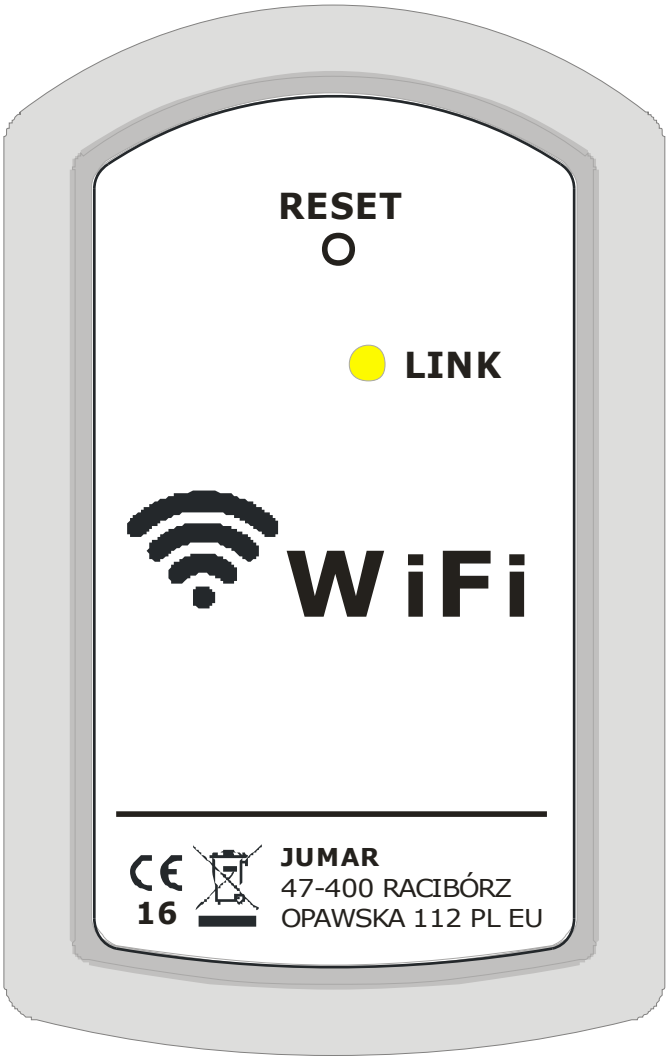
WiFi Module



INSTRUCTION OF INSTALLING

AND THE MAINTENANCE

JUMAR

TABLE OF CONTENTS

SAFETY OF OPERATIONAL USE.....5
INSTALLATION GUIDANCE.....5
APPLY.....6
OPERATING MODES OF MODULE.....7
DESCRIPTION OF MODULE AND CONNECTION.....8
CONFIGURATION 9
APPLICATION.....15
EXAMPLES.....16
TERMS OF WARANTY.....18
NOTES.....20

Thanks you for choosing our product.
This instruction should make the installation of the driver easier and make you accustomed to the maintenance and the safe using of the device.
Before installing please read the instruction carefully and get to know the functioning of the driver.

Any questions occur, contact with the JUMAR company.

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SAFETY OF OPERATIONAL USE

- Before using read carefully the instruction.
- Installing and connecting the regulator should be done by a professional staff. All available safety requirements should be taken into consideration.
- Before switching the regulator on, the accuracy of all connections ought to be checked.
- Guarantee proper working conditions according to the device's specification.

INSTALLATION GUIDANCE

- Do not power the device from the same source of power as others devices of high power without appropriate net filters.
- Avoid putting signal wires in a direct contiguity and in parallel to energetic and powering wires.
- Avoid closeness of remotely-controlled devices, loads of high power devices with a group or phase regulation of power and other devices producing large interference of impulses.
- When switching on the feed mechanism, remember that in the installation of a building a breaker or a circuit breaker should exist. This part ought to be near the device, easy to reach by the operator and marked as a device disconnecting the mechanism.
- For problems caused by disobeying the instruction, the manufacturer is not responsible for.

TECHNICAL DATA

Certificate:	FFC/CE
Standard Wi-Fi:	802.11 b/g/n
Frequency:	2.412GHz – 2.484GHz
Operating modes Wi-Fi:	STA / AP / AP+STA
Supported security Wi-Fi:	WEP / WPA-PSK / WPA2-PSK
Interface standard:	UART TTL (RXD,TXD)
Working temperature:	-40°C - 85°C
Power:	+5V DC, 300mA
Default parameters:	
SSID:	REG-03Mini_xxxx
Operating mode:	AP (Access Point)
IP module:	10.10.100.254
Login:	admin
Password:	admin
Port TCP of Server:	8899

APPLY

Wi-Fi module is a system interface device used to connect devices of the company JUMAR to the ethernet network. With the module you can control some of our products from mobile devices (smartphone, tablet, PC). To do this you have to properly configure network devices and install the dedicated software for the device. Wi-Fi module can operate in three modes: AP, STA and AP + STA.

