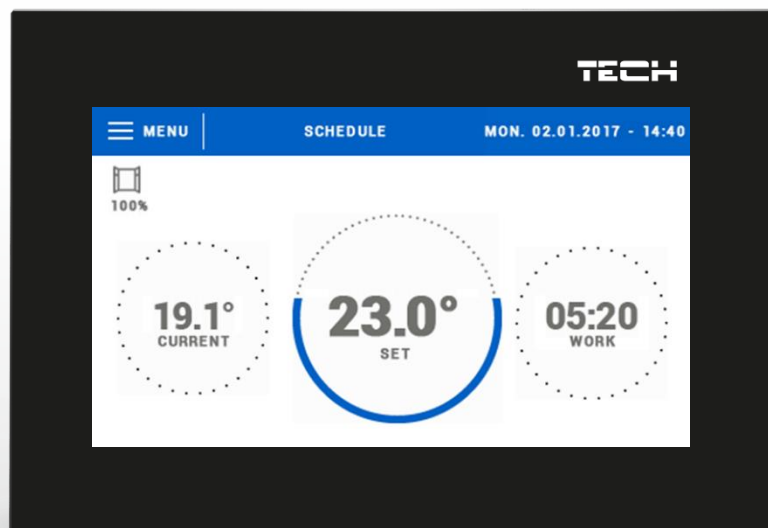


# TECH TECH CONTROLLERS

## USER MANUAL EU- 283c WiFi

EN



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KN.2020.05.11

## I. 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.
- The regulator should not be operated by children.

### NOTE

-  • 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 May 11th 2020. 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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Care for the natural environment is our priority. Being aware of the fact that we manufacture electronic devices obligates us to dispose of used elements and electronic equipment in a manner which is safe for nature. As a result, the company has received a registry number assigned by the Main Inspector of Environmental Protection. The symbol of a crossed out rubbish bin on a product means that the product must not be thrown out to ordinary waste bins. By segregating waste intended for recycling, we help protect the natural environment. It is the user's responsibility to transfer waste electrical and electronic equipment to the selected collection point for recycling of waste generated from electronic and electrical equipment.



## II. DEVICE DESCRIPTION

### Controller features:

- Front panel made of 2 mm glass
- Large colour touch screen
- Built-in temperature sensor
- Built-in WiFi module
- Flush-mountable

## III. INSTALLATION

Controller should be installed by a qualified person.



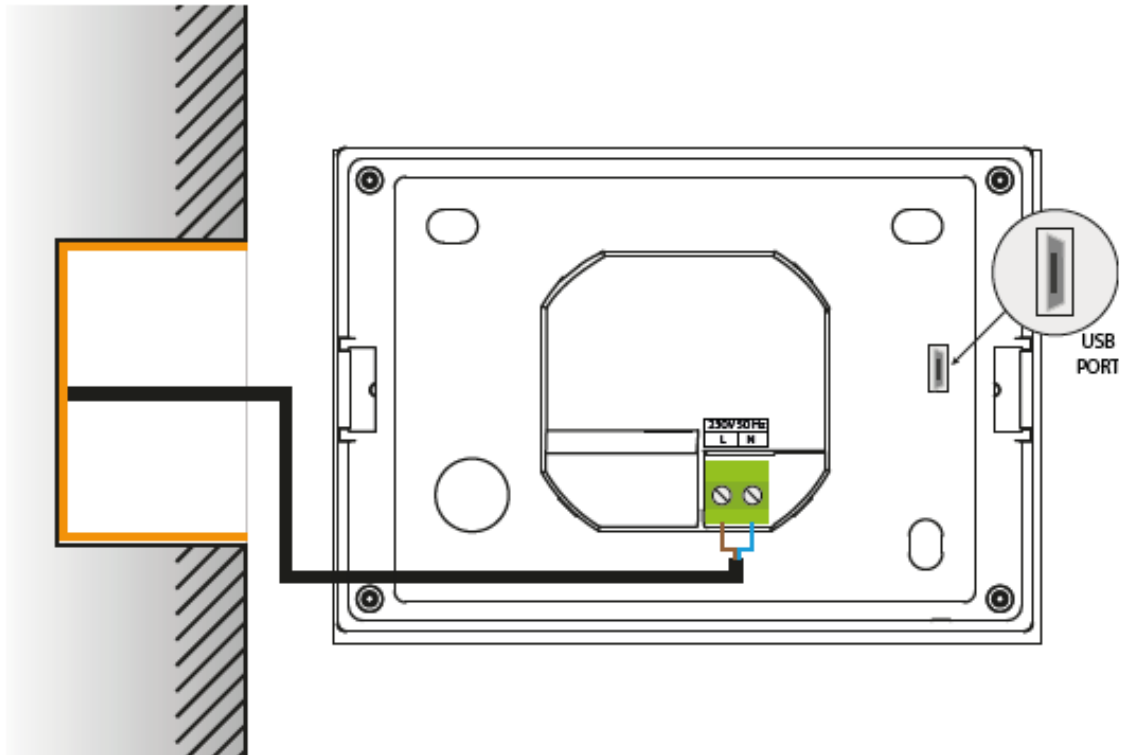
### WARNING

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



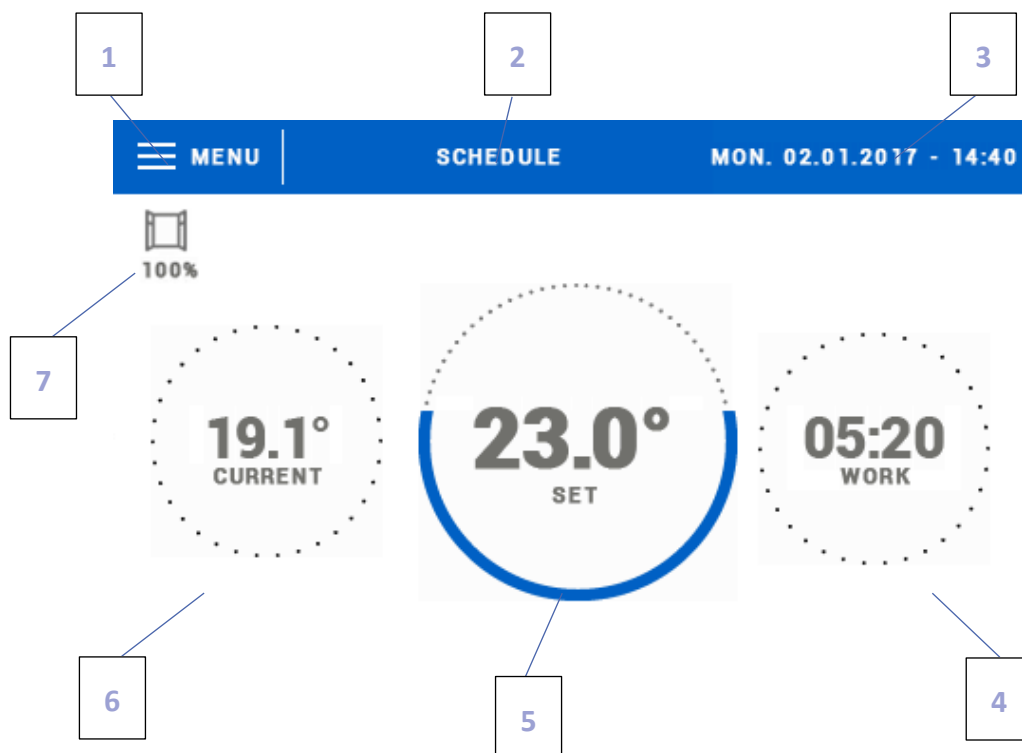
### NOTE

Incorrect connection of the wires may damage the regulator!



