

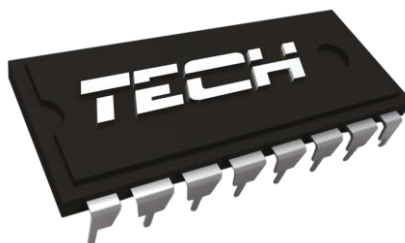
Controllers

User's manual WiFi RS

EN



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Declaration of conformity No 188/2015

The company TECH, based in Wieprz (34-122) at ul. Biała Droga 31, declares with complete liability that our Internet module ST-507 meets the requirements of the following EC directives:

- R&TTE Directive 1999/5/EC;
- Low Voltage Directive (LVD) 2006/95/EC;
- EMC Directive 2004/108/EC.

Harmonized standards were used to assess the conformity:

- **PN-EN 60950-1-:2007;**
- **PN-EN 55022:2011;**
- **PN-EN 55024:2011.**


PAWEŁ JURA


JANUSZ MASTER

WŁAŚCICIELE TECH SPÓŁKA Z OGRANICZONĄ ODPOWIEDZIALNOŚCIĄ SP. K.

Wieprz, 25. 04. 2016

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 and device damage. The user's manual should be stored in a safe place for further reference.

In order to avoid unnecessary errors and accidents it should be ensured that every person using the device has familiarized themselves with the principle of its operation as well as its security functions. 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 (connecting cables, installing the device etc.).
- The device should be installed by a qualified electrician.
- The regulator should not be operated by children.



NOTE

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



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 a selected collection point for recycling of waste generated from electronic and electrical equipment.

II. Description

WiFi is a controller and an Internet module in one device.

WiFi Internet module a device which enables the user remote control of the CH boiler via the Internet. The user controls the status of all CH boiler system devices and may view the controller alarm log as well as the temperature log in a form of clear charts.

The Internet module configuration and functionalities depend on the type of the main controller and its software. Due to constant development of the software used in our controllers, innovations appear frequently. In the new type controllers the configuration procedure has been simplified considerably (*Registration* option is available in the submenu of the Fitter's menu in the Internet module; the function is not available in older versions). ST-505 Ethernet module is compatible both with the latest and the older versions of the main controller.

Functions fulfilled in cooperation with the latest controller versions (for pellet-fired CH boilers, with colour display):

- remote control of the CH boiler operation via the Internet
- monitoring all heating system devices
- possibility of editing all main controller parameters (as presented in the menu structure)
- possibility of viewing the temperature log
- possibility of viewing the event log (alarms and parameter changes)
- possibility of assigning any number of passwords (to access menu, events, statistics) - optional
- possibility of editing the pre-set temperature via a room regulator
- possibility of controlling many modules via one user account
- e-mail notification in case of alarms

Functions fulfilled in cooperation with the older controller versions:

- remote control of the CH boiler operation via the Internet
- graphic interface offering animations on the home computer screen
- possibility of changing the pre-set temperature values for both the pumps and the mixing valves
- possibility of viewing the sensor temperatures
- possibility of viewing the temperature log
- possibility of viewing the alarm log and alarm types

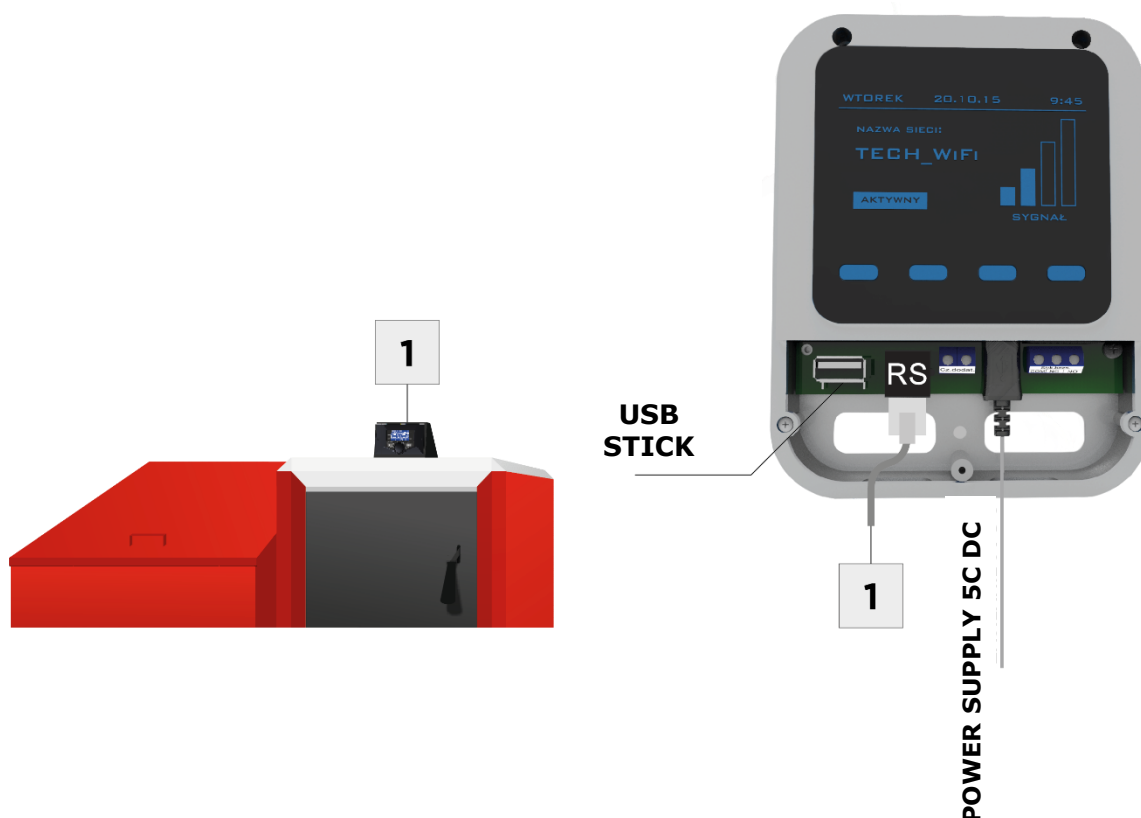
III. Module installation

The module should be installed by a qualified person.



WARNING

Incorrect connection of the wires may damage the module!



