



U-Prox WDC

Wireless magnetic contact
sensor

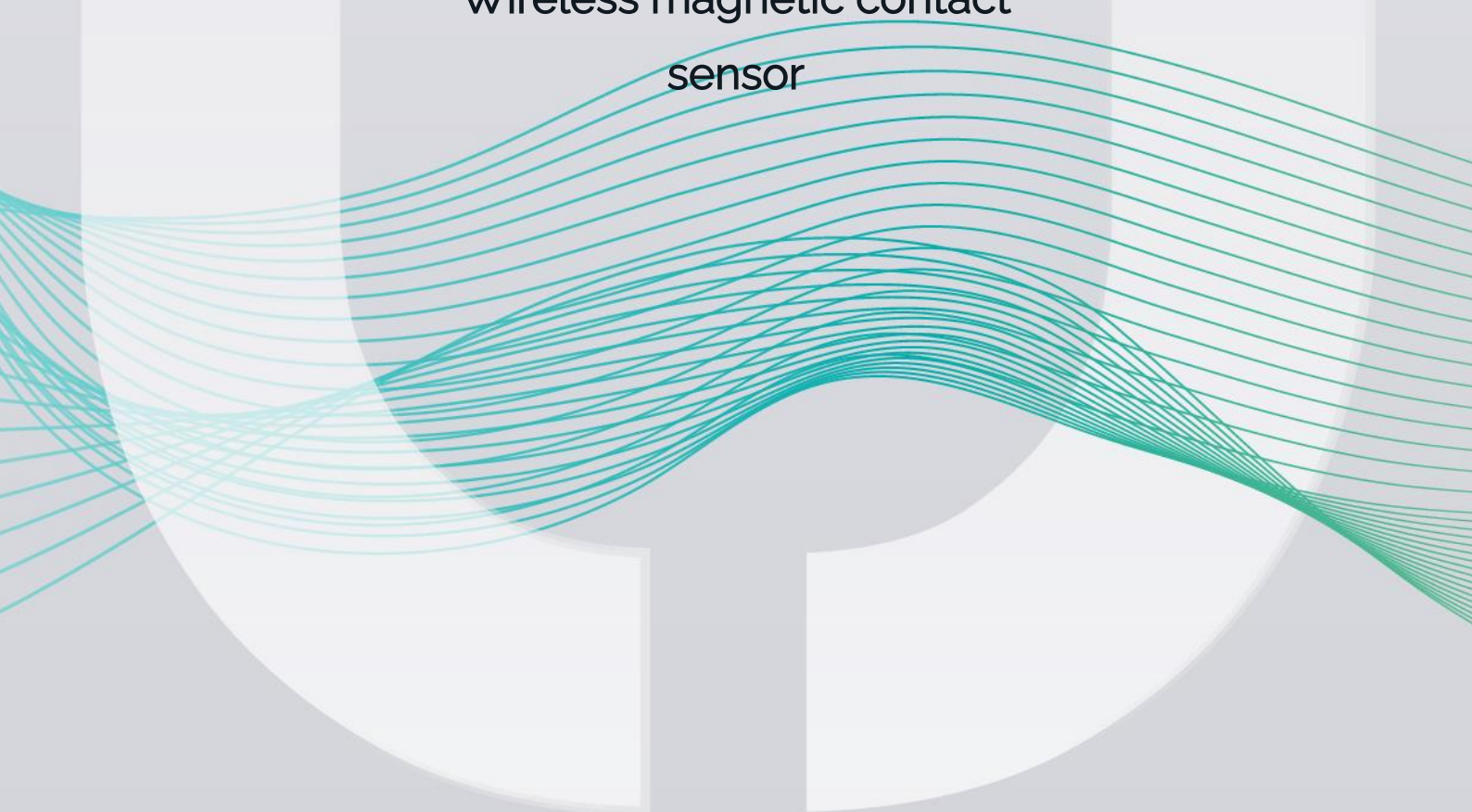


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Introduction

This manual describes how to install and configure U-Prox WDC wireless magnetic contact sensors. Please read this manual carefully before using the device.

Technical support for all U-Prox products is provided by phone: +38(091)481-01-69 and/or e-mail: support@u-prox.systems.

Security warnings

WARNING. THE APPLIANCE HAS A BUILT-IN BATTERY. SUBSTITUTING AN INCORRECT TYPE OF BATTERY FOR THE APPLIANCE MAY RESULT IN A FIRE OR EXPLOSION. DISPOSE OF USED BATTERIES IN ACCORDANCE WITH LOCAL LAWS AND REGULATIONS.

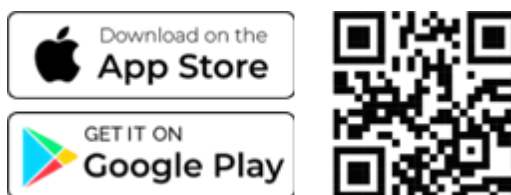
Applications for customization

U-Prox Installer mobile application

Application for setting up the U-Prox wireless security system.

It is intended for both individual users and engineers of central monitoring stations.

Using a mobile phone, the app allows you to perform full security system setup: install, test, and calibrate wireless system elements; configure security groups; connect to monitoring stations; add users and give them the right to control the security system from the U-Prox Home app.



Installer web portal

The U-Prox Installer WEB web portal is designed to configure the U-Prox wireless security system.

It is intended for both individual users and engineers of central monitoring stations of security organizations.



Using a web browser, you can perform full configuration of the security system: install, test, and calibrate wireless system elements; configure security groups; connect to monitoring stations; add users and grant them the right to control the security system from the U-Prox Home app.

<https://web-security.u-prox.systems/>

Description and principle of operation

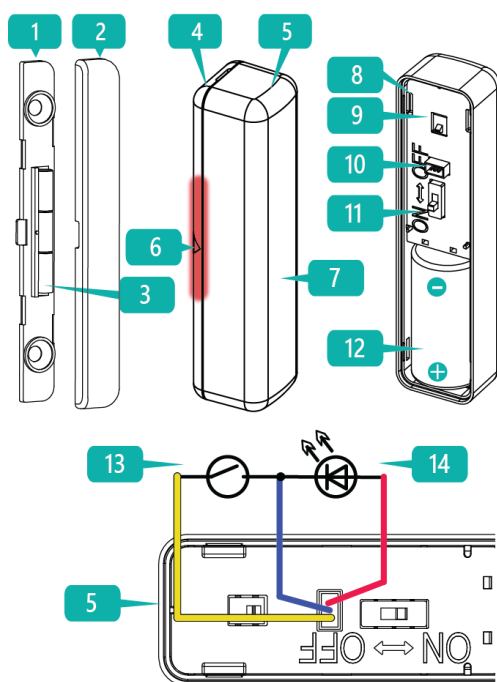
U-Prox WDC is a magnetic contact point radio channel sensor designed to monitor the state of structural elements for opening or displacement to detect an attempted intrusion into the premises and to issue an alarm notification to the U-Prox alarm center.

The sensor operates only with the U-Prox security system; it cannot be connected to third-party systems.

It has a sealed case and is used to protect doors and windows.

The device has contacts for connecting an arming LED and an external sensor, such as a reed switch.

Functional elements of the device



1. Bottom plate of the magnet case
2. Magnet case cover
3. Neodymium magnet
4. Lower plate of the sensor case
5. The upper cover of the case and the capsule with the device
6. Magnet location marks
7. LED indicator
8. Protective plastic plate with the device board
9. Tamper contact
10. Connector for connection:
 - LD contact (+ LED, red) - universal input/output
 - GND contact (ground, blue)
 - DC contact (reed switch, yellow)
11. On/off button
12. Battery, CR123A battery
13. Sensor (reed switch)
14. Light emitting diode (LED)
15. Rubber seal

Features

Sensor (reed switch)	Threshold of operation is 7-15 mm, not less than 1 000 000 actuations
Power supply	3V, CR123A lithium battery included
Service life of a battery	up to 5 years
Radio communication	ISM wireless interface with multiple channels
Radio communication parameters	ITU region 1 (EU, UA): 868.0...868.6 MHz, 100 kHz bandwidth, 20 mW max., distance to devices - up to 4800 m (outdoors); ITU region 3 (AU): 916.5...917 MHz, 100 kHz bandwidth, 20 mW max, distance to devices - up to 4800 m (in open space).
Data transmission (radio)	Two-way communication, encrypted, with sabotage (jamming) detection. The encryption key is 256 bits
Operating temperature range	-20°C ... +50°C
Permissible humidity	Up to 95%
Climate class	III (по EN 50131)
Overall dimensions of the device	85 x 20,9 x 20,4 mm
Overall dimensions of the magnet	85 x 11 x 6 mm
Case color	white, black, dark brown
Degree of protection	IP55
Weight	66 grams

Power supply



The device uses a CR123A lithium battery, which allows it to operate for up to 5 years on a single battery.

Display in the current mode

The light indicator shows data transmission and sensor triggering. Data exchange with the security center, LEDs light up sequentially:

1. Sensor triggering - red
2. Data transmission:
 - Green - transmission is successful
 - Red - data transfer failed
3. Receiving confirmation
 - Green - reception is successful
 - Red - data reception failed

Steps 2 and 3 can be repeated up to 3 times (transmission repeats with increased power)

Installation

Selecting the installation location

Choose the location of the U-Prox WDC carefully. The device should not be placed on top of other devices:

1. Outdoors or in rooms with unacceptable humidity and temperature
2. In places with a high level of radio interference
3. Near objects that can cause attenuation or shielding of the radio signal (metal, mirrors, etc.)
4. At a distance closer than 1 m from the security center

It is recommended to perform the installation in the following sequence:

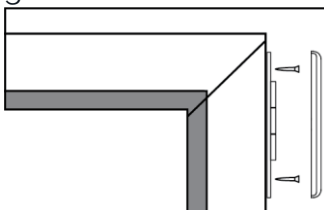
1. Registering the sensor in the security system using the U-Prox Installer app
2. Select the installation location with the optimal signal using the U-Prox Installer app. Please note that the sensor can be placed either vertically or horizontally
3. Installing the magnet
4. Installing the sensor base plate (4)
5. Installing the device (5)

Installation

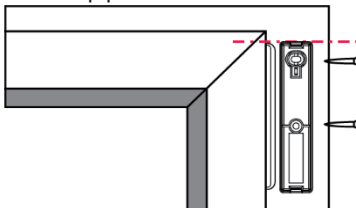
ATTENTION! INSTALLATION IS POSSIBLE ON DOUBLE-SIDED ADHESIVE TAPE OR BY FASTENING WITH THE SUPPLIED SCREWS.

