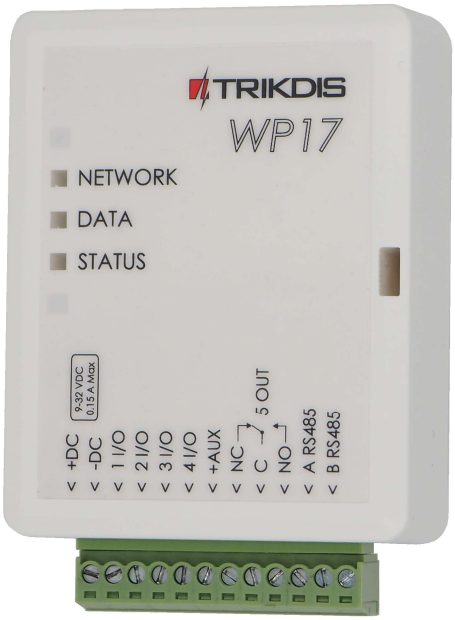

Wi-Fi controller WP*17*

Installation manual

March, 2021

www.trikdis.com • UAB Trikdis • Draugystės str. 17, LT-51229 Kaunas, Lithuania • +370 37 408 040 • info@trikdis.lt

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Safety precautions

The controller should only be installed and maintained by qualified personnel.

Please read this manual carefully prior to installation in order to avoid mistakes that can lead to malfunction or even damage to the equipment.

Always disconnect the power supply before making any electrical connections.

Any changes, modifications or repairs not authorized by the manufacturer shall render the warranty void.

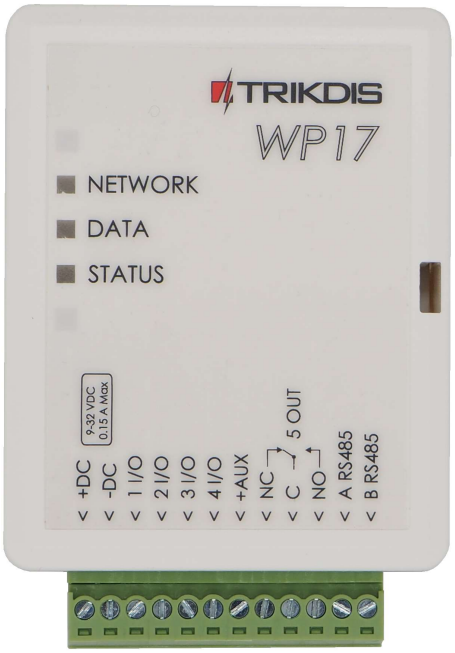
Please adhere to your local waste sorting regulations and do not dispose of this equipment or its components with other household waste.

1 Description

The Wi-Fi controller ***WP17*** is designed for remote control of an automatic door (or other electrical equipment).

WP17 can be controlled with ***Protegus*** app. The controller can enter 990 users (you need to specify the user's e-mail). The ***WP17*** controller can be used to set the user control schedule, set the counter, how many times the user can control the system. The controller can send messages about input and output activation and restores to the CMS (Central Monitoring Station) receiver and the ***Protegus*** app.

Features



Remote control

- With Mobile application ***Protegus*.**

Messages for users

- Sends messages about events to the ***Protegus*** application.

Messages for security company

- Sends event information in Contact ID codes to TRIKDIS software and hardware receivers, which work with any monitoring software.
- Can simultaneously send event messages to the receiver of the safety company and work with the ***Protegus*** app.
- If connection with the main receiver is lost, the messages are automatically sent to a backup receiver**.**

Inputs and outputs

- 4 universal inputs/outputs. Mode of operation is set as either input (NO; NC; EOL) or output.
- 1 output (OUT) - relay.

Settings and installation

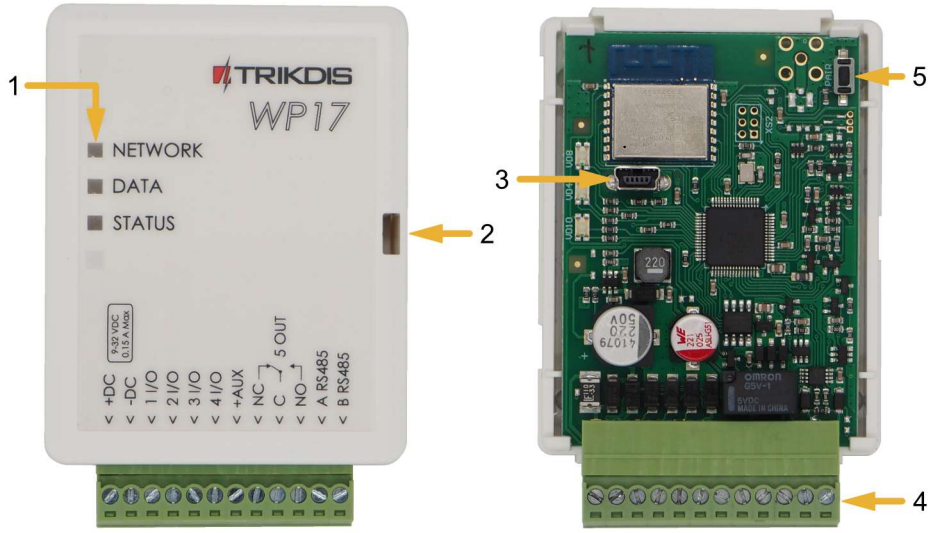
- Quick and easy installation.
- Addition of new users and deletion of existing users can be done with the ***Protegus*** app (when logged in with administrator rights), ***TrikdisConfig*** software.
- Device can be configured either by connecting a USB Mini-B cable or remotely with the ***TrikdisConfig*** software.
- Remote updating of firmware.

1.1 Specifications

Parameter	Description
Power supply voltage	9-32 V DC
Current consumption	150 mA
Universal inputs/outputs	4, can be set either as input IN with type: NC, NO, EOL=10 kΩ, or output OUT (open collector (OC) 50 mA)
Output	1 vnt., relay, 1 A 30 V DC, 0,5 A 125 V AC
Connection to CMS	TCP/IP or UDP/IP via Wi-Fi
Event transmission protocol	TRK_TCP or TRK_UDP
Encryption key	6 symbol encryption key
Wi-Fi frequency	2,4 GHz
Wi-Fi protocol	802.11 b/g/n
Security mode	WPA, WPA2, WPA mixed

Parameter	Description
Network configuration type	DHCP or manual network configuration (using phone or laptop)
Unsent events memory	Up to 60 events
Event log memory	Up to 5000 events
Users who have permission to control	990
Operating environment	Temperature from –10 °C to +50 °C, relative air humidity – up to 80 % at +20 °C
Dimensions	88 x 62 x 26 mm
Weight	80 g

1.2 Controller elements



1. Light indicators.
2. Frontal case opening slot.
3. USB Mini-B port for controller programming.
4. Terminal for external connections.
5. Button for activating the module's Wi-Fi configuration mode.

1.3 Purpose of terminals

Terminal	Description
+DC	Power terminal (9-32 V DC positive)
-DC	Power terminal (9-32 V DC negative)
1 I/O	Input/output (factory setting: input, NO)
2 I/O	Input/output (factory setting: input. NO)
3 I/O	Input/output (factory setting: type OC output)
4 I/O	Input/output (factory setting: type OC output)
+AUX	Positive power terminal for external devices
NC	Relay terminal NC
C	Relay terminal C
NO	Relay terminal NO
A RS485	*RS485* bus A terminal
B RS485	*RS485* bus B terminal

1.4 LED indication of operation

Indicator	Light status	Description
NETWORK	Green solid	Connected to Wi-Fi network
	Green blinking	Trying to connect to Wi-Fi network
	Yellow blinking	Indication of signal strength from 0 to 5.
	Flashing green yellow quickly	Wi-Fi configuration mode
DATA	Green solid	Message is being sent
	Yellow solid	There are unsent event messages in the data buffer
STATUS	Green blinking	No operation problems
	1 red blink	Unable to connect to Wi-Fi network
	2 red blinks	Poor Wi-Fi signal strength
	3 red blinks	Unable to connect to the IP receiver using the primary channel
	4 red blinks	Unable to connect to ***Protegus*** server
	5 red blinks	Unable to connect to both receiver channels
	6 red blinks	Internal clock of the ***WP17*** is not set
	7 red blinks	Low power supply voltage

If the LED indication is not working, check the power supply and connections.

Note: Before beginning installation, make sure that you have the necessary components:

1. USB Mini-B type cable for configuration.
2. Cable consisting of at least 4 wires for connecting the controller.
3. Flat-head 2,5 mm screwdriver.