IV. First start-up

In order for the controller to operate correctly, the user must follow these steps when starting the device for the first time:

1. Connect WiFi WIFIRS module with the main controller using RS cable.
2. Connect the power supply.
3. Select *WIFI network* option in the controller menu. The controller will open up a list of available WIFI networks – select one and enter the password.

V. How to configure the module (for the latest controller versions)

Connecting the module with the controller

In the case of using the controller with the latest software version (controllers for pellet-fired CH boilers, with a colour display) the installation process is intuitive. After the module has been properly connected, activate the module in the Fitter's menu of the main controller (*Menu >> Fitter's menu >> Internet module >> Registration*) – a registration code, which will be generated, must be entered on the website.



NOTE

The code is valid for 60 minutes. If the user fails to register on the website within this time, a new code must be generated.



It is advisable to use such web browsers as Mozilla Firefox or Google Chrome.

V.a) How to log in to the website

After the code has been generated, go to <http://emodul.pl> and create a new user account:

Creating a new account at emodul.pl

After logging in to your account, enter the code in *Settings* tab. It is possible to assign any name to the module (module description area):



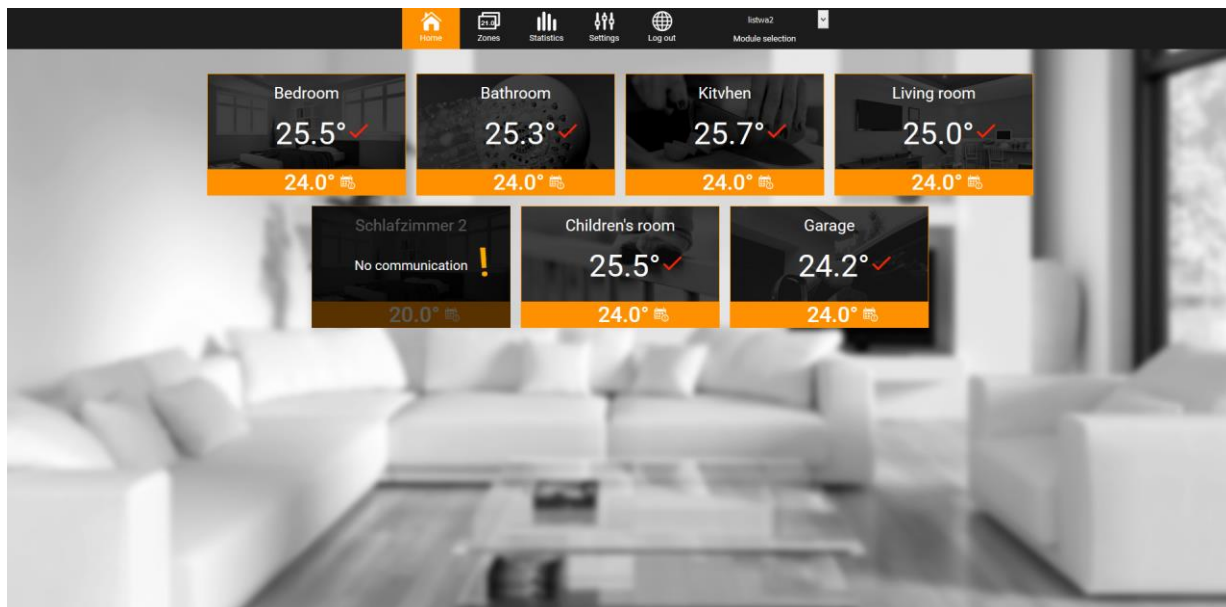
NOTE

It is possible to control several WIFI modules from one account at emodul.pl.

The user may authorise other users to adjust certain settings e.g. the parameters available in the main menu while locking the settings of the fitter's menu and the service menu.

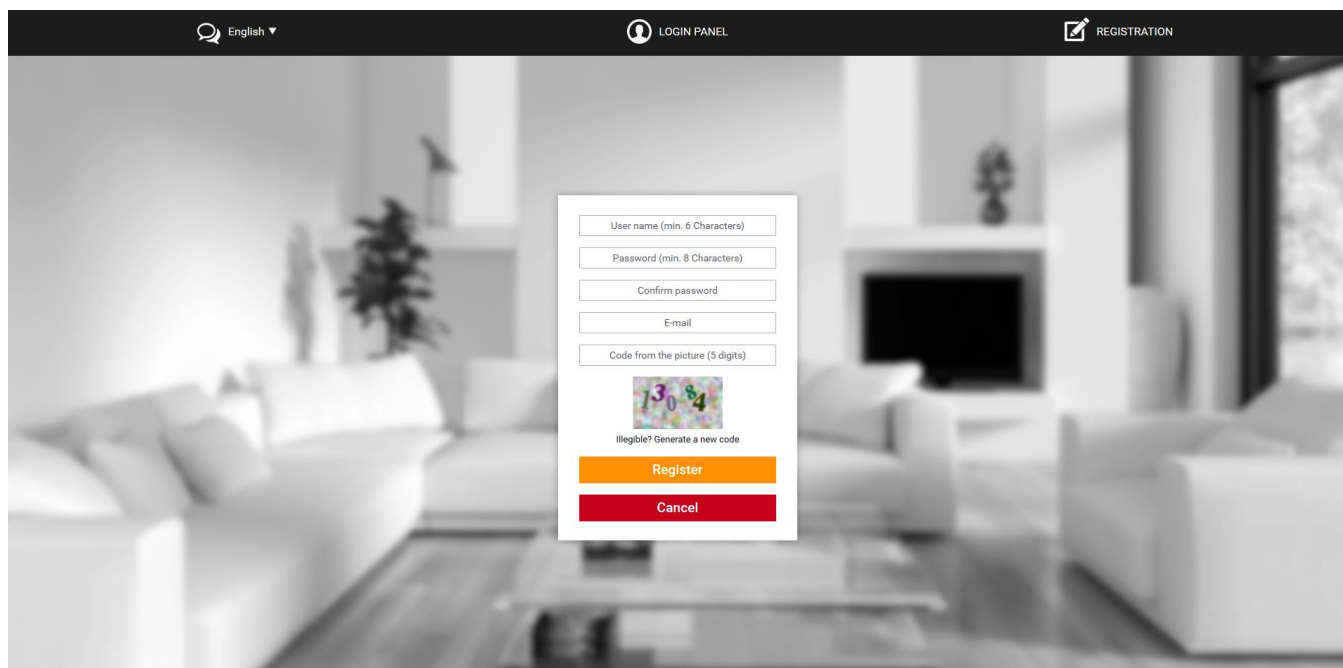
V.b) Home page

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.