Vertical installation

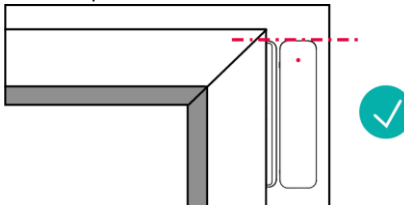
1. Install and secure the magnet



2. Install the bottom plate of the appliance

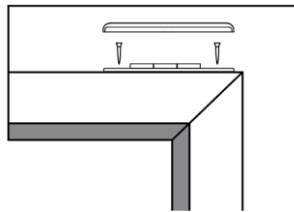


3. Install the device in the bottom plate

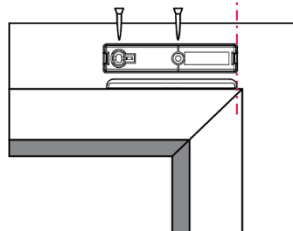


Horizontal installation

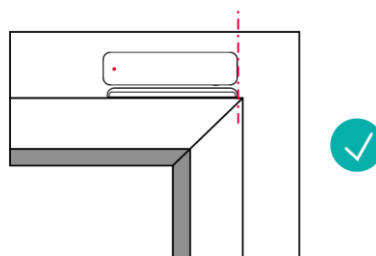
1. Install and secure the magnet



2. Install the bottom plate of the appliance



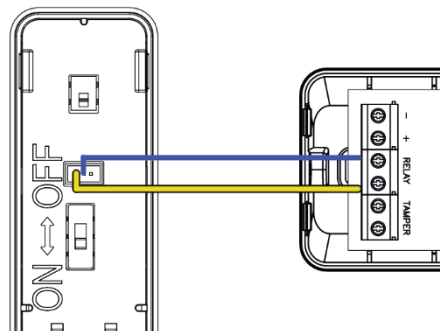
3. Install the device in the bottom plate



WARNING! WHEN THE DEVICE IS INSTALLED CORRECTLY, THE TAMPER WILL BE CLAMPED (LOCKED).

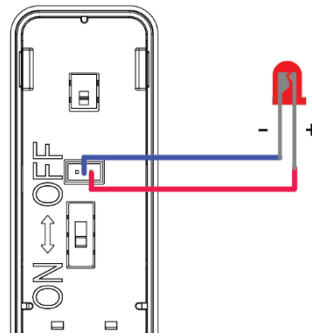
Connecting an external sensor

It is used in cases where the U-Prox WDC cannot be installed, where flush mounting is required, or to process signals from another external sensor or device.



Connecting an external LED

The external LED is used to provide light confirmation that the security team has been armed, the event has been delivered to the security company or the U-Prox cloud, and the security center has received confirmation of the event delivery.



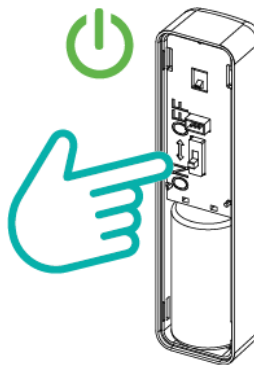
The LED turns on for up to 15 seconds after the sensor is violated and restored during the exit delay countdown.

Turning on and off

Move the switch (11) to the ON position - the indicator light will be on.

If the device has already been registered in the security system, it switches to the next mode.

To turn off the device, move the switch (11) to the OFF position.



WARNING. IF THE DEVICE HAS NOT BEEN REGISTERED, IT WILL GO INTO SLEEP MODE AFTER 30 SECONDS.

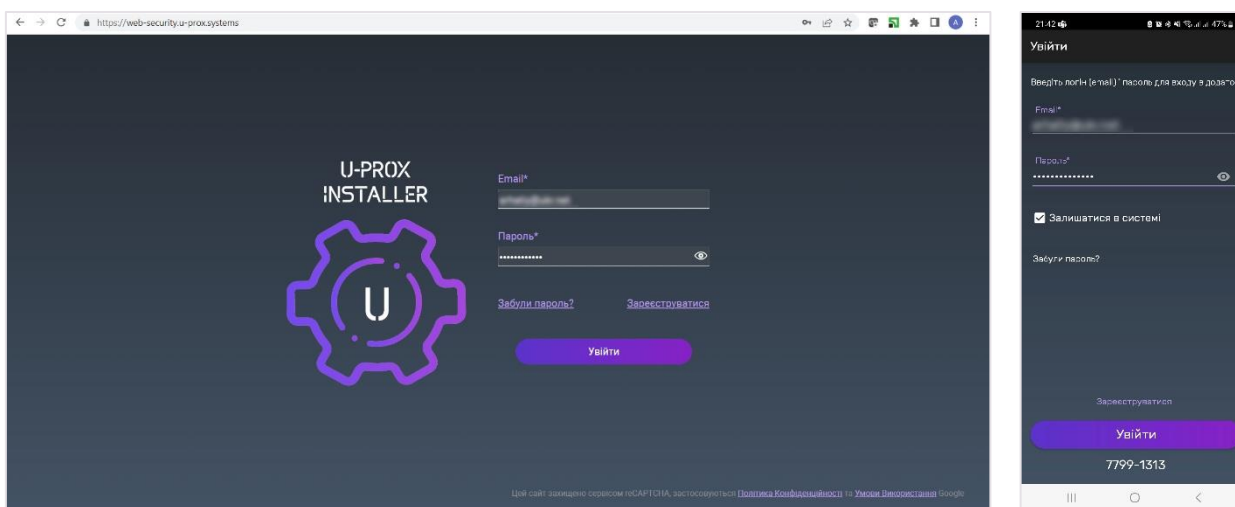
Settings

1. Download and install the U-Prox Installer mobile application to configure the system
2. Launch the U-Prox Installer application and log in or log in using the U-Prox Installer WEB portal

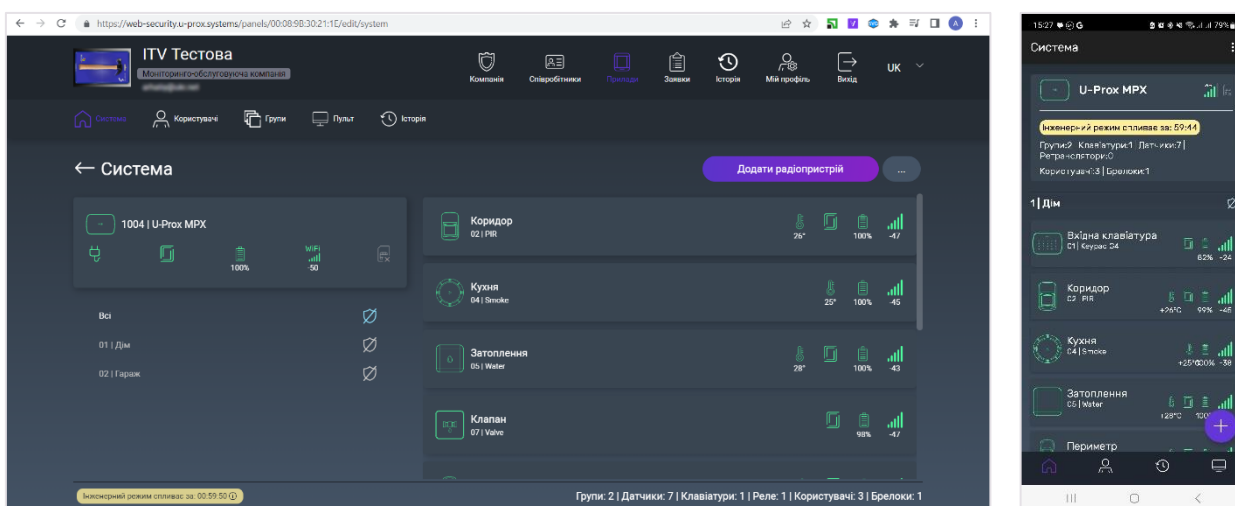
IF NECESSARY, REGISTER IN THE SYSTEM AS AN AUTONOMOUS INSTALLER OR GET ACCESS AS AN INSTALLER OF A SECURITY COMPANY

Adding a device to the security system (registration)

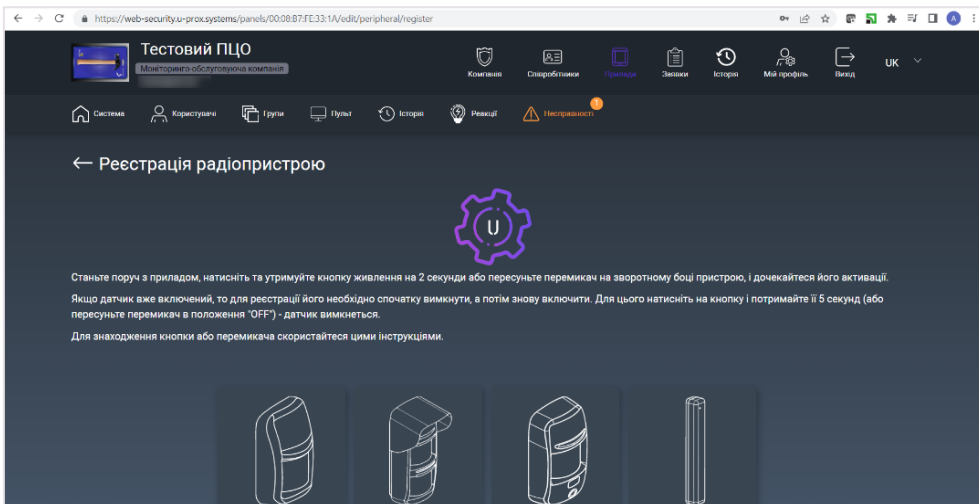
1. Launch the U-Prox Installer application or open the web portal in a browser and log in



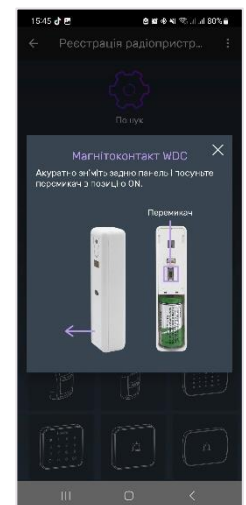
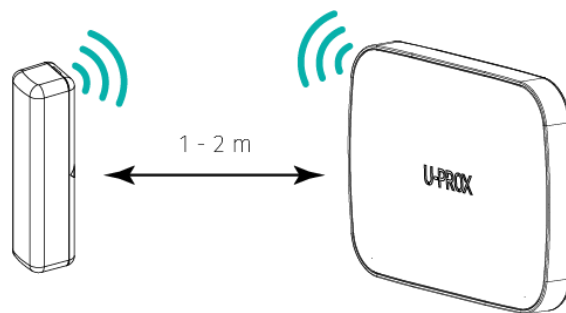
2. Select the U-Prox MPX to which you want to add the wireless sensor from the list of devices



3. Press the button (+) ("Add radio device"), the security center will enter the mode of registering sensors, keypads, etc. In this window, you can click on the device icons and view the instructions for activation.