Order the necessary components separately from your local retailer.

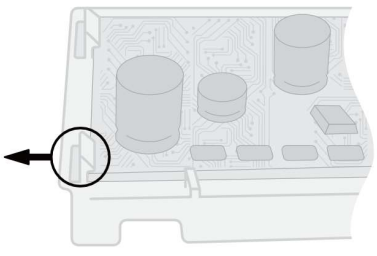
1.5 Wi-Fi controller *WP17* standard packing list

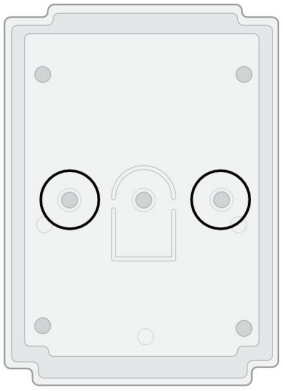
- Wi-Fi controller ***WP17*** 1 pc.
- Resistor 10 kΩ 3 pcs.
- Double-sided adhesive tape (5 cm) 1 pc.
- Screw 2 pcs.

2 Wiring schematics for the Wi-Fi controller *WP17*

2.1 Fastening

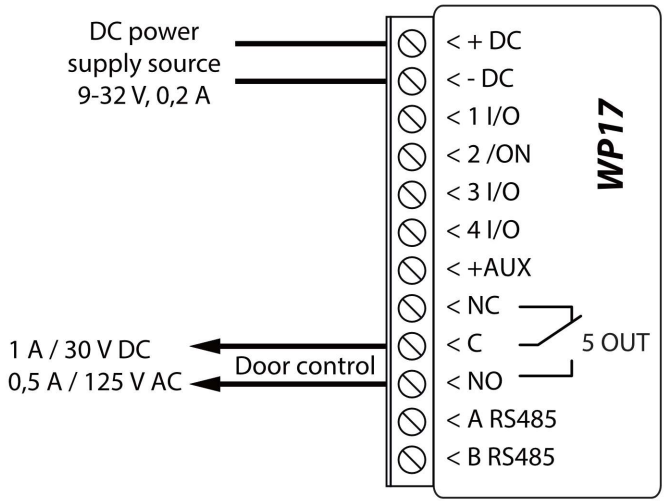
1. Remove the top lid. Pull out the plug part of the terminal block.
2. Remove the PCB board.
3. Fasten the base of the case in the desired place using screws.
4. Reinsert the board and the terminal block.
5. Close the top lid.





2.2 Schematic for connecting the power supply

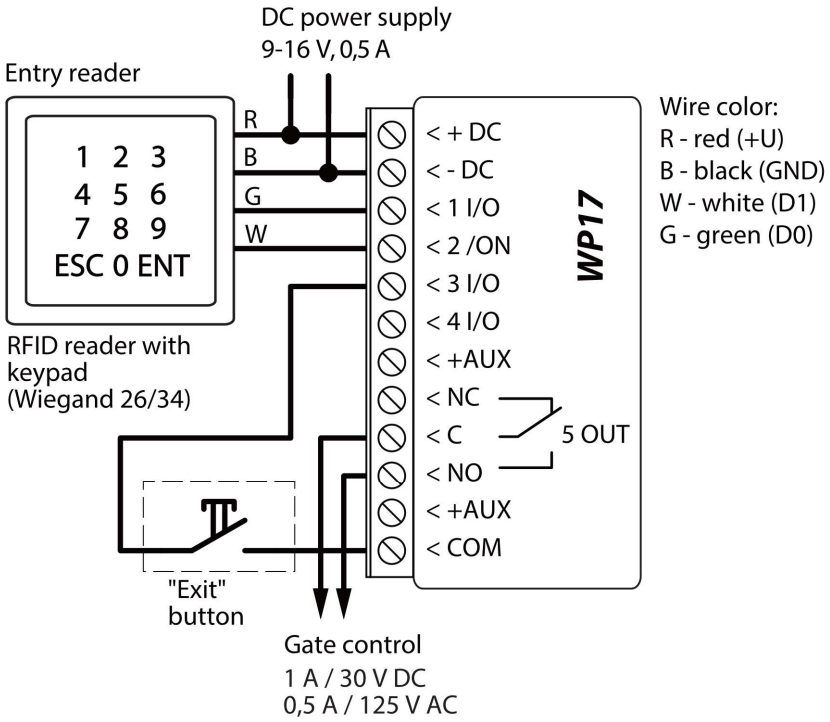
Using wires, connect the ***WP17*** controller according to the schematic shown below.



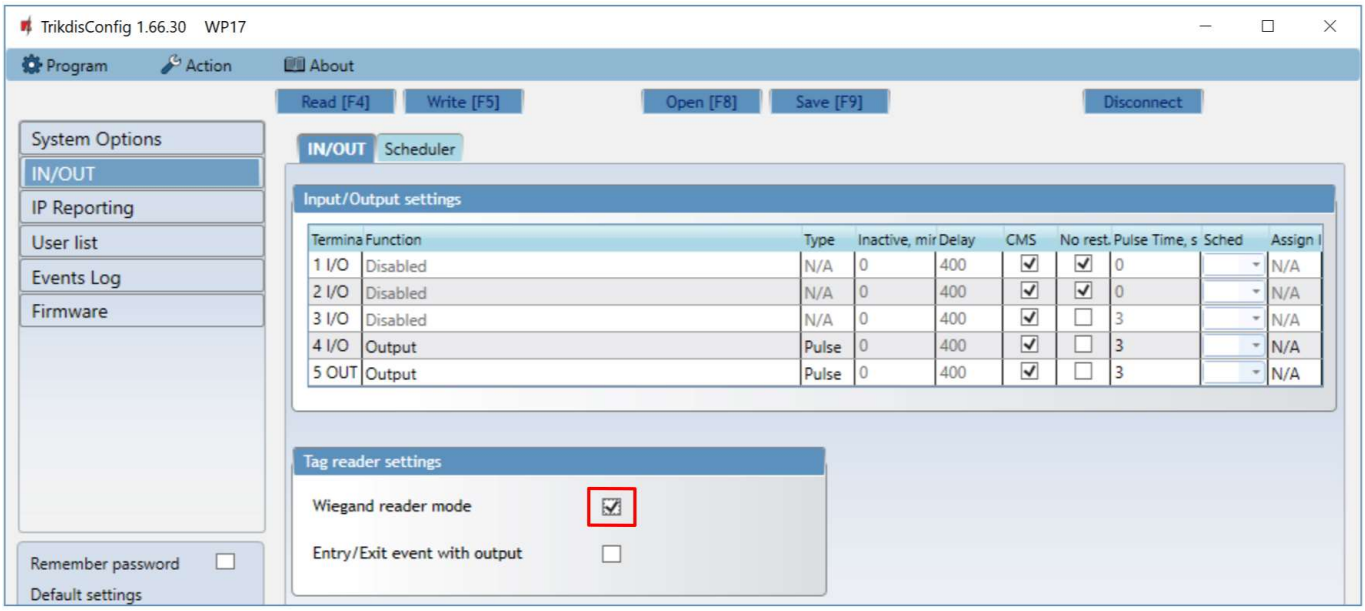
2.3 Schematic for connecting the RFID reader (Wiegand 26/34)

Configuring controller with an RFID reader is described in chapter 4.3. „„IN/OUT" window". Only output 5 OUT can be controlled with an RFID reader.

Schematic for connecting of RFID reader to ***WP17*** controller.



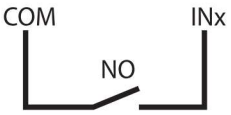
In the ***TrikdisConfig*** program, the **Wiegand reader mode** field must be selected. When by pressing the "Exit" button, the 5OUT output of the controller will be activated for the set pulse duration.



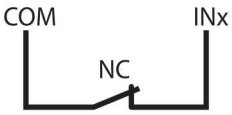
2.4 Schematics for connecting inputs

The ***WP17*** has four universal I/O (Inputs/Outputs) terminal, which can operate either as inputs or outputs. These inputs can operate in NC, NO, EOL modes. Connect the inputs according to the set input type (NC, NO, EOL) as is shown in the schematics bellow:

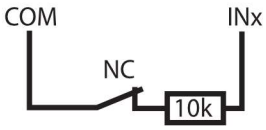
Normally open (NO).
Short - Alarm;
Open - Restore.