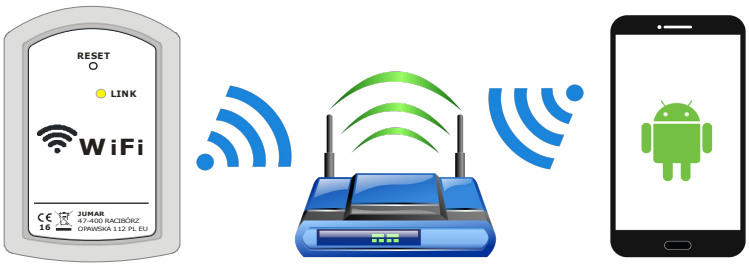
OPERATING MODES OF MODULE

- **AP Mode (Access Point)**

  The device (smartphone, tablet) connects directly to the Wi-Fi module. Module broadcasts network SSID: **REG-03Mini_xxxx**. The default IP address of the device is **10.10.100.254**.

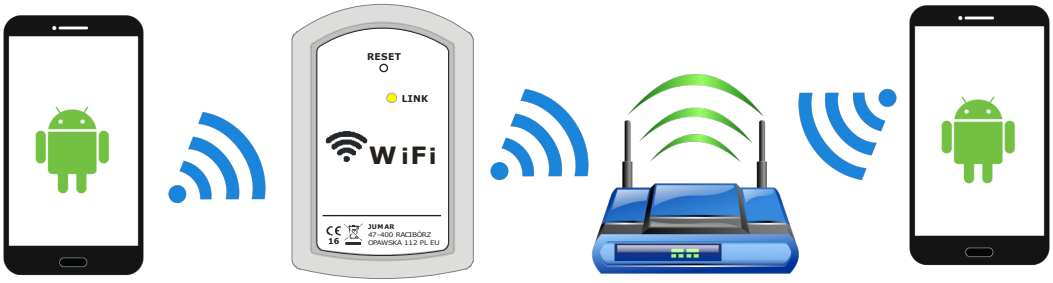
- **STA Mode**

  Wi-Fi module connects to the primary router (Access Point). The device (smartphone, tablet) connects to a router. Wi-Fi module does not broadcast additional network. This mode is not recommended. In bad network configuration there may be lost the configuration of the module and it may require a manual RESET of the module.



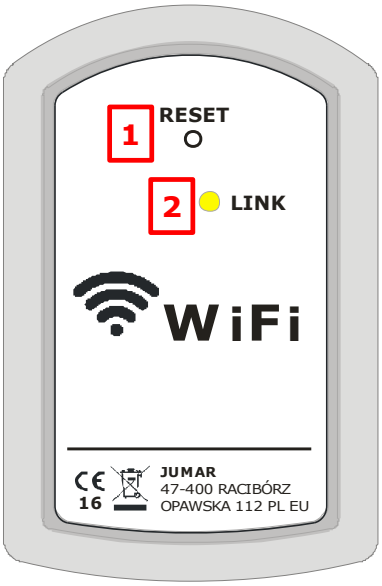
- **AP+STA Mode**

  Mode is a combination of modes AP Mode and STA Mode. Wi-Fi module connects to the primary router (Access Point). The device (smartphone, tablet) connects to a router. Wi-Fi module broadcasts additional network: **REG-03Mini_xxxx**. The default IP address of the device is **10.10.100.254**.



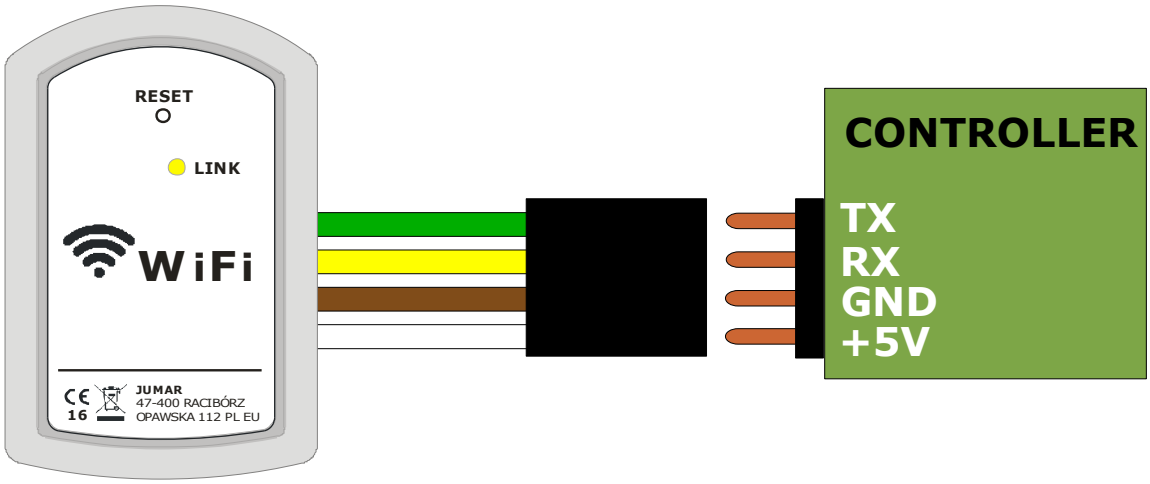
DESCRIPTION OF MODULE AND CONNECTION

Description:



No.	Element	Description
1	RESET	The button is used to restore the factory settings. The button need to hold 4 seconds. After the reset, should be set again all the value as specified with the instructions.
2	LED DIODE YELLOW	The LED is yellow if correctly configured and connected to the module.
2	LED DIODE RED	The LED glows red if there is established communication with router (only in the STA and AP + STA mode)

Description of connecting module to the controller:



CONFIGURATION

By default, the Wi-Fi module is configured as an Access Point, and does not require additional settings from an user. If, however, there is required additional network security and connecting of the module to an existing network, there should be changed the settings accordingly in the module.