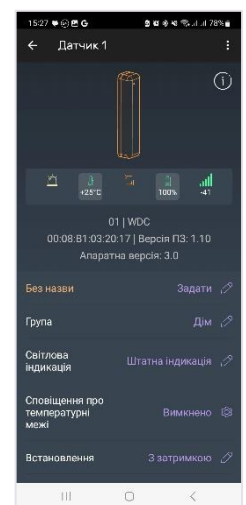
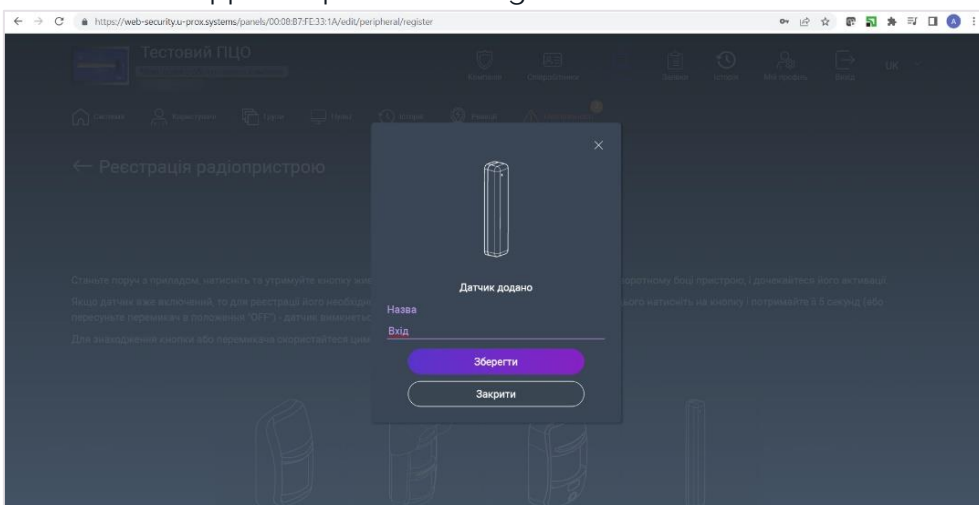


4. According to the instructions, turn on the wireless sensor and bring it to the security center at a distance of about 1 meter



5. Wait 15-20 seconds for the wireless sensor to be registered.
WARNING. THE DEVICE WILL BE ADDED TO THE FIRST FREE ZONE WITH THE LOWEST NUMBER

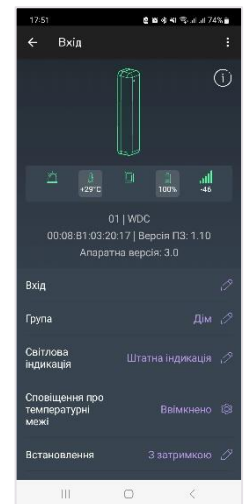
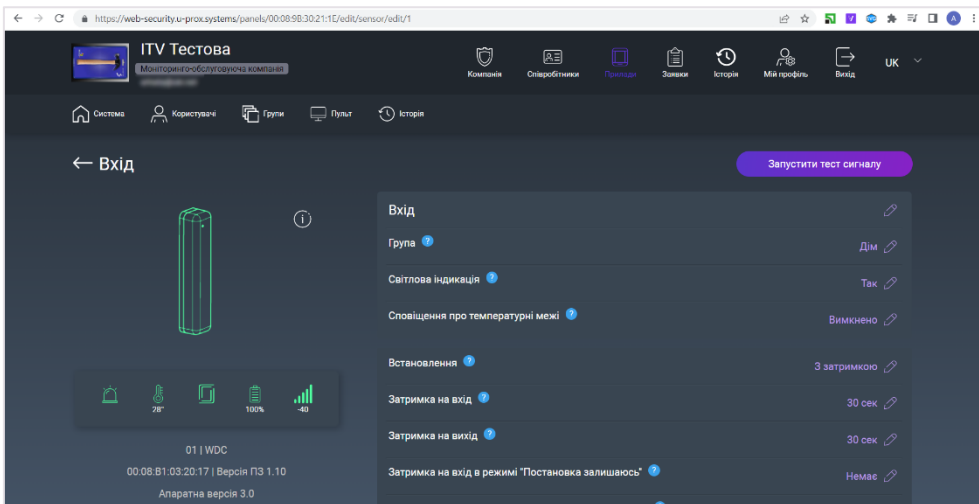
6. The app will open the settings of the wireless sensor



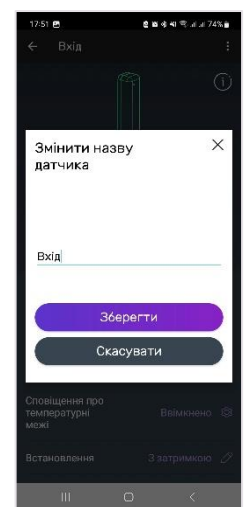
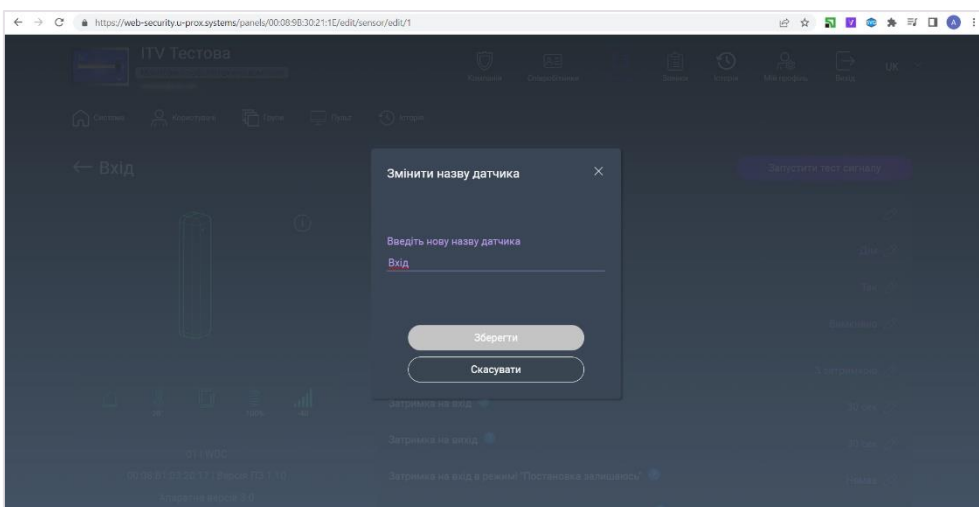
7. Configure your device

Basic settings of the U-Prox WDC

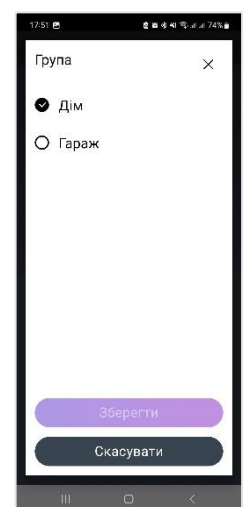
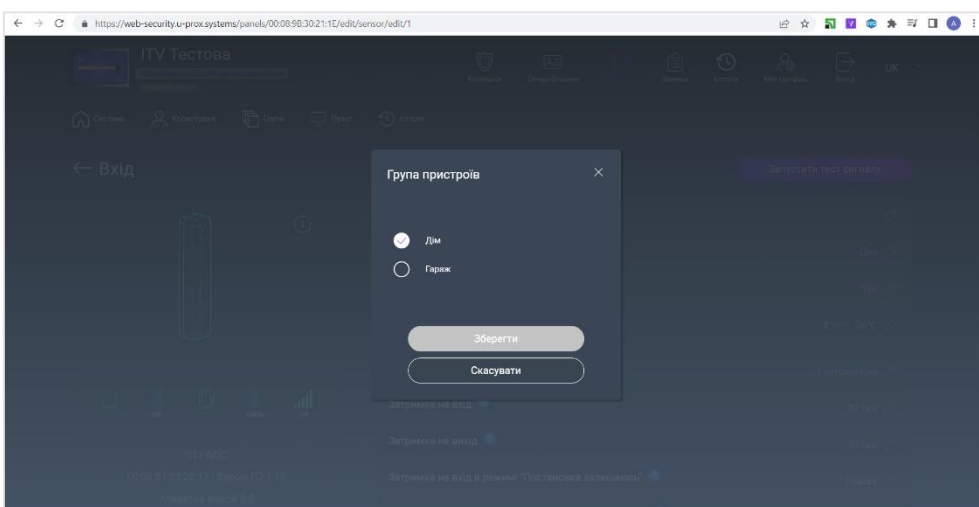
Select the device you want to configure from the device list