Screenshot presenting an example Home page

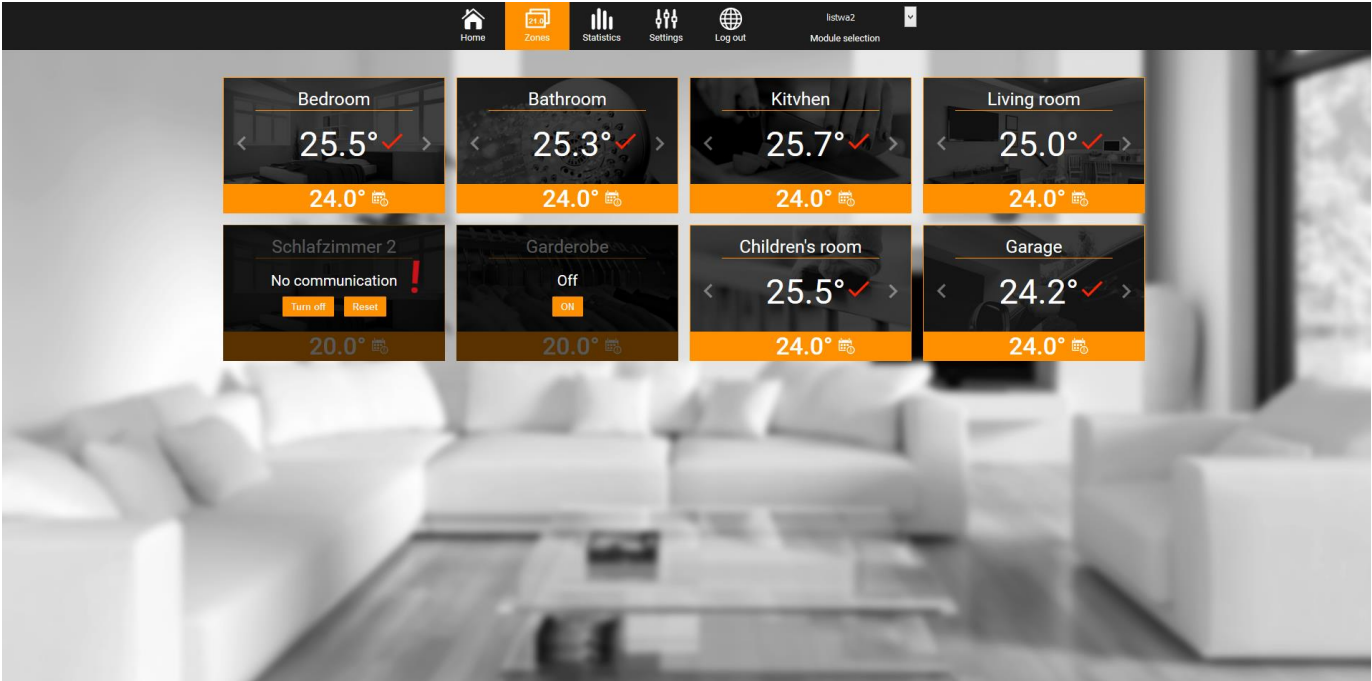
The user may customize the home page by changing the layout of the tiles or deleting some of them. In order to introduce changes, go to *Settings* tab.



New module registration screen

V.c) How to adjust the main controller operation parameters

The following tabs include main controller parameters. The menu structure is the same as the structure of the main controller menu.