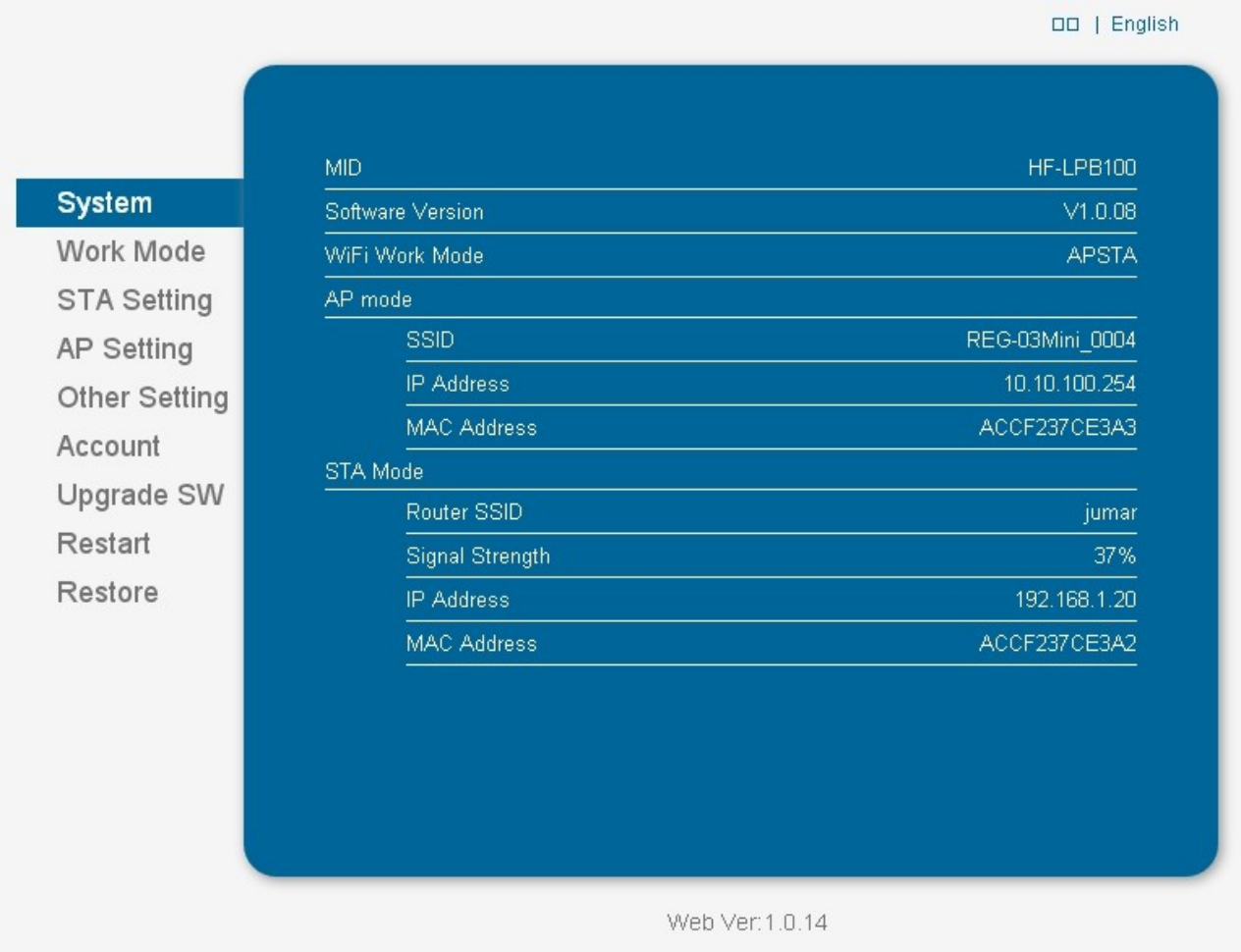
The module broadcasts network called SSID **REG-03Mini_xxxx**. It is required to connect to this network and in order to configure to type the default IP address in the browser:

10.10.100.254

and enter your login and password:

admin
admin

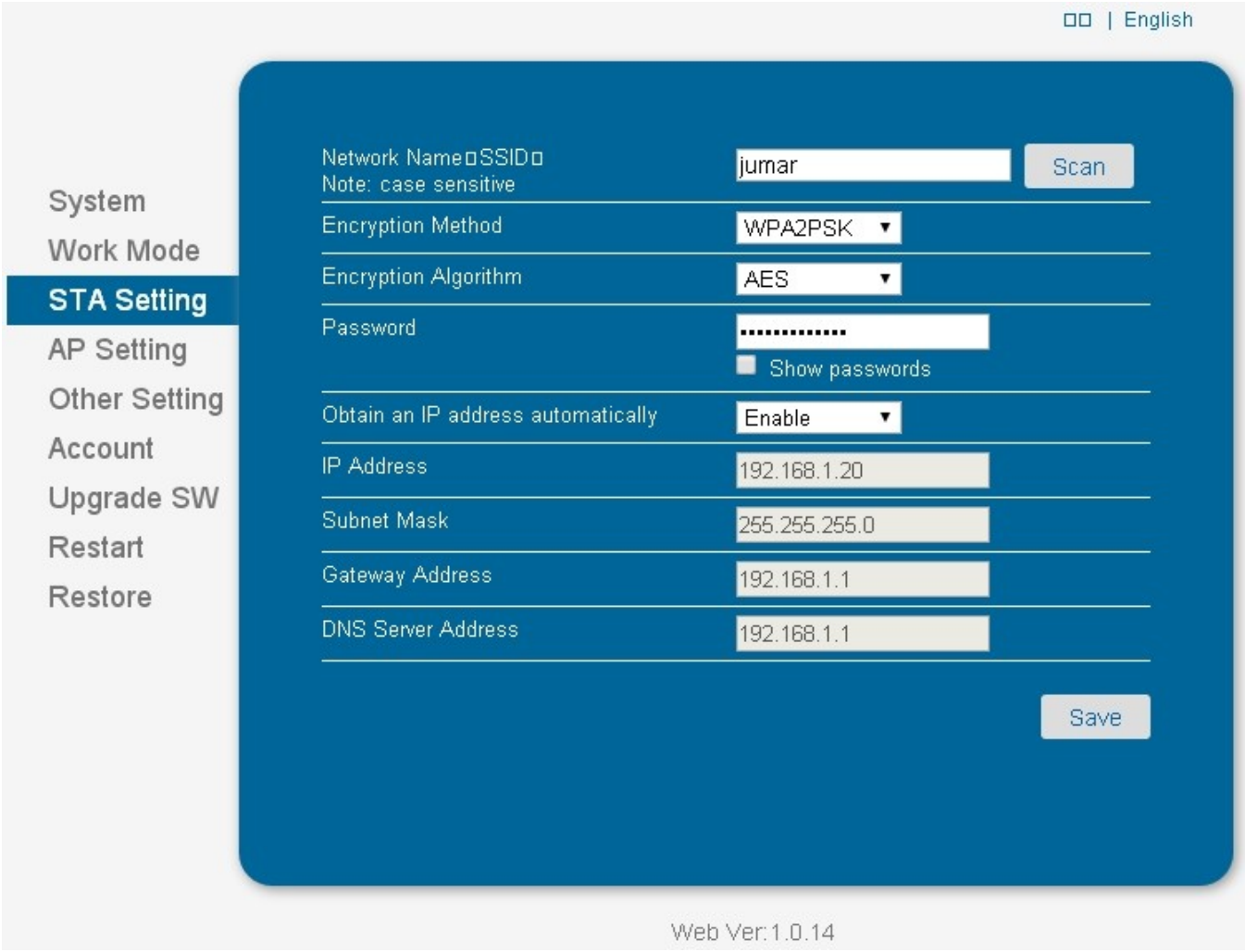
Wi-Fi module should generate a configuration page as the following figure:



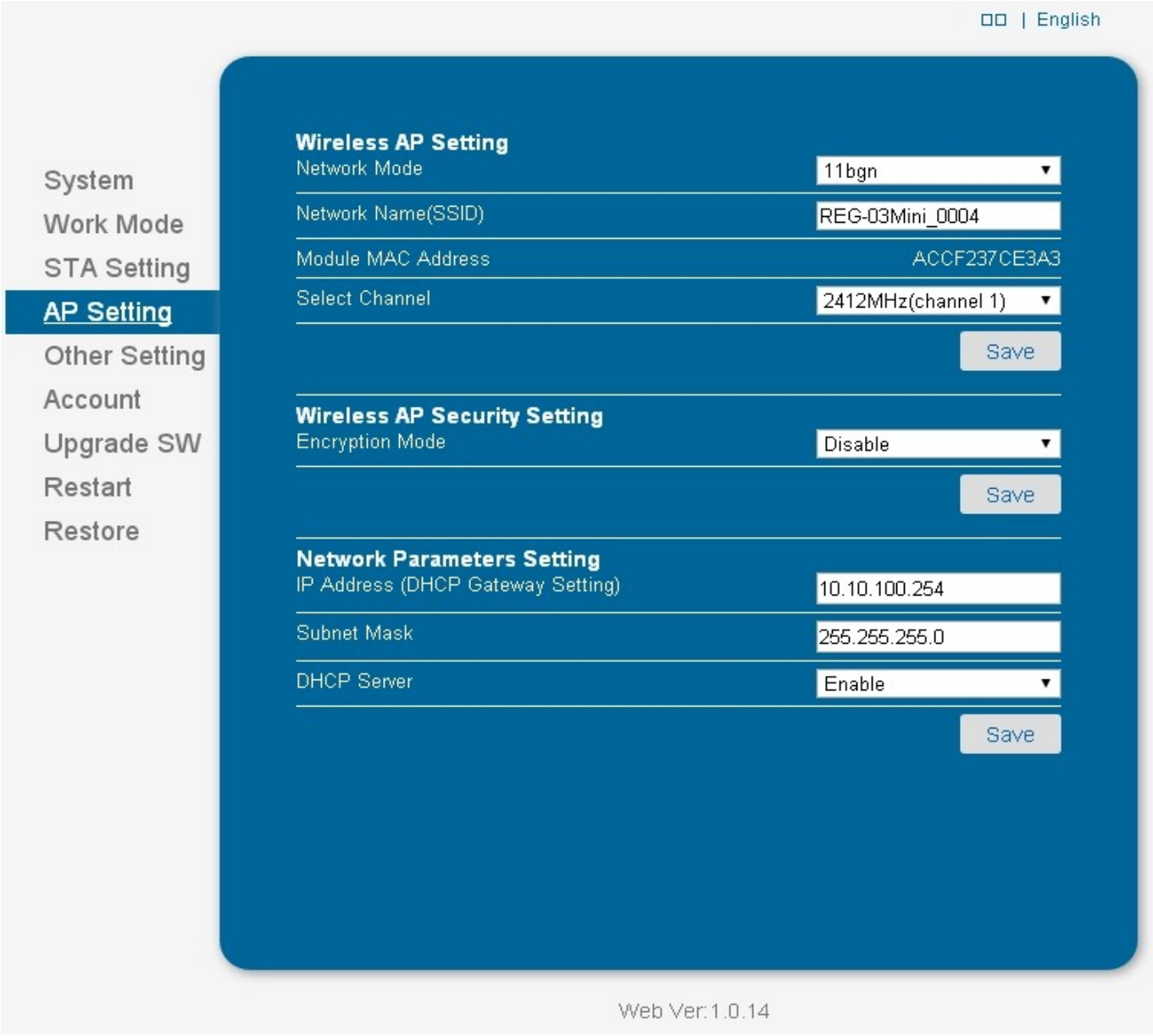
Parameter name	***Description***
MID	Symbol of Wi-Fi module.
Software Version	The version number of the software module.
WiFi Work Mode	Operating mode of modem (AP, STA, AP-STA).
AP Mode	
SSID	The names of the network access point (Access Point).
IP Address	The IP address of the access point (Access Point).
MAC Address	MAC address of the access point (Access Point).
STA Mode	
Router SSID	Name of the Wi-Fi router network.
Signal Strength	The signal strength of a router.
IP Address	IP address obtained / set after connecting to the router.
MAC Address	MAC address of a router.

Parameter name	***Description***
AP Mode	The module operates only as an access point (Access Point).
AP+STA Mode	The modem connects to the router of another network and operates as an access point (Access Point).
STA Mode	The module connects to the router only of other networks.