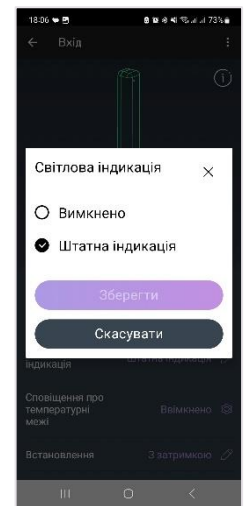
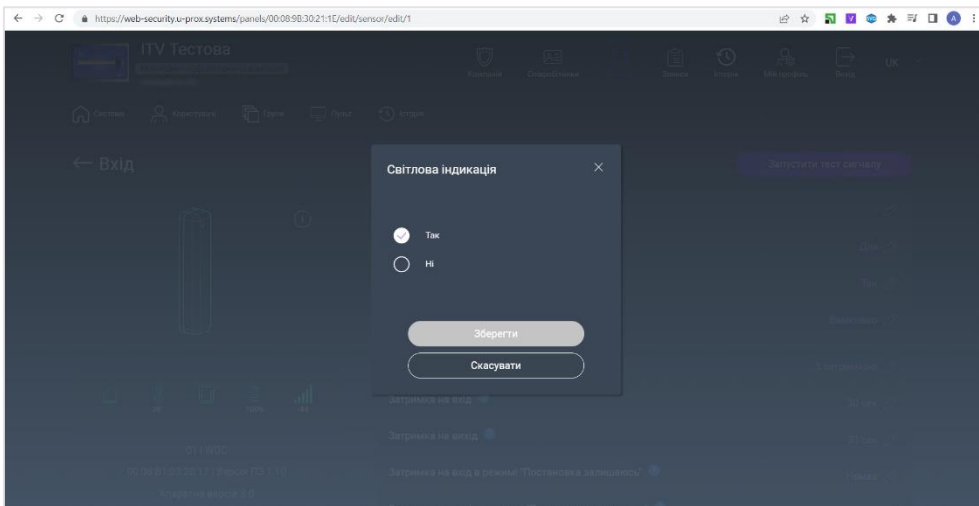
1. "Name" - the name of the device



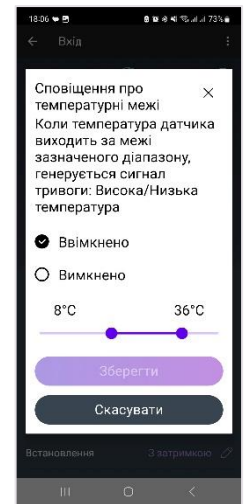
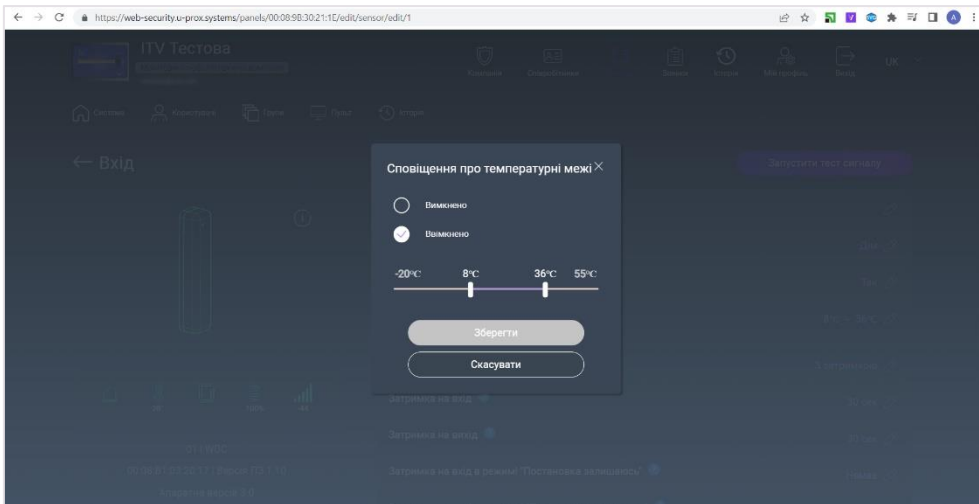
2. «Group - selects the security group to which the device belongs. A security group is a logical set of zones of a protected premises (for example, a room, apartment, garage, floor of a building, etc.), a minimum security unit. A security group allows you to manage all zones simultaneously. Security groups are independent - the user can manage and view only those security groups, devices, and events in them to which he or she has been granted access.



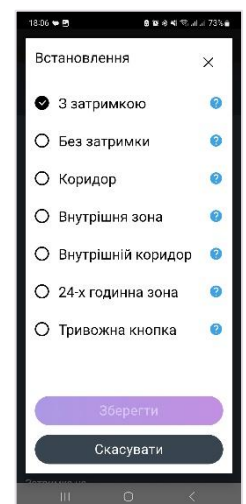
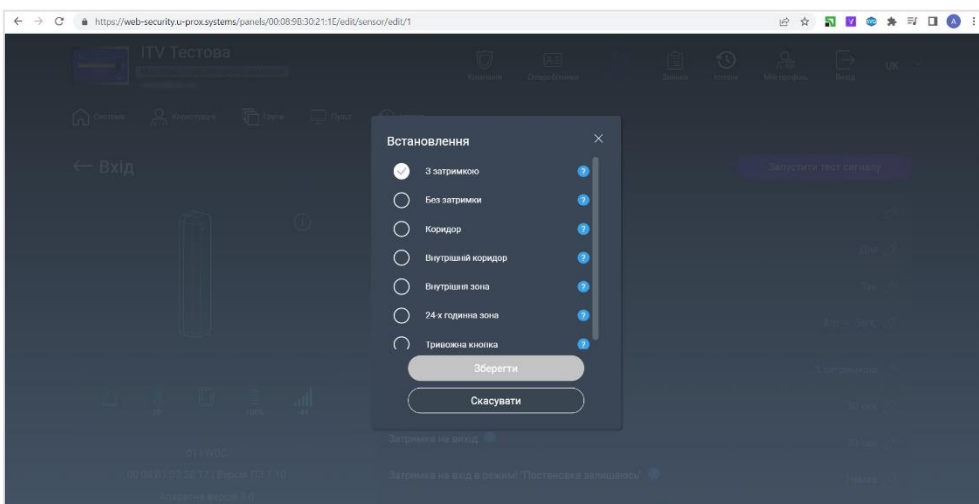
3. "Light indication" - turns on or off the light indication on the device



4. "Temperature limits notification" - when the device exceeds the specified temperature limits, it will generate the corresponding events - "Cooling" and "Overheating". Can be used in scenarios

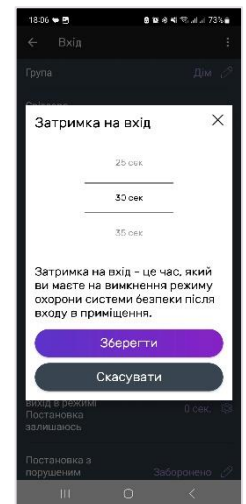
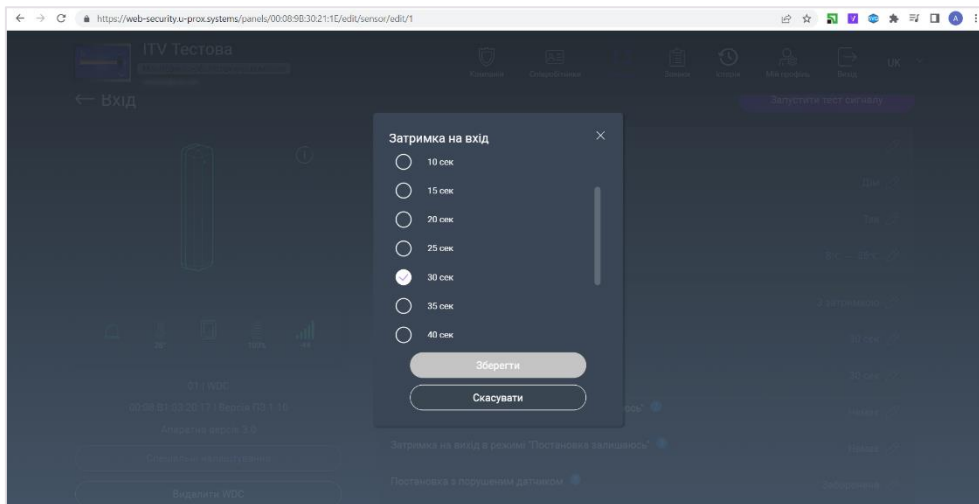


5. "Setting" (zone type) - operating modes of the device depending on the type of use

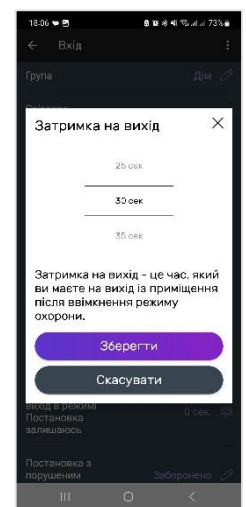
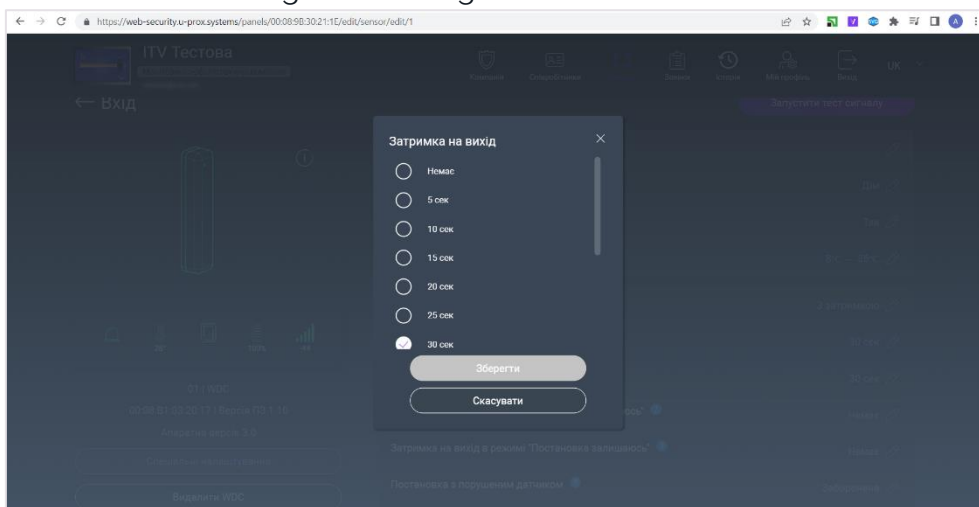


