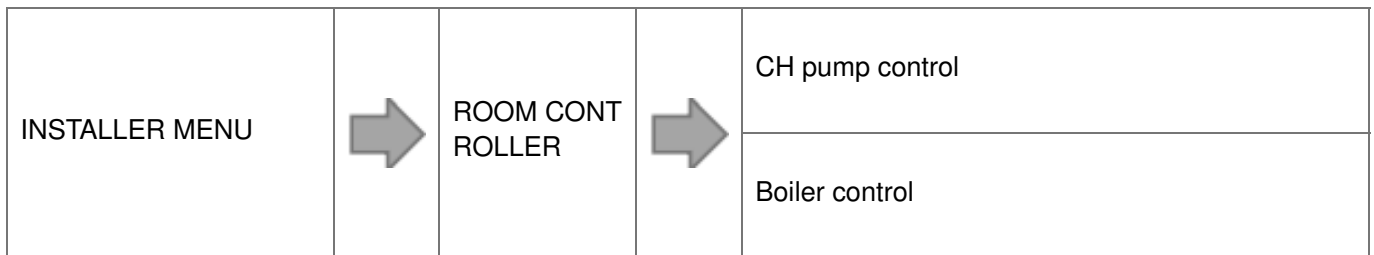
\* Parameter visible when working with the *Standard* algorithm enabled

## REDUCTION BY THE ROOM CONTROLLER

- In this function, set the value by which the controller will lower the set CH temperature when the temperature

set for the room controller is reached (room heated).

## ROOM CONTROLLER



- This function allows to indicate the type of controller connected to the EU-28N PID controller and to program the operation of the room controller.

## CH PUMP CONTROL

- The function enables activation of the control of the room regulator over the operation of the CH pump After activation of this function, the CH pump will be switched off when the room regulator reports reaching the heating temperature of the room.
- **Standard regulator** – check this option if the valve is to be controlled by a two-state room regulator.

## BOILER CONTROL

- The room controller will reduce the value of the boiler setpoint by the parameter Reduction by room controller in the Installer menu.
- **Standard regulator** – check this option if the valve is to be controlled by a two-state room regulator.

## OPERATING ALGORITHM

### STANDARD

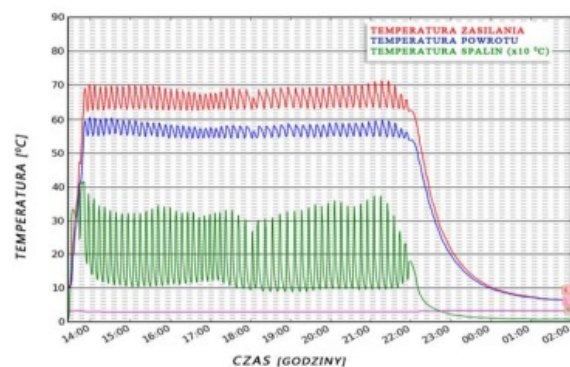
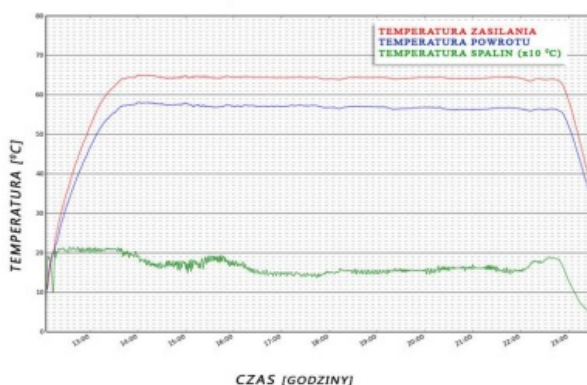
- When the Standard adjustment function is switched on, the controller will work like a regular two-state controller, and an additional option – Operation settings – will appear in the main menu.
- A detailed description of the parameters of the Operating Settings can be found in item 5.4
- The fan operation depends on the user settings and the current boiler temperature.
- If the current temperature is much lower than the set temperature (e.g. after the ignition is completed), the fan operates according to user-defined settings.

### PID

- The EU-28N PID controller is a continuous output controller applying a PID control algorithm. In this type of controller, the blowing power is calculated based on measuring the boiler temperature and the flue gas temperature measured at the boiler exhaust.
- The fan operation is carried out continuously over time, and the blowing power directly depends on the measured boiler temperature, flue gas temperature, and the difference between these parameters and their set

points.