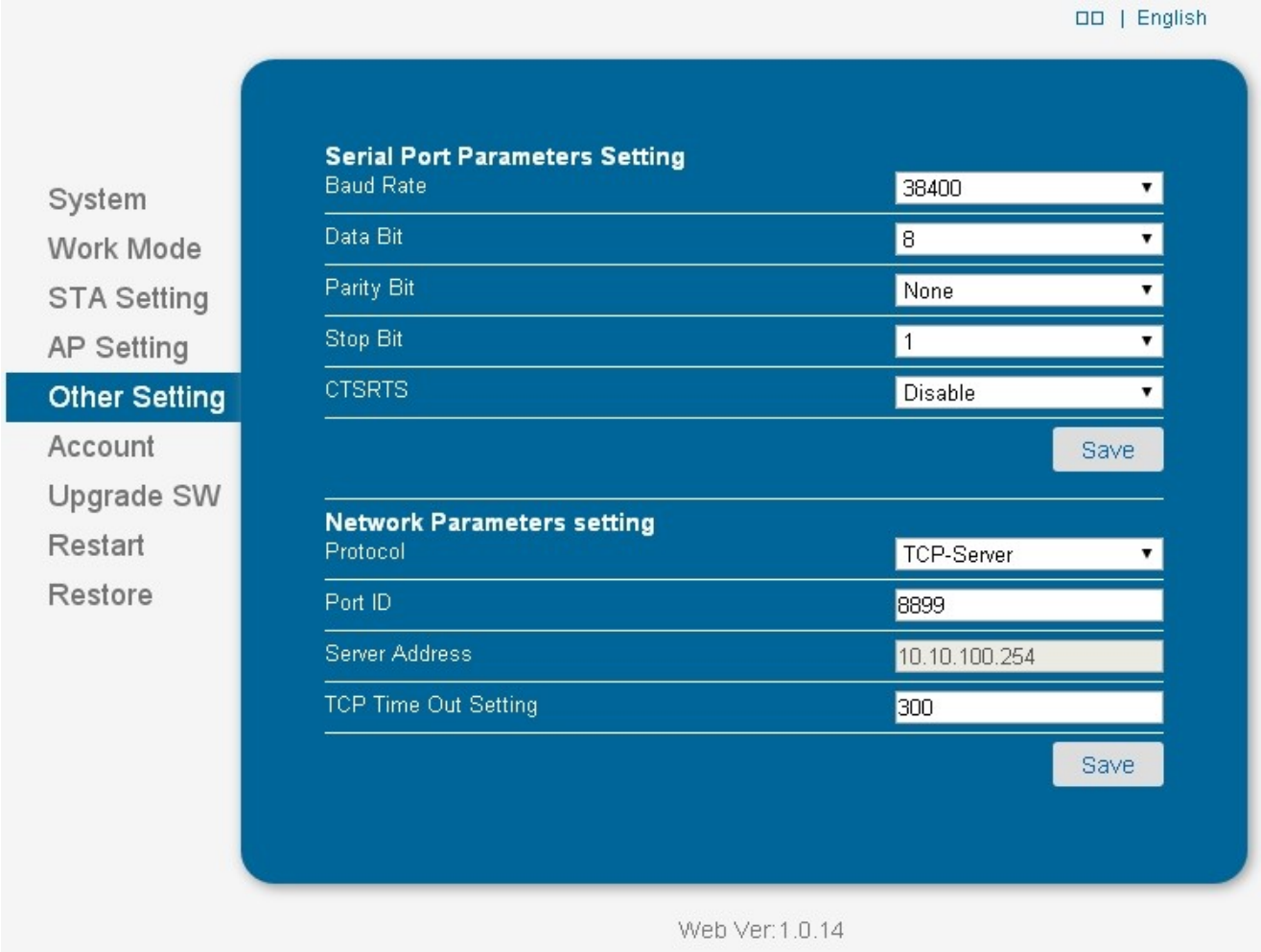
Default a producer sets the mode of the **AP Mode**. User has the ability to connect directly with a Wi-Fi module. There is also a possibility that the module could communicate with home ethernet network and broadcast its own network (for purposes of configuration). Select the mode **AP + STA Mode** and restart the modem again (**Restart**). On the next panel (**STA Settings**), there can be set up a connection to an external router. Enabling only **STA Mode** is not recommended (for experienced users only).



Parameter name	***Description***
Network Name SSID	Network name of the router with Wi-Fi module that has a connection. **"Scan"** button is used to automatically search the network.
Encryption Method Encryption Algorithm	Type of encryption Wi-Fi network broadcast by the router. If was used the "Scan" module selects the appropriate encryption modes.
Password	The password for the Wi-Fi network broadcast by the router.
Obtain an IP address automatically	Enable / disable the DHCP. If you select "**Enable**" module to fetch address (if the router DHCP feature set).
IP Address	Modem IP address from available addresses of the router.
Subnet Mask	Subnet Mask.
Getway Address	Getway Address.
DNS Server Address	DNS Server Address.



Parameter name	***Description***
Network Mode	Operation standard of the device (b/g/n).
Network Name (SSID)	Name of broadcasted network through Wi-Fi module (in AP and AP+STA mode).
Module MAC Address	MAC address of Wi-Fi module.
Select Channel	Broadcasting channel of Wi-Fi module.
Encryption Mode	Enabling / disabling of network encryption of Wi-Fi module. Enabling causes a display of the next settings based on the type of encryption.
IP Address	IP address of Wi-Fi module.
Subnet Mask	Subnet Mask.
DHCP Server	Enabling/disabling of automatic IP addresses assignment for devices connecting to the module.