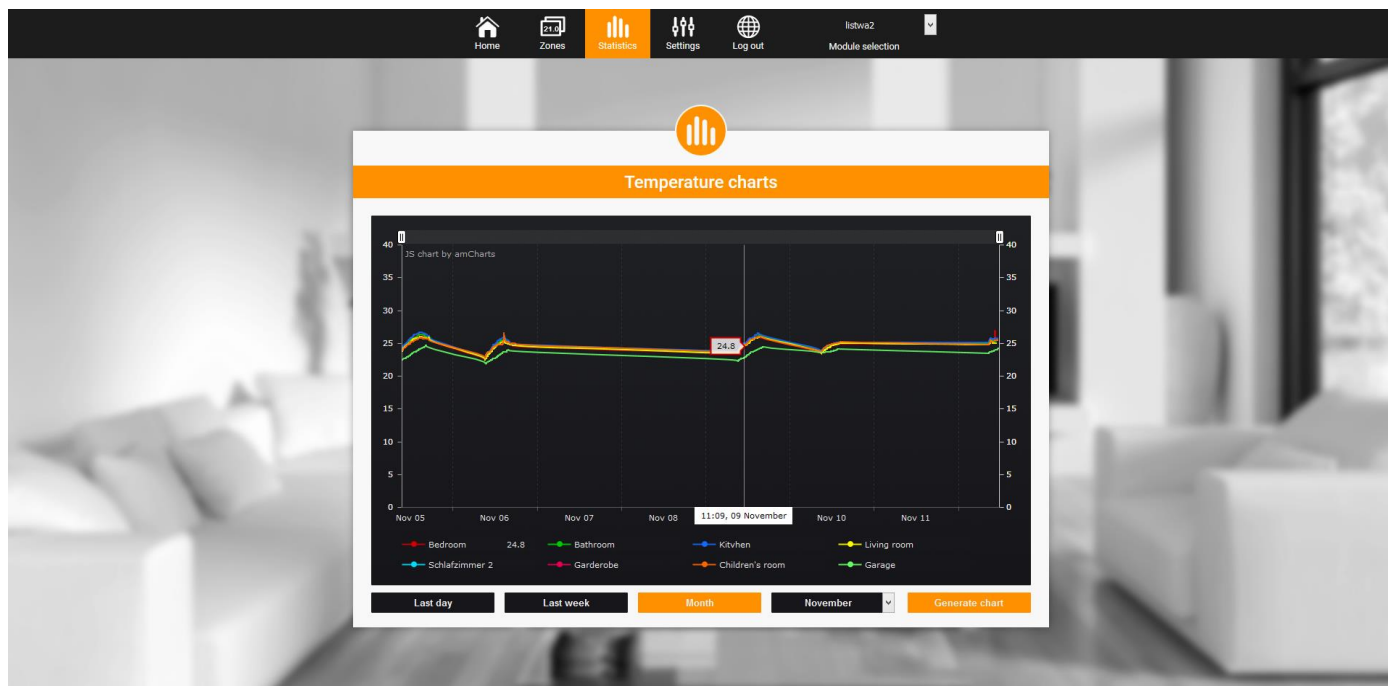


Screenshot presenting an example tab with main menu parameters

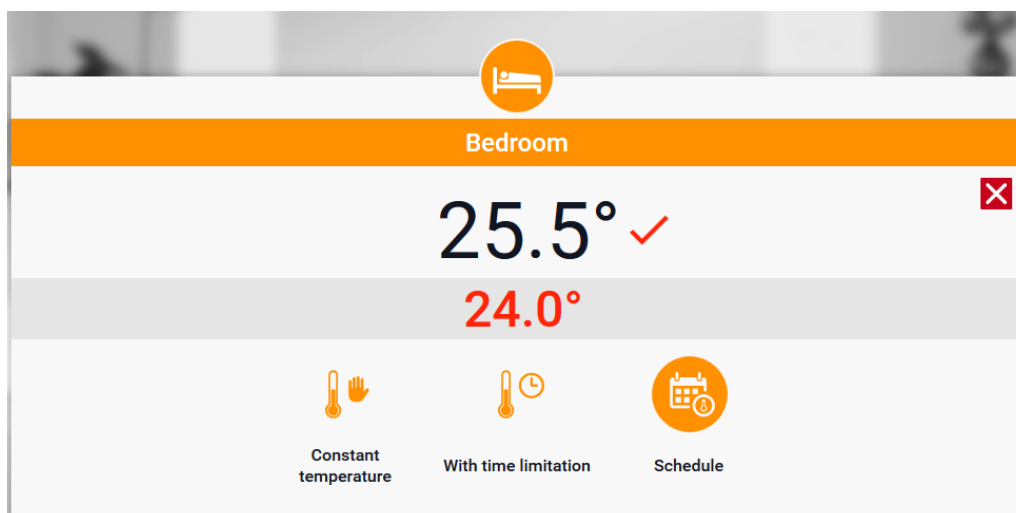
.

V.d) 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:



Screenshot presenting an example temperature chart



Screenshot presenting an example setting change

VI. How to configure the module (for older controller versions)

Connecting the module with the controller

ST-505 module cooperates with TECH controllers with RS communication and compatible software. After the module has been properly connected, activate the Internet module in the Fitter's menu of the main controller (*Menu >> Fitter's menu >> Internet module >> ON*) and confirm >> *IP Address*. After a while the IP address of the module will be displayed (e.g. **192.168.1.192**) – it is advisable to copy the address on a piece of paper as it will be needed later on in the installation process

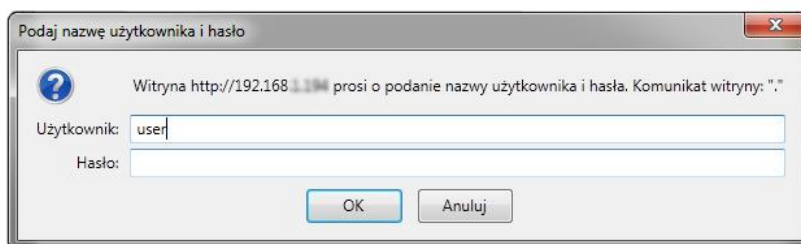
VI.a) How to log in to the module (local network)

1. Open the Internet browser,



Enter the IP address (e.g. <http://192.168.1.192>) and confirm with **enter**.

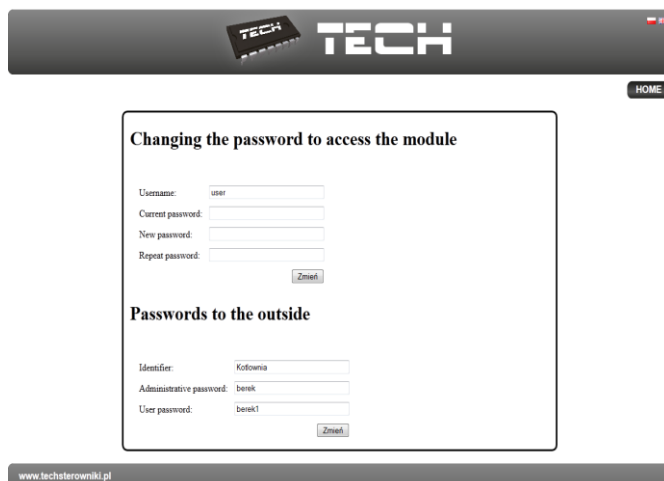
2. Enter the default user name (**user**) in the window which has opened,
The password space should be left blank. Press OK.



After completing this procedure, the user will be successfully logged in to the module via local network.

VI.b) Protection settings

1. Module protection settings in local network.



Enter a new user name and password.

Confirm by tapping on *Change* – the following message will appear:



2. How to register at the website.

To use the module it is necessary to configure the access to the external website. In order to do it, fill in

Passwords to the outside

Identifier:	<input type="text" value="Kotlownia"/>
Administrative password:	<input type="text" value="berek"/>
User password:	<input type="text" value="berek1"/>
	<input type="button" value="Register"/>

the spaces: *Identifier/Login* and *Password*.

Entering **administration password** enables the user to adjust the pre-set temperature values (editing), whereas **user password** enables the user to view the temperature values without introducing any changes.

NOTE!

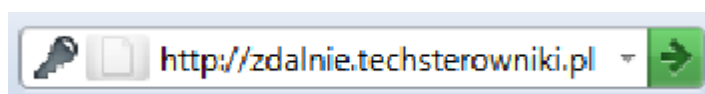
Subsequent modification of the external website **login/identifier** will not be possible.