## IV. MAIN SCREEN DESCRIPTION

The regulator is controlled using touch screen.



1. Enter the controller menu

2. Regulator operation mode - the pre-set temperature is selected according to the schedule or manual settings (manual mode). Touch the screen here to open up a schedule selection panel

3. Current time and date

4. Time left before the next change of the pre-set temperature in current operation mode

5. Pre-set zone temperature - tap on the screen here to edit this value. Once the temperature has been changed manually, manual mode is activated in the zone

6. Current zone temperature

7. Icon informing about window opening or closing

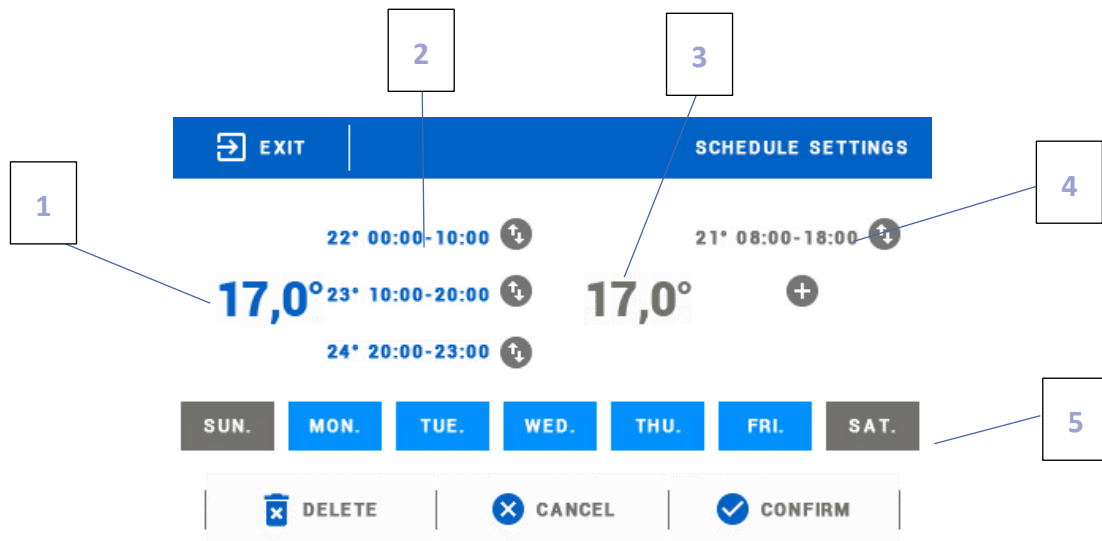
## V. SCHEDULE

### 1. SCHEDULE

Pressing this icon activates / deactivates the controller's operating mode according to a set schedule.

### 2. SCHEDULE SETTINGS

After entering the schedule editing screen, the schedule may be adjusted to the user's needs. The settings may be configured for two separate groups of days – the first group in blue, the second one in grey. It is possible to assign up to 3 time periods with separate temperature values to each group. Outside these periods, a general pre-set temperature will apply (its value may also be edited by the user).



1. General pre-set temperature for the first group of days (blue colour – in the example above the colour is used to mark working days Monday-Friday). The temperature applies outside the time periods defined by the user.
2. Time periods for the first group of days – the pre-set temperature and the time limits. Tapping on a given period opens up an editing screen.
3. General pre-set temperature for the second group of days (grey colour – in the example above the colour is used to mark Saturday and Sunday).
4. Time periods for the second group of days.
5. Days of the week – blue days are assigned to the first group whereas grey days are assigned to the second one. In order to change the group, tap on a selected day.

If the time periods overlap, they are marked with red colour. Such settings cannot be confirmed.

### 3. ADDITIONAL CONTACTS

#### A) PAIRING

In order to register the actuator, select 'Pairing' in *Additional contacts* submenu and press quickly the communication button (found under the actuator cover). Release the button and watch the control light:

- control light flashes twice - proper communication established
- control light lights up continuously - no communication with the main controller

#### B) CONTACT REMOVAL

This option enables the user to remove the actuators in a given zone.

### 4. WINDOW SENSORS

#### A) ON

This option is used to activate registered sensors.

## B) DELAY TIME

When the pre-set delay time is over, the main controller sends the information to the actuators forcing them to close. Time setting range is 00:00 – 00:30 minutes.

Example:

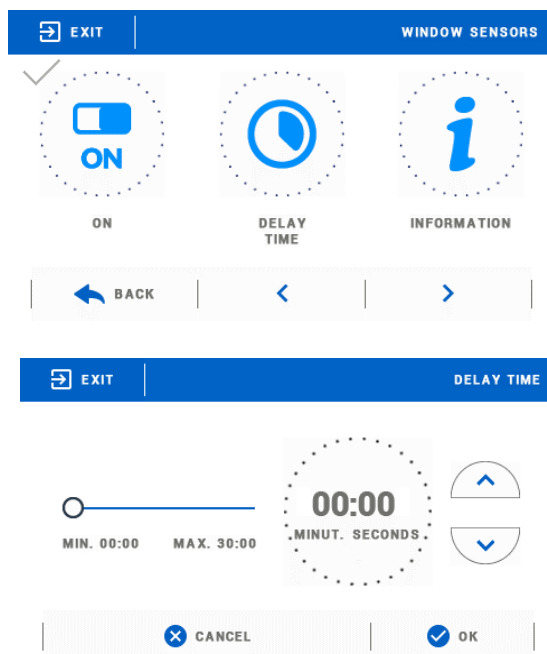
Delay time is set at 10 minutes.

When the window is opened, the sensor sends the information to the main controller. If the sensor sends another information that the window is open after 10 minutes, the main controller will force the actuators to close.



