



GARM System Guide

2025

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What is the GARM system

What is GARM

GARM is a smart security system that keeps constant watch over your property and lets you manage everything via a mobile app. It responds instantly to unusual activity — movement, smoke, water leaks, or break-ins — and alerts you no matter where you are.



Who is GARM for

GARM is designed for anyone who wants to:

- Protect a home, apartment, office, cottage, or warehouse
- Control the security of their property remotely
- Receive instant alerts about incidents
- Automate routine tasks

Where is GARM used

The system is suitable for:

- Apartments
- Private houses
- Offices
- Retail stores
- Country homes and plots



- Warehouses and industrial spaces

Main components of the GARM system

ASTRA wireless sensors

- Detect motion, smoke, water leaks, and intrusion attempts
- Easy to install with no wiring needed
- Always on and ready to alert you at the first sign of trouble

ASTRA actuators

- Control heating, lighting, ventilation, and more
- Operate remotely from your phone
- Can be triggered by schedule or system events

GARM Link PRO hub

- The central unit that connects all devices
- Receives data from sensors and forwards it to the app
- Works reliably even during connection issues

GARM cloud server

- Stores event history and system settings
- Automatically backs up your data
- Gives you fast access to your system anytime

GARM mobile app

- Control the entire system from your smartphone: activate security modes, check sensor statuses, and review event logs
- Customize notifications to your preference
- Access from anywhere with an internet connection

Key terms in GARM

Owner

- the user who registers the hub and creates the object in the GARM app.

Inputs

- terminals on the hub for connecting wired sensors or alarm loops.

Outputs

- terminals on the hub for connecting actuators like sirens, electric locks, or relays.

Configuration update

- the process of sending changes made in the app (like adding sensors or adjusting settings) to the hub. Until updated, the hub operates with old settings. Afterward, it applies the new setup.

User

- anyone with access to the GARM system. Each user can have individual access rights.

Security mode

- a system state where sensors are active and monitoring events, such as "Disarmed" or "Night protection."

Zone

- a logical group of sensors combined for easier management, monitoring, and response.

Event

- any recorded activity or system state change, like a triggered sensor, opened door, or disarming.

Status

- the current mode or condition of a device or the system.

Notification

- a message in the app alerting you to a system event, such as an alarm, status change, or technical issue.

Device

- any component connected to GARM, including sensors, actuators, sirens, or the hub.

Hub or controller

- the main device that links together all components of the GARM system. It receives sensor signals, processes them, and communicates with the mobile app.

Touch Memory electronic keys

- a key fob or token used with a reader to arm or disarm the system.

QR code

- a special barcode found on the hub's casing that contains device information and helps you access its settings quickly.

How to install and launch the app

GARM is a modern mobile app designed to help you manage the security of your property. It runs on Android and iOS smartphones and gives you full control over your GARM system devices from anywhere.



This guide walks you through the app interface and provides step-by-step instructions for installation, registration, device setup, and using key system features.

What you can do with the GARM app

With the GARM app, you stay in control of your security system:

- Manage your security system

Arm or disarm your site with a single tap. Night and partial arming modes are available, and you can trigger an emergency SOS alert if needed.

- Add and configure devices

Connect various security sensors, actuators (like sirens and locks), access keys, temperature sensors, and video cameras directly through the app.

- Receive real-time alerts

Instantly get push notifications when a sensor is triggered or system status changes.

- Monitor device status

Check the real-time status of all connected devices: whether they are active, if there are any alerts or errors, and more. You always know what's happening at your property.

- Customize system behavior

Create zones (sections), configure alarm responses, manage outputs, and build custom widgets for quick access to your most-used features.

How to install the GARM app

To start using the GARM security system, first install the mobile app on your smartphone — choose the method that's most convenient for you.

Via your smartphone's app store

1. Open the app store on your smartphone:

- Google Play — for Android devices
- App Store — for iPhone

2. In the search bar, type: GARM

3. Find the app with the brand icon and tap **Install** / **Get**

Or

1. Open the app store link on your smartphone:

[Go to Google Play](#)

[Go to App Store](#)

2. Install the GARM app

Using a QR code

1. Open your smartphone's camera

2. Point it at the appropriate QR code:

- For Android (Google Play)



- For iPhone (App Store)



3. Tap the link that appears and then **Install / Get**

After installation is complete, the GARM icon will appear on your smartphone's home screen. Tap it to open the app and start setting up your system.

Tips for safe app usage

To ensure your data, devices, and property remain secure, follow these best practices:

- Only download the app from official sources (as listed above)
- Never leave your phone unattended while logged in
- Do not share your login credentials
- Avoid giving access to unauthorized users
- If the app requests suspicious permissions unrelated to its core features, avoid granting them

How to sign in and register

To start using the GARM system, you'll need to either create a new account or sign in to an existing one.

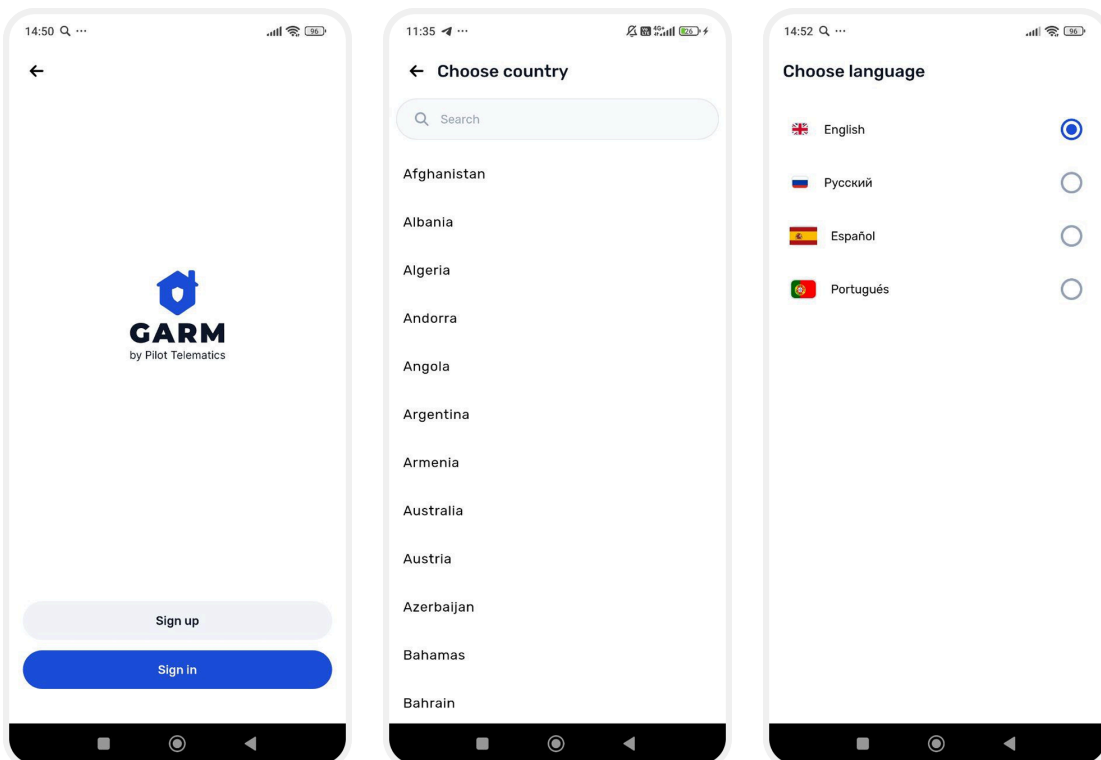
What you'll need

- A smartphone with the GARM app installed
- An active internet connection
- A valid email address

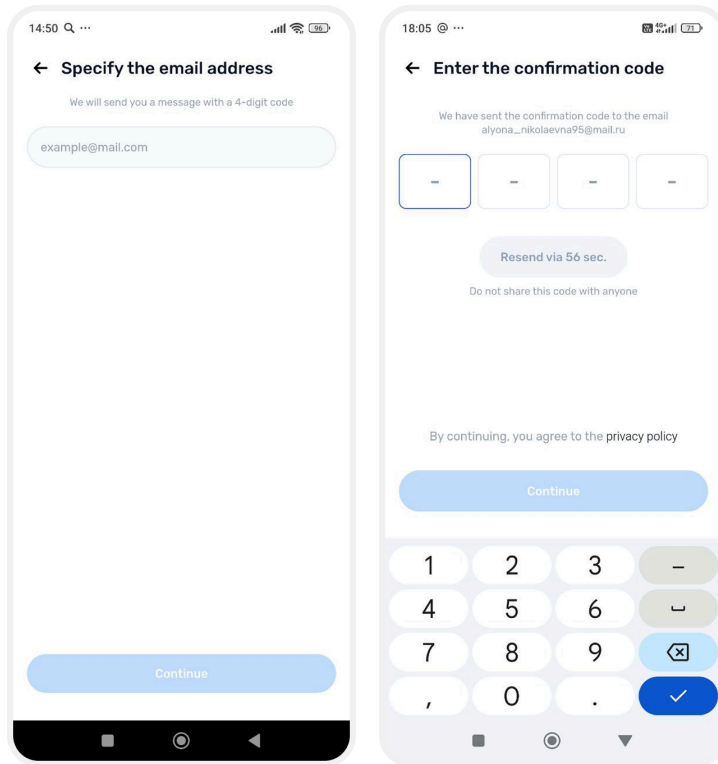
How to register a new account

If you're using the GARM app for the first time, follow these steps:

1. Open the app on your smartphone
2. On the welcome screen, tap **Sign up**
3. Choose your country from the list, or use the search bar to find it
4. Choose your preferred app language

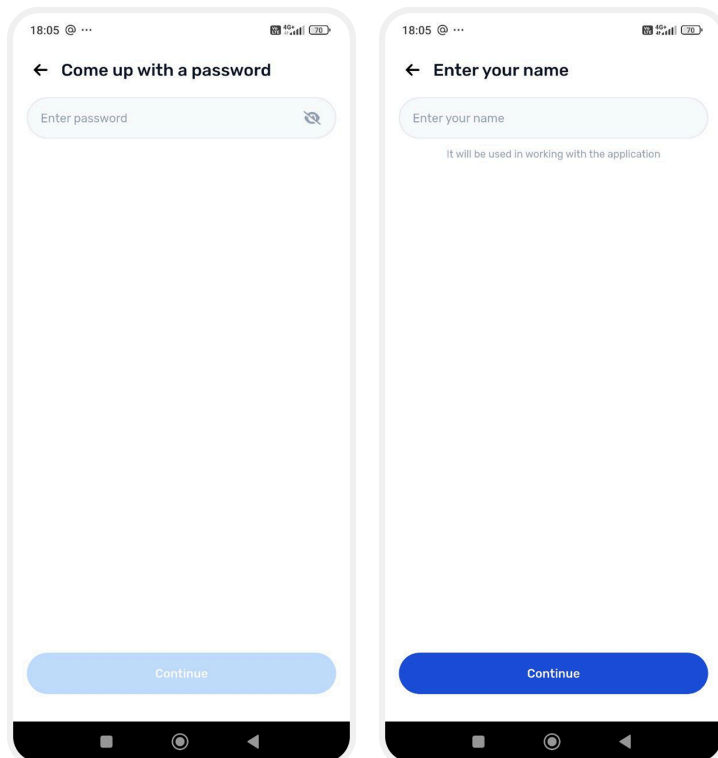


5. Enter your email address. A confirmation code will be sent to it
6. Open your inbox, find the email from GARM with the confirmation code, and enter the code in the app



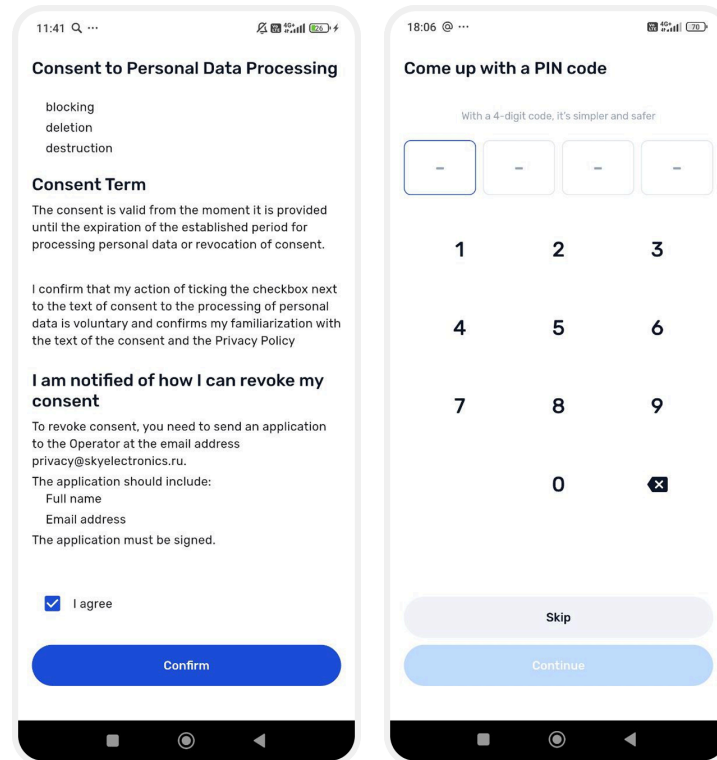
7. Create a password and confirm it

8. Enter a username



9. Set a 4-digit PIN code for quick and secure access to the app, then confirm it

That's it — your account is ready!