Confirm by tapping on *Register* – the following message will appear:



VI.c) How to log in to the module (external website)

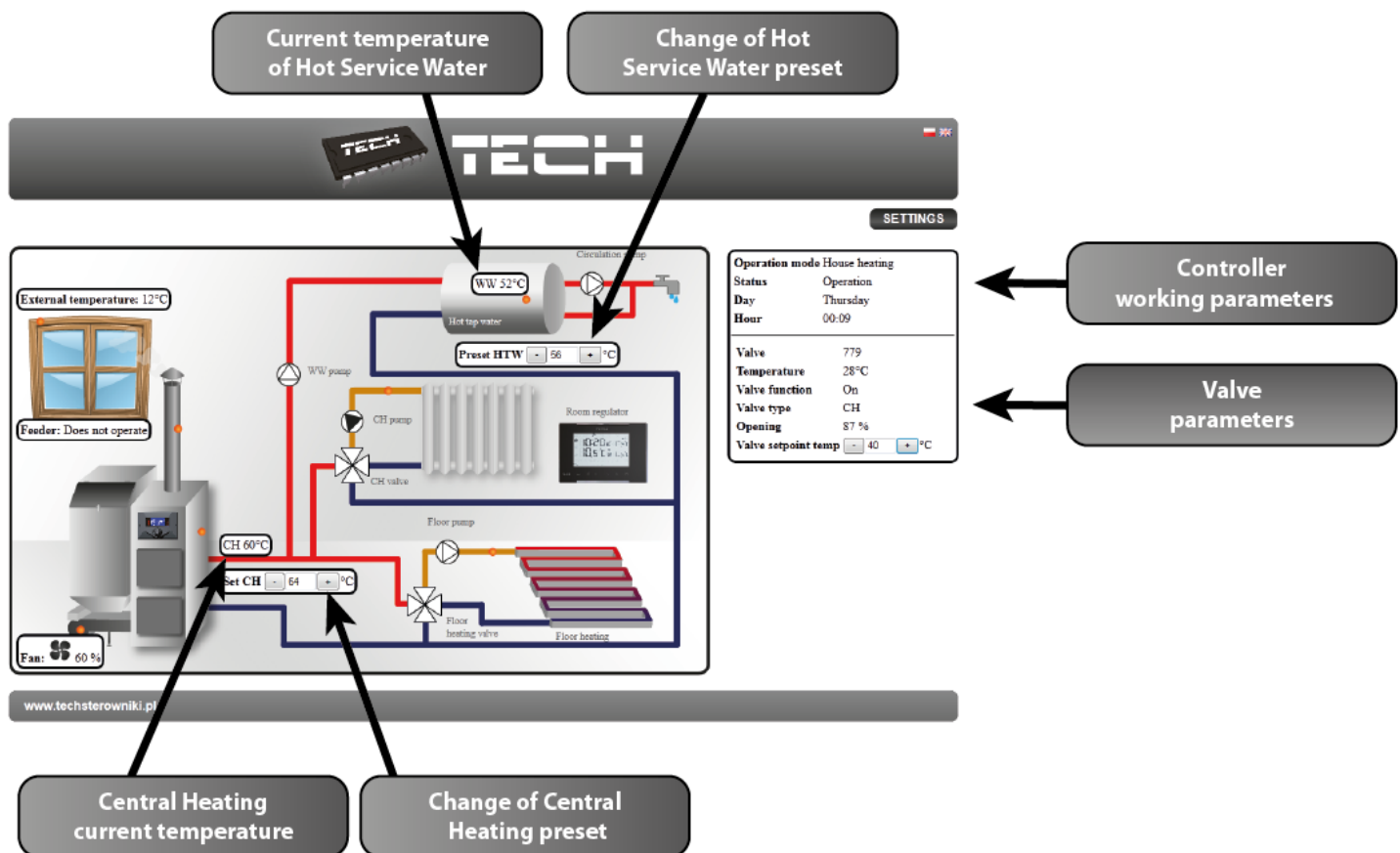
In order to log in to ST-505 module via the external website, open the Internet browser and enter the website address: **http://zdalnie.techsterowniki.pl**



After a while a welcome screen will appear. Enter the previously set login and password and tap on **Log in**

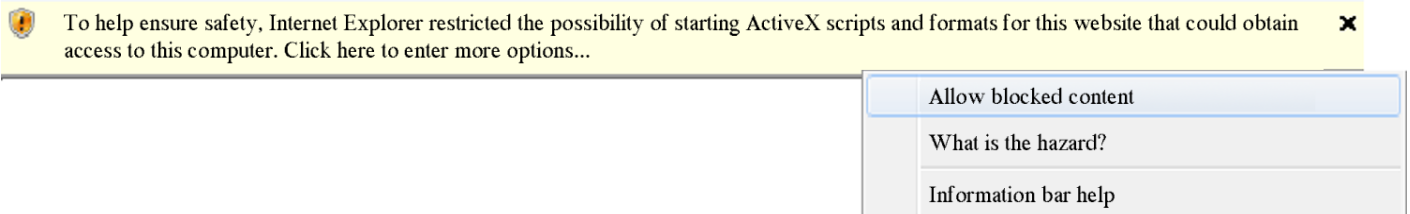


After a while the module screen will appear.



**NOTE!**

In some cases Internet Explorer does not permit to activate ActiveX formats and scripts which are necessary to display module data. It is advisable to activate this option by right-clicking on '*Allow blocked content*' on the notification bar



VI.d) Manual module configuration

One way of establishing controller connection with the local network is to configure the access parameters manually.

In order to do it, it is necessary to check your local network settings. The following parameters are necessary:

IP address

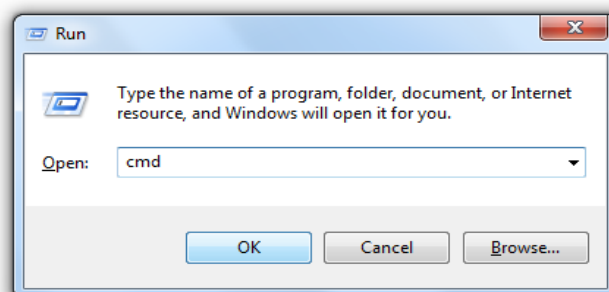
IP mask

Gate address

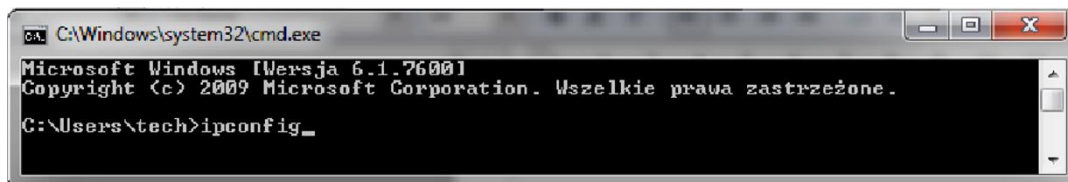
DNS address

Downloading data

1. Go to *Start* and select *Run* (or press **WIN+R** buttons)
c:\Windows\system32\cmd.exe



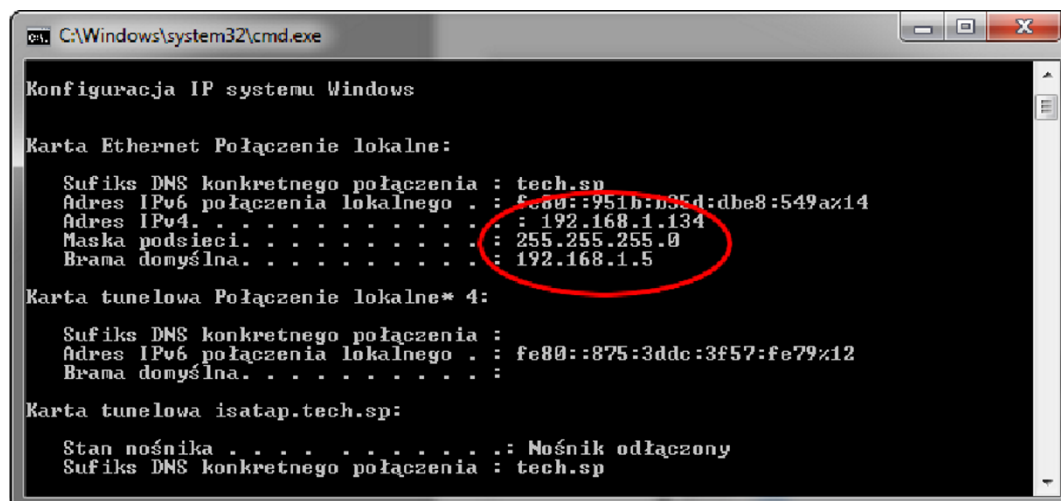
2. Enter **cmd** and click **OK**



```
C:\Windows\system32\cmd.exe
Microsoft Windows [Wersja 6.1.7600]
Copyright (c) 2009 Microsoft Corporation. Wszelkie prawa zastrzeżone.

C:\Users\tech>ipconfig_
```

3. Enter **ipconfig** and press **Enter**.



```
C:\Windows\system32\cmd.exe

Konfiguracja IP systemu Windows

Karta Ethernet Połączenie lokalne:

    Sufiks DNS konkretnego połączenia : tech.sp
    Adres IPv6 połączenia lokalnego . . : fe80::951b:b35d:dbe8:549a%14
    Adres IPv4. . . . . : 192.168.1.134
    Maska podsieci. . . . . : 255.255.255.0
    Brama domyślna. . . . . : 192.168.1.5

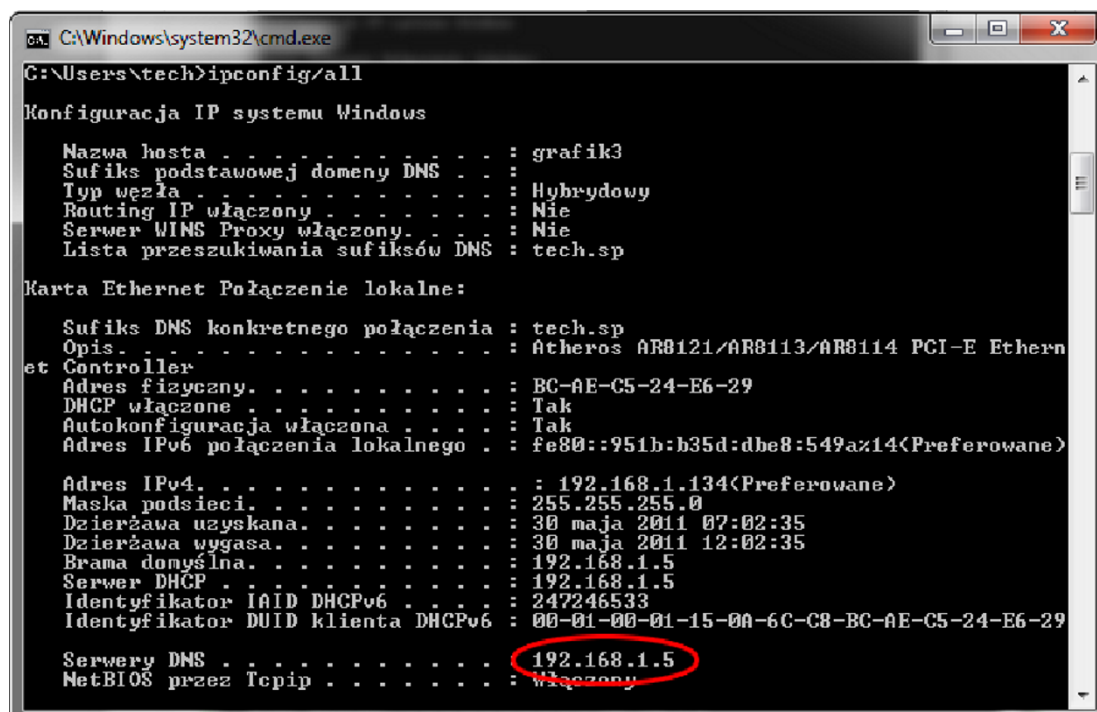
Karta tunelowa Połączenie lokalne* 4:

    Sufiks DNS konkretnego połączenia :
    Adres IPv6 połączenia lokalnego . : fe80::875:3ddc:3f57:fe79%12
    Brama domyślna. . . . . :

Karta tunelowa isatap.tech.sp:

    Stan nośnika . . . . . : Nośnik odłączony
    Sufiks DNS konkretnego połączenia : tech.sp
```