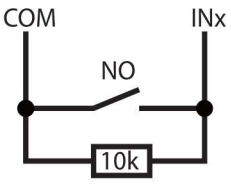
Normally closed (NC).
Short - Restore;
Open - Alarm.



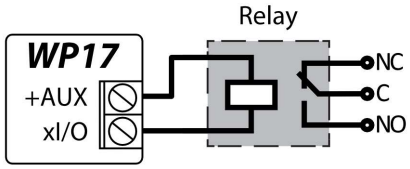
Normally closed with 10k End of line resistor (EOL 10k).
Short - Alarm; Open - Alarm; 10k - Restore.



Normally open with 10k End of line resistor (EOL 10k).
Short - Alarm; Open - Alarm; 10k - Restore.

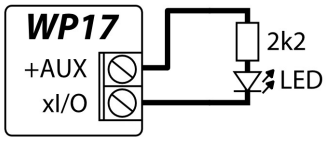


2.5 Schematic for connecting the relay



Using the contact of the relay, it is possible to remotely control (turn on/off) various electric devices. The **Output** mode must be set to the **xI/O** terminal.

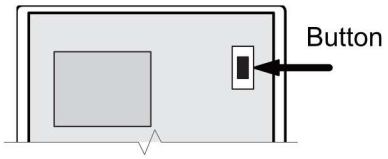
2.6 Schematic for connecting the LED



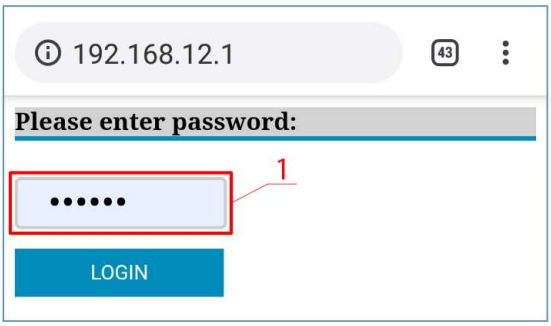
The **Output** mode must be set to the **xI/O** terminal.

3 Wi-Fi network setting parameters

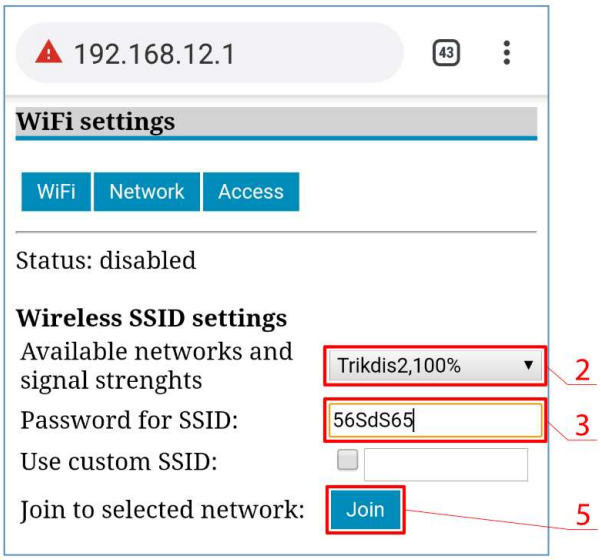
Registering the ***WP17*** controller on a Wi-Fi network. Turn on the power on the controller. Use a flat screwdriver to remove the ***WP17*** lid. Press and hold the button for 3 seconds. The "**NETWORK**" indicator will start fast flashing green in yellow. Release the button. The Wi-Fi controller has a registering mode on the Wi-Fi network. Use your phone or laptop to register. Select a Wi-Fi access point **WP17_xxx** on your phone (or laptop).



1. Open a browser and enter the IP address 192.168.12.1. In the window that opens, enter the password (default password – 123456). Click **LOGIN.**

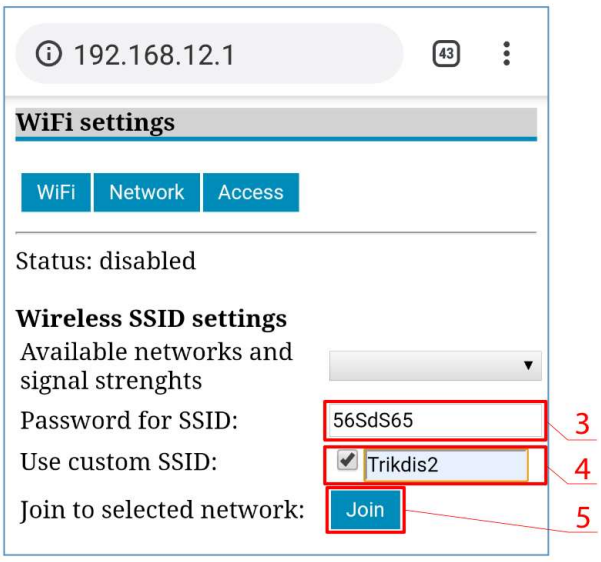


2. Choose a Wi-Fi network in the **WIFI settings** window, to which the controller ***WP17*** will connect.
3. Enter the Wi-Fi network password.
5. Click the **Join** button.

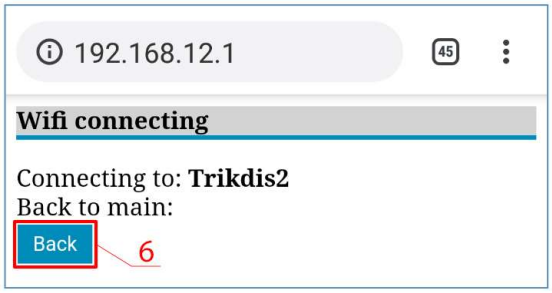


If the network is not on the **Available network and signal strengths** list or if it is hidden, you must.

3. Enter the Wi-Fi network password.
4. Enter the network name in the **Use custom SSID** field and tick the box
5. Click the **Join** button.

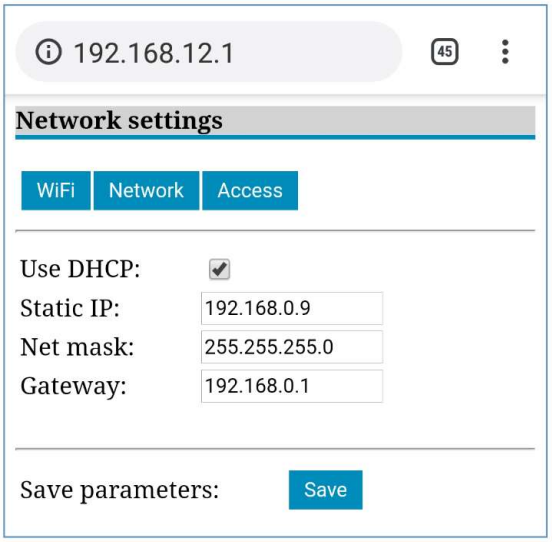


6. A window will open. You must wait for the module to connect and then click **Back.**



„Network settings“ windows

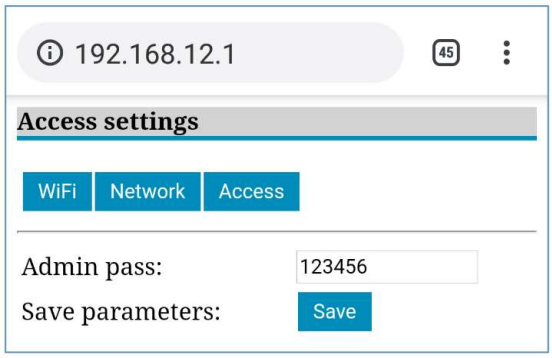
The connection will be established and the IP address will be assigned to the Wi-Fi controller.



“Access settings” window

Admin pass – set the password for connecting with the Wi-Fi controller.

After making the changes click **Save**.