### NOTE

If the delay time is set at 0 minutes, the message forcing the actuators to close will be sent immediately.



## C) INFORMATION

Select this option to view all sensors.

## D) PAIRING

In order to register the sensor, select 'Pairing' in Additional contacts submenu and press quickly the communication button. Release the button and watch the control light:

- control light flashes twice - proper communication established
- control light lights up continuously - no communication with the main controller

## E) SENSOR REMOVAL

This option is used to remove the sensors in a given zone.

## 5. CALIBRATION

Calibration of the room sensor 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 -10 to +10°C with the accuracy of 0,1°C.

## 6. HYSTERESIS

This function is used to define tolerance of the pre-set temperature in order to prevent undesired oscillation in case of small temperature fluctuation (within the range 0,1 ÷ 2,5°C) with the accuracy of 0,1°C.

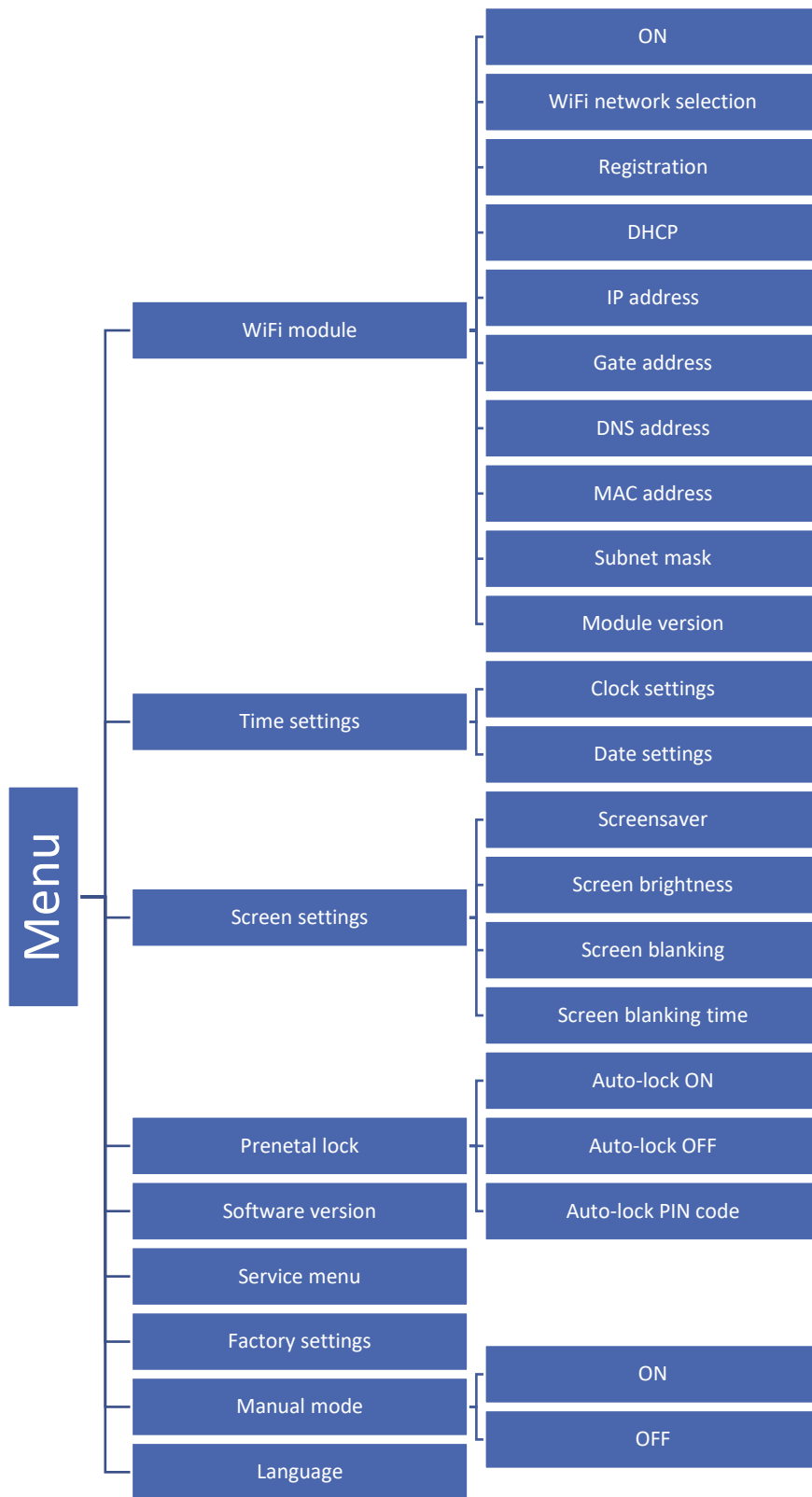
Example: if the pre-set temperature is 23°C and the hysteresis is 0,5°C, the room temperature is considered too low when it drops to 22,5°C.

## 7. ON

This function enables the user to activate the devices assigned to a given zone.

# VI. CONTROLLER MENU

## 1. BLOCK DIAGRAM OF MAIN MENU





## 2. WIFI MODULE

The controller features a built-in Internet module enabling the user to monitor the status of all system devices on a computer screen, a tablet or a mobile phone.

Apart from the possibility to view the temperature of every sensor, the user may adjust the pre-set temperature values.

After switching the module on and selecting DHCP option, the controller automatically downloads such parameters as IP address, IP mask, gateway address and DNS address from the local network. If any problems arise when downloading the network parameters, they may be set manually. The procedure of obtaining these parameters is described in detail in the instruction manual of the Internet module.

Online system control via a website is described in detail in section VII.

## 3. TIME SETTINGS

This option is used to set current time which is displayed in the main screen view.

Use icons: ▲ and ▼ to set the desired value and confirm by pressing OK.

## 4. SCREEN SETTINGS

Tapping on Screen settings icon in the main menu opens up a panel enabling the user to adjust the screen settings to individual needs.

The user may activate a screensaver which will appear after a pre-defined time of inactivity. In order to return to the main screen view, tap on the screen. The following screensaver settings may be configured by the user:

- **Screensaver selection** - After tapping on this icon, the user may deactivate the screen saver (No screensaver) or set the screensaver in the form of:

- Slide show – (this option may be activated if the photos have been uploaded first). The screen displays the photos at a user-defined frequency.