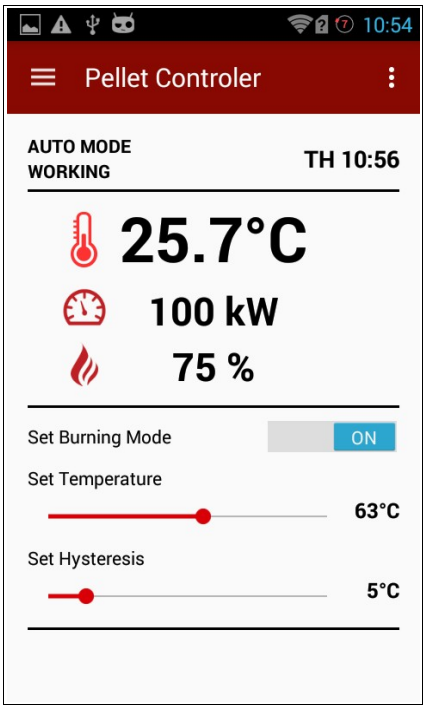


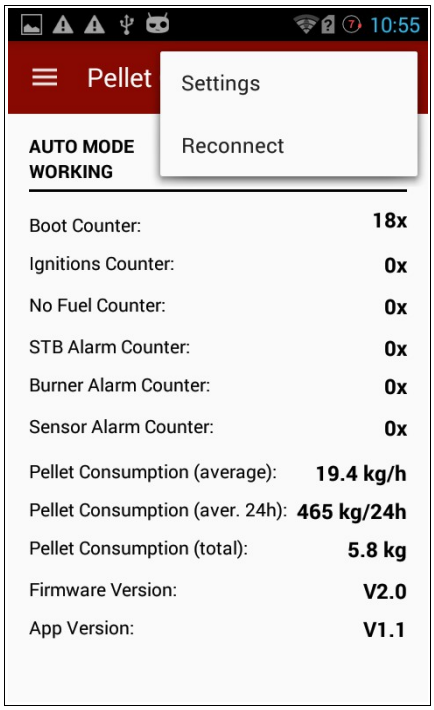
In these parameters there are set parameters related to the communication of Wi-Fi module with a the device/controller. You must enter these parameters in order to work properly. After enabling the **Restore** function (restore of factory settings), or pressing the **Reset** button on the module, there occur also a change of these parameters. Remember to re-set according to the drawing.

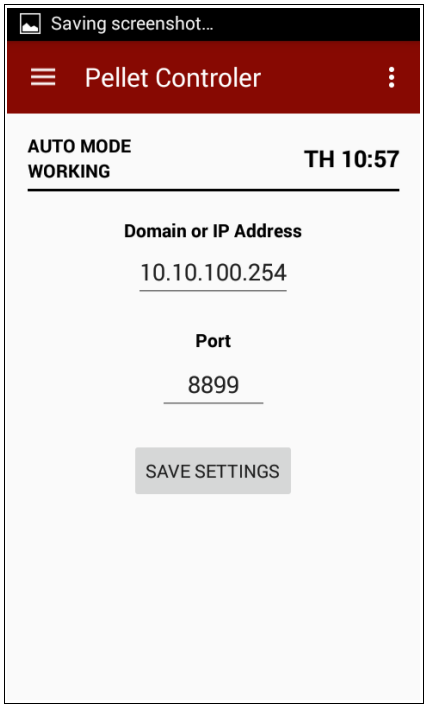
The user can only change the Server port TCP - ID Port. By default, the port is set to 8899.

APPLICATION

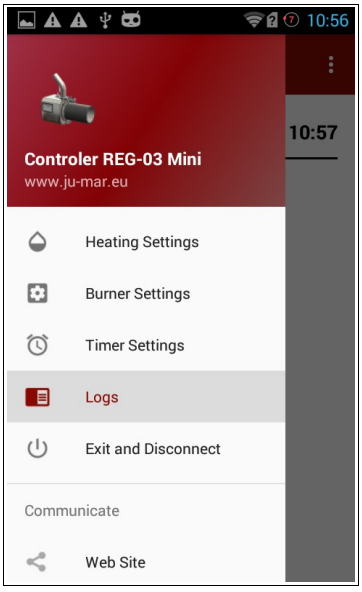
After installing the application, connecting to the network SSID: **REG-03Mini_xxx** and starting the application, there will appear the measuring screen. If data from the driver will not be shown, check the IP address in the application settings. Implicitly **10.10.100.254** port **8899**th. After the change, save and click on **Reconnect**.

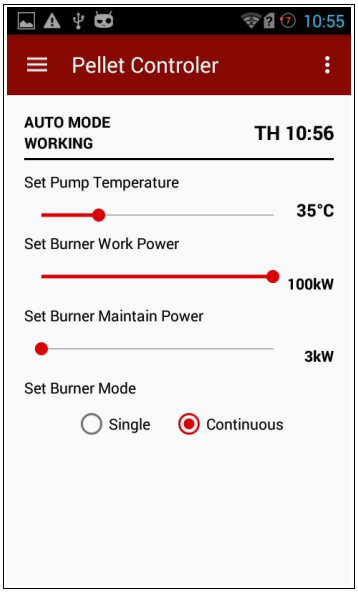


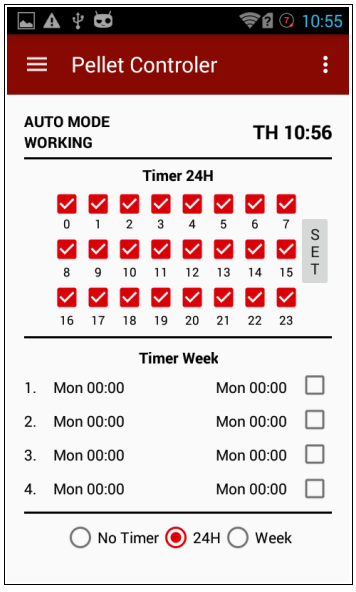


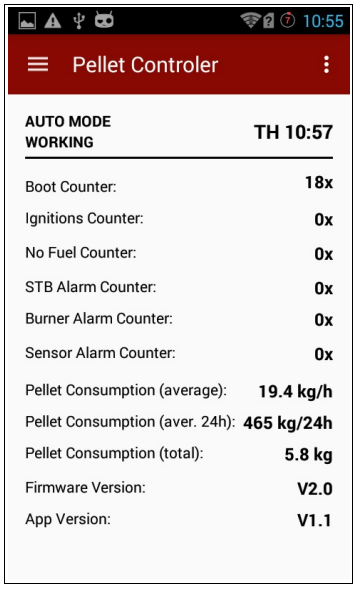


In the side menu, you can select groups of settings: **HEATING SETTINGS**, **BURNER SETTINGS**, **TIMER SETTINGS**, **LOGS** and **EXIT**.