4. In most cases **DNS address** is the same as **Gate address**. In order to check, enter **ipconfig/all**.



```
C:\Windows\system32\cmd.exe

C:\Users\tech>ipconfig/all

Konfiguracja IP systemu Windows

Nazwa hosta . . . . . : grafik3
Sufiks podstawowej domeny DNS . . :
Typ węzła . . . . . : Hybrydowy
Routing IP włączony . . . . . : Nie
Serwer WINS Proxy włączony. . . : Nie
Lista przeszukiwania sufiksów DNS : tech.sp

Karta Ethernet Połączenie lokalne:

    Sufiks DNS konkretnego połączenia : tech.sp
    Opis. . . . . : Atheros AR8121/AR8113/AR8114 PCI-E Ethernet
    Controller
    Adres fizyczny. . . . . : BC-AE-C5-24-E6-29
    DHCP włączone . . . . . : Tak
    Autokonfiguracja włączona . . : Tak
    Adres IPv6 połączenia lokalnego : fe80::951b:b35d:dbe8:549a%14<Preferowane>

    Adres IPv4. . . . . : 192.168.1.134<Preferowane>
    Maska podsieci. . . . . : 255.255.255.0
    Dzierżawa uzyskana. . . . . : 30 maja 2011 07:02:35
    Dzierżawa wygasa. . . . . : 30 maja 2011 12:02:35
    Brama domyślna. . . . . : 192.168.1.5
    Serwer DHCP . . . . . : 192.168.1.5
    Identyfikator IAID DHCPv6 . . . : 247246533
    Identyfikator DUID klienta DHCPv6 : 00-01-00-01-15-00-6C-C8-BC-AE-C5-24-E6-29

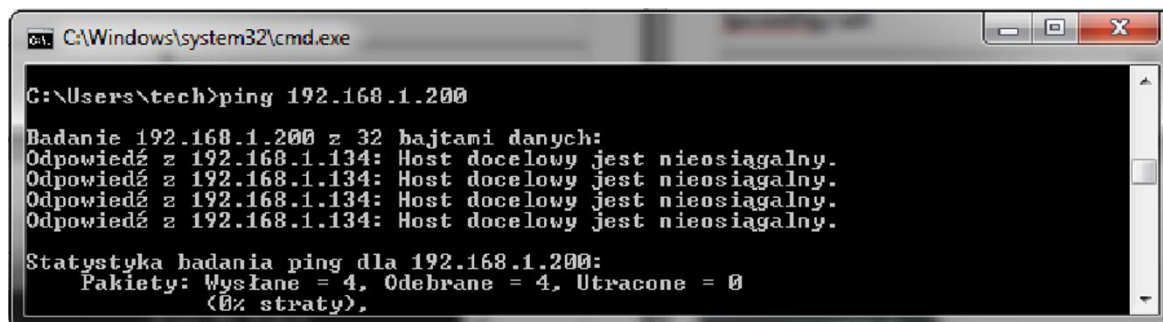
    Serwery DNS . . . . . : 192.168.1.5
    NetBIOS przez Tcpip . . . . . : Włączony
```

How to configure the controller

After noting down all necessary parameters, go to controller settings. Go to the Internet module settings

in the CH boiler controller (Menu>> Fitter's menu>>Internet module).

1. **DHCP parameter** (ang. **D**ynamic **H**ost **C**onfiguration **P**rotocol) must be disabled.
2. **IP address** should be set as unique for the network by changing the IP digits freely e.g. 192.168.1.200. If necessary, the user may check it the IP address has not been already taken by entering the command: **ping 192.168.1.200** in cmd.exe.



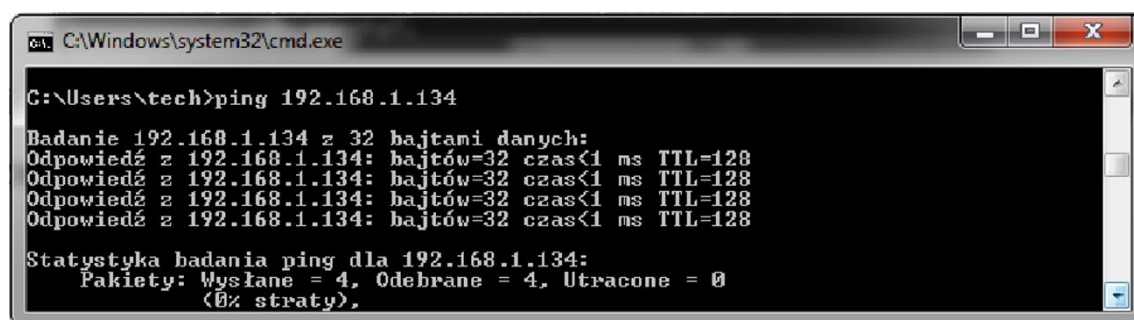
```
C:\Windows\system32\cmd.exe

C:\Users\tech>ping 192.168.1.200

Badanie 192.168.1.200 z 32 bajtami danych:
Odpowiedź z 192.168.1.134: Host docelowy jest nieosiagalny.
Odpowiedź z 192.168.1.134: Host docelowy jest nieosiagalny.
Odpowiedź z 192.168.1.134: Host docelowy jest nieosiagalny.
Odpowiedź z 192.168.1.134: Host docelowy jest nieosiagalny.

Statystyka badania ping dla 192.168.1.200:
    Pakiety: Wysłane = 4, Odebrane = 4, Utracone = 0
            (0% strat).
```