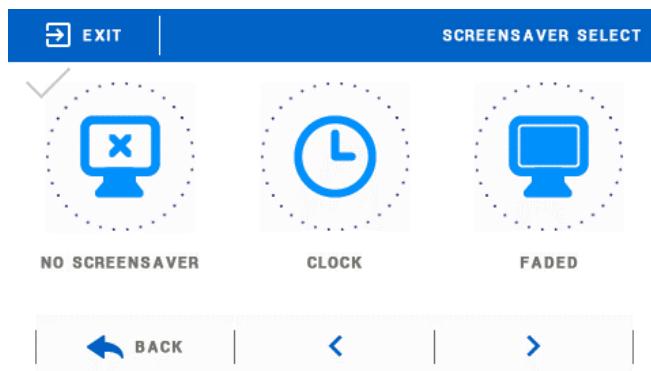
- Clock – the screen displays the clock.

- Blank – after the pre-defined time of inactivity the screen goes blank.

- **Photo upload** - Before importing the photos to the controller memory they must be processed using ImageClip (the software may be downloaded from [www.techsterowniki.pl](http://www.techsterowniki.pl)).



After the software has been installed and started, load the photos. Select the area of the photo which will be displayed on the screen. The photo may be rotated. After one photo has been edited, load the next one. When all the photos are ready, save them in the main folder of the memory stick. Next, insert the memory stick into the USB port and activate Photo upload function in the controller menu.

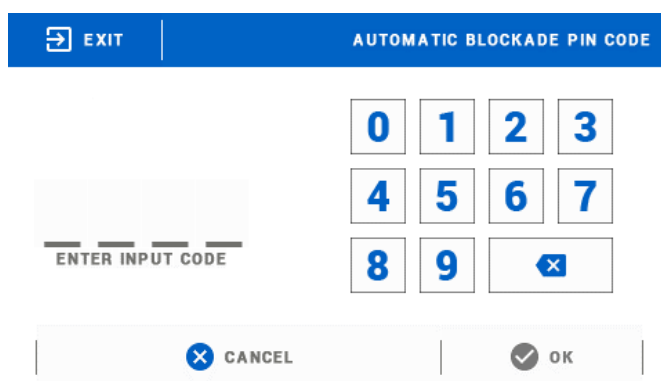


It is possible to upload up to 8 photos. When uploading new photos, the old ones are automatically removed from the controller memory.

- **Slide show frequency** - This option is used to set the frequency at which the photos are displayed on the screen if the Slide show is activated.

## 5. PRENATAL LOCK

Tapping on *Parental lock* icon in the main menu opens up a screen enabling the user to configure the parental lock function. When this function is activated by selecting Auto-lock ON, the user may set the PIN code necessary to access to the controller menu.



### NOTE

Default PIN code is „0000”.

## 6. SOFTWARE VERSION

When this option is selected, the display shows the logo of the manufacturer as well as the software version used in the regulator.



### NOTE

When contacting Service Department of TECH company it is necessary to provide the software version number.

## 7. SERVICE MENU

Service menu functions should be configured by a qualified fitter. Access to this menu is protected with a 4-digit code.

## 8. FACTORY SETTINGS

This option enables the user to restore factory settings defined by the manufacturer.

## 9. MANUAL MODE

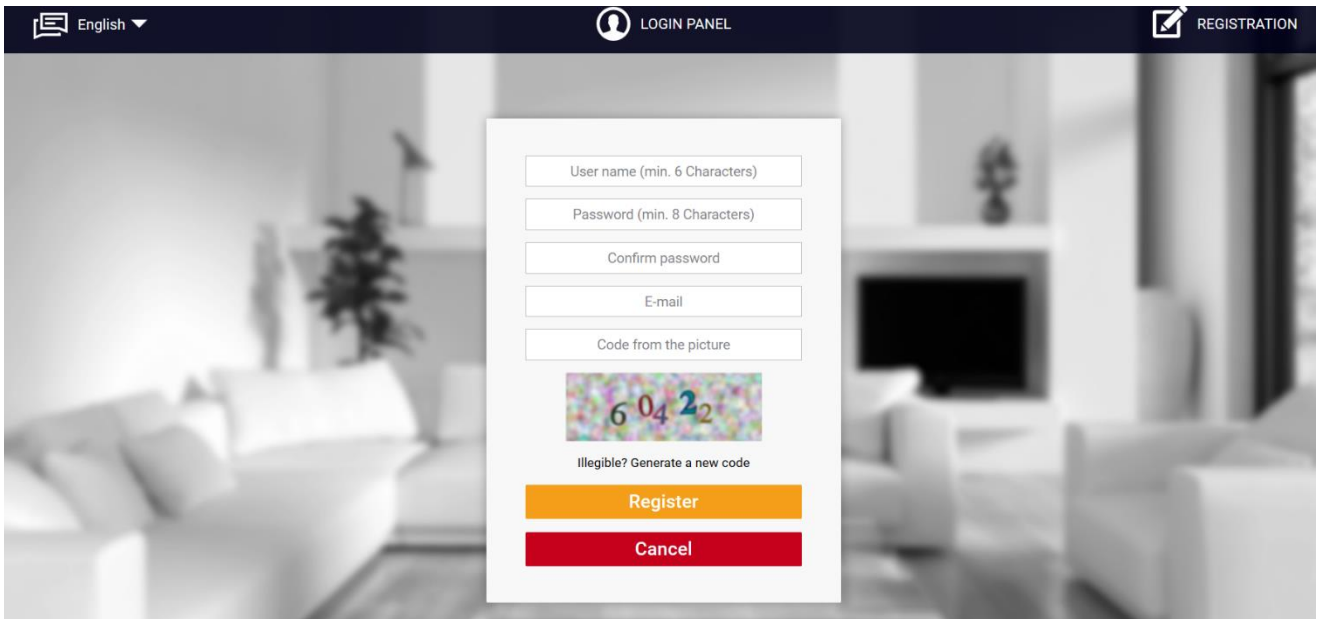
This function enables the user to check if the contact to which the heating device is connected works correctly.

## 10. LANGUAGE SELECTION

This option is used to select the software language preferred by the user.