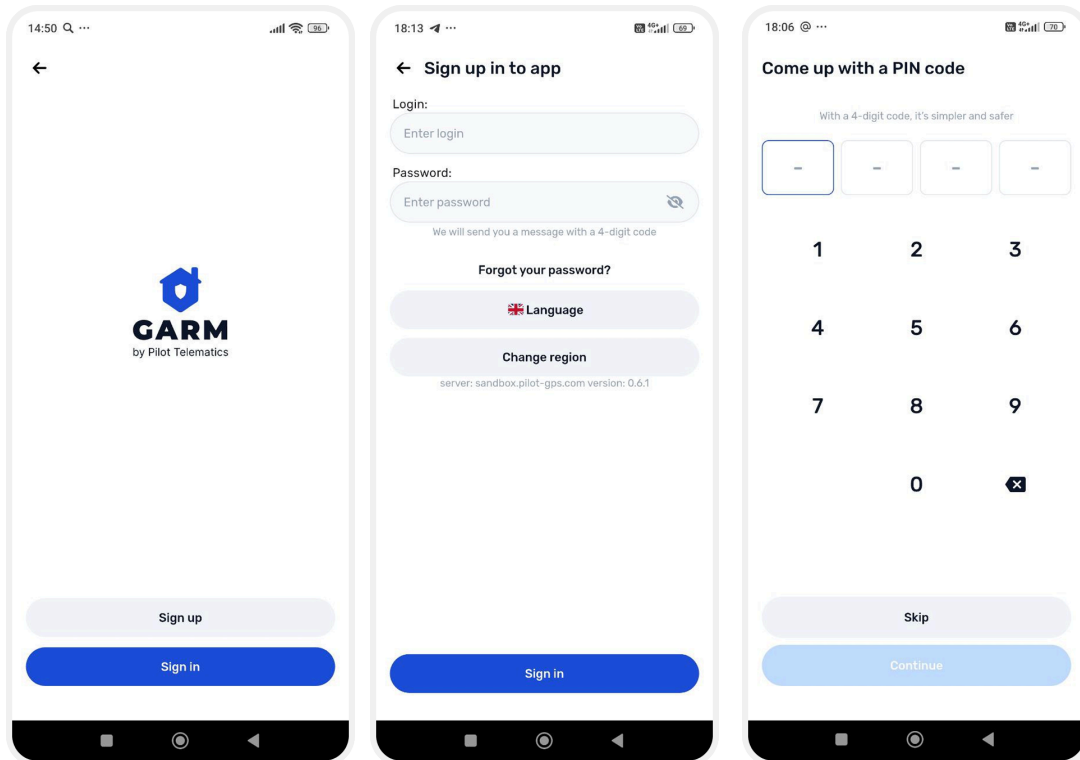


User registration process

How to log in to an existing account

If you already have a GARM account, follow these steps:

1. Open the GARM app on your smartphone
2. On the welcome screen, tap **Sign in**
3. Enter your login details:
 - Your registered email address
 - The password you created during registration
4. If you didn't set a PIN during registration, you'll be prompted to create one now
5. After logging in, you'll be taken to your list of connected locations

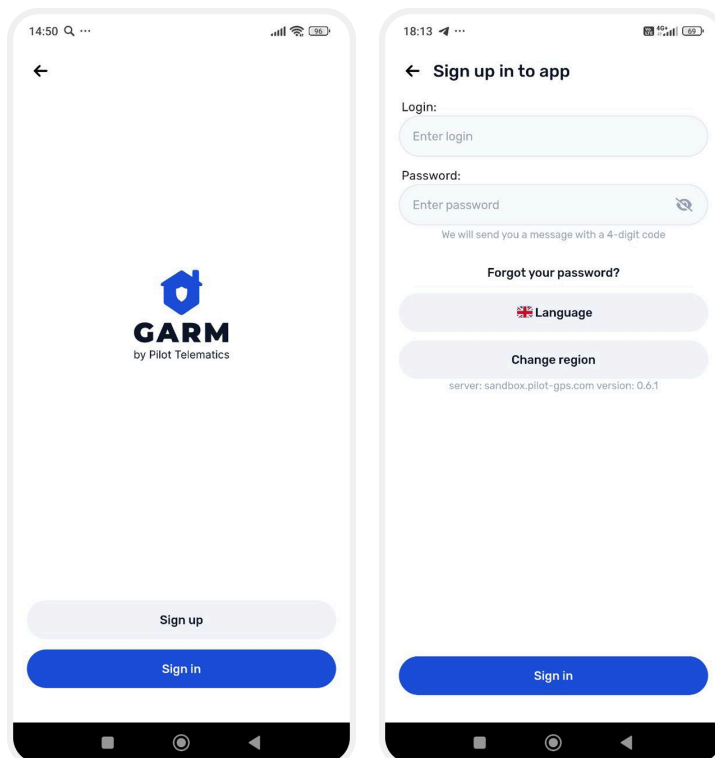


User login process

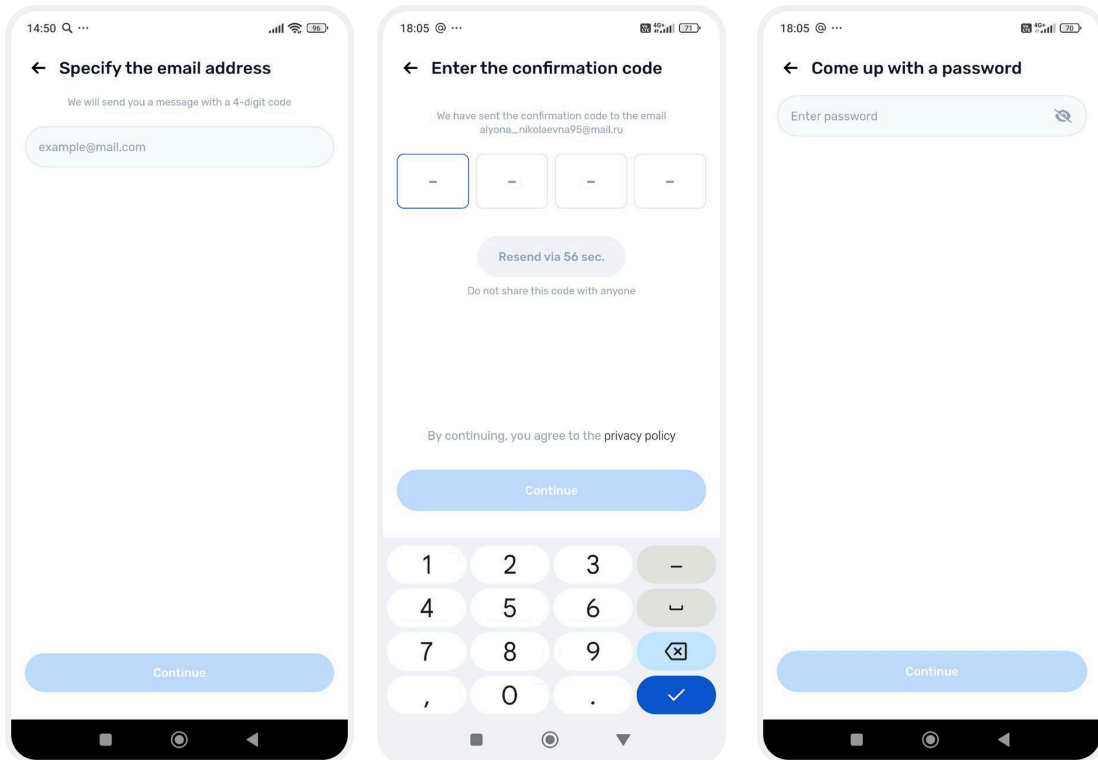
Forgot your password

If you've forgotten your password, you can easily reset it:

1. On the welcome screen, tap **Sign in**
2. On the login screen, tap **Forgot your password?**



3. Enter the email address linked to your account
4. You'll receive a 4-digit reset code via email
5. Enter the code in the app
6. Create a new password and confirm it
7. You can now log in with your new credentials



Password recovery process

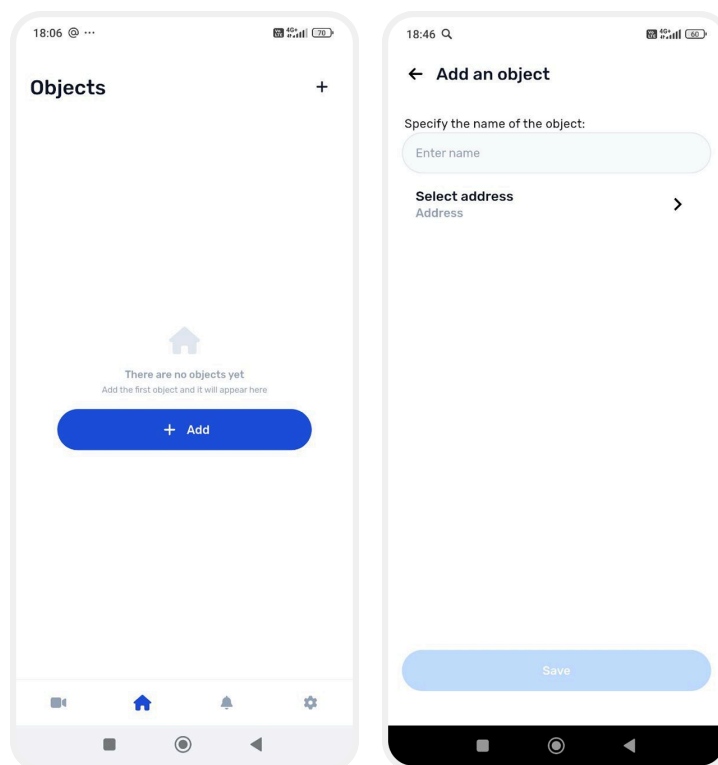
How to add an object

After registering in the GARM app, you can start creating objects and connecting equipment. An object is your home, office, cottage, or any other place you want to protect.

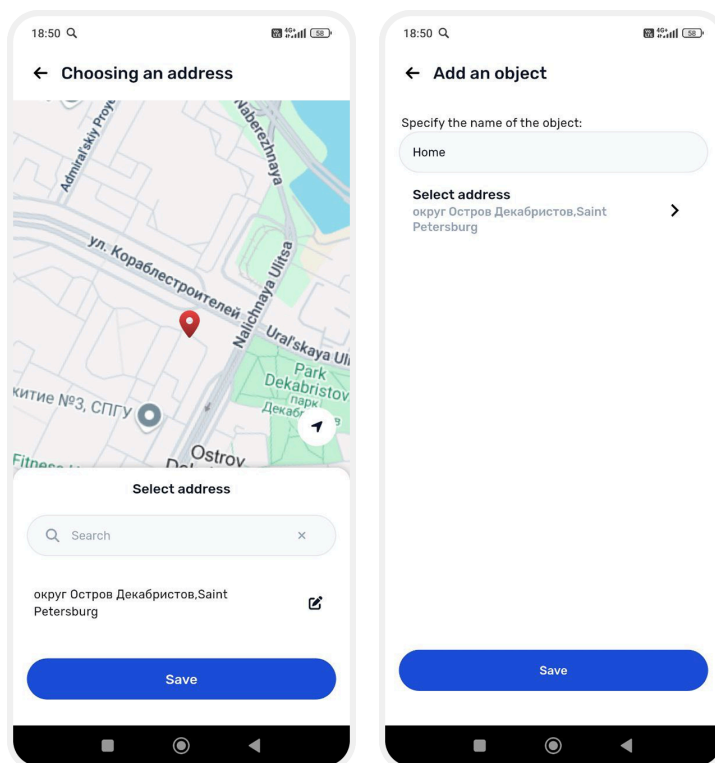
How to add your first object

Right after registration, you'll be taken to the main screen where you can add your first object:

1. On the main screen, tap the **Add** button
2. Enter the name of the object, for example: "Apartment," "Country House," or "Office"



3. Specify the object's address — either select a location on the map or enter it manually
4. Tap **Save** — the object will be added



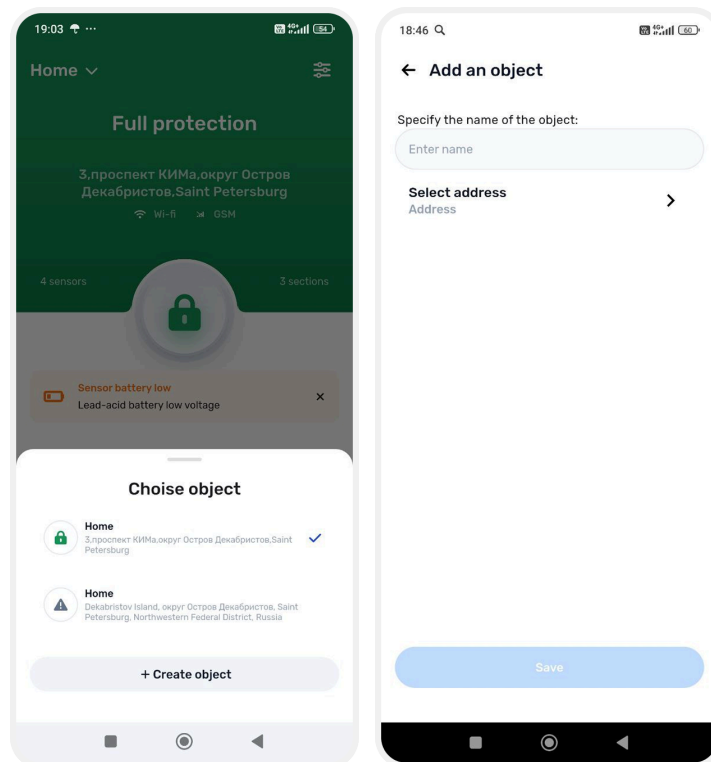
Adding your first object

After creating the object, connect it to the hub. For instructions on adding a hub, see [here](#).

How to add another object

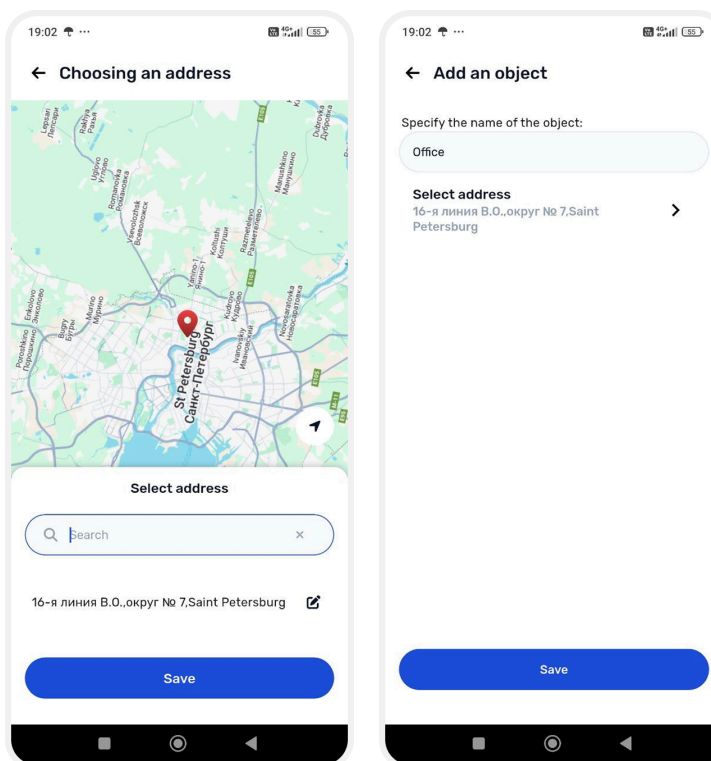
If you already use GARM and want to add another object (for example, a second home or office), follow these steps:

1. On the main screen, tap [the objects list button](#) in the top left corner
2. Tap **Create object**
3. Enter the name and address of the new object



4. Tap **Save**

The new object will appear in the list, and you can quickly switch between objects in the app.