- Stable maintenance of the set temperature without unnecessary overregulation and oscillation are the advantages of the PID controller.
- The PID control is additionally supported by readings from the airflow sensor mounted on the fan. The controller uses the data from the flow sensor for additional correction of its operation.
- Using this type of controller with an exhaust gas sensor, fuel savings can range from a few to a dozen or so percent; the outlet water temperature is very stable, which in turn affects the longer service life of the heat exchanger (boiler). Exhaust gas temperature control at the boiler exhausts lowers the emissions of clouds of dust and gases harmful to the environment. Thermal energy from exhaust gases is not wasted, i.e. released into the chimney, but used for heating.
- Below we present the results of tests carried out with the use of the Tech controller with PID control: and the same controller without PID control:



- Any comments regarding the program should be reported to the boiler manufacturer. Each controller must be set individually, depending on the type of fuel used in the boiler, and also the type of boiler. TECH is not responsible for incorrect controller settings.

## PUMP SWITCH-ON TEMPERATURE

- This option is used to set the switch-on temperature of the pumps (this is the temperature measured on the boiler).
- Below the set temperature, the pumps do not operate, and above this temperature, the pumps are switched on but operate depending on the mode of operation.

## DHW HYSTERESIS

This option is used to set the boiler set point hysteresis. This is the difference between the set temperature (i.e. the desired temperature on the boiler) and the return to operation temperature (for example: when the set temperature is 55°C and hysteresis is 5°C, then once the set temperature is reached, i.e. 55°C, the DHW pump switches off. The DHW pump will be switched on again after the temperature has dropped to 50°C).

### Example:

<i>DHW set temperature</i>	<i>55°C</i>
<i>Hysteresis</i>	<i>5°C</i>
<i>Pump shutdown</i>	<i>55°C</i>
<i>Switching the pump on again</i>	<i>50°C</i>

- When the preset temperature is 55°C and the hysteresis is 5°C, the device will be switched off when the temperature reaches 55°C, while the return to the operating cycle will occur when the temperature drops to 50°C).

## **DISINFECTION OF THE BOILER**

- Thermal disinfection consists of raising the temperature to the required disinfection temperature of min. 60°C is the entire DHW circuit. The new regulations impose the obligation to adapt the DHW installation to periodic thermal disinfection carried out at a water temperature not lower than 60°C (the recommended temperature is 70°). Wires, fittings, and technological systems of hot water preparation must meet this condition.
- Disinfection of DHW is aimed at eliminating Legionella pneumophila bacteria, which cause a decrease in the cellular immunity of the body. This bacterium often multiplies in vessels with standing hot water (optimum temperature 35°C), which often takes place, for example, in boilers.
- When this function is activated (only possible in Boiler Priority mode), the boiler heats up to 70°C (factory setting) and maintains this temperature for 10 minutes (factory setting), and then returns to the normal operation mode.
- From the moment of disinfection, the temperature of 70°C must be reached for not more than 60 minutes (factory setting), otherwise, this function will automatically deactivate.

## **ANTI-STOP FOR PUMPS**

- After enabling this option, the pump will switch on depending on the user's settings every 1-20 days for a set time (min. 30, max. 180 seconds). This prevents water from fouling the installation outside the heating season.

## **ANTIFREEZE TEMPERATURE**

- This option allows you to enable the antifreeze function, which is designed to protect the installation against freezing. After the temperature on the boiler or tank sensor drops below the specified value, the pump is switched on permanently.
- Its shutdown will only occur once the temperature in the circuit rises.

## **BOILER HYSTERESIS**

- When the zPID function is deactivated, the Boiler Hysteresis function will appear in the Installer Menu.
- This option is used to set the hysteresis of the set CH temperature. This is the difference between the temperature of entry into the temperature maintaining cycle and the temperature of return to the operating cycle (e.g. when the set temperature is 60°C and the hysteresis is 3°C, the transition to the maintaining cycle will occur after the temperature is reached 60°C, while the return to the operating cycle will occur after the

temperature drops to 57°C).

## **SCREEN SETUP**

- The option allows the user to set screen parameters such as screen brightness, screen fading, and fading time according to their needs and preferences.

## **DISPLAY CONTRAST**

- This function allows you to change the contrast settings of the display.