## VII. HOW TO CONTROL THE HEATING SYSTEM VIA WWW.EMODUL.EU

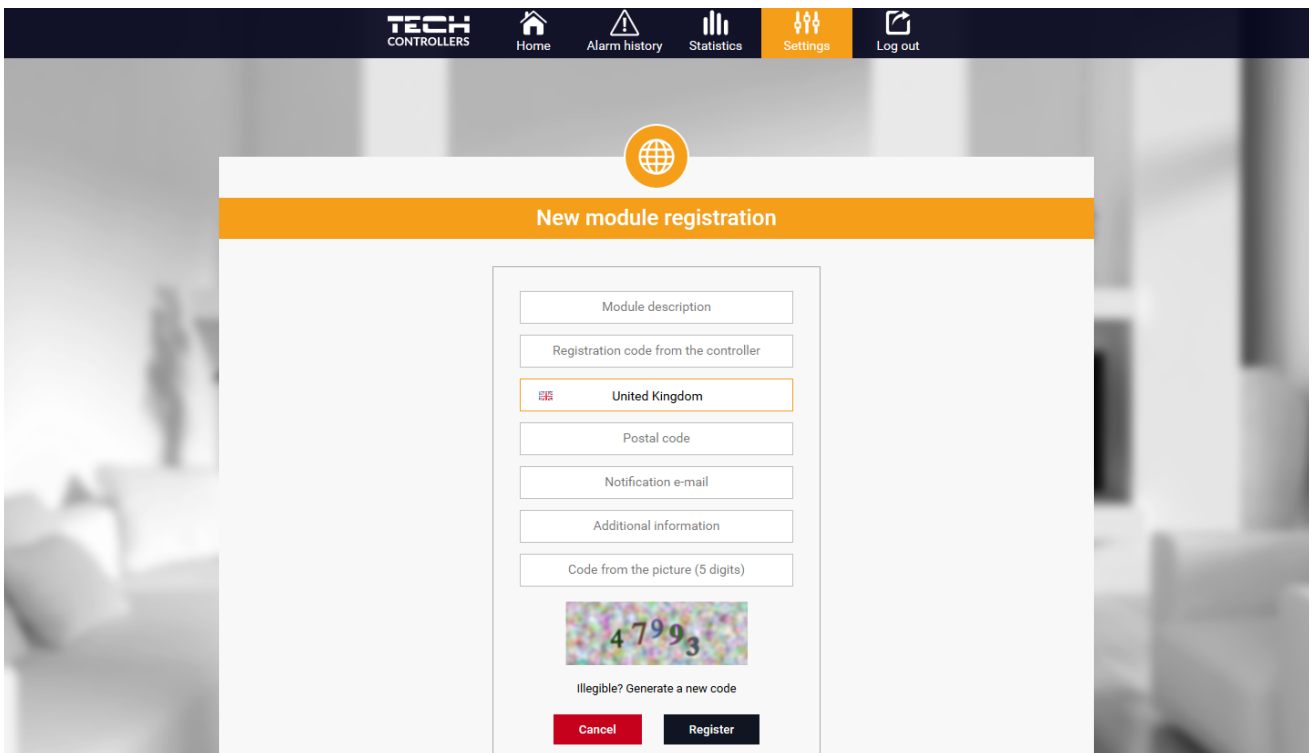
The website offers multiple tools for controlling your heating system. In order to take full advantage of the technology, create your own account:



The screenshot shows the registration form on the emodul.eu website. The form is centered on a blurred background of a living room. At the top, there is a navigation bar with 'English' on the left, 'LOGIN PANEL' in the center, and 'REGISTRATION' on the right. The registration form itself contains the following fields: 'User name (min. 6 Characters)', 'Password (min. 8 Characters)', 'Confirm password', 'E-mail', and 'Code from the picture'. Below the 'Code from the picture' field is a CAPTCHA image showing the numbers '6 04 22'. Underneath the CAPTCHA is the text 'Illegible? Generate a new code'. At the bottom of the form are two buttons: 'Register' (orange) and 'Cancel' (red).

*Creating a new account at emodul.eu*

Once logged in, go to Settings tab and select Register module. Next, enter the code generated by the controller (to generate the code, select Registration in WiFi 8s menu). The module may be assigned a name (in the are labelled Module description):

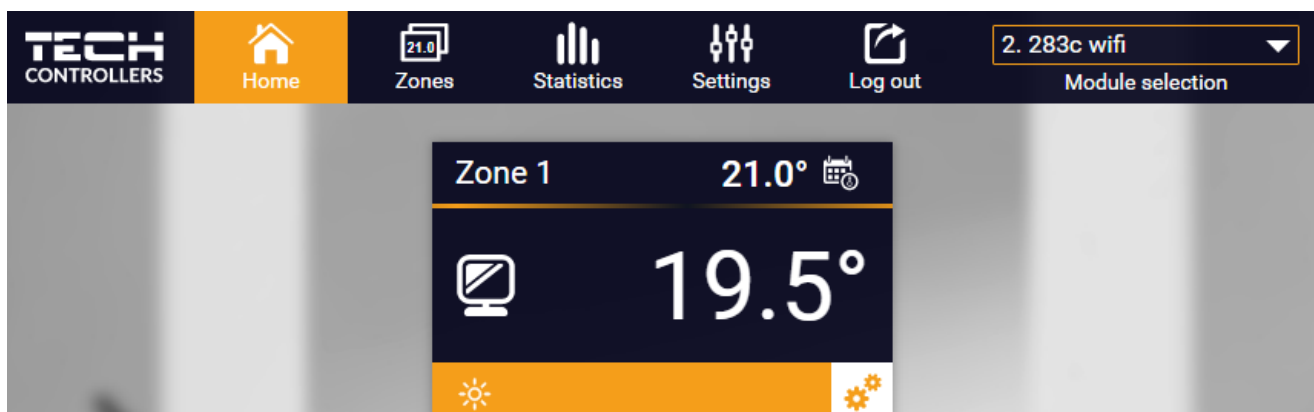


The screenshot shows the 'New module registration' screen on the emodul.eu website. The top navigation bar includes 'TECH CONTROLLERS', 'Home', 'Alarm history', 'Statistics', 'Settings' (highlighted in orange), and 'Log out'. The main content area features a white registration form with an orange header bar that says 'New module registration'. The form includes the following fields: 'Module description', 'Registration code from the controller', a dropdown menu for 'United Kingdom' (with a UK flag icon), 'Postal code', 'Notification e-mail', 'Additional information', and 'Code from the picture (5 digits)'. Below the 'Code from the picture' field is a CAPTCHA image showing the numbers '4 7 9 9 3'. Underneath the CAPTCHA is the text 'Illegible? Generate a new code'. At the bottom of the form are two buttons: 'Cancel' (red) and 'Register' (black).