Adding another object

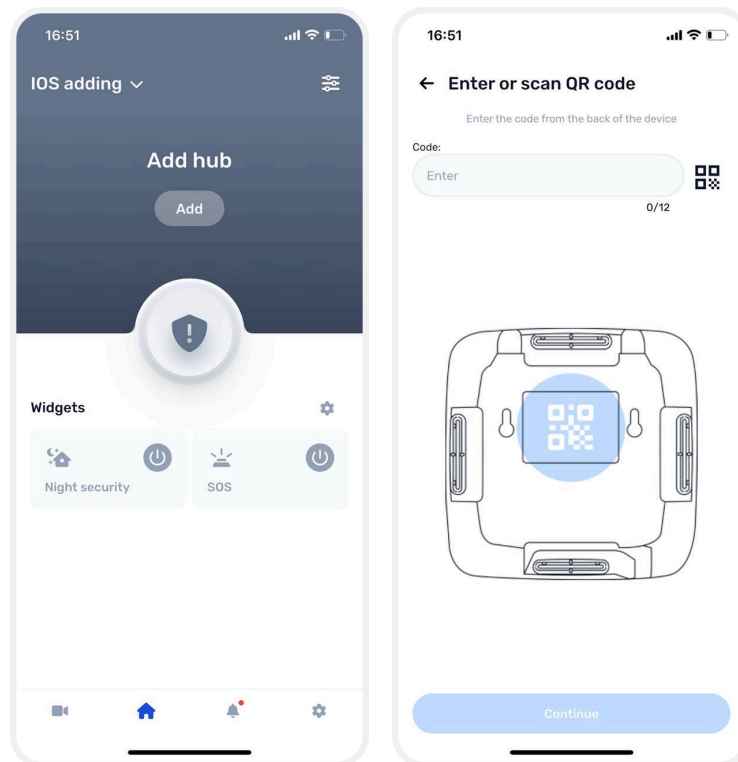
Each object works with its own hub. One hub can be connected to only one object.

How to connect the hub

Each object operates through a hub — the central device that connects all components and manages the security system. After adding an object, connect the hub to it to start configuring the system.

To connect the hub, follow these steps:

1. On the home page, tap **Add hub**
2. Enter the serial number manually or scan the QR code (found on the device casing)



3. Choose how the hub will connect to the Internet:

- Via Wi-Fi

If you have a regular Wi-Fi router at home, this is the simplest option.

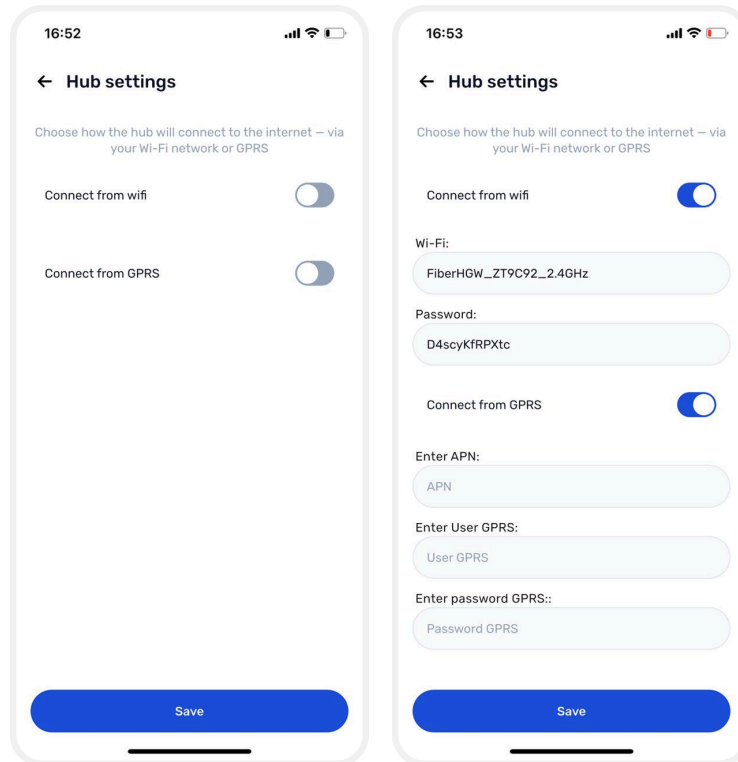
- 1) Select your home Wi-Fi network from the list
- 2) Enter your Wi-Fi password
- 3) Confirm the connection — the hub will connect to the Internet through your router

- Via GPRS (if a SIM card with Internet access is installed)

- 1) Make sure the SIM card is inserted into the hub
- 2) Enter the information required for connection:
 - APN (access point name) — you can get it from your mobile provider
 - GPRS username and password

- 3) Tap **Save and connect**

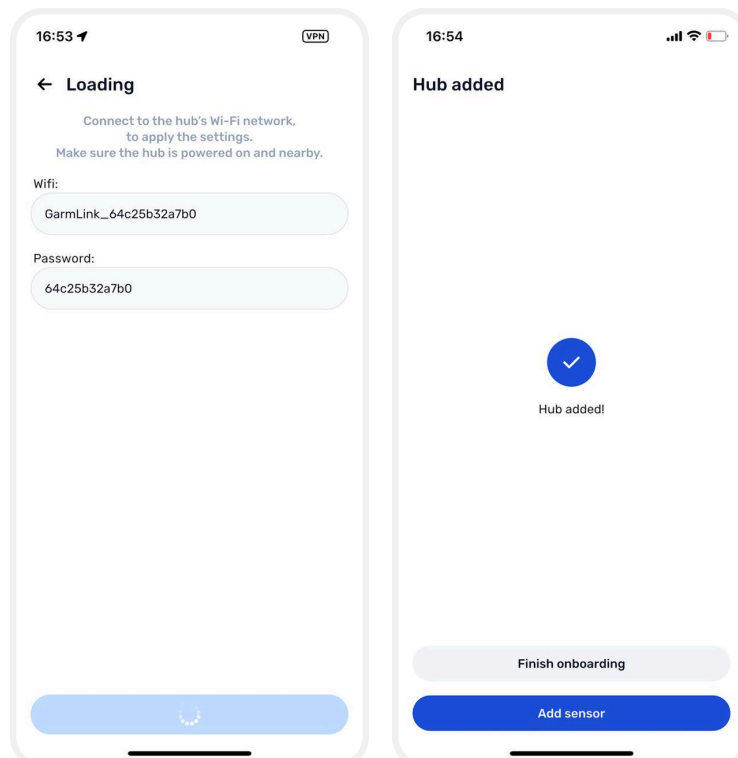
For full remote access, the hub must be connected to the Internet.



4. Next, connect to the hub's access point — it will appear as GarmLink_xxxxxxxxxxx

5. Enter the connection password. The password is the same as the last characters in the network name (xxxxxxxxxxx)

6. After adding the hub, reconnect to your regular Wi-Fi network if you want the hub to use it for Internet access. This step ensures the hub isn't left connected only to its temporary network.



How to work with the app interface

This article covers the main elements of the GARM app interface. You will learn where to find key functions and how to manage your security system.

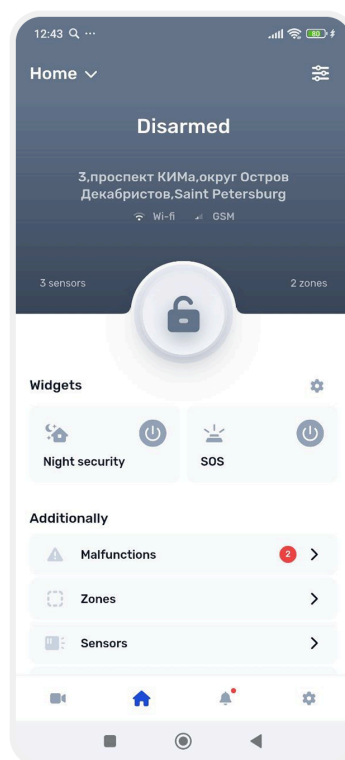
We will go through:

- [Main screen](#)
- [Object settings](#)
- [Events](#)
- [Account settings](#)
- [Surveillance cameras](#)

Main screen

The main screen opens automatically when you tap the "Home" icon in the bottom menu. This is the primary screen, from which you can:

- check the status of your object
- quickly arm and disarm the system
- control devices
- access necessary sections

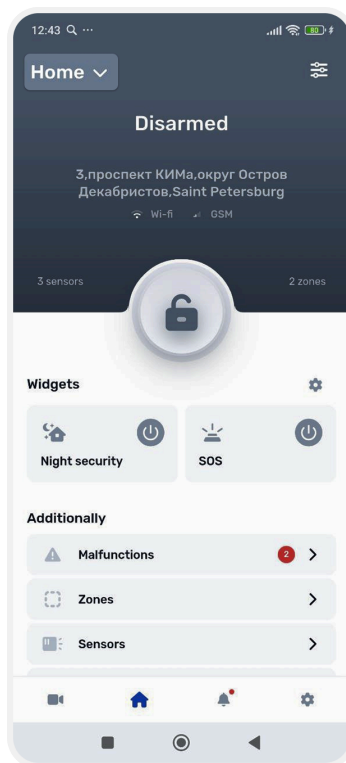


Main screen

Main screen elements:

1. Objects list button

Tap this button to view all objects you are managing.



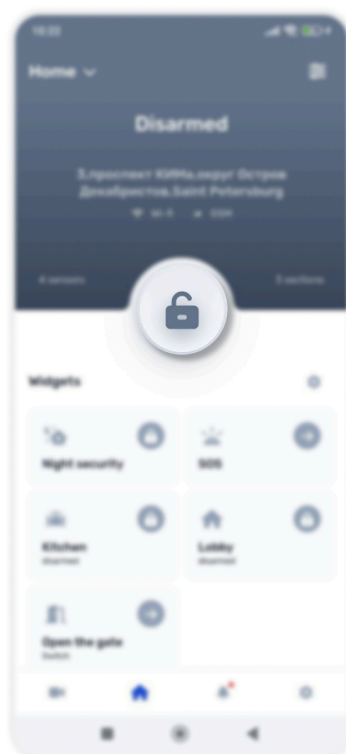
Objects list button

2. Object name and address

Displayed at the top of the screen, so you always know which Object you are currently working with.

3. [Lock button](#)

Use this button to quickly arm or disarm the object with a single tap.



Lock button

4. [Object settings button](#)

Opens the settings menu for the selected object.

5. [Control widgets](#)

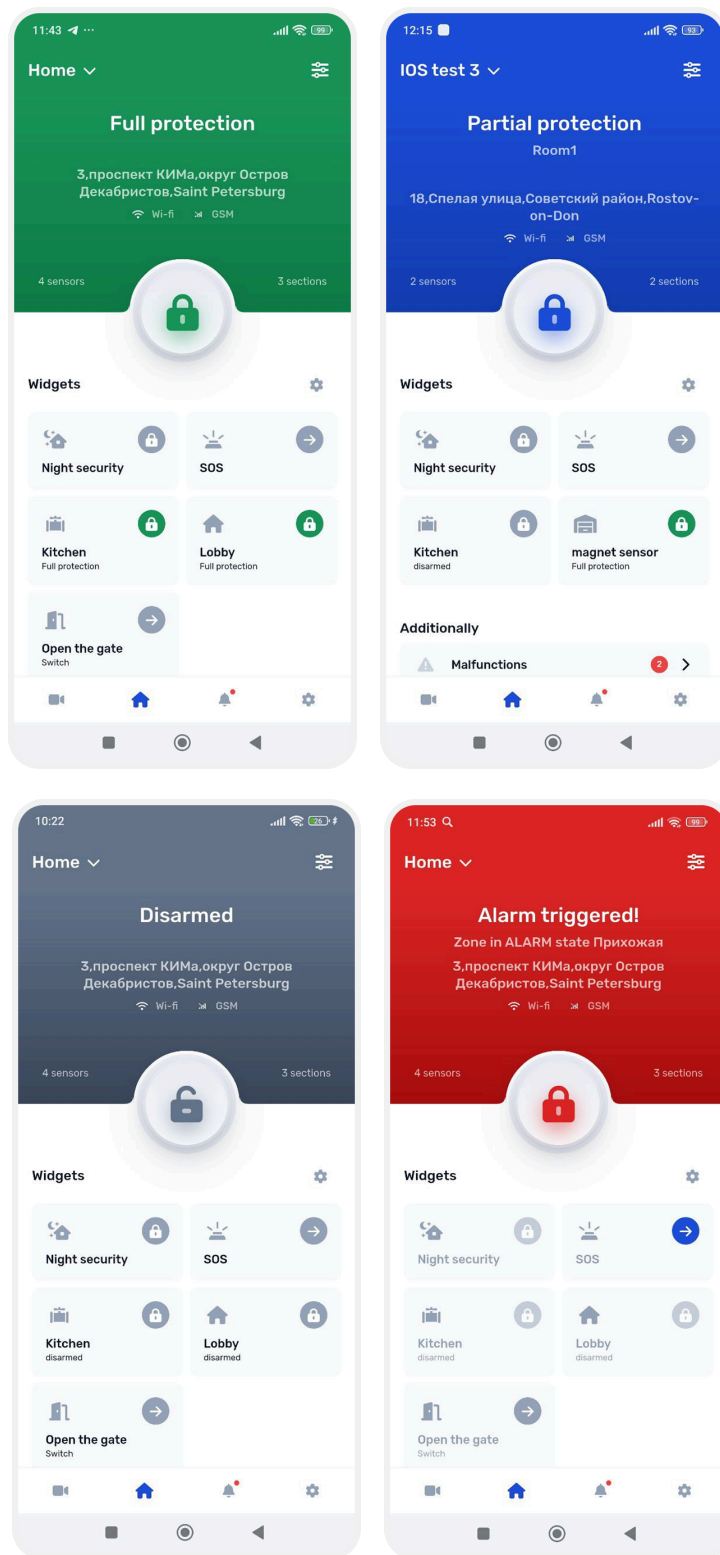
These interactive elements allow you to manage the system directly from the main screen. Through widgets, you can:

- Arm and disarm the system
- Control locks, sirens, lights, and other devices
- Quickly check the status of the object without navigating to other sections

6. Color status indicators

The screen color changes based on the object's status:

- Full protection — green
- Night and partial protection — blue
- Disarmed — grey
- Alarm triggered or no connection — red

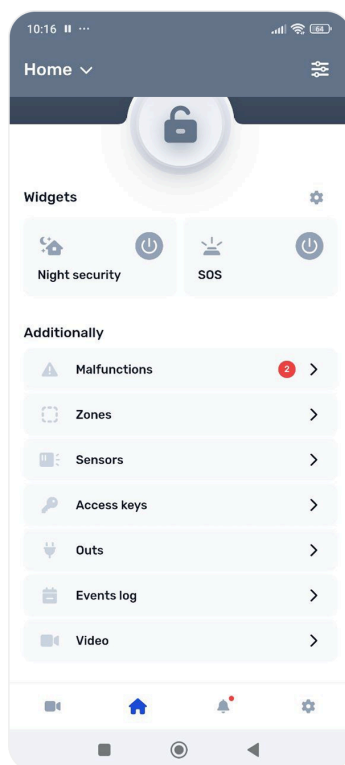


Color status indicators

7. Additional information

In the **Additionally** section on the main screen, you'll find tabs for detailed system management and control.

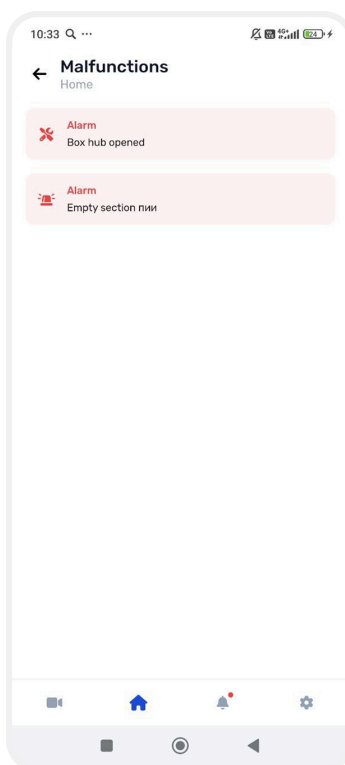
Additional tabs on the main screen:



Additional tabs on the main screen

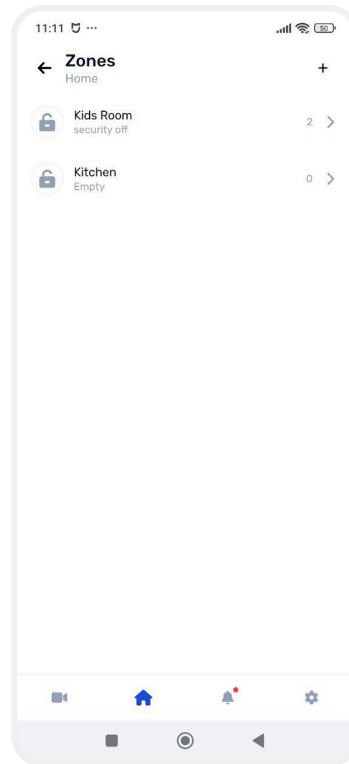
- Malfunctions

The **Malfunctions** tab displays all current issues in the system. Here you can see if any device is not working properly — for example, if a sensor has lost connection or a battery is running low.



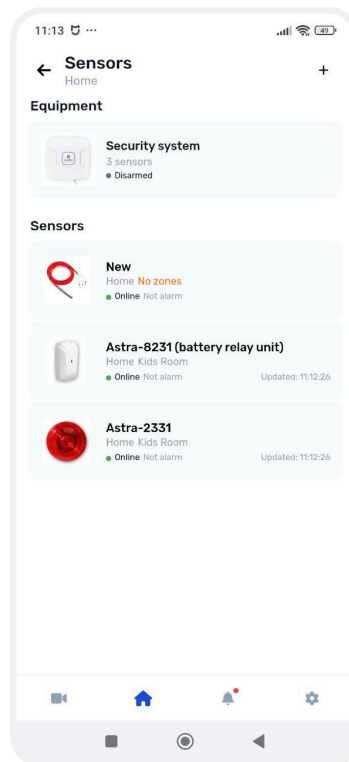
- Zones

The **Zones** tab displays information about the object's zones. Here you can open the settings of an existing zone or add a new one.



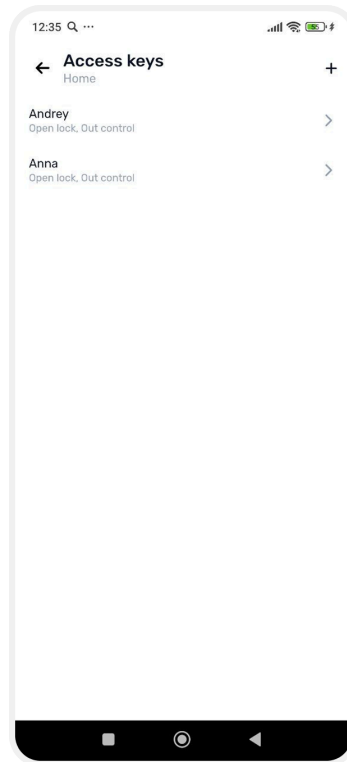
- Sensors

Displays connected sensors. You can add new ones, check their status, rename, and configure them.



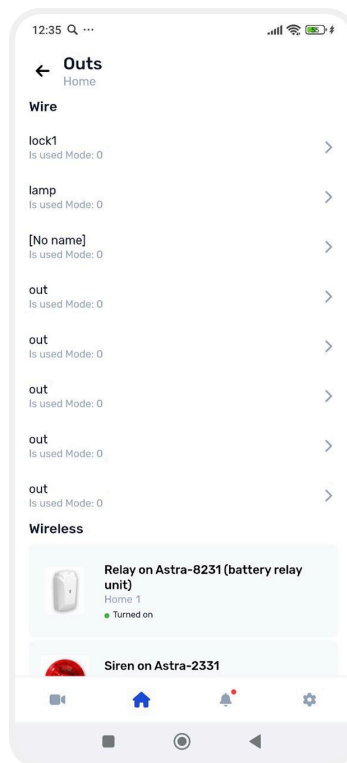
- Access keys

List of electronic Touch Memory (TM) [keys](#) used for access.



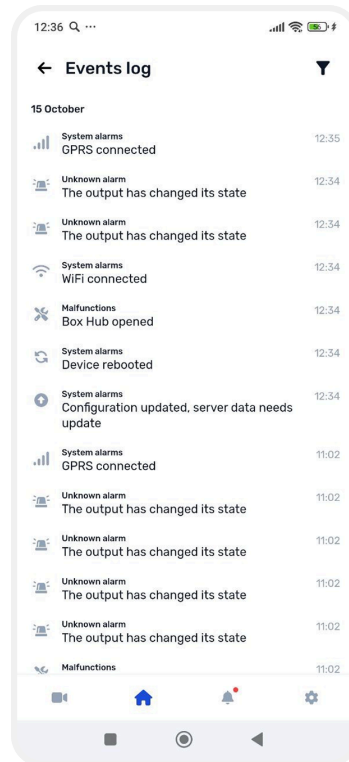
- [Outputs](#)

View and configure actuators that respond to alarms or commands (sirens, light signals, electromagnetic locks, relays).



- Event log

Shows all significant actions and changes occurring at the object and within the GARM system.



You can track:

- changes in object and section statuses
- emergence of malfunctions or technical issues
- system events — updates, connections, disconnections
- sensor events — temperature and wireless devices
- use of electronic access keys
- sent and received SMS messages

Filters can be set to display only the desired events by toggling switches next to each event type.

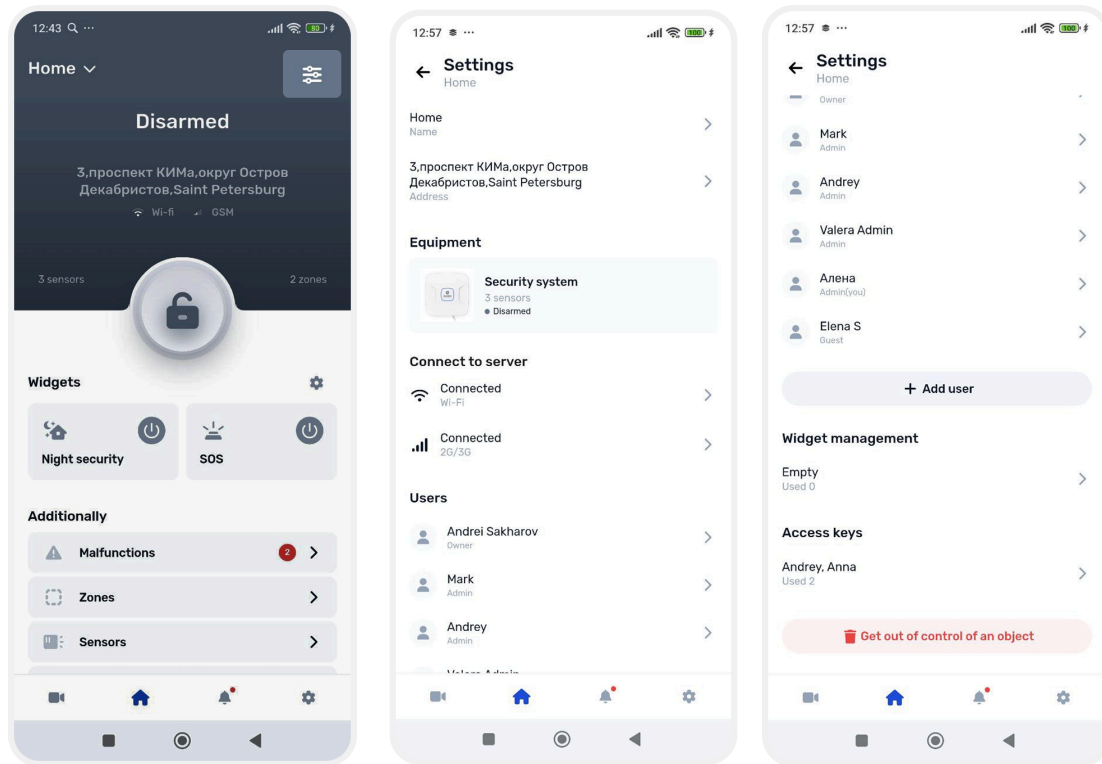
- Video

Quick access to the video surveillance section and cameras.

Object settings

To modify object parameters, tap the settings button in the top right corner of the main screen. Here you can:

- Change the object's name or address
- View connected equipment
- Check server connection — Wi-Fi or GPRS
- View and add users
- Widget management — see how many and which widgets are created, and modify their settings
- Manage access keys

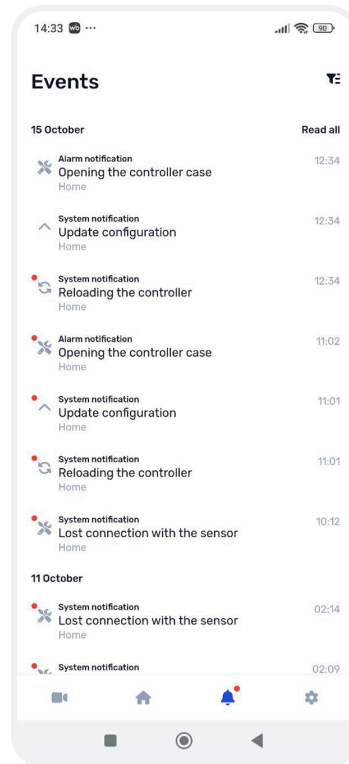


Object settings

Events

On the bottom panel, you'll find the bell icon — this is where all events related to your object are stored:

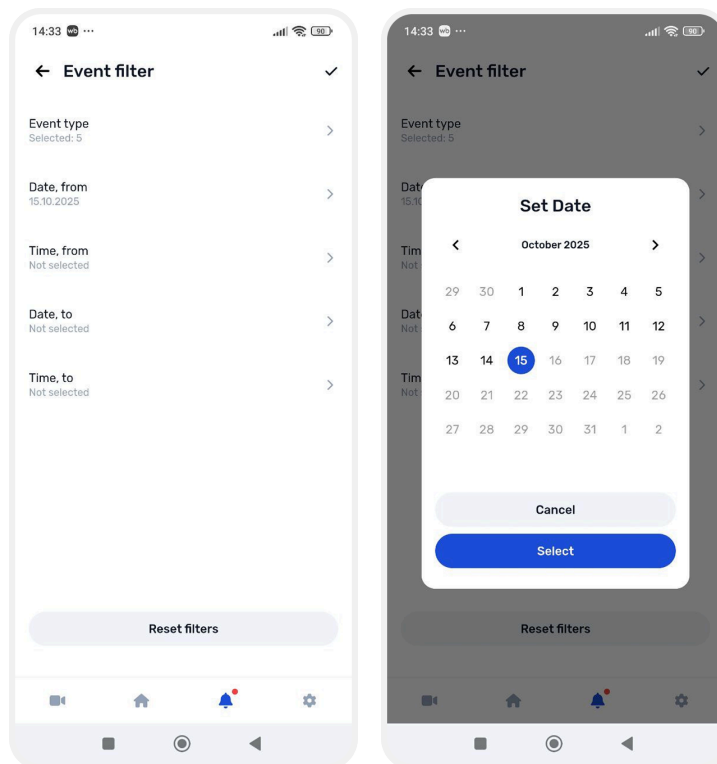
- Alarms and triggers
- Changes in sensor statuses
- System messages
- User invitations and more



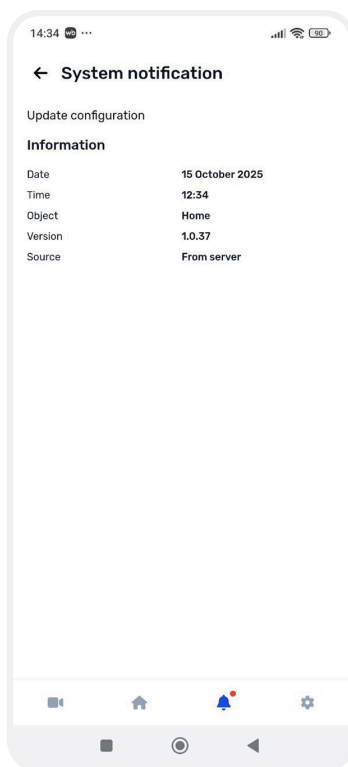
Events

You can customize how events are displayed — in the **Event filter**, select the event types you want to see and set a time period in the calendar to view only events from a specific timeframe.