- a. With delay" or "Entrance zone":

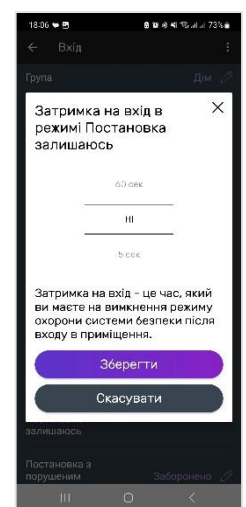
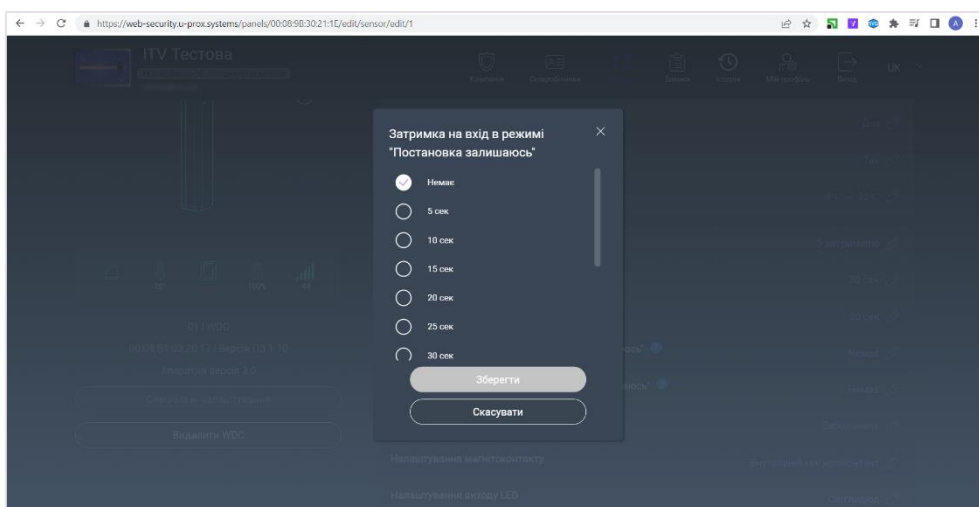
- If the system is armed, the entry delay starts when the sensor is triggered. If the system is not disarmed during the delay, the system switches to the Alarm state and sends an alarm notification
 - When arming, the exit delay will start, and the system will be armed.
- a. Without delay
 - if the system is armed, when the sensor is triggered, the system switches to the Alarm status and transmits an alarm notification
 - if the system is disarmed, the system does not respond to sensor triggering with the following types
 - b. Corridor
 - if the system is armed and there is no entry delay or the delay time has expired, the system switches to the Alarm status and transmits an alarm notification
 - if the system is armed and there is an entry delay, the system does not respond to sensor triggering of this type
 - if the system is disarmed and there is a delay in exit - the system does not respond to the triggering of a sensor of this type
 - if the system is disarmed, the system does not respond to the triggering of a sensor of this type
 - c. Internal corridor
 - if the system is armed and there is no entry delay or the delay time has expired, the system switches to the Alarm status and transmits an alarm notification
 - if the system is armed and there is an entry delay, the system does not respond to sensor triggering of this type
 - if the system is disarmed and there is a delay in exit - the system does not respond to the triggering of a sensor of this type
 - if the system is armed in the Perimeter mode ("Staying" or "Night mode") - the system does not respond to the triggering of a sensor of this type
 - if the system is disarmed, the system does not respond to the triggering of a sensor of this type
 - d. Indoor zone
 - if the system is armed, when the sensor is triggered, the system switches to the Alarm status and transmits an alarm notification
 - if the system is armed in the Perimeter mode ("Stay" or "Night mode"), the system does not respond to sensor triggering of this type
 - if the system is disarmed, the system does not respond to the triggering of a sensor of this type
 - e. 24-hour zone (around the clock)
 - when the sensor is triggered, the system switches to the Alarm state and transmits an alarm notification in any system mode
 - f. Panic button ("Intrusion Alarm", CTS)
 - when the sensor is triggered, the system switches to the Silent Alarm state without activating the sound alert (siren) and transmits an alarm notification
6. "Delayed entry (only for the Delayed installation type). Time to disarm (disarm) the security system after entering the premises.



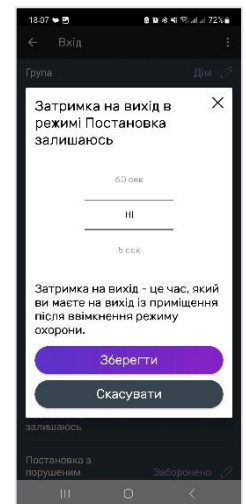
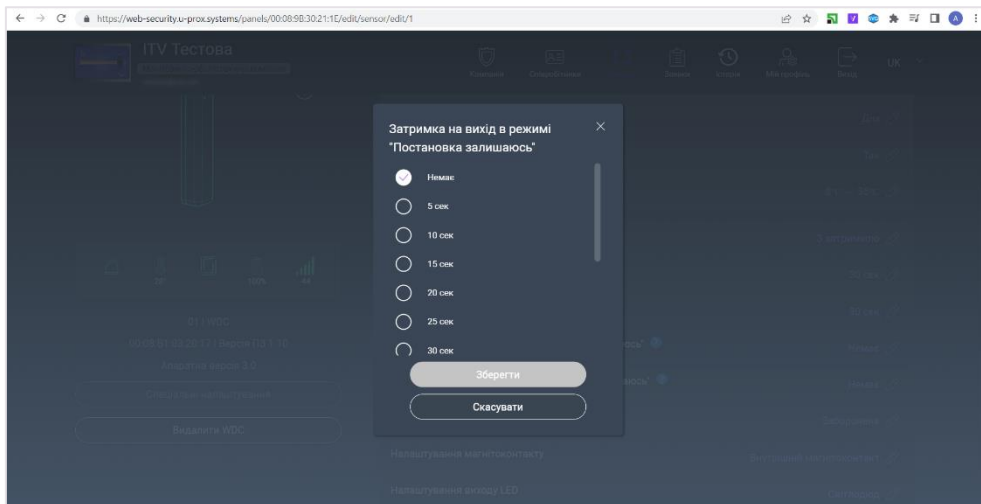
7. "Delay to exit (only for the Delayed arming type). The time to leave the premises after arming or disarming.



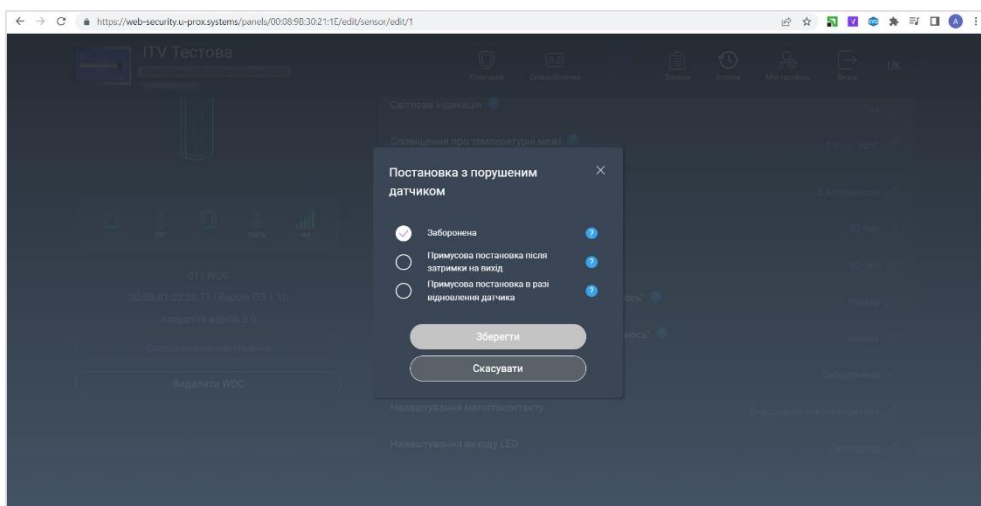
8. "Delay for entry in Stay Armed mode" (only for the Delayed arming type). Time for disarming (disarming) the security system after entering the premises (arming in Stay, Night mode)



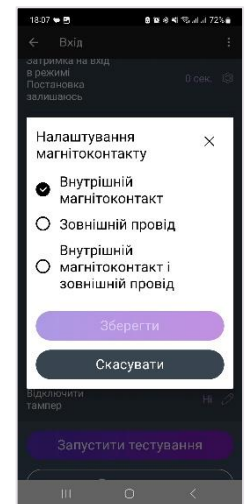
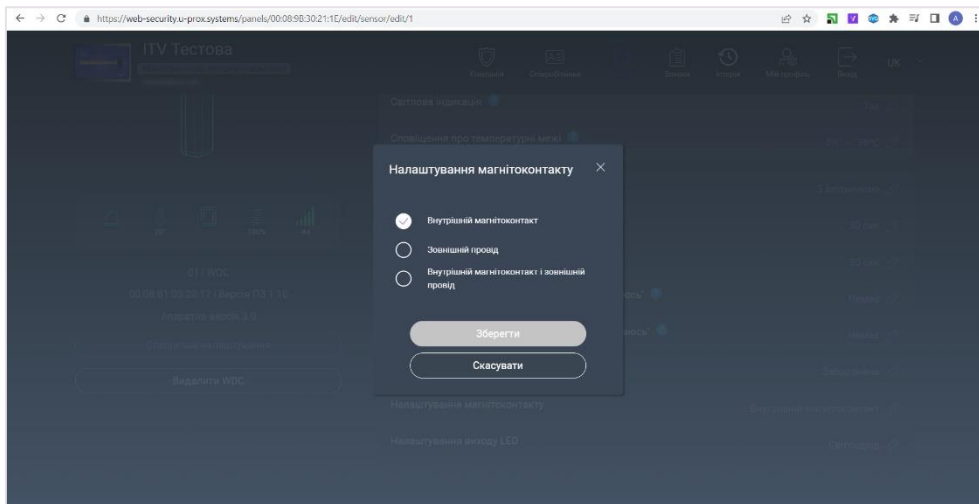
9. "Delay to exit in Stay Armed mode" (only for the arming type - "Delayed"). Time to exit the premises after arming the Perimeter security mode (Stay, Night mode).