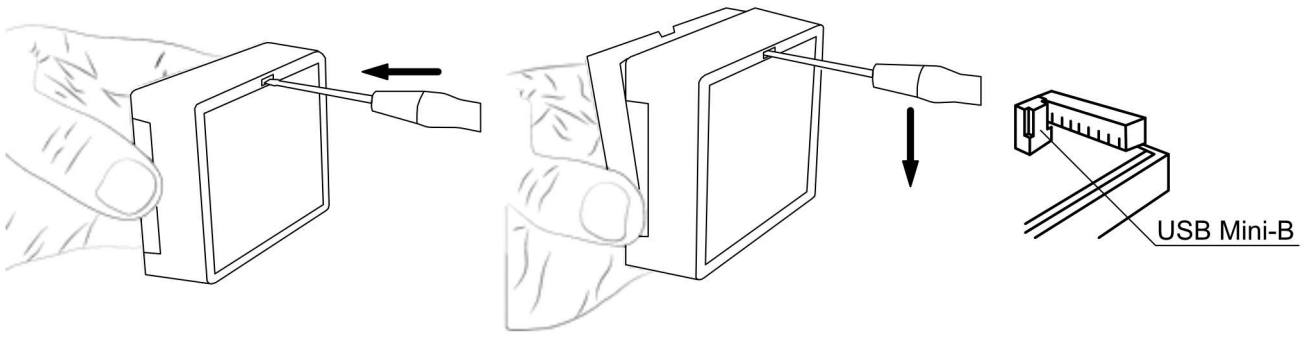


Close your browser. Disconnect your phone (or laptop) from the ***WP17_xxx*** Wi-Fi network. The Wi-Fi Controller ***WP17*** will leave the recording mode within a few minutes (or press and hold the button for 3 seconds until the **NETWORK** indicator stops flashing green-yellow).

4 Setting parameters using *TrikdisConfig* software

With ***TrikdisConfig*** you can change the ***WP17*** controller’s settings according to the program window descriptions below.

1. Download the configuration software ***TrikdisConfig*** from www.trikdis.com/lt/ (enter “TrikdisConfig” in the search field) and install it.
2. Using a flat-head screwdriver, remove the ***WP17***’s lid as shown below:



3. Connect the ***WP17*** to a computer using a USB Mini-B cable.
4. Launch the configuration software ***TrikdisConfig***. The program will automatically recognize the connected device and will automatically open the ***WP17*** configuration window.
5. Click **Read [F4]** to see current ***WP17*** parameters. If prompted, enter administrator's code in the pop-up window.

Note: The button **Read [F4]** will make the program read and show the settings currently saved on the device.

The button **Write [F5]** will save the settings made in the program to the device.

The button **Save [F9]** will save the settings into a configuration file. You can upload the saved settings to other devices later. This allows to quickly configure multiple devices with the same settings.

The button **Open [F8]** will allow to choose a configuration file and open saved settings.

If you want to revert to default settings, click on the **Restore** button at the bottom left of the window.

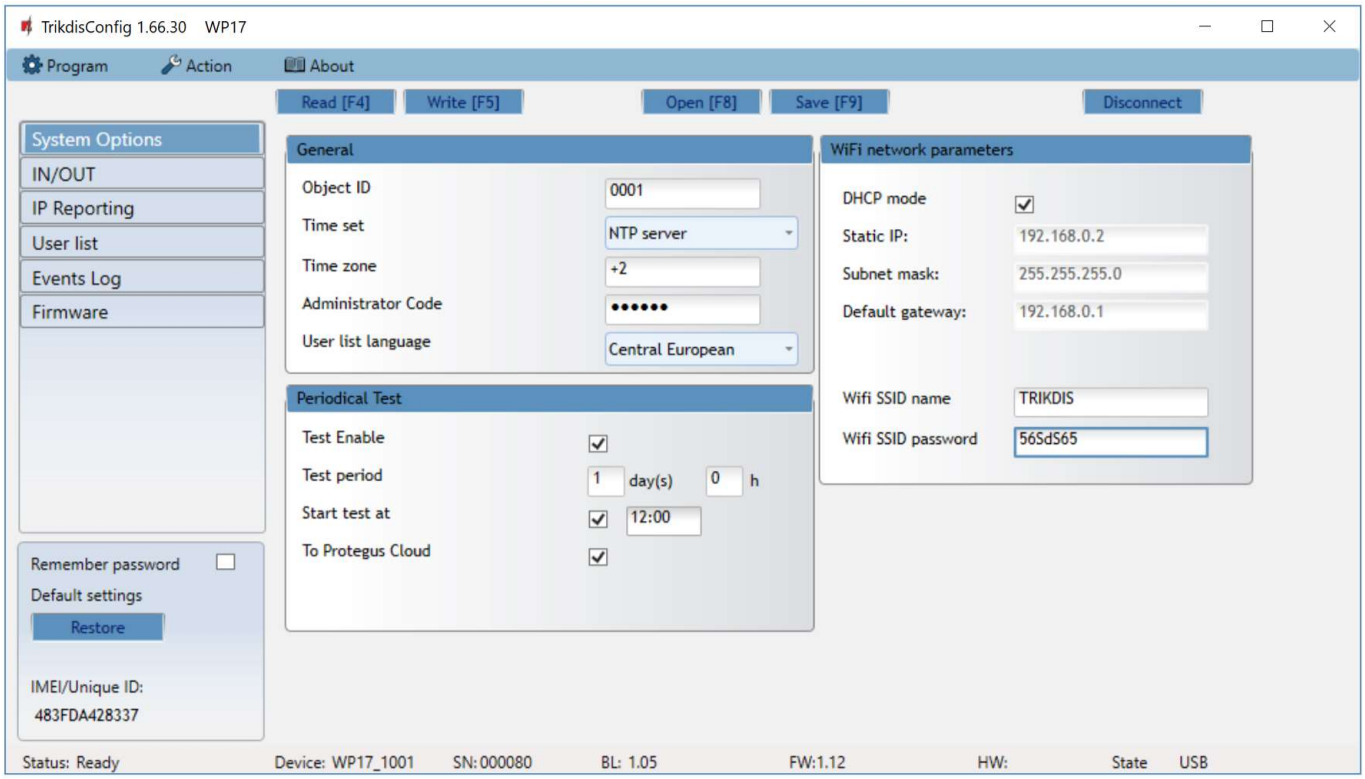
4.1 TrikdisConfig status bar

After connecting the ***WP17*** to the ***TrikdisConfig*** software, the software will show information about the connected device in the status bar.

Name	Description
IMEI/Unique ID	The device's MAC number
State	Operational state
Device	Device type (must show ***WP17_xxxx***)
SN	Device's serial number
BL	Launcher version
FW	Device's firmware version
HW	Device's hardware version
State	Type of connection with the software (with USB or remote)

When the button **Read [F4]** is clicked, the program will read and show the settings currently saved on the ***WP17***. With ***TrikdisConfig***, adjust the required settings according to the program window descriptions below.

4.2 „System options“ windows



Settings group „General“

- **Object ID** – enter account number (4 symbol hexadecimal number, 0-9, A-F. **Do not use FFFE, FFFF Object ID**).
- **Time set** – choose a source for setting the time.
- **Time zone** – indicated, when the time synchronization NTP server is specified.
- **Administrator Code** – with this code it is possible to change all of the parameters of the controller.
- **User list language** – select a language (The user list can be entered in the characters of the selected language).

Settings group „Periodic test”

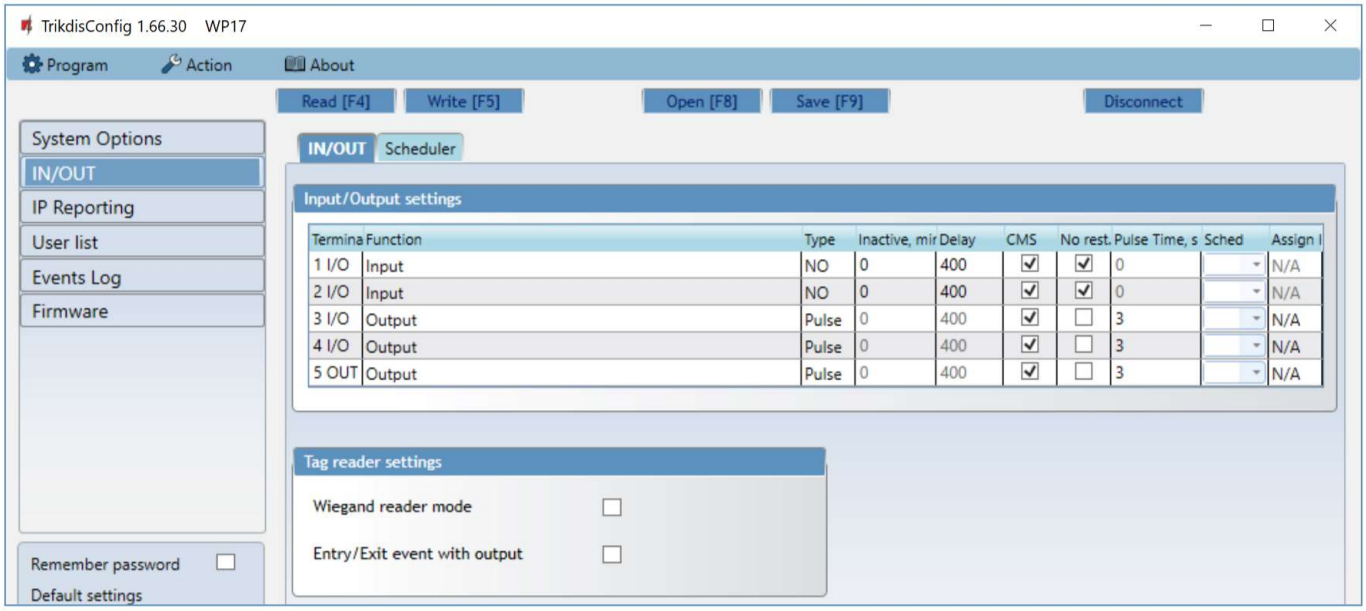
- **Test Enable** – if the box is ticked, periodic test messages are enabled.
- **Test period** – setting of test sending time period.
- **Start test at** – setting of test start time.
- **To Protegus Cloud** – if the box is ticked, the test message will be sent to ***Protegus***.