If you want to show all events again, click **Reset filters**.



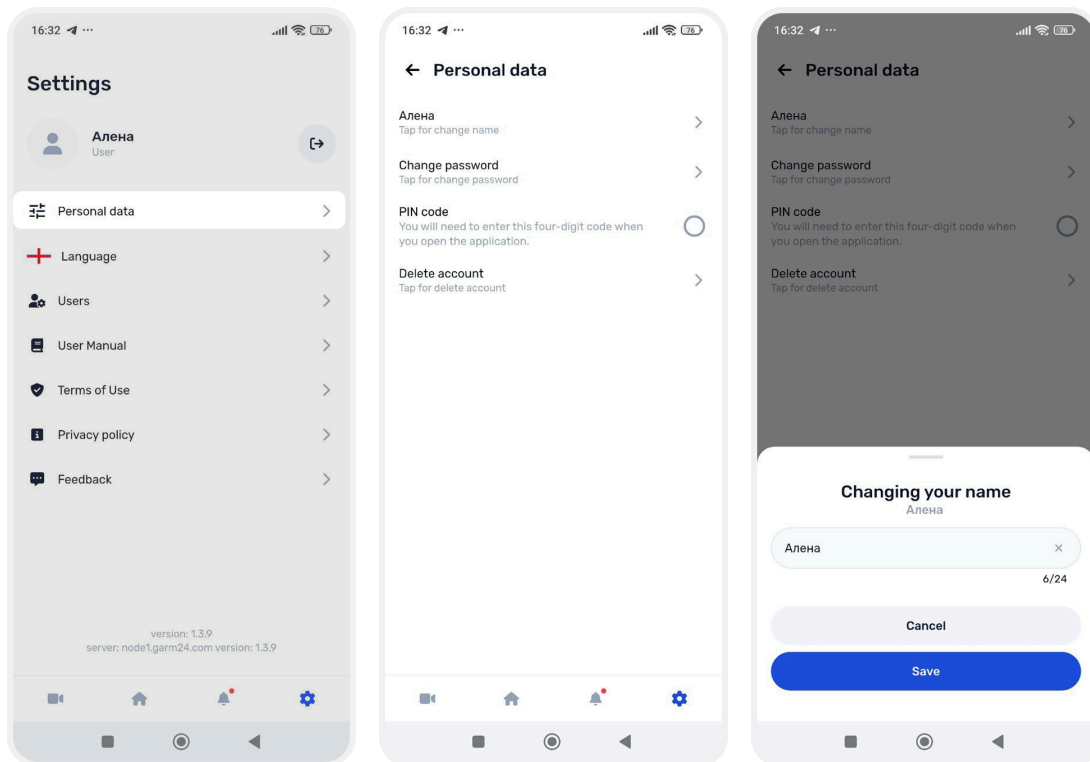
By tapping any event, you'll see detailed information: when and where the event occurred, which devices were involved, and other details.

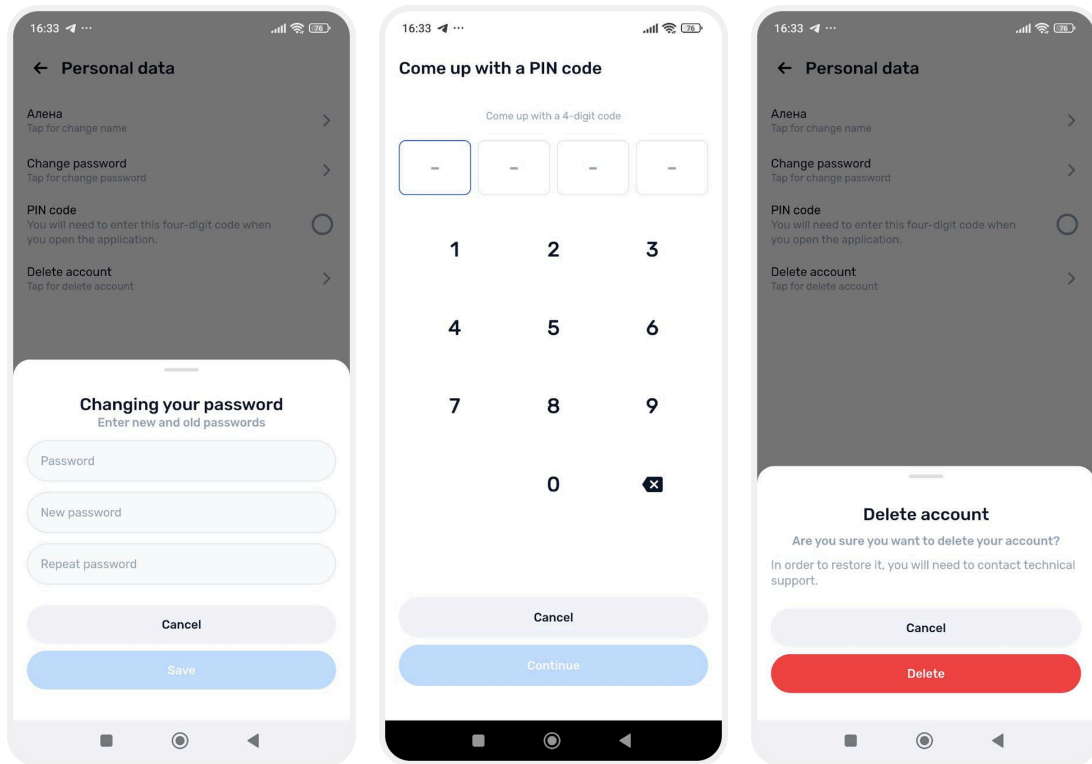


Account settings

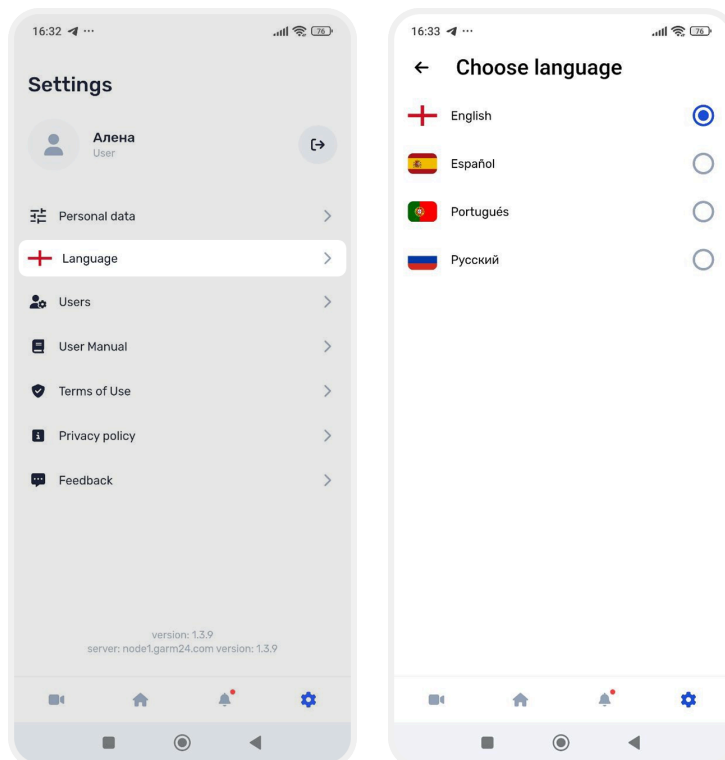
In the **Account settings** section, you can manage your profile and app preferences:

— change your name, password, or set a PIN code — you can also delete your account if needed

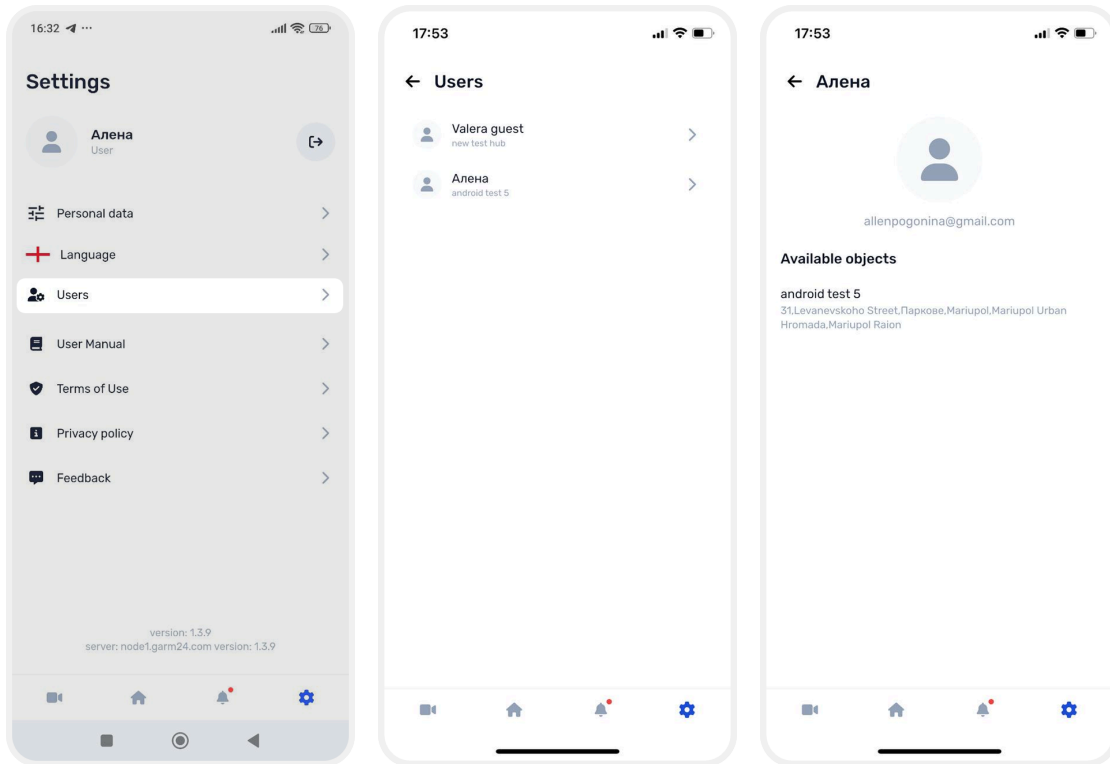




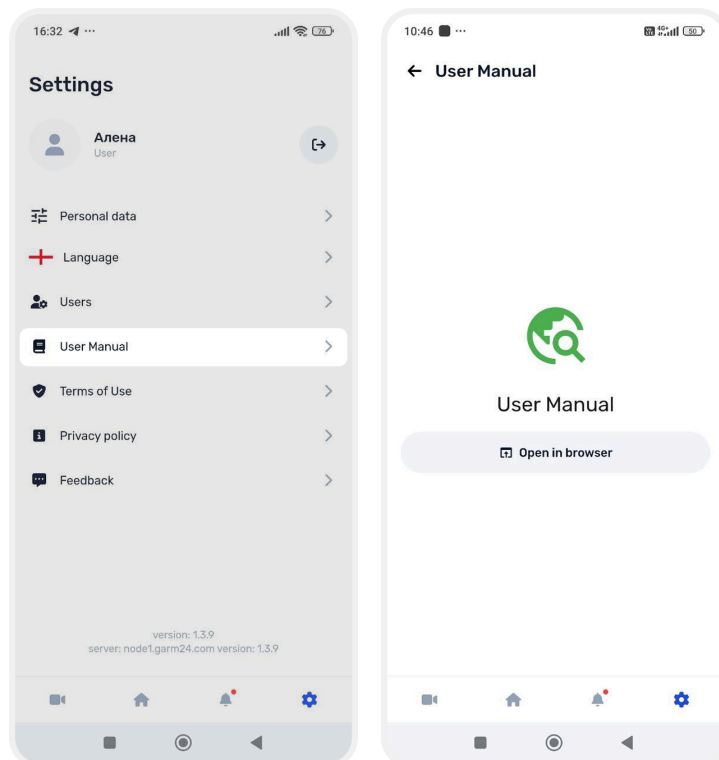
— select the app interface language



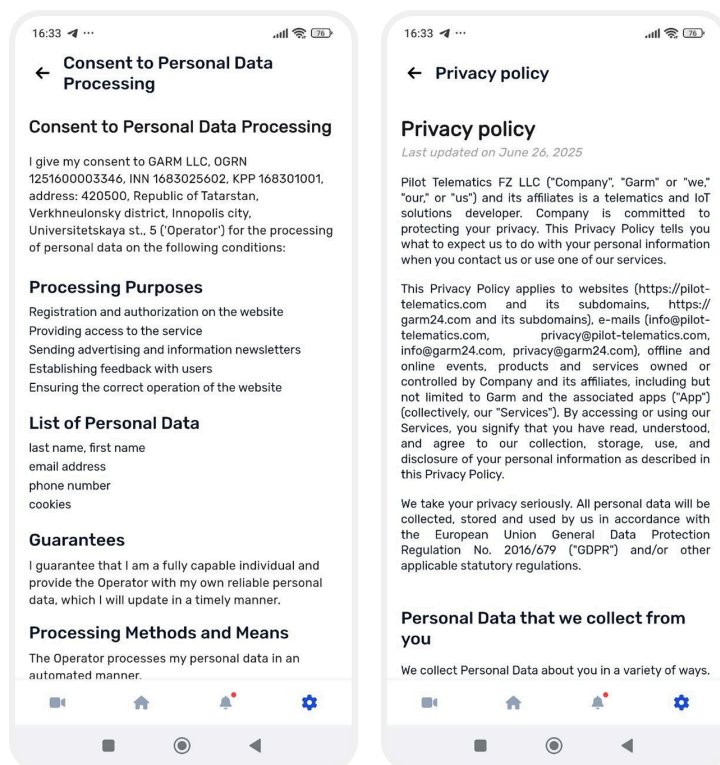
— view the list of users who have access to your devices