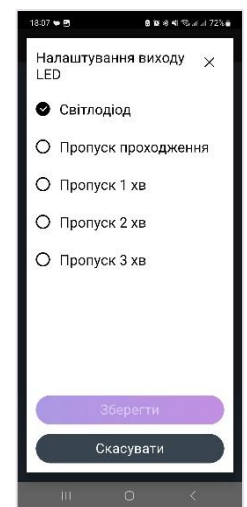
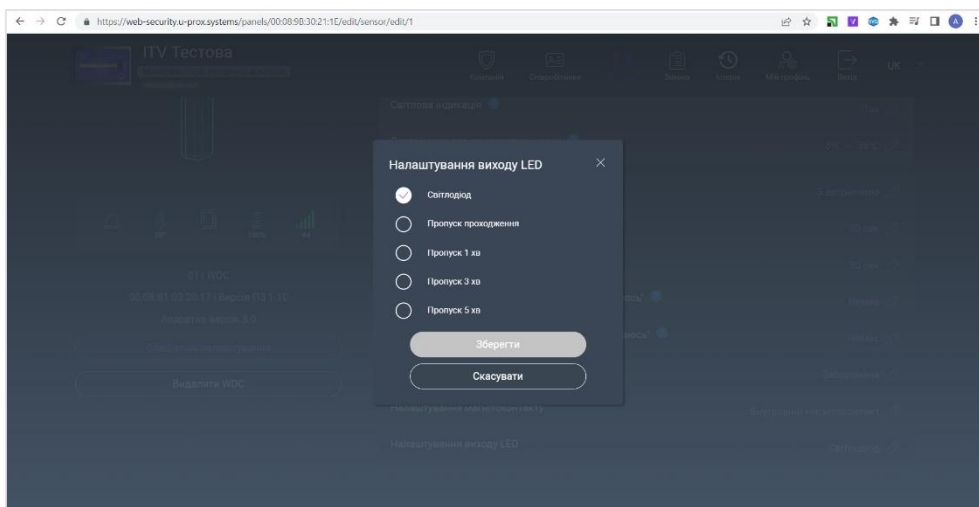
10. "Arming with a broken sensor" - forced arming of a sensor, even if it is broken
 - a. "Forced arming after exit delay" - if the sensor does not recover after the exit delay countdown, the system switches to the Alarm state and transmits an alarm notification
 - b. "Forced arming when the sensor is restored" - the system waits for the sensor to be restored and switches it to the Armed mode



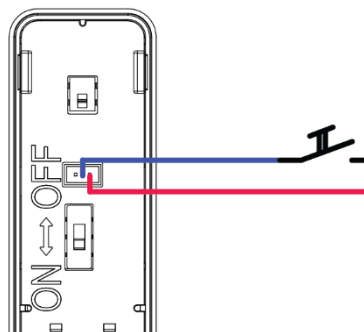
11. "Magnetic contact settings" - work with built-in and external magnetic contact
 - a. "Internal magnetic contact" - the sensor works only with the built-in magnetic contact
 - b. "External, wired" - the device operates only with an external sensor connected by wires
 - c. "Internal magnetic contact and external wired" - the device operates with both inputs



12. "LED output settings" - setting up the universal input/output

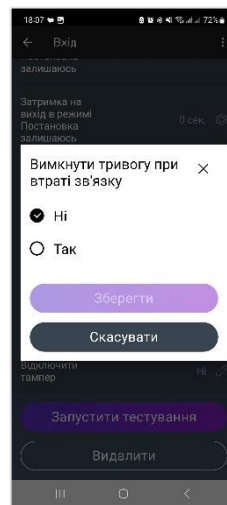
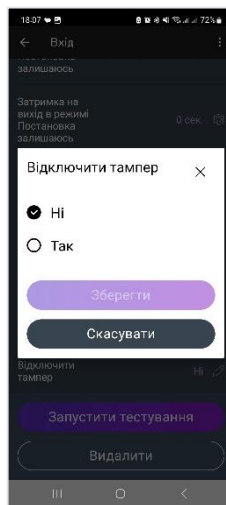
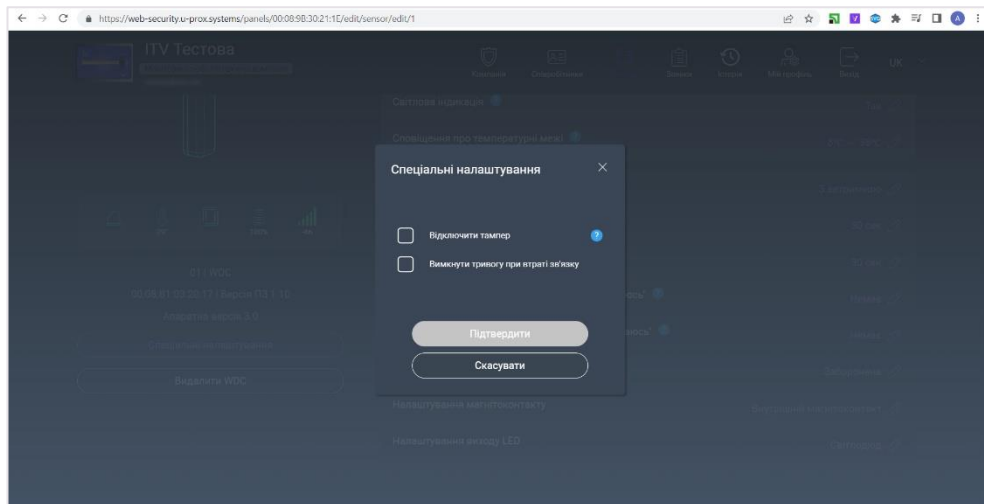


- Pass bypass - the sensor is skipped (bypassed) while the universal input loop is closed
- Skip for 1, 3, or 5 minutes - after the universal input loop is broken and restored, the sensor will be skipped for a specified time
- LED (default) - use of the universal input/output as an LED output



13. Special settings

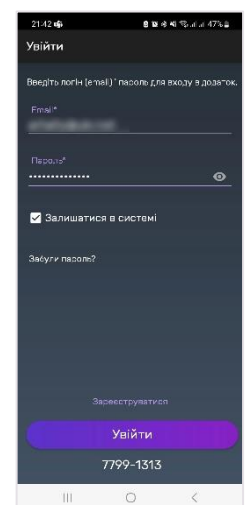
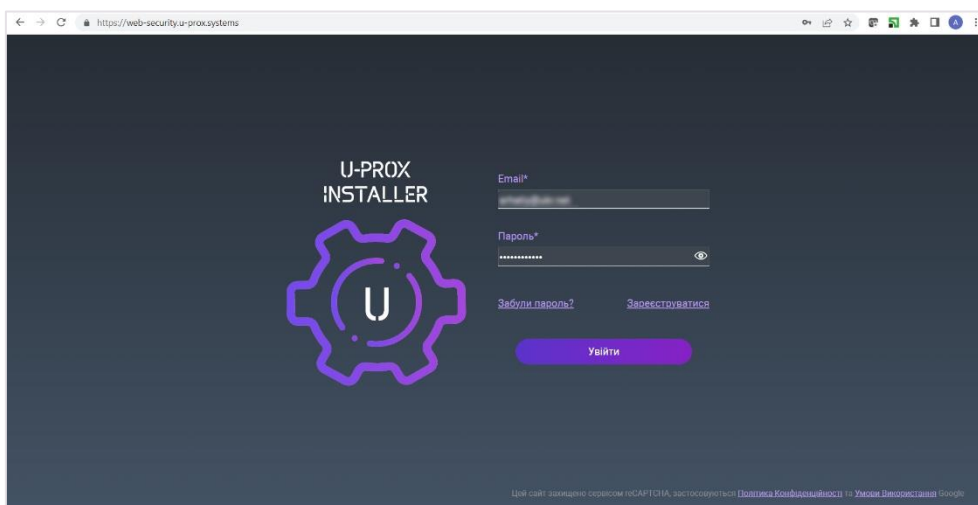
- "Disable tamper" - a setting when enabled, the device will not respond to the opening of the case
- "Disable alarm when communication is lost" - do not generate an alarm when communication with the device is lost



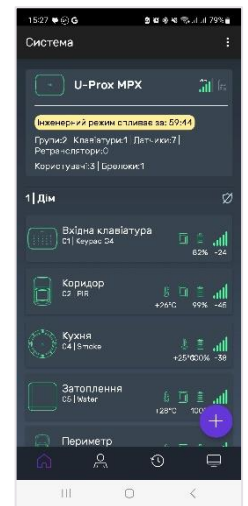
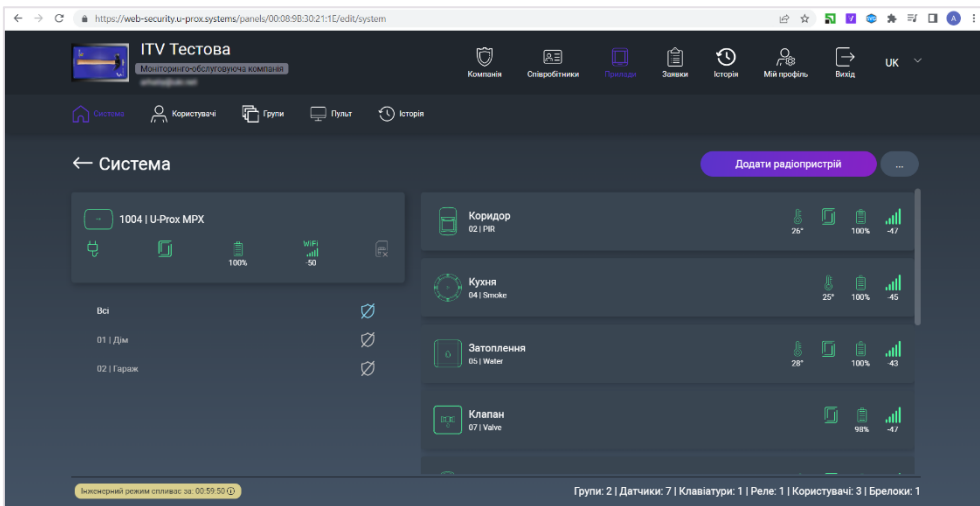
Testing the connection

WARNING. BEFORE PERFORMING THIS STEP, THE DEVICE MUST BE REGISTERED IN THE UPROX SECURITY SYSTEM.