Settings group „WiFi network parameters“

- **DHCP mode** – WiFi controller’s mode for registering to network (manual or automatic).
- **Static IP** – static IP address for when manual registering mode is set.
- **Subnet mask** – subnet mask for when manual registering mode is set.
- **Default gateway** – gateway address for when manual registering mode is set.
- **Wifi SSID name** – enter the Wi-Fi network name, to which the controller ***WP17*** will connect.
- **Wifi SSID password** - enter the Wi-Fi network password.

4.3 „IN/OUT“ windows

„IN/OUT“ tab



Input / Output settings window.

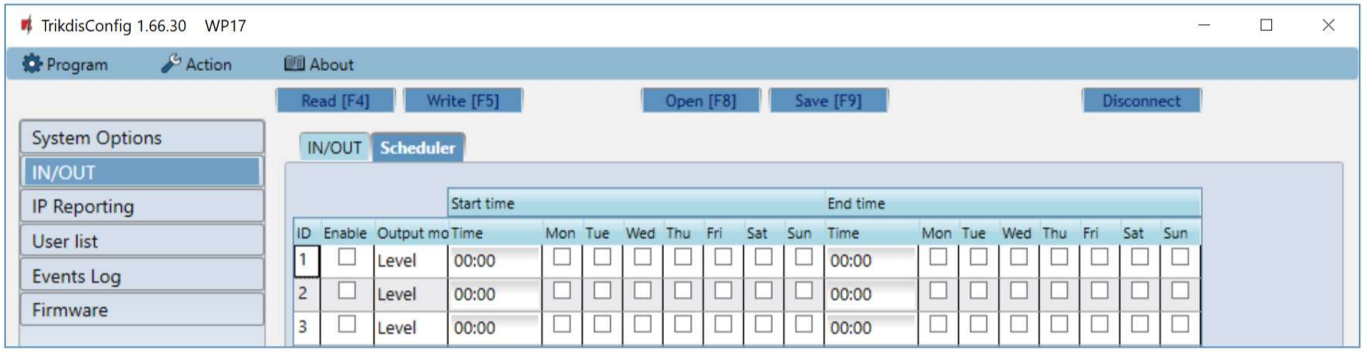
Settings group „Input/Output settings“

- **Terminal** – controller’s input and output terminal numbers.
- **Function** – terminal type (input, output, disabled).
- **Type** – specify input type (NC, NO, EOL=10kΩ).
- **Inactive** –input will be inactive for specified time after first activation. Enter 0 if you want to turn this function off.
- **Delay** - input (zone) reaction time, ms.
- **CMS** – if box is ticked, the message will be sent to CMS (Central Monitoring Station) and to ***Protegus***.
- **No rest**. – do not send restore event.
- **Pulse time** – time for which the output is turned on, when output is set as **Pulse** type.
- **Sched** – assign a schedule number for controlling the output.
- **Assign IN** – assign input (IN) to output to see the actual state of the device depending on the input’s state.

Settings group „Tag reader settings“

- **Wiegand reader mode** – tick the box if an RFID reader (Wiegand 26/34) will be connected to the ***WP17*** controller.
- **Entry/Exit event with output** - tick the box and input / output events will be sent when controlling the output through ***Protegus***.

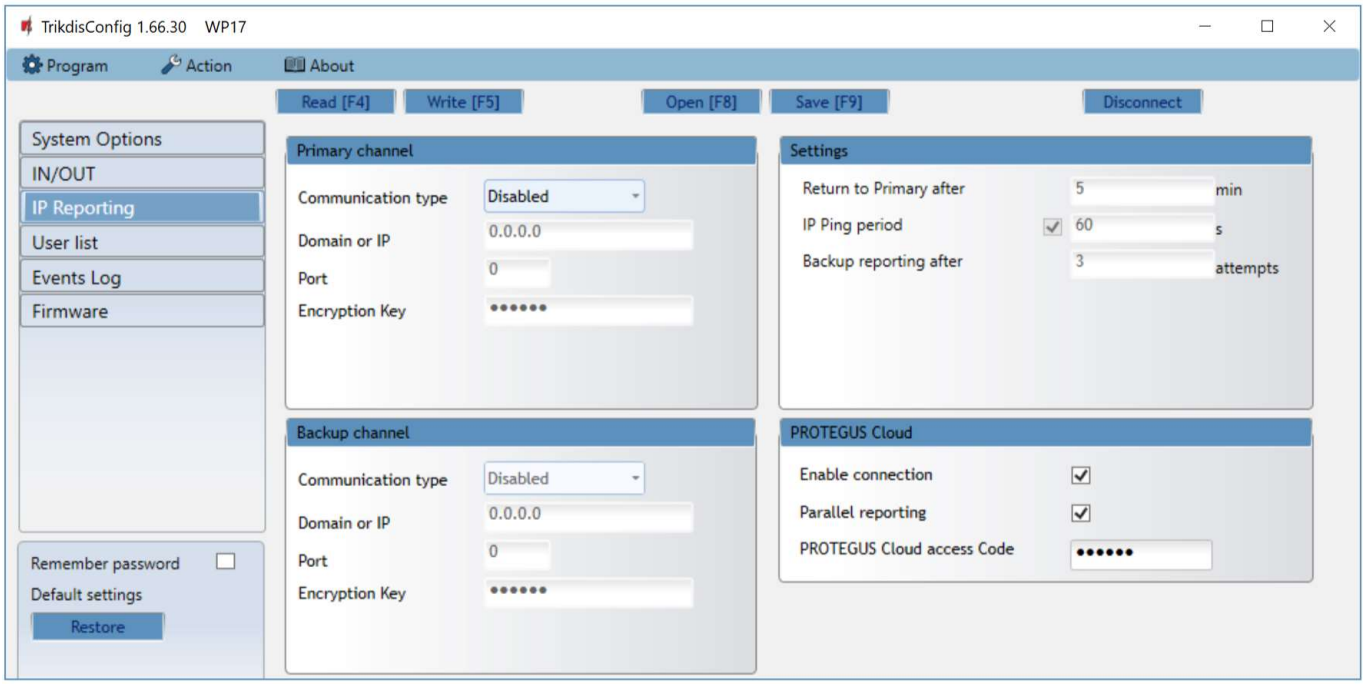
„Scheduler“ tab



The OUT output can be activated according to a set schedule. It is necessary to specify the time and days of the week, enable the schedule, and assign the schedule to the Output.

- **Enable** – enable the time schedule for when the controller will control the output.
- **Start time** – specify the time and days of the week from when the output will be turned on.
- **End time** – specify the time and days of the week until when the output will be turned on.

4.4 „IP reporting“ windows



Settings group „Primary channel“

- **Communication type** – choose the type of communication (TCP/IP, UDP/IP) with the CMS (Central Monitoring Station) receiver.
- **Domain or IP** – enter the receiver's domain or IP address.
- **Port** – enter the receiver's network port number.
- **Encryption Key** – 6-digit message encryption key that must match the encryption key of the CMS receiver.

Settings group „Backup channel“

The settings are identical to those of the main communication channel.