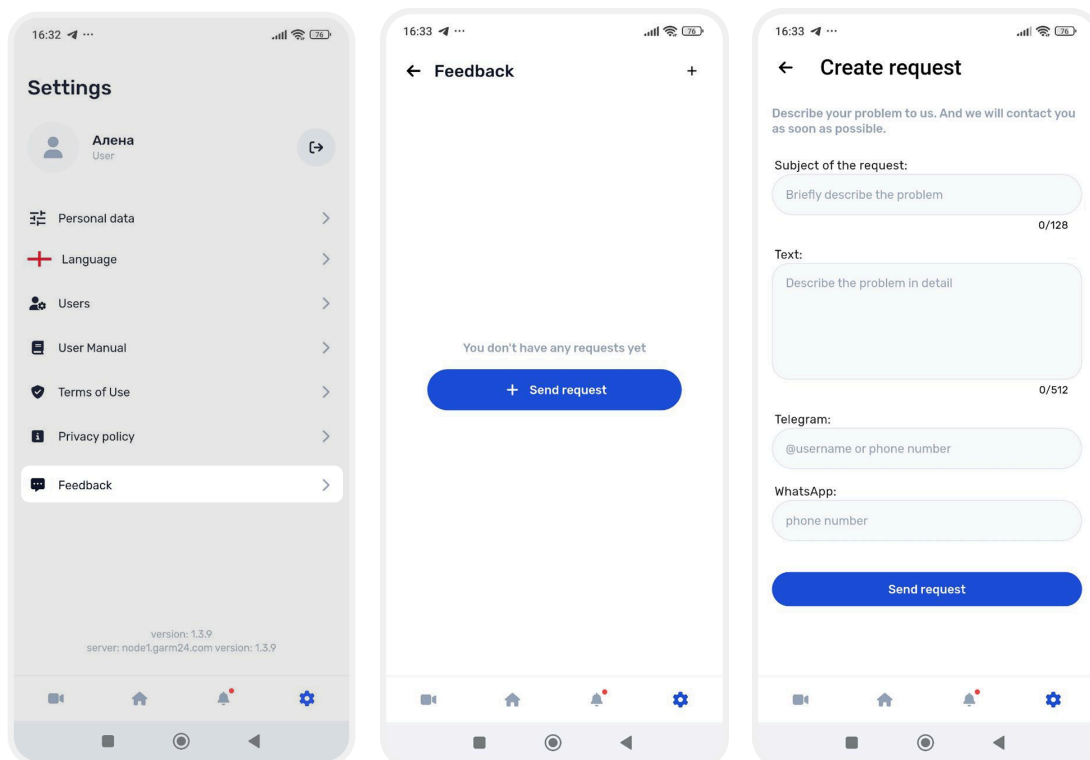
— open the user guide



— review the terms of use and privacy policy



— contact support



If you have a question or something isn't working, feel free to reach out. Tap Send Request to open the feedback form:

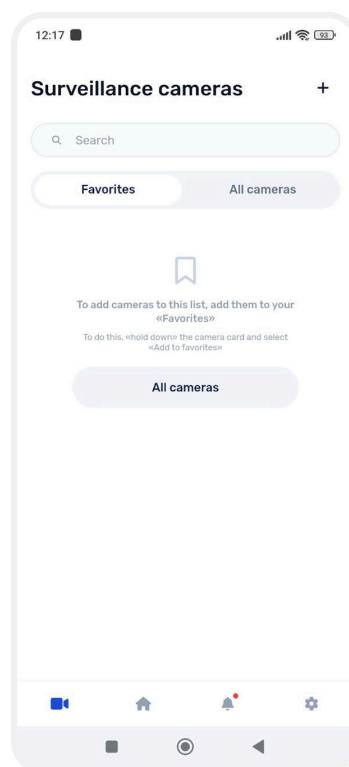
1. Enter the subject of your request
2. Describe the issue or suggestion — let us know at which step the problem occurred
3. Add your phone number for contact via Telegram or WhatsApp
4. Tap **Send request**

Our support team will get back to you and help resolve the issue.

Surveillance cameras

This section displays all [cameras](#) added to your object.

- quickly switch between cameras
- view favorite cameras marked as important
- configure video surveillance settings
- watch live streams in real-time through the selected video player



Surveillance cameras

How to set up control widgets

Widgets are interactive controls that allow you to manage your security system directly from the main screen of the app. With widgets, you can:

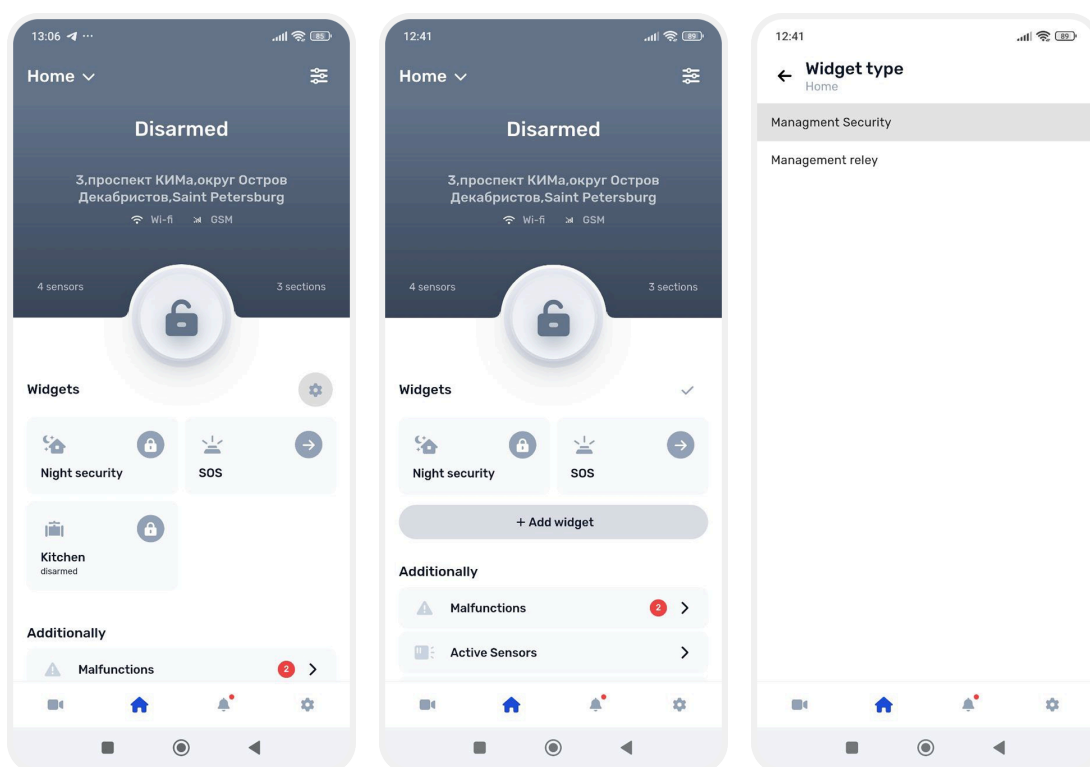
- arm and disarm the system
- control locks, sirens, lights, and other devices
- quickly check the status of your object without navigating to other sections

This guide will show you how to create and configure widgets, pin them to the screen, and manage them conveniently.

How to add a security control widget

The security control widget enables you to arm or disarm a specific zone with a single tap.

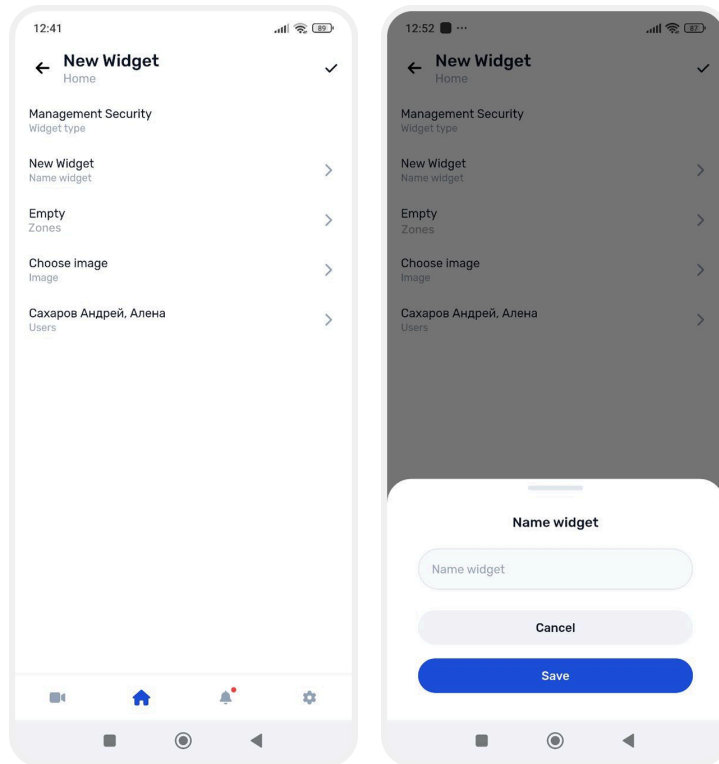
1. On the main screen of the object, tap the gear icon above the pinned widgets
2. Select **Add widget**
3. From the list, choose the widget type **Management security**



Adding a security control widget

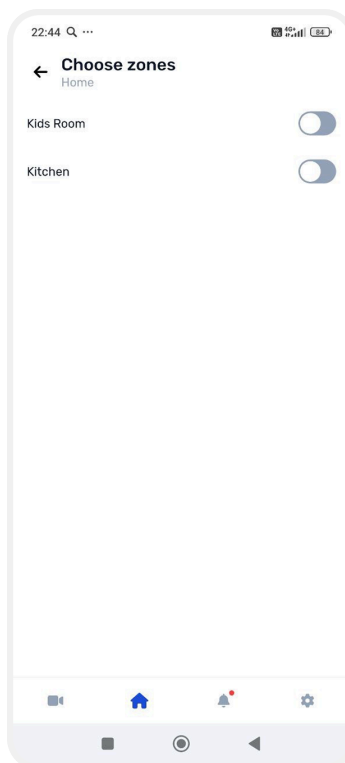
4. On the widget configuration screen:

- Enter a name for the widget, e.g., "Kitchen"

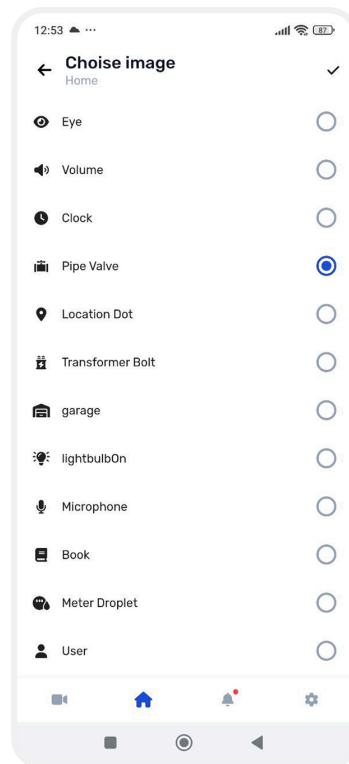


Security control widget settings

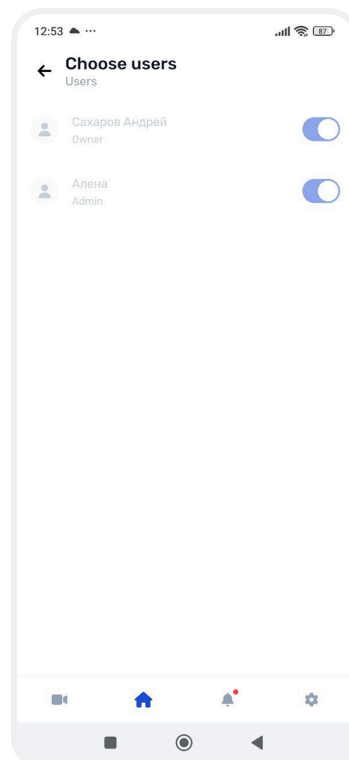
- Select the [zones](#) you want to control. After selection, tap the checkmark in the top right corner to save



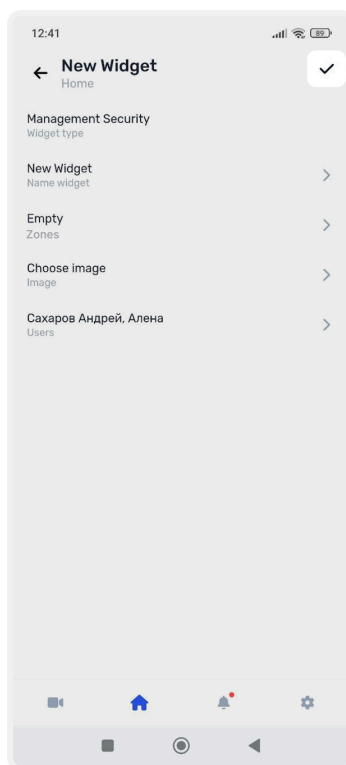
- Choose an icon for the widget and confirm by tapping the checkmark