*New module registration screen*

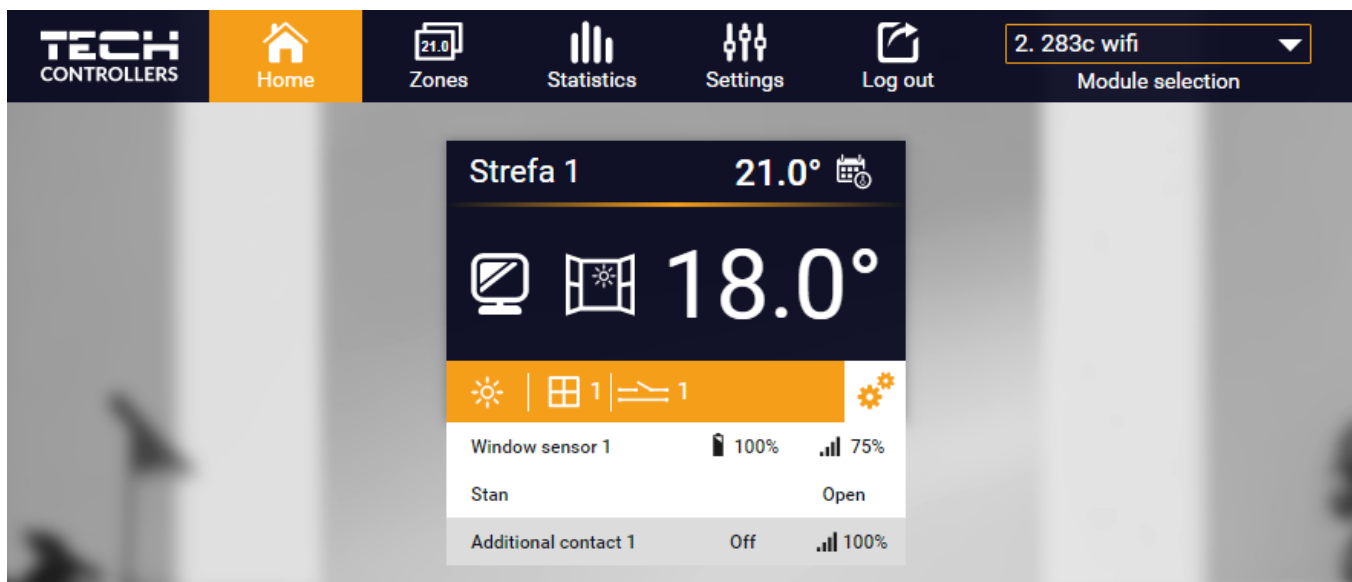
## 1. HOME TAB

Home tab displays the main screen with tiles illustrating the current status of particular heating system devices. Tap on the tile to adjust the operation parameters:



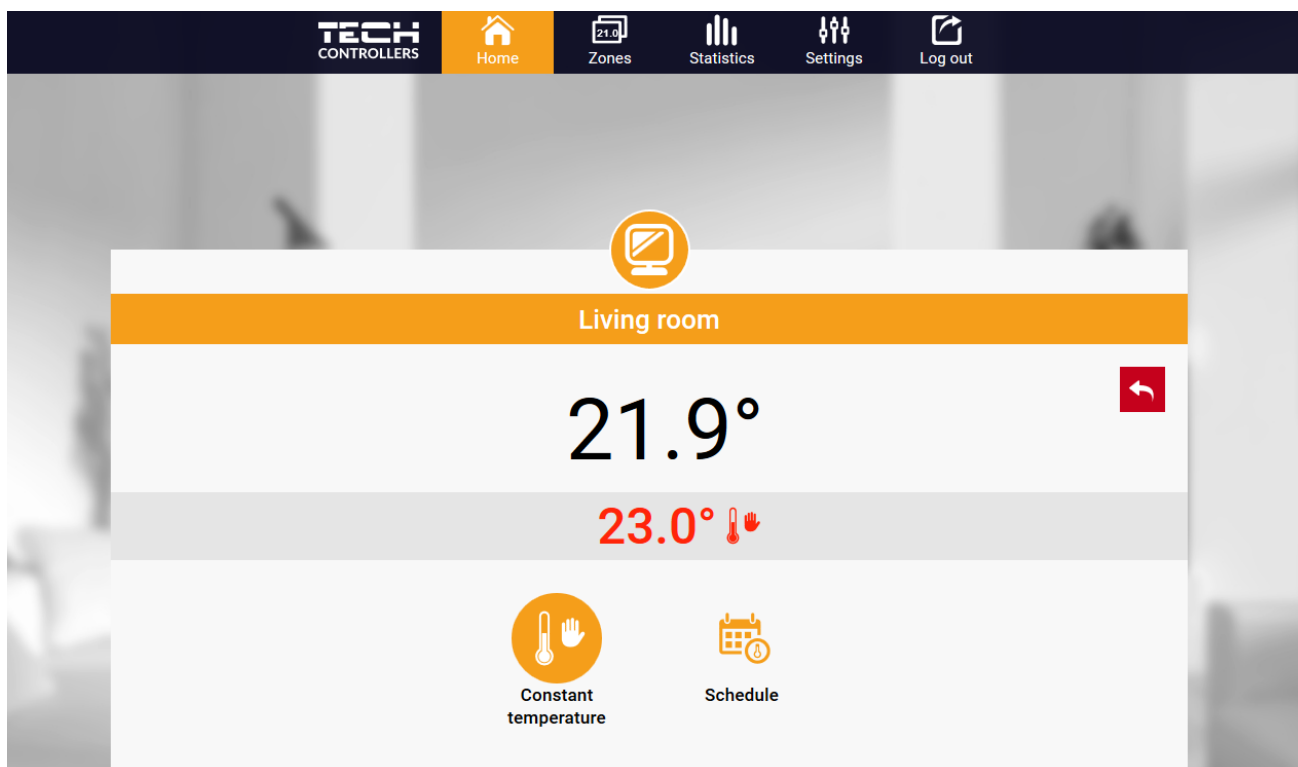
### NOTE

„No communication” message means that the communication with the temperature sensor in a given zone has been interrupted. The most common cause is the flat battery which needs replacing.



*View of the Home tab when window sensors and additional contacts are registered*