Settings group „Settings“

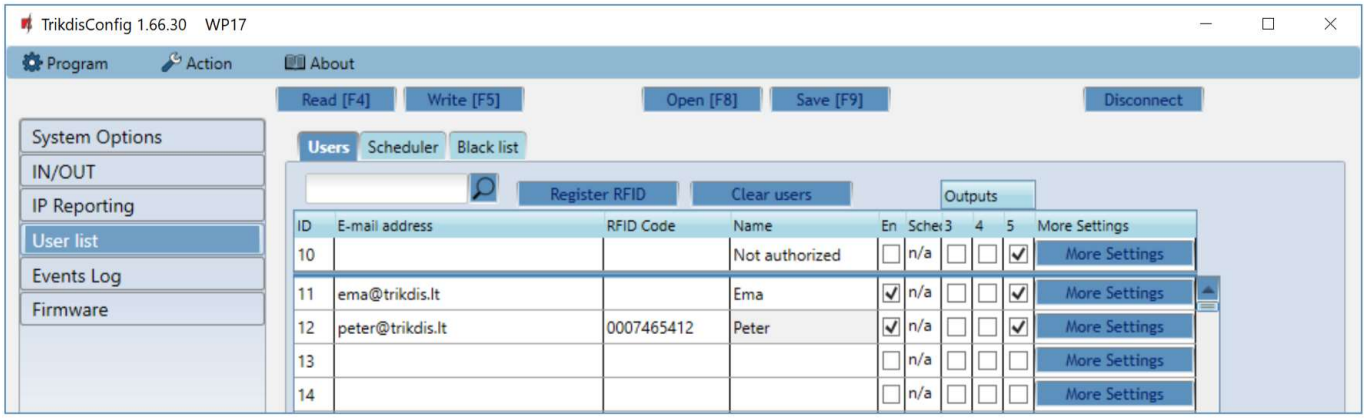
- **Return to primary after** – time period after which the controller will attempt to regain connection with the primary channel.
- **IP Ping period** – enable sending of PING signal and set the length of its period.
- **Backup reporting after** – specify amount of attempts to connect with the main channel, after which the controller will automatically connect to the backup connection channel.

Settings group „Protegus Cloud“

- **Enable connection** – enable ***Protegus*** service, the ***WP17*** will be able to exchange data with the ***Protegus*** app and also remote configuration with ***TrikdisConfig*** will be possible.
- **Parallel reporting** – the messages are sent simultaneously to the CMS, ***Protegus***. When not enabled, messages to ***Protegus*** will be sent only after being sent to CMS.
- **Protegus Cloud access Code** – 6-digit code for connecting with ***Protegus*** (default code - 123456).

4.5 „User list“ window

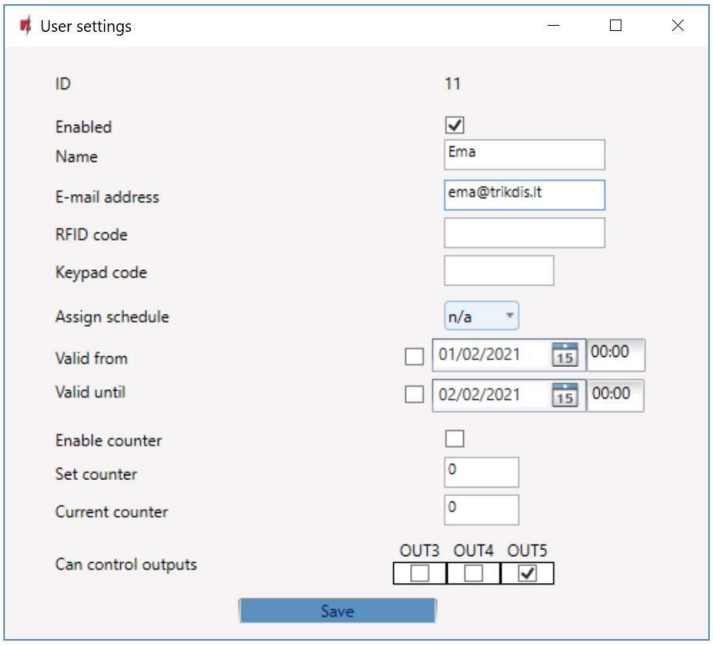
„User list“ tab



- **E-mail address –** specify user’s e-mail address.
- **RFID code** - enter the user's RFID card (pendant) ID number if an RFID reader is connected to the controller and the user has an RFID card (pendant).
- **Name** - specify user’s name.
- **En** – if boxed is ticked, user is allowed to control outputs OUT.
- **Sched**. – assign a schedule (specify a schedule number) for when the user can control outputs OUT.
- **Outputs** – mark the number of the output that will be controlled by the user.
- **Code** – enter user code of RFID reader with keypad.
- **More settings** - by clicking on the **More settings** button, an additional user settings window will open.

Note:	If box **En.** is unticked for user **No.10** with the name **Not authorized,** the user will be prohibited from operating the controller with RFID cards and codes not included in the user list.

User settings (numbers from 11 to 999)

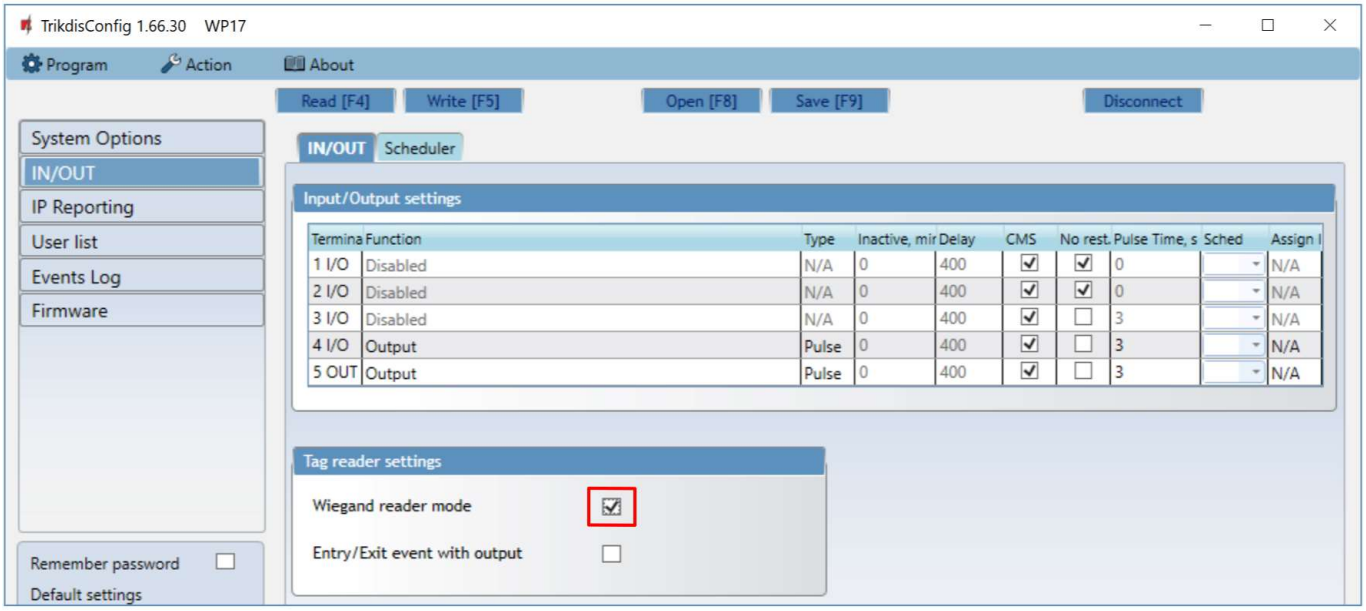


- **Enabled** – boxed is ticked, user is allowed to control outputs OUT.
- **Name** – specify user’s name.
- **E-mail address** – specify user’s e-mail address.
- **RFID code** – when an RFID reader with keypad (Wiegand 26/34) is connected to the controller, the ID number of the RFID card (pendant) can be assigned to the user.
- **Keypad code** – when RFID reader with keypad (Wiegand 26/34) is connected to the controller, the user can be assigned a user code.
- **Assign scheduler** – assign a schedule (specify a schedule number) for when the user can control outputs OUT.
- **Valid from** – specify date and time from when the user can control the controller.
- **Valid until** – specify date and time until when the user can control the controller.
- **Enable counter** – check the box to enable the counter.
- **Set counter** – specify number of times that user can control the controller during the chosen time.