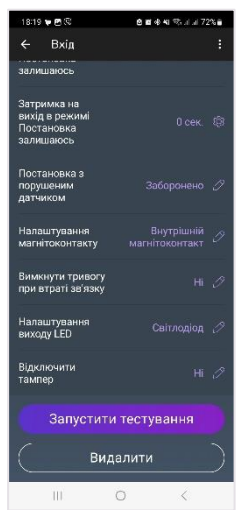
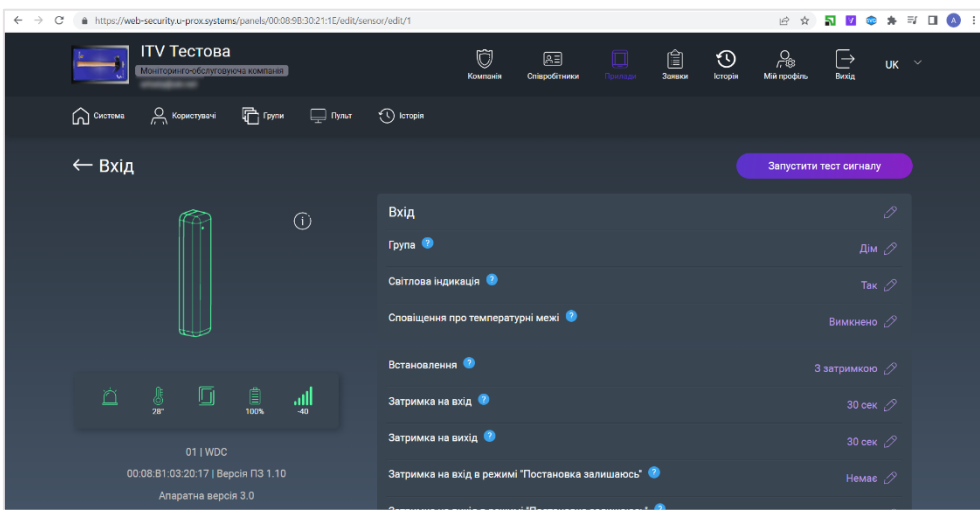
1. Launch the U-Prox Installer application or log in to the U-Prox Installer WEB portal



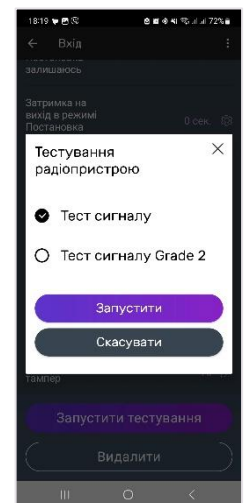
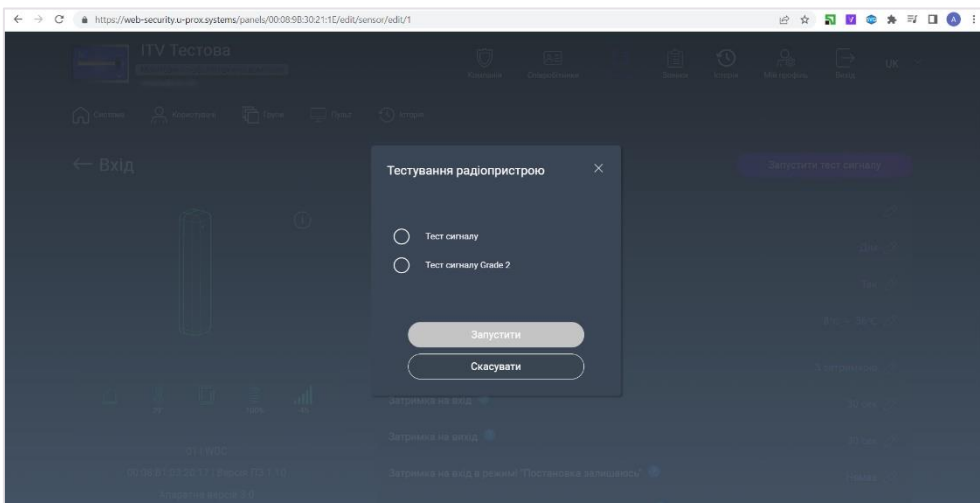
2. Select a security center from the list



3. Select a device from the list

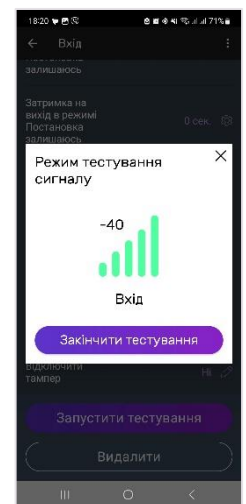
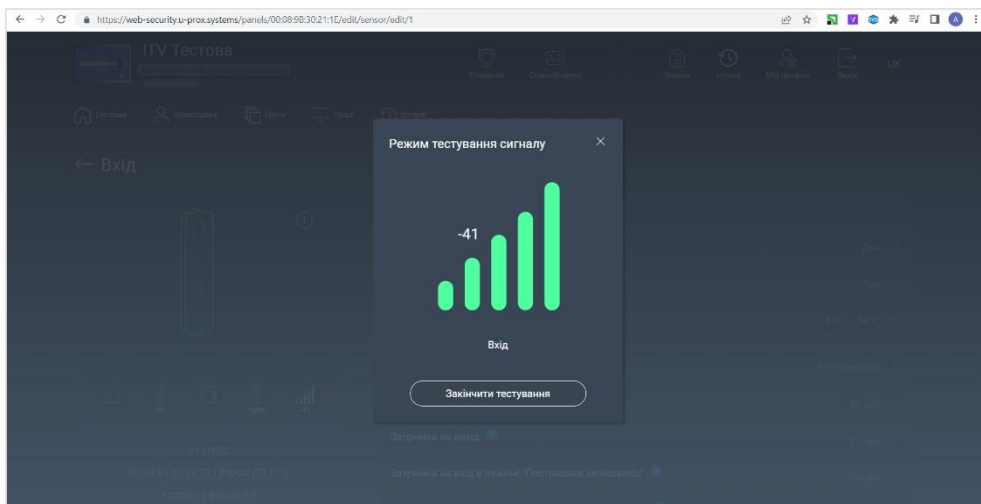


4. Start the test mode and select the test mode - Normal or Grade II



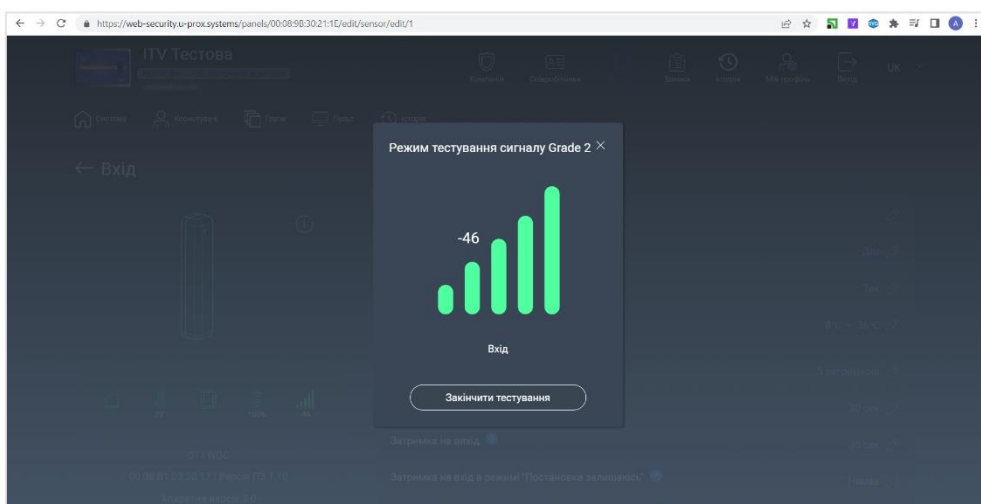
a. Conventional signal testing

ATTENTION!!! TESTING IS PERFORMED AT AN AVERAGE POWER LEVEL OF RADIO TRANSMITTERS.

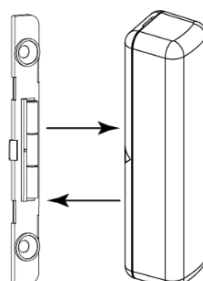


b. Signal testing in accordance with Grade II

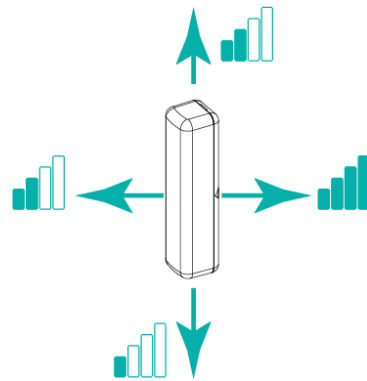
ATTENTION!!! TESTING IS PERFORMED AT REDUCED POWER OF RADIO TRANSMITTERS, IN ACCORDANCE WITH EN 50131-1



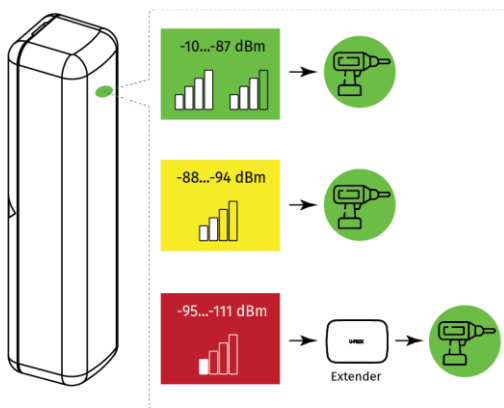
- To start testing the signal strength of the device, wait for the next communication session with the device, or trigger it or open the case.