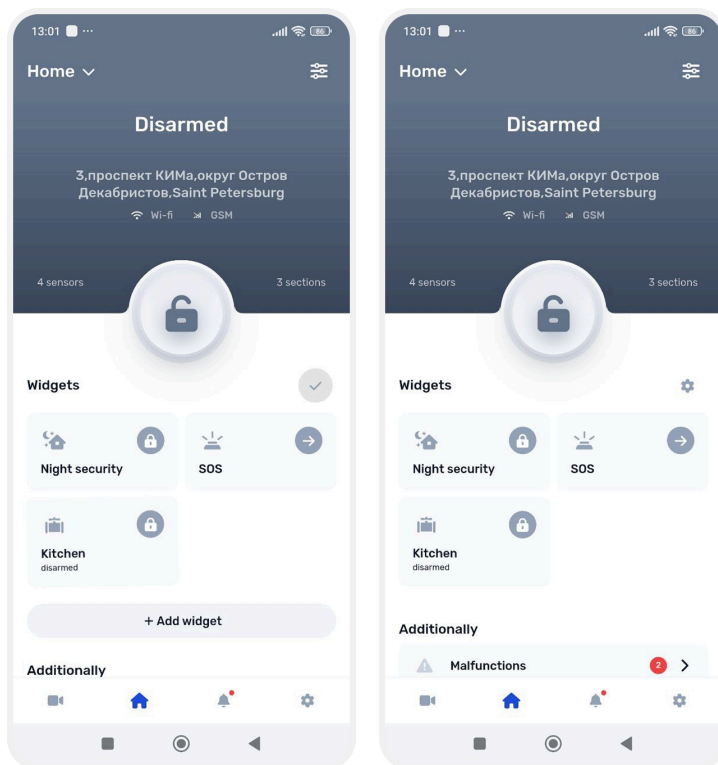
- Specify which users can view and use this widget



5. Tap the checkmark in the top right corner to save all settings



6. Pin the widget to the main screen by tapping icon  next to the widgets.



Pinning a widget to the screen

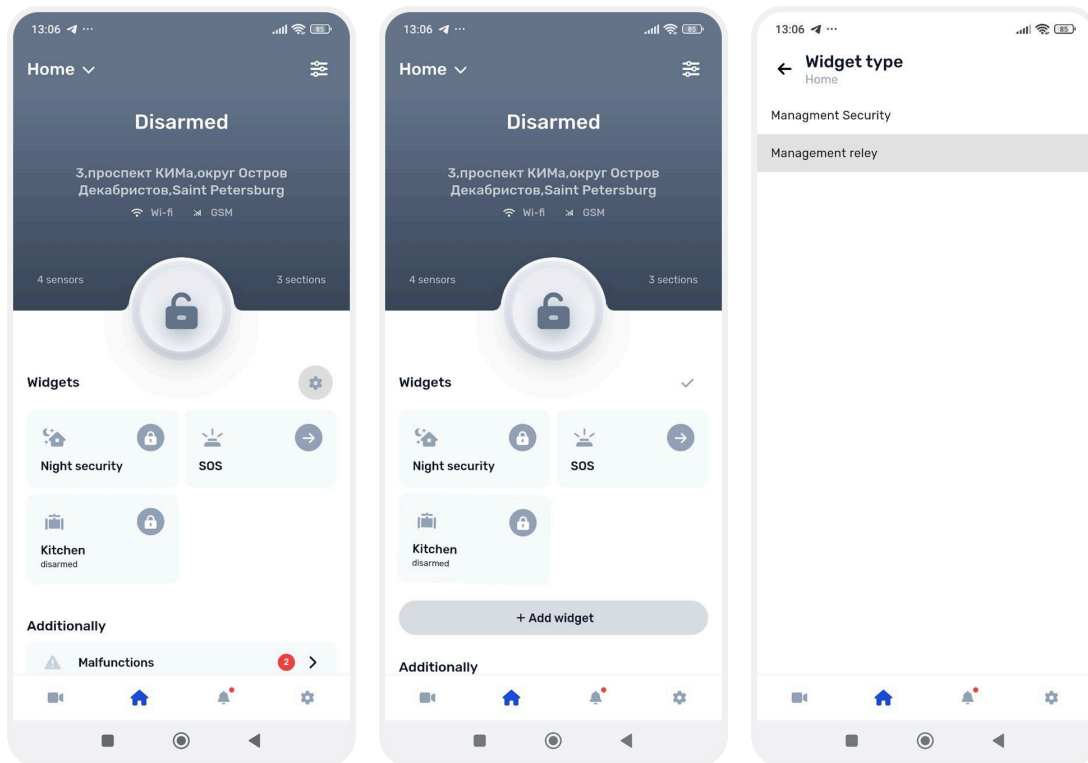
How to add a relay control widget

To control a lock, light, siren, or other connected device, set up a relay control widget:

1. On the main screen of the object, tap the gear icon above the pinned widgets.

2. Select **Add widget**

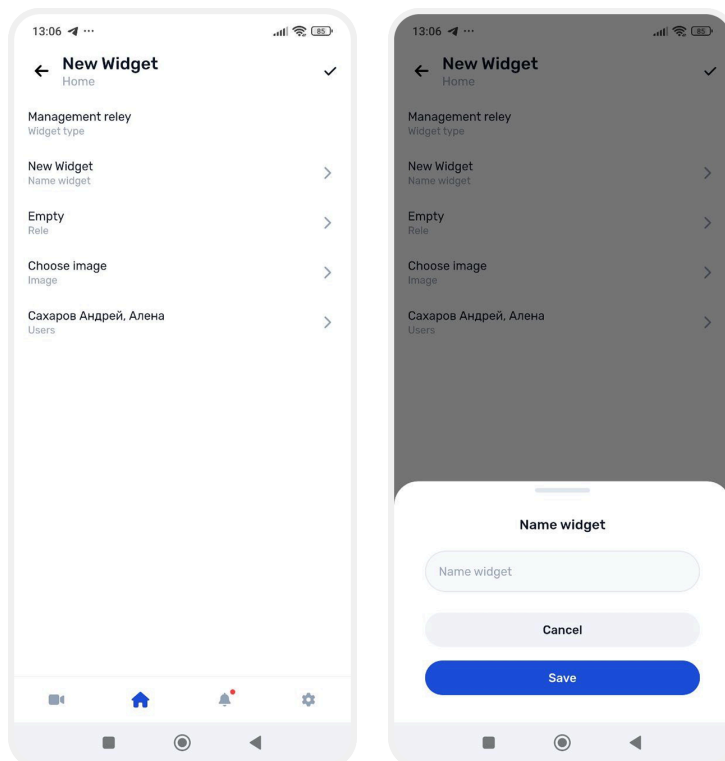
3. From the list, choose the widget type **Management relay**



Adding a relay control widget

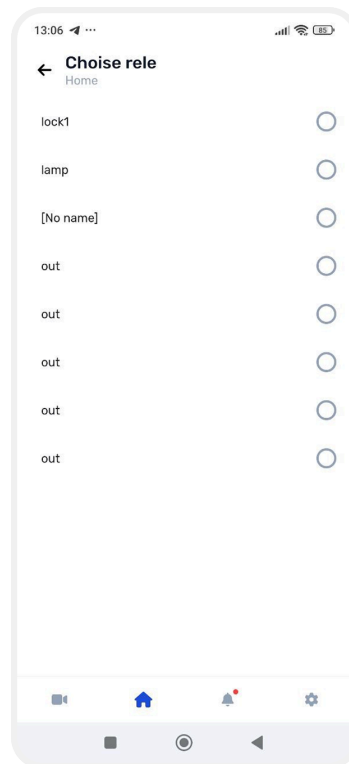
4. On the widget configuration screen:

- Enter a name for the widget, e.g., "Open the gate"

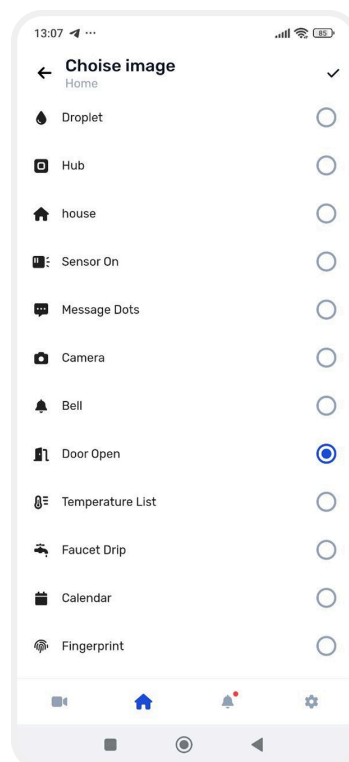


Relay control widget settings

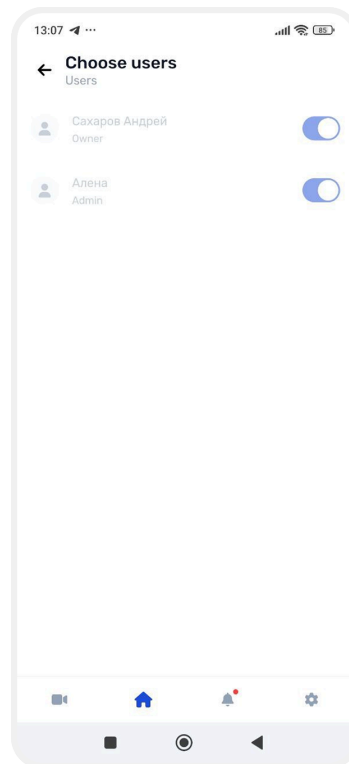
- Select the output you want to control. After selection, tap the checkmark in the top right corner to save



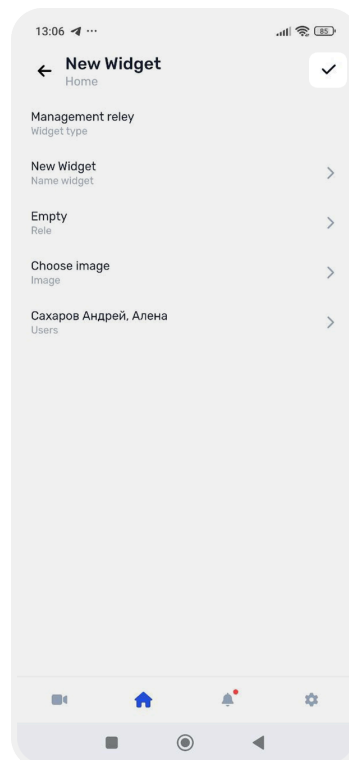
- Choose an icon for the widget and confirm by tapping the checkmark



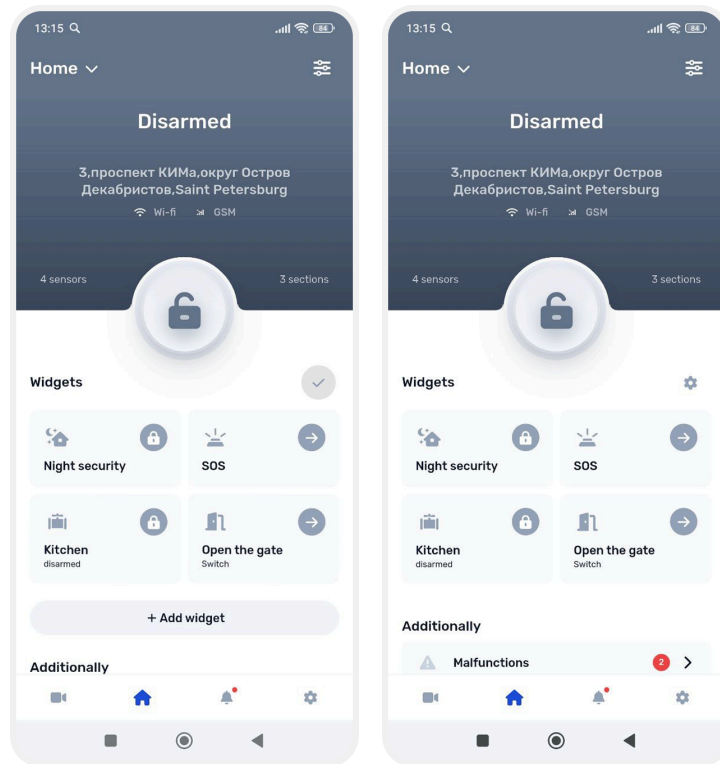
- Specify which users can access this widget



5. Tap the checkmark in the top right corner to save all settings



6. Pin the widget to the main screen by tapping icon  next to the widgets.



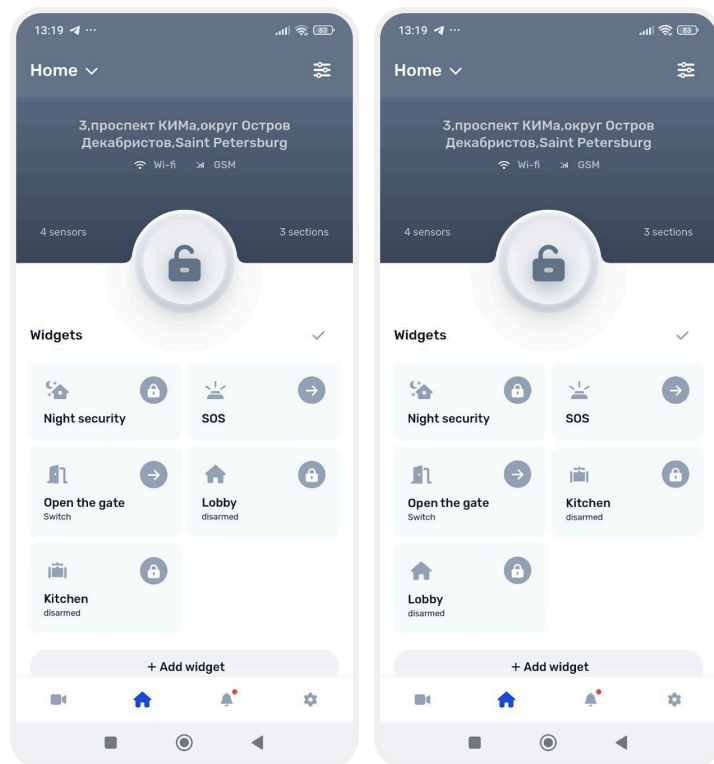
Pinning a widget to the screen

Displaying widgets on the main screen

Once you've added and configured widgets, they will appear on the main screen of the object.