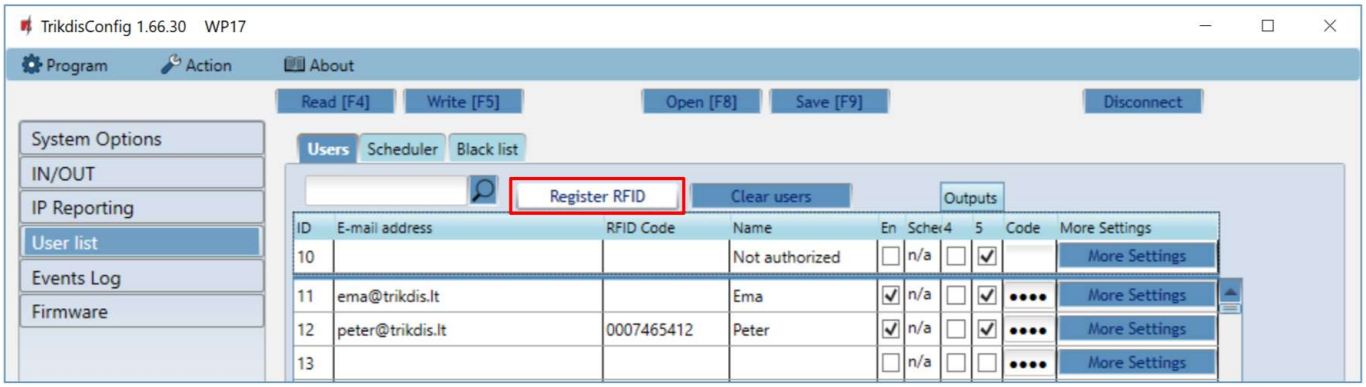
- **Current counter** – current number of control times.
- **Can control outputs** - mark the number of the output that will be controlled by the user.

4.5.1 RFID pendant (card) registration

Connect the RFID reader to the controller (see p.2.3 " Schematic for connecting for RFID reader (Wiegand 26/34)"). Turn on the power to the controller. Connect the USB Mini-B cable to the controller. In the „IN / OUT" window of the ***TrikdisConfig*** program, select the **Wiegand reader mode** field.



Click **Register RFID** in the "User list" window.

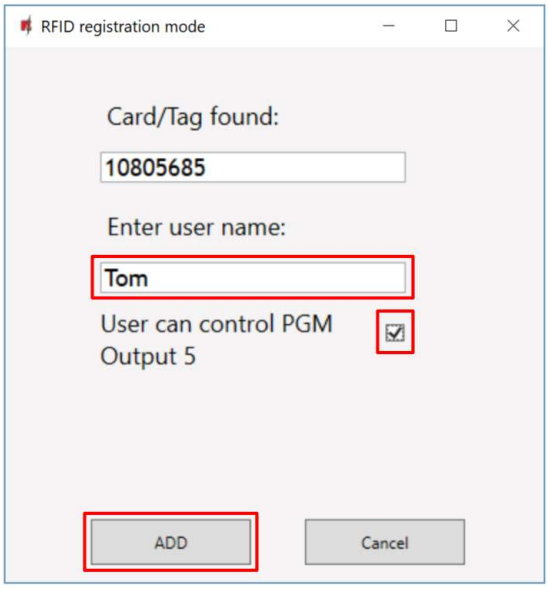


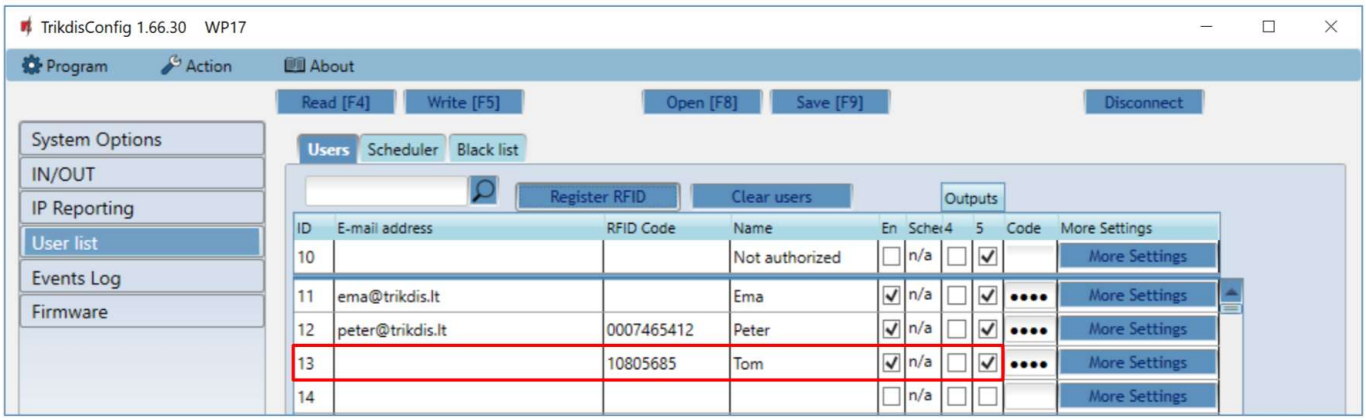
The RFID pendants (cards) registration window will open.

Attach the RFID pendant (card) to the RFID reader. A new window will open when the reader scans the pendant (card). In it, **Enter user name** and select the **User can control PGM Output 5**. Press the **ADD** button.

Repeat the steps above to add more RFID pendant (cards). When the registration of all RFID pendant (cards) is completed, press the **STOP registration** button.

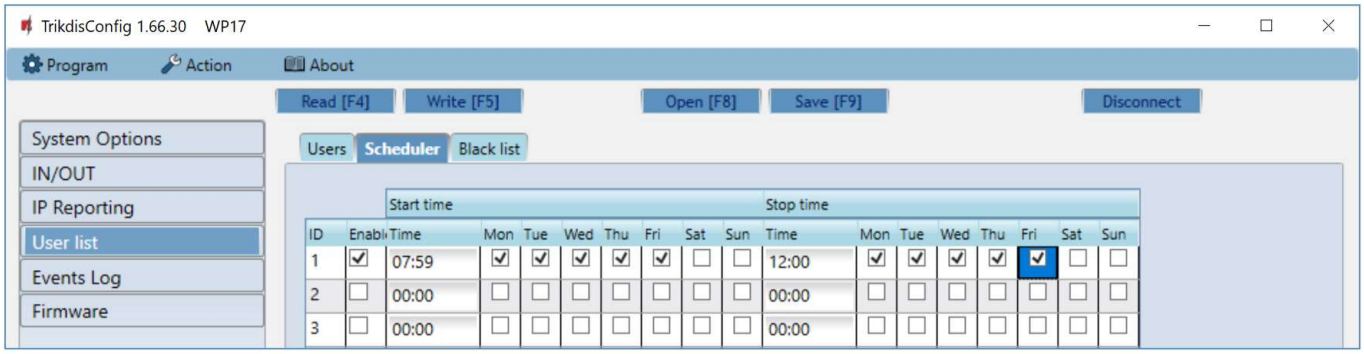
Press the button **Write [F5]** to save the RFID pendant list to the controller.





RFID pendants (cards) can be registered in ***TrikdisConfig*** by entering their ID numbers in the **RFID code** field. Give the user a **Name**, check field the **En.** and a managed **Outputs** field. Press the **Write [F5]** button to save the list of RFID pendants (cards) to the controller.

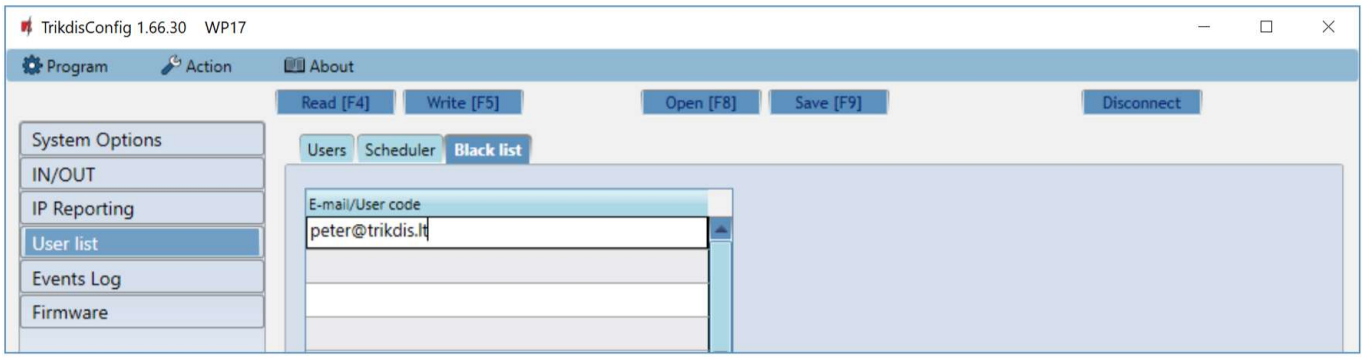
„Scheduler“ tab



A schedule can be created for the user, specifying the time and days of the week when he will be able to control the output.