- Move the device to the pre-selected installation location



7. Based on the data in the U-Prox Installer or U-Prox Installer WEB mobile application, select a location with an optimal signal strength of at least -95 dBm.
8. You can also use the light indication of the device



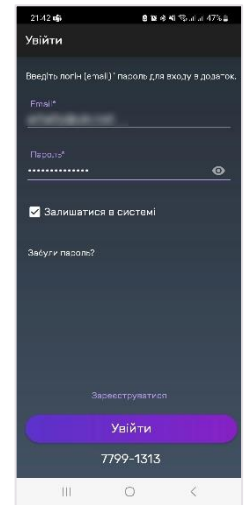
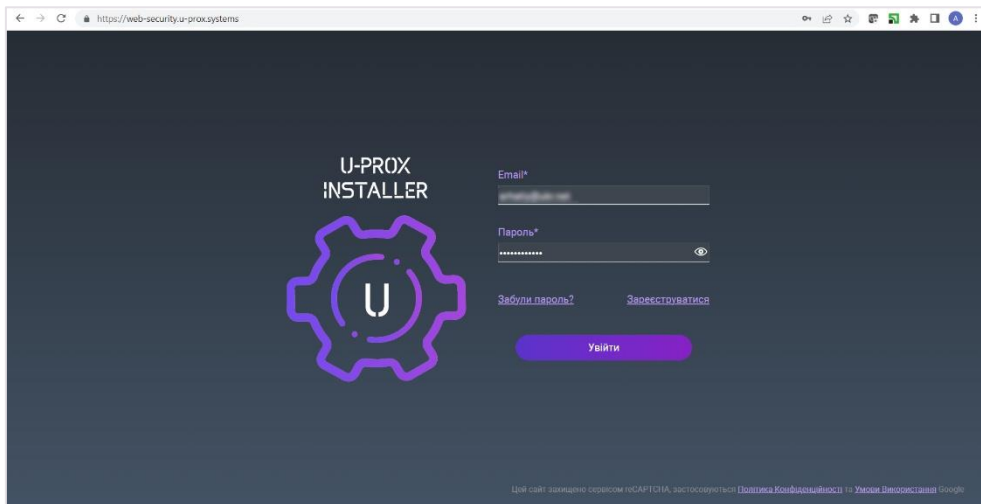
- a. -LED flashes green (up to -87 dBm) - excellent signal strength, can be set
- b.
- c. LED flashes yellow (up to -88 ... -94 dBm) - average signal strength, can be set
- d.
- e. LED flashes red (up to -95 ... - 111 dBm) - poor signal strength, move the device to another location or use the UProx Extender radio range extender

9. To exit the signal test mode, click the "End test" button in the application

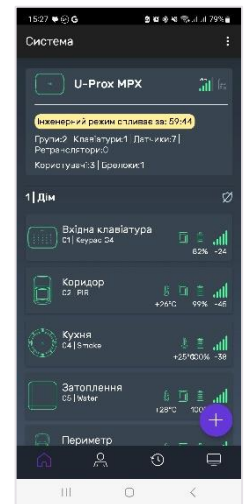
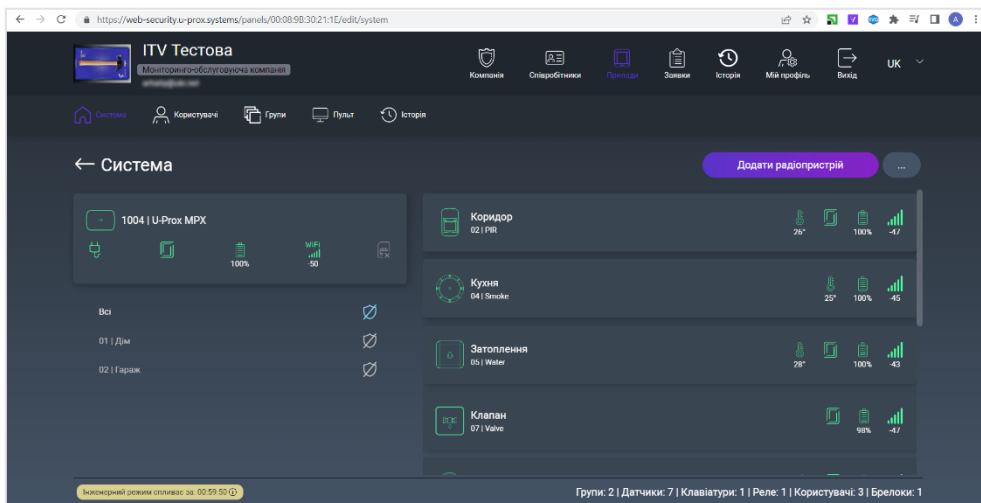
ATTENTION!!! THE TEST WILL BE AUTOMATICALLY COMPLETED 30 MINUTES AFTER THE START

Remove a device

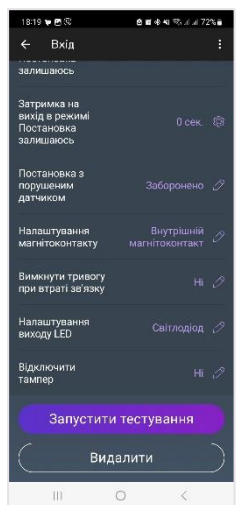
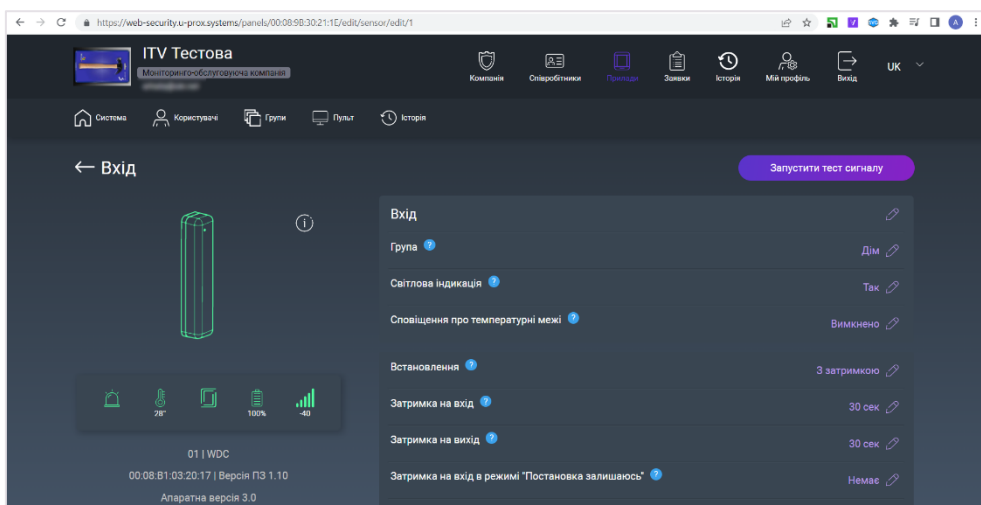
1. Launch the U-Prox Installer application or log in to the U-Prox Installer WEB portal



2. Select a security center from the list

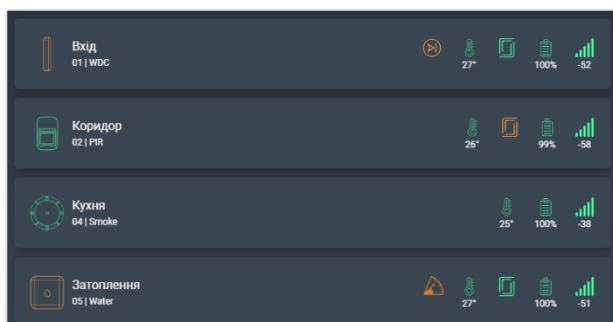


3. Select a device from the list



4. Click the "Delete" button and confirm the deletion

Wireless device states



- the main power supply is normal
- main power supply is absent
- the device case is closed
- the device case is open
- the battery is charged
- battery charge level
- the battery is critically low
- the battery is defective
- level of radio communication with the security center
- there is no radio communication with the security center
- passage (bypass) of the zone for the period of protection

Service

The device normally requires minimal maintenance.

Use a dry cloth suitable for appliances to periodically clean the device case from dust and other contaminants as they appear.

Compliance with standards

- RED (Radio Equipment Directive) Directive 2014/53/EU
- EU ROHS Directive 2011/65/EU, EN IEC 63000:2018
- EN 62311:2008
- EN 62368-1:2014
- EN 50130-4:2011/A1:2014
- EN 61000-6-3:2007/A1:2011
- ETSI EN 301 489-1 v2.2.3
- ETSI EN 301 489-3 v2.1.1
- ETSI EN 300 220-1 v3.1.1
- ETSI EN 300 220-2 v3.2.1
- EN 50131-1 Grade 2, Class II:
 - EN 50131-1:2006/A1:2009/A2:2017/A3:2020
 - EN 50131-2-6:2008
 - EN 50131-5-3:2017
 - EN 50131-6:2017

Warranty obligations

The warranty period for the U-Prox device (excluding batteries) is 2 years from the date of sale.

If the device is not functioning properly, first contact support@uprox.systems, perhaps this issue will be resolved remotely.

The scope of delivery

1. U-Prox WDC;
2. Magnet;
3. CR123A battery (pre-installed);
4. Installation kit;
5. Quick start guide