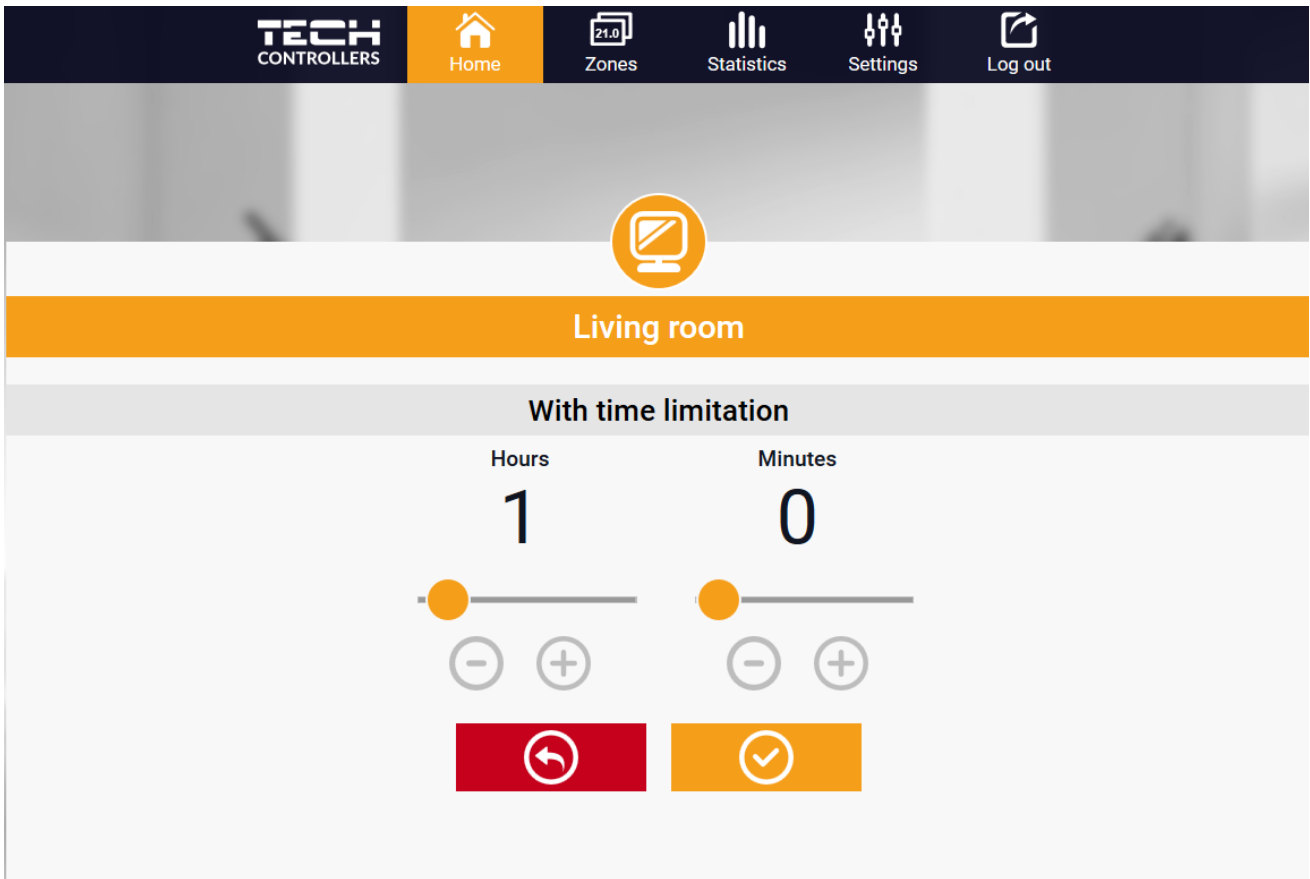
Tap on the tile corresponding to a given zone to edit its pre-set temperature:



The upper value is the current zone temperature whereas the bottom value is the pre-set temperature.

The pre-set zone temperature depends by default on the weekly schedule settings. Constant temperature mode enables the user to set a separate pre-set temperature value which will apply in the zone regardless of the time.

By selecting Constant temperature icon, the user may define the pre-set temperature which will apply for a pre-defined period of time. Once the time is up, the temperature will be set according to the previous schedule (schedule or constant temperature without time limit).



Local schedule is a weekly schedule assigned to a particular zone. Once the controller detects the room sensor, the schedule is assigned automatically to the zone. It may be edited by the user. After selecting the schedule select OK and move on to edit the weekly schedule settings:

**TECH CONTROLLERS** Home Zones Statistics Settings Log out

## Living room

### Local schedule

Mo Tu We Th Fr Sa Su

**Setback temperature**

**23.0°**

00:00 - 06:00	20.0°	⊖
08:00 - 16:00	18.5°	⊖
23:00 - 00:00	20.0°	⊖

Mo Tu We Th Fr Sa Su

**Set temperature**

**23.0°**

00:00 - 07:00	20.0°	⊖
23:00 - 00:00	20.0°	⊖

+

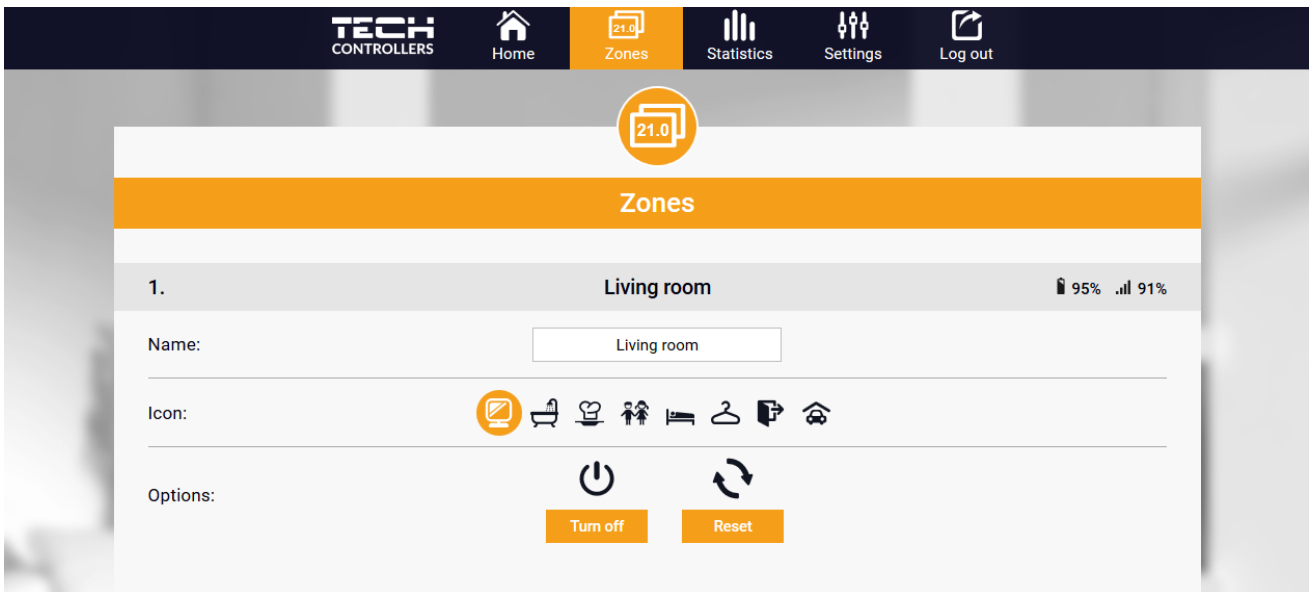
↶
✓

Editing enables the user to define two programs and select days when the programs will be active (e.g. from Monday to Friday and the weekend). The starting point for each program is the pre-set temperature value.

For each program the user may define up to 3 time periods when the temperature will be different from the pre-set value. The time periods must not overlap. Outside the time periods the pre-set temperature will apply. The accuracy of defining the time periods is 15 minutes.