- **Enable** – enable time schedule when the user will be able to control the controller's outputs.
- **Start time** – specify time and days of the week from when the user can control controller's outputs.
- **Stop time** – specify time and days of the week until when the user can control controller's outputs.

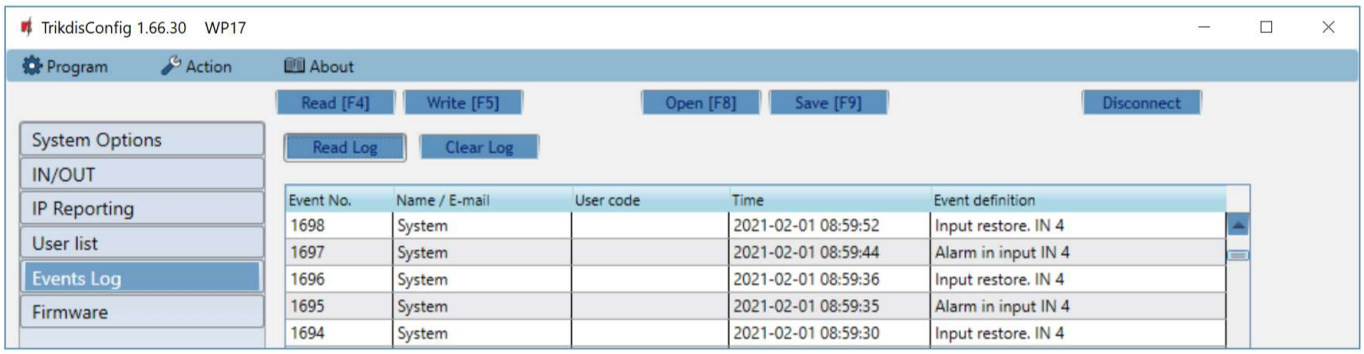
„Black list“ tab



The **Black list** contains e-mail addresses of users, ID numbers of RFID cards who are banned from controlling the ***WP17***.

It is convenient to add users to the **Black List** directly from the **Events Log**. In the **Events Log**, right-click on the **Name** or ID number of the RFID card and choose **Add to Black List**.

4.6 „Event Log“ window



Click the button **Read Log**. The **Events Log** will be read from the controller's memory. The **Events log** provides information about the controller's actions and its internal events.

4.7 Restore default settings

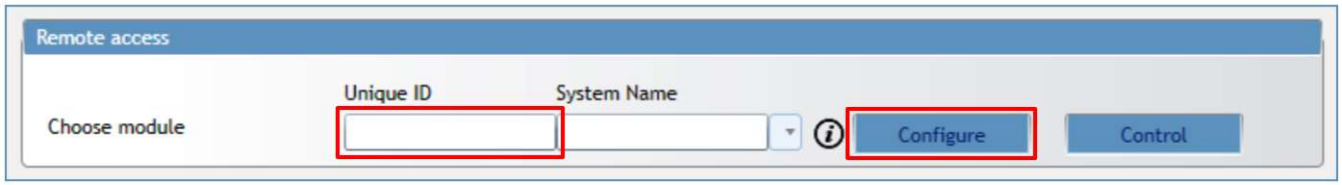
To restore the default settings of the ***WP17*** controller you need to click the **Restore** button in the ***TrikdisConfig*** program window.

5 Setting parameters remotely

IMPORTANT: Remote configuration will only work when:

1. ***Protegus service*** is enabed. Enabling the service is described in chapter 4.4 ““IP reporting” window”;
2. Connected to network („**NETWORK**“ LED is green solid and yellow blinking).

1. Download the program ***TrikdisConfig*** from www.trikdis.com.
2. Make sure that the controller is connected to the internet and connection to ***Protegus*** is enabled.
3. Launch the configuration program ***TrikdisConfig*** and in the field **Unique ID** of the **Remote access** section enter the **MAC** number of your controller (the MAC number is given on the stickers that can be found on the lower part of the device's case and on the packaging).



4. In the field **System Name** you can give any name to this controller. Click **Configure**.
5. The controller configuration window will open. Click the button **Read [F4]** for the program to read the parameters currently set for the controller. If a window for entering the *Administrator code* opens, enter the six-symbol *administrator code*. To make the program remember the code, tick the box next to **Remember password** and click the button **Write [F5]**.
6. Set the desired settings for the controller and afterwards click **Write [F5]**. To disconnect from the controller click **Disconnect** and exit the ***TrikdisConfig*** program.

6 Testing of Wi-Fi controller WP17

When configuration and installation are finished, test the system:

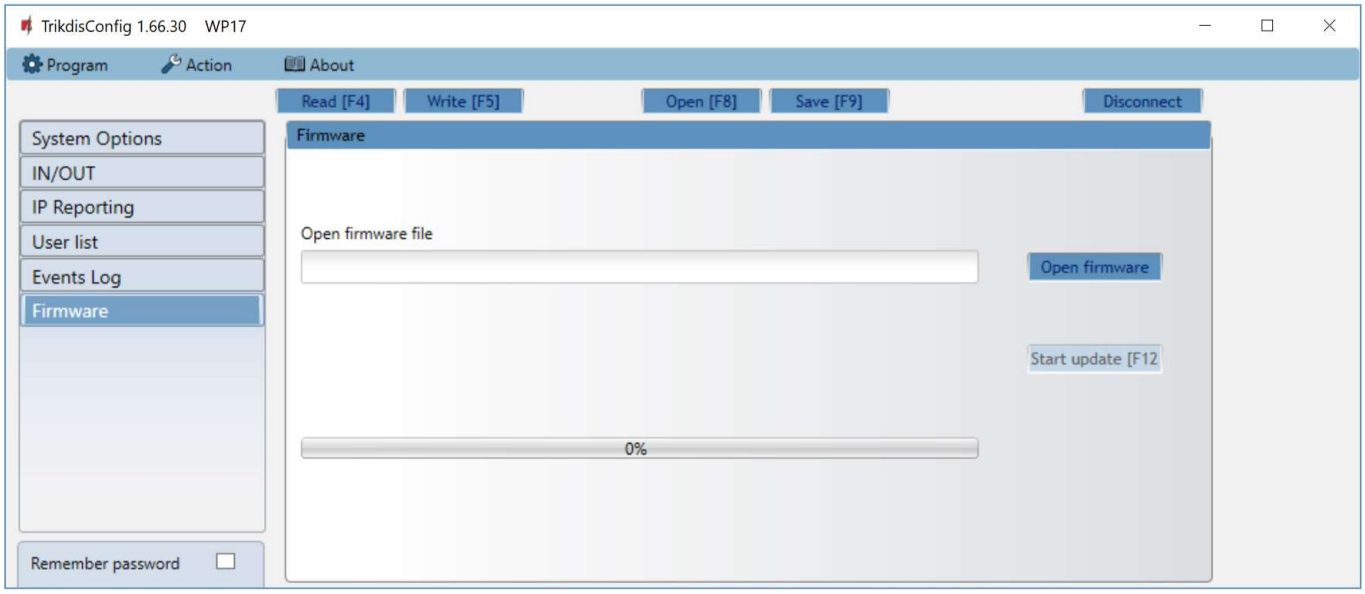
1. Check if the power is on;
2. Check network connectivity („**NETWORK**" indicator must be green solid and blink yellow);
3. To test the ***WP17***'s inputs, trigger them and make sure that the recipients get correct messages;
4. To test the ***WP17***'s outputs, turn them on remotely and make sure that the recipients get correct messages and the outputs are activated correctly.

7 Updating firmware manually

Note:	When the ***WP17*** is connected to ***TrikdisConfig***, the program will offer to update the device's firmware if updates are available. Updates require an internet connection. If antivirus software is installed in your computer, it might block the automatic firmware update function. In this case you will have to reconfigure your antivirus software.

The ***WP17***'s firmware can also be updated and changed manually. All prior ***WP17*** parameters remain after update. When writing manually, the firmware can be changed to an older or a newer version. Follow these steps:

1. Launch ***TrikdisConfig***.
2. Connect the ***WP17*** to a computer using a USB Mini-B cable or connect to the ***WP17*** remotely. If a newer version of firmware is available, the program will offer to install it.
3. Choose the menu branch **Firmware**.
4. Click the **Open firmware** button and choose the required firmware file. If you do not have the file, the newest version of the firmware file can be downloaded by registered users from www.trikdis.com, under the download section of the ***WP17***.



5. Click the button **Start update [F12].**
6. Wait for the update to finish.