EXAMPLES

- **AP MODE** (DEFAULT)
  - You need to download the application to use the driver on the smartphone or tablet. The application can be found on our website. The application supports Android systems > 4.0.
  - Once downloaded, install the software. If the install of applications from unknown sources is disabled, you must enable this option in Android system.
  - Wi-Fi module after switching should broadcast the SSID network: **REG 03Mini_xxxx**. You should connect to the network by smartphone or tablet.
  - After running the application there will be automatically connection to the driver and data.

- **AP + STA MODE**
  - You need to download the application to use the driver on the smartphone or tablet. The application can be found on our website. The application supports Android systems> 4.0.
  - Once downloaded, install the software. If the install of applications from unknown sources is disabled, you must enable this option in Android system.
  - Wi-Fi module after switching should broadcast the SSID network: **REG-03Mini_xxxx**. You should connect to the network by smartphone or tablet.
  - In the browser, enter the IP address of the Wi-Fi modem: **10.10.100.254**, and then log in using the default login and password: **admin**, **admin**.
  - On the **WORK MODE** overlap, select **AP + STA** and click on (**SAVE**). Then click on the **RESTART** to restart the Wi-Fi module again.

- Then switch to the **STA SETTINGS** overlap and the search the network, which a Wi-Fi module has to connect (**SCAN** button). The module should display all networks within range of the module. Select the appropriate network and press **OK**. If the network is secured, check the type of securities and encryption and enter the appropriate password. After configured, you must save the new settings (**SAVE**) and start the module again (**RESTART**). After starting and correct configuration there should be lit the red diode on the Wi-Fi module informing of a connection with the Access Point.
- After reconnecting and logging to the module in **SYSTEM** overlap we can readout the assigned IP address from the main Access Point (if DHCP function is enabled - automatic assignment of IP addresses).
- Then we connect by a smartphone or tablet with the main Access Point (which is connected to a Wi-Fi module) and start the application. In application settings, you must change the IP address according to the read out address in the overlap **SYSTEM**, and then save the settings and click on the "**RECONNECT**" in the application.

TIPS !!!

- Please note that assigning the DHCP addresses is random. Please note that in the main Access Point you should set assigning of constant IP addresses using the MAC number or disable DHCP function and set the IP address manually.
- It is possible to control the device also from the WAN network. To do this, redirect the WAN network port (default 8899) to the appropriate IP address assigned to the Wi-Fi module.
- Controlling from the WAN network requires a static IP address. If the IP address is variable, use the DDNS servers (eg. dyndns.org, noip.com).

ATTENTION !!!

MODULE CONFIGURATION REQUIRES A BASIC KNOWLEDGE AND SKILLS IN CONFIGURATION OF NETWORK DEVICES. WITHOUT SUCH KNOWLEDGE IT IS RECOMMENDED TO USE DEFAULT AP MODE SET BY MANUFACTURER.

TERMS OF WARRANTY

Dear User,

First of all, we would like to thank you for choosing our product. We are sure that you will be satisfied with this choice. We design our devices in order to meet your requirements and guarantee future trouble-free use. We ensure correct hardware function, provided that it is used according to its purpose and rules contained in the attached instruction manual. **JUMAR** gives warranty in case of all sorts of manufacturing defects and obliges to repair or replace faulty device (depending on **JUMAR**'s decision). Warranty period is:

24 months from purchase date

Rights resulting from the warranty are granted only when the following terms of obtaining warranty services are met.

Terms of acknowledging the warranty claims:

1. The warranty is valid only when the user can provide an original invoice or purchase receipt for this device.
2. The faulty product should be delivered to the service in appropriate packaging, protecting it against damages during transport. **JUMAR** will cover transport costs when returning the repaired or replaced product only if the device was damaged due to manufacturer's fault.
3. **JUMAR** will repair or replace equipment in possibly short time, appropriate to the damage complication degree (maximum of 14 working days or 31 if this requires shipping of hardly available parts).
4. The warranty does not cover damages caused by modifications or improvements in the product, unless doing so was permitted by **JUMAR** in written form.
5. Replacements of the device or its parts does not cause extension of the warranty.

The warranty does not cover:

1. Damages resulting from excessive component wear caused by improper use. The product should used according to attached instruction manual.
2. Damages caused by incorrect setup or product use not in accordance with technical or safety standards.
3. Damages caused by attempted repair performed by third parties or attempted repair provided by oneself.
4. Damages cased during transport, due to inappropriate packaging.
5. Damages caused by mechanical impact, being struck by lightning, flooding, fire, over-voltage or other causes independent of the manufacturer.
6. In order to avoid unnecessary complications and inconveniences, prior to contacting the service, we suggest reading the **INSTRUCTION MANUAL** carefully or contacting **JUMAR**.

JUMAR's responsibility is limited to the value equalling the price of faulty product.

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