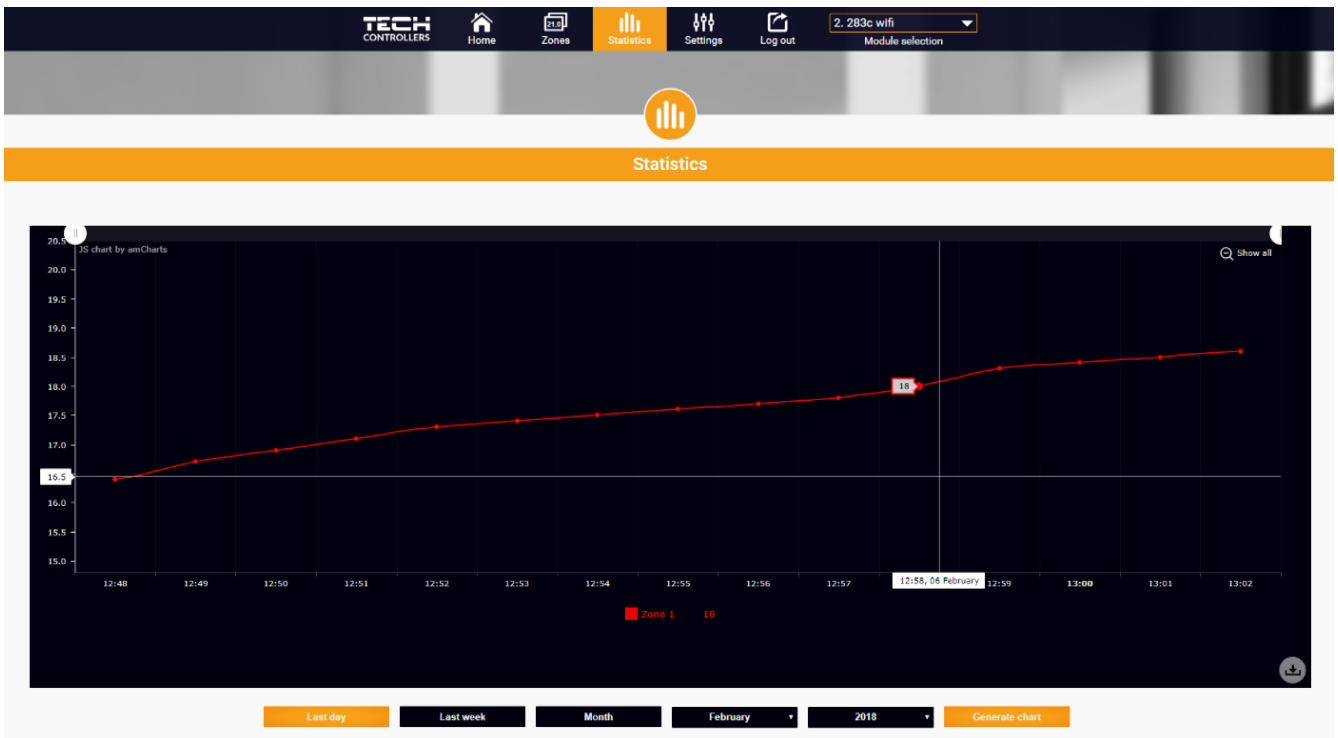
## 2. ZONES TAB

The user may customize the home page view by changing zone names and corresponding icons. In order to do it, go to Zones tab:



## 3. STATISTICS

Statistics tab enables the user to view the temperature values for different time periods e.g. 24h, a week or a month. It is also possible to view the statistics for the previous months:





#### 4. SETTINGS TAB

Settings tab enables the user to register a new module and change the e-mail address or the password:

**TECH CONTROLLERS** Home Zones Statistics **Settings** Log out

**Settings**

**Modules associated with the account**

**1. Test**

<b>Controller</b>		
<b>Module</b>	Test	Change
<b>Notification e-mail</b>	Notification e-mail	Change
<b>Postal code</b>	Postal code	Change
<b>Additional information</b>	Additional information	Change
<b>Options</b>	Remove module	

Register next module

**Account settings**

<b>User</b>	testl	
<b>E-mail</b>	test@test.com	Change
<b>Password</b>	Current password	
	New password	Change
	Confirm password	

## VIII. PROTECTIONS AND ALARMS

In the event of an alarm, a sound signal is activated and the display shows an appropriate message.

Alarm	Possible cause	Solution
Damaged sensor alarm (in the event of internal sensor damage )	Internal sensor in the controller has been damaged	Call the service staff
No communication with sensor/wireless regulator	<ul style="list-style-type: none"><li>- No range</li><li>- No batteries</li><li>- The batteries are flat</li></ul>	<ul style="list-style-type: none"><li>- Put the sensor/regulator in a different place</li><li>- Insert the batteries into the sensor/regulator</li></ul> <p>The alarm is deactivated automatically when the communication is re-established</p>

## IX. SOFTWARE UPDATE

In order to install new software, the controller must be unplugged from the power supply. Next, insert the memory stick with the new software into the USB port. Connect the controller to the power supply. A single sound signals that the software update process has been initiated.



### NOTE

Software update shall be conducted only by a qualified fitter. After the software has been updated, it is not possible to restore previous settings.

## X. TECHNICAL DATA

Specification	Value
Supply voltage	230V
Maximum power consumption	1,5W
Temperature adjustment range	5°C÷ 40°C
Measurement error	+/-0,5°C
Operation frequency	868MHz
Transmission	IEEE 802.11 b/g/n

# TECH CONTROLLERS

## EU Declaration of conformity

Hereby, we declare under our sole responsibility that **EU-283c WiFi** manufactured by TECH STEROWNIKI, head-quartered in Wieprz Biała Droga 31, 34-122 Wieprz, is compliant with Directive **2014/53/EU** of the European parliament and of the Council of 16 April 2014 on the harmonisation of the laws of the Member States relating to the making available on the market of radio equipment, 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 art. 3.1a Safety of use

PN-EN IEC 62368-1:2020-11 art. 3.1 a Safety of use

PN-EN 62479:2011 art. 3.1 a Safety of use

ETSI EN 301 489-1 V2.2.3 (2019-11) art.3.1b Electromagnetic compatibility

ETSI EN 301 489-3 V2.1.1 (2019-03) art.3.1 b Electromagnetic compatibility


ETSI EN 301 489-17 V3.2.4 (2020-09) art.3.1b Electromagnetic compatibility


ETSI EN 300 328 V2.2.2 (2019-07) art.3.2 Effective and coherent use of radio spectrum

ETSI EN 300 220-2 V3.2.1 (2018-06) art.3.2 Effective and coherent use of radio spectrum

ETSI EN 300 220-1 V3.1.1 (2017-02) art.3.2 Effective and coherent use of radio spectrum

Wieprz, 11.05.2020

  
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