„Destination host unreachable” means that the IP address has not been taken yet and it may be used.



```
C:\Windows\system32\cmd.exe

C:\Users\tech>ping 192.168.1.134

Badanie 192.168.1.134 z 32 bajtami danych:
Odpowiedź z 192.168.1.134: bajtów=32 czas<1 ms TTL=128
Odpowiedź z 192.168.1.134: bajtów=32 czas<1 ms TTL=128
Odpowiedź z 192.168.1.134: bajtów=32 czas<1 ms TTL=128
Odpowiedź z 192.168.1.134: bajtów=32 czas<1 ms TTL=128

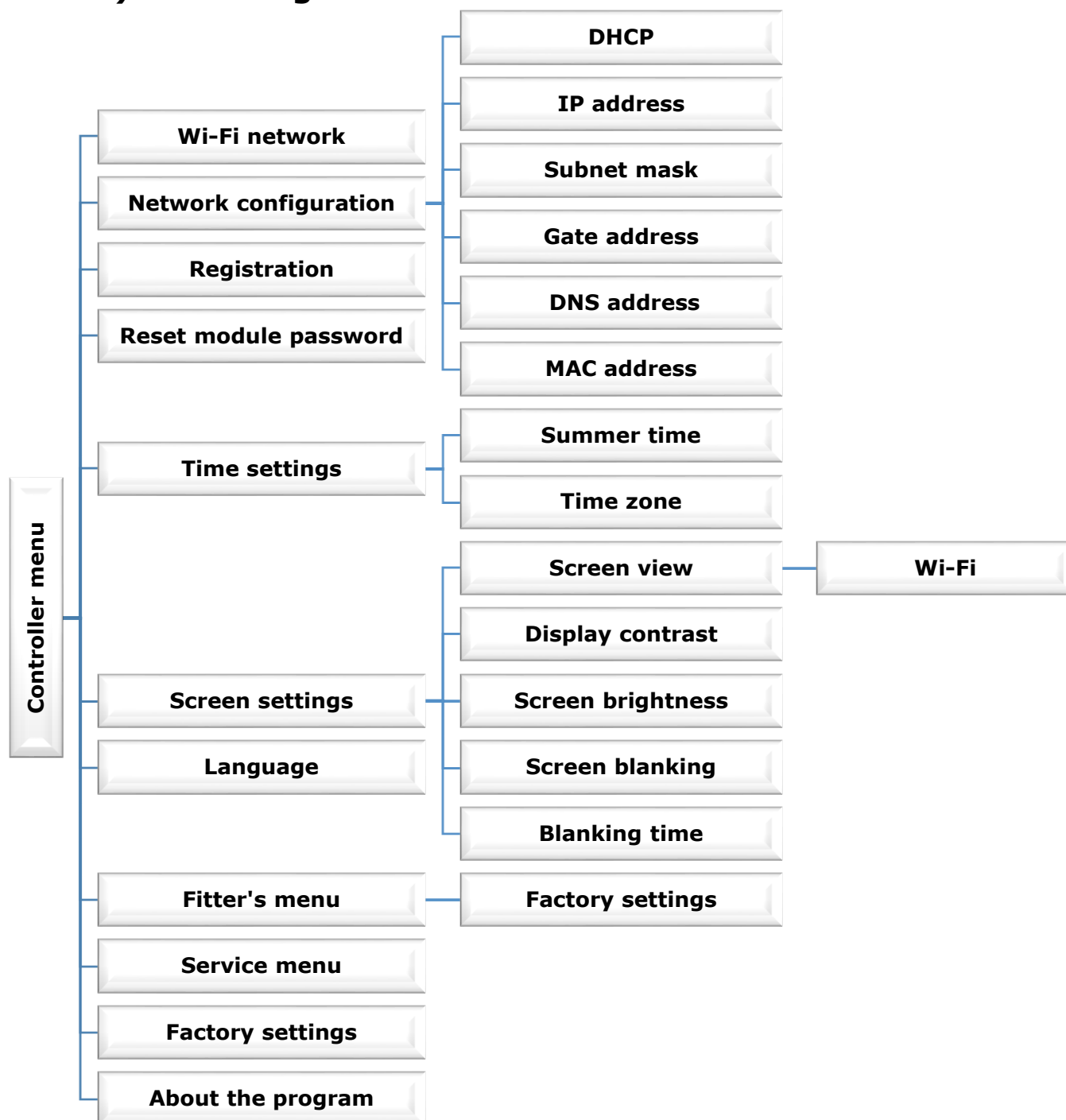
Statystyka badania ping dla 192.168.1.134:
    Pakiety: Wysłane = 4, Odebrane = 4, Utracone = 0
            (0% strat).
```

Otherwise it is necessary to use a different IP address.

5. **MAC address** is default: **12:12:12:12:12:18** and it must be unique.
6. **IP mask, Gate address and DNS address** should be copied from the downloaded data.
7. After the controller has been configured successfully, go back to the beginning of the manual – part IV. *How to log in to the module (local network)* and enter the previously set IP address in the Internet browser.

VII. Controller menu

VII.a) Block diagram of the controller menu:



VII.b) Wi-Fi network

This submenu includes a list of available networks. Select one and press MENU. If the network is secured, it is necessary to enter the password. Use + and – buttons to enter the letters of the password.

VII.c) Network configuration

Standard network configuration is performed automatically. The user may also configure the network manually using the submenu options: DHCP, IP address, Subnet mask, Gate address, DNS address and MAC address.

VII.d) Registration

Registration is used to generate the code necessary to register WIFIRS module at www.emodul.pl. The code may also be generated using a corresponding function in the main controller.

VII.e) Reset module password

This function is used to reset the module password used at www.emodul.pl.

VII.f) Time settings

Current time and date are downloaded from the network. The user may switch to summer time or change the time zone.

VII.g) Screen settings

Parameters included in this submenu enable the user to adjust the main screen view to individual needs. It is possible to choose what information should be displayed on the controller screen: *Wi-Fi* (the screen displays the network name and signal strength) or *Sensors* (the screen displays current and pre-set values of the built-in sensor and the additional sensor).

It is also possible to adjust the contrast and screen brightness. *Screen blanking* function enables the user to adjust the blank screen brightness. *Blanking time* is used to define the time of inactivity after which the controller screen will be blanked.

VII.h) Language

This option is used to select the language version of the controller menu.

VII.i) Fitter's menu

Functions available in this submenu are used to configure advanced controller parameters.

- **Factory settings**

This function is used to return to factory settings. It concerns the settings configured in the Fitter's menu.

VII.j) Service menu

This submenu should be accessed only by a qualified person and it is secured with a code.

VII.k) Factory settings

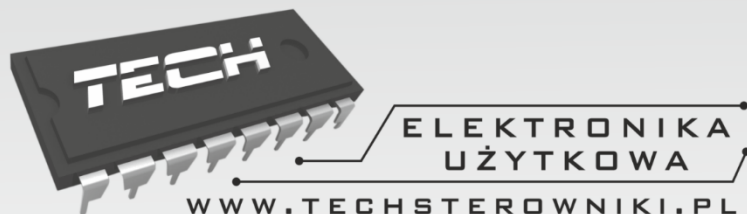
This function is used to return to factory settings. It concerns the settings configured in the main menu of the controller (not including the Fitter's menu and the Service menu).

VII.l) About the program

This function is used to view the current version of the controller software.

VIII. Technical data

No.	Specification	
1	Supply voltage	5V DC
2	Maximum power consumption	200 mA
3	Transmission	IEEE 802.3 10 Mb/s
4	Network connection	RJ 45 connector
5	Connection with the controller	RJ12 connector



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