## **FACTORY DEFAULTS**

- The controller is delivered pre-configured for operation. However, it needs to be adapted to the needs of the user. It is possible to return to the factory settings at any time.
- Enabling the factory defaults option will delete all user settings of the boiler (as stored in the user menu), replacing them with default values set by the boiler manufacturer.
- From now on, you can set your boiler parameters again.

## **PROTECTIONS**

- To ensure maximally safe and seamless operation, the controller has many safeguards. In the event of an alarm, an acoustic signal is activated and a message will appear on the display.

## **TEMPERATURE ALERT**

- This protection is activated only in the operating mode (if the boiler temperature is lower than the set temperature).
- If the boiler temperature fails to rise within the time specified by the user, this alert is triggered, the blower is switched off and an acoustic signal is activated. The following message is displayed on the display:  
"Temperature is not rising".
- Pressing the OPTIONS button will disable this alert.
- The controller will return to the last set operating mode.

## **THERMAL PROTECTION**

- It is an additional mini bimetallic sensor (located next to the boiler temperature sensor – or on the supply pipe as close as possible to the boiler), disconnecting the fan in case of exceeding the alarm temperature –about 85÷90°C.
- Its operation prevents the boiling of water in the installation, in case of overheating of the boiler or damage to the controller. When this protection is activated, once the temperature drops to a safe value, the sensor will unlock itself.
- If this sensor is damaged or overheated, the fan will be disconnected.



## **CAUTION**

- In the event of damage to the thermal switch, the fan will not work both in manual operation and automatic operation mode.

## **AUTOMATIC SENSOR CONTROL**

- If the CH, DHW, or screw temperature sensor or fuel reservoir is damaged, an audible alarm is activated, additionally signaling the relevant fault on the display, e.g.: "CH sensor damaged".
- The blower is switched off. The pump operates independently of the current temperature.

## **BOILER BOILING WATER PROTECTION**

- This protection applies only to the boiler priority operating mode, in case the tank is underheated. Namely, when the boiler temperature is set, e.g.: 55OC, and the actual temperature of the boiler rises to 62OC (this is the so-called priority temperature), then the controller turns off the fan. If the temperature on the boiler rises to 80, the CH pump will switch on. When the temperature continues to rise, an alarm will sound at 85OC.
- Most often, such a state can occur when the boiler is damaged, the sensor is incorrectly fixed, or the pump is damaged. However, once the temperature decreases, at the 60OC threshold, the controller will turn on the blower and will operate in the operating mode until the temperature reaches 62OC.

## **TEMPERATURE PROTECTION**

- The controller has additional mechanical protection against dangerous temperature increases. If the alarm temperature (80) is exceeded, the fan is disconnected.
- When the temperature of 85OC is exceeded, an alarm is activated and a message appears on the display reading: "Temperature too high". Once the temperature drops to a safe value, after pressing the OPTIONS button, the alarm will be turned off and the controller will return to the last set operating mode.

## **FUSE**

- The controller has a 3.15A WT glass tube fuse insert, which protects the network.

## **CAUTION:**

- Using a higher-rating fuse may cause damage to the controller.

## **TECHNICAL SPECIFICATIONS**


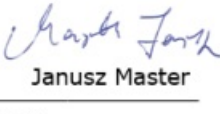
- In the EU-28N PID Controller, one should check the technical condition of the wiring before and during the heating season.
- Also, check the mounting of the controller, clean it from dust and soiling, and measure the grounding of the motors (CH pump, DHW pump, blower).

No.	Specification	
1	Power supply	230V $\pm$ 10% /50Hz
2	Max. power consumption	4.5W
3	Operating temperature	5÷50°C
4	Max. pump output load	0.5A
5	Max fan output load	0.6A
6	Temperature measurement accuracy	$\pm$ 1°C
7	KTY sensor temp resistance	-30÷99°C
8	Exhaust gas sensor temperature resistance	-30÷480°C
9	Fuse	2x 3.15 A

## EU DECLARATION OF CONFORMITY

Hereby, we declare under our sole responsibility that EU-28N PID manufactured by TECH STEROWNIKI, 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.  
Wieprz, 03.02.2023


  
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**[TECH CONTROLLERS EU-28N zPID Charging Boiler](#)** [pdf] User Manual  
EU-28N zPID, EU-28N zPID Charging Boiler, Charging Boiler, Boiler

## References

- [User Manual](#)