The "Night Security" and "SOS" widgets are added automatically and always appear first. They are pinned by default and do not require additional configuration.

All other widgets you create can be rearranged. Customize the order to your preference by holding a widget and dragging it to the desired position on the screen.

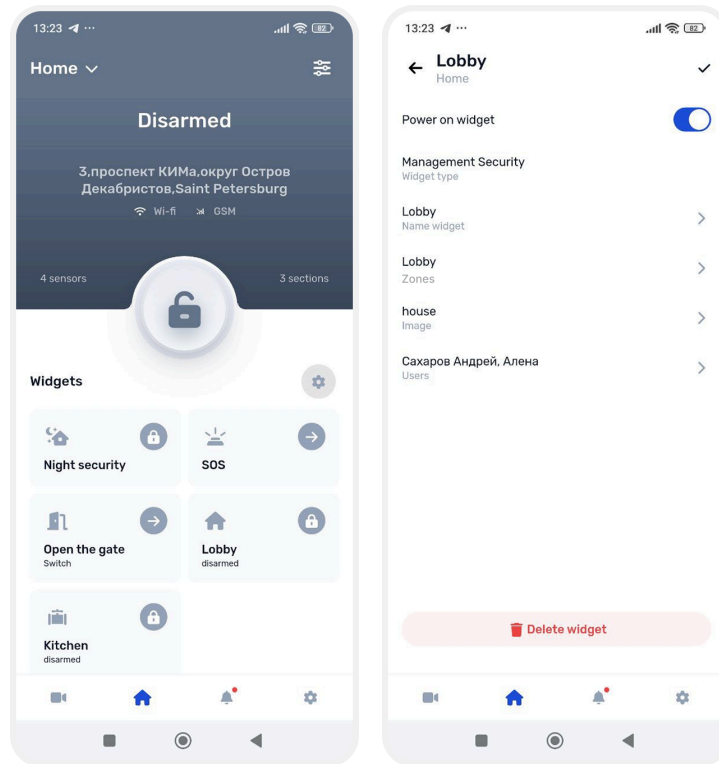


Example of moving widgets

How to edit a widget

To modify an existing widget — such as renaming it, changing its icon, or updating the zone or output:

1. On the main screen of the object, tap the gear icon above the pinned widgets
2. Find the widget you want to edit and tap on it
3. On the widget settings screen, you can:
 - change the widget's name
 - select a different icon
 - modify the selected sections or output
 - adjust user access permissions
 - disable the widget — this will remove it from the main page but not delete it. To re-enable:
1. Go to [Object settings](#)
2. Select **Widget management**
3. Find the desired widget and enable it using the toggle switch
4. Tap the checkmark in the top right corner to save changes

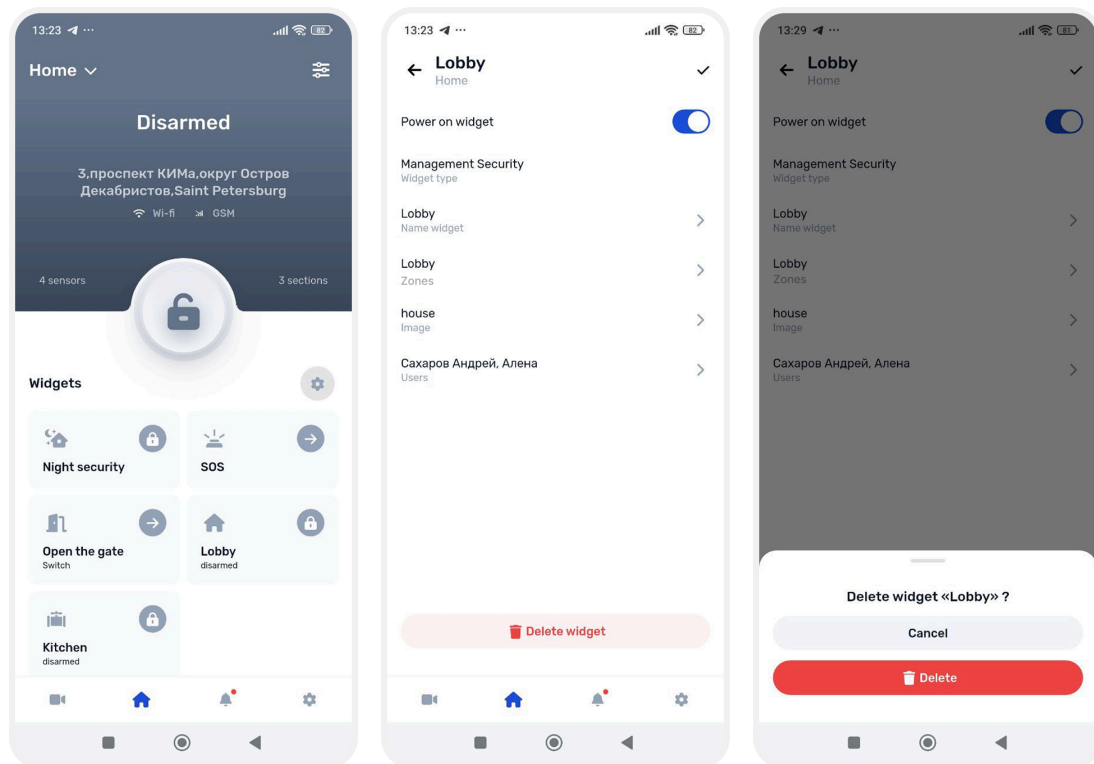


Editing a widget

How to delete a widget

If you no longer need a widget, you can easily delete it:

1. On the main screen of the object, tap the gear icon above the pinned widgets
2. Find the widget you want to delete
3. On the widget settings page, tap **Delete widget** at the bottom of the screen
4. Confirm the deletion — the widget will be removed from the main screen



Deleting a widget

How to connect and configure wireless sensors

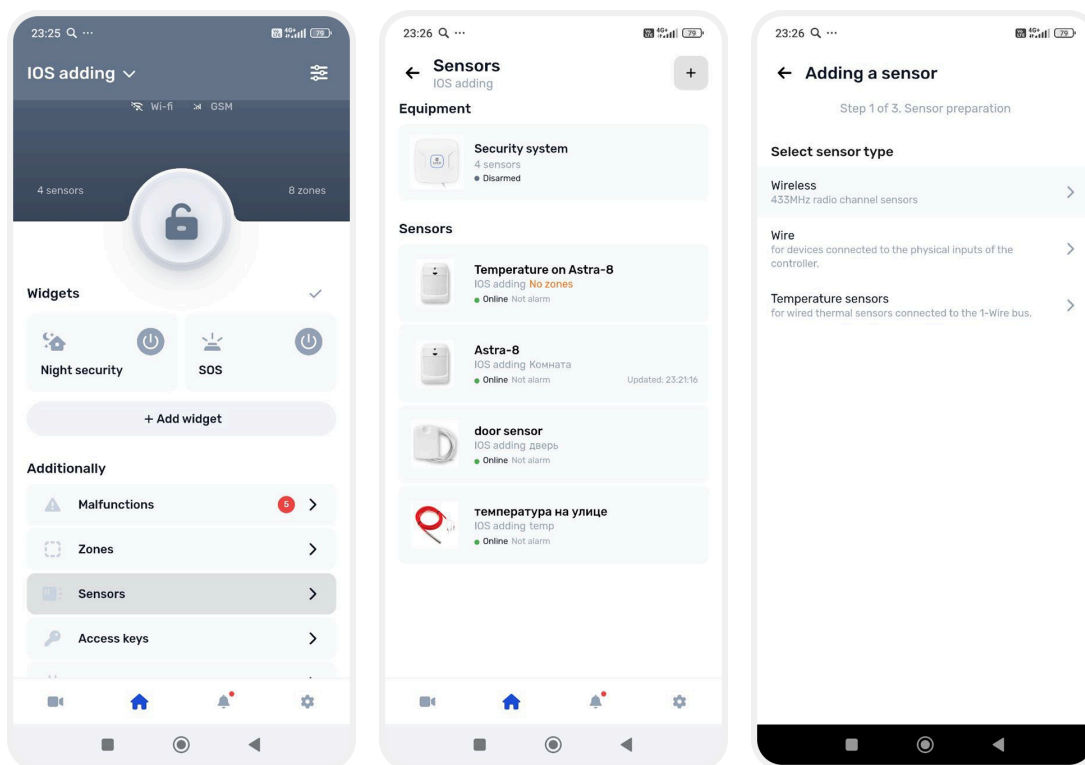
The GARM system supports ASTRA wireless devices — easy-to-install, wire-free sensors that enhance your security setup. This guide walks you through adding, configuring, enabling, managing, and, if needed, disabling or removing these sensors.

The GARM Link PRO hub exclusively supports ASTRA wireless devices. For a comprehensive list of compatible models, refer to the [Frequently asked questions about GARM](#)

How to add an ASTRA wireless sensor

To add a wireless sensor:

1. Navigate to the main screen of the application
2. Tap the **Sensors** tab
3. On the sensors page, tap the icon **+** in the top-right corner
4. Select **Wireless** as the sensor type

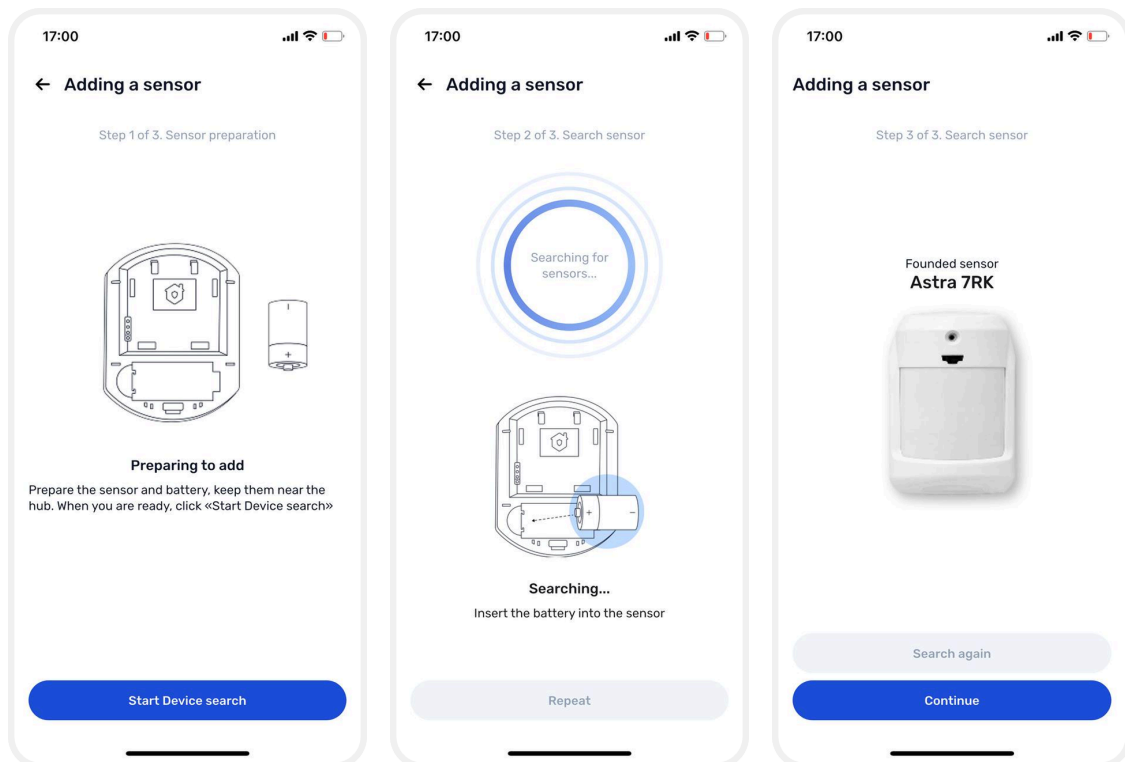


Adding a wireless sensor

5. This will launch the sensor registration wizard
6. Follow the on-screen instructions; the application will begin searching for nearby ASTRA wireless devices

Prepare the sensor and the battery, and keep them close to the hub. In the app, tap **Start search** — the hub will switch to pairing mode.

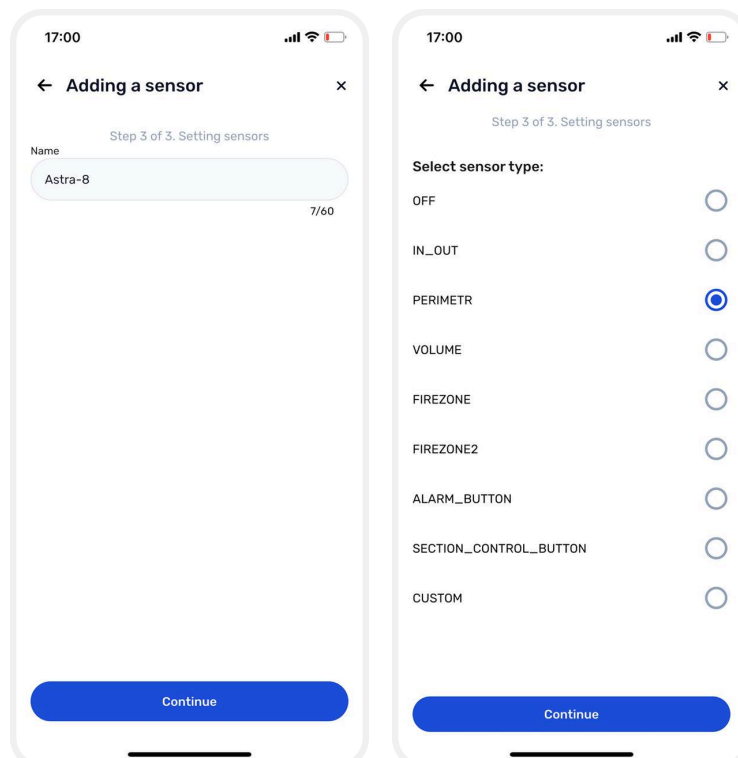
Now insert the battery into the sensor and make sure it turns on. After that, wait until the sensor appears on the screen.



Sensor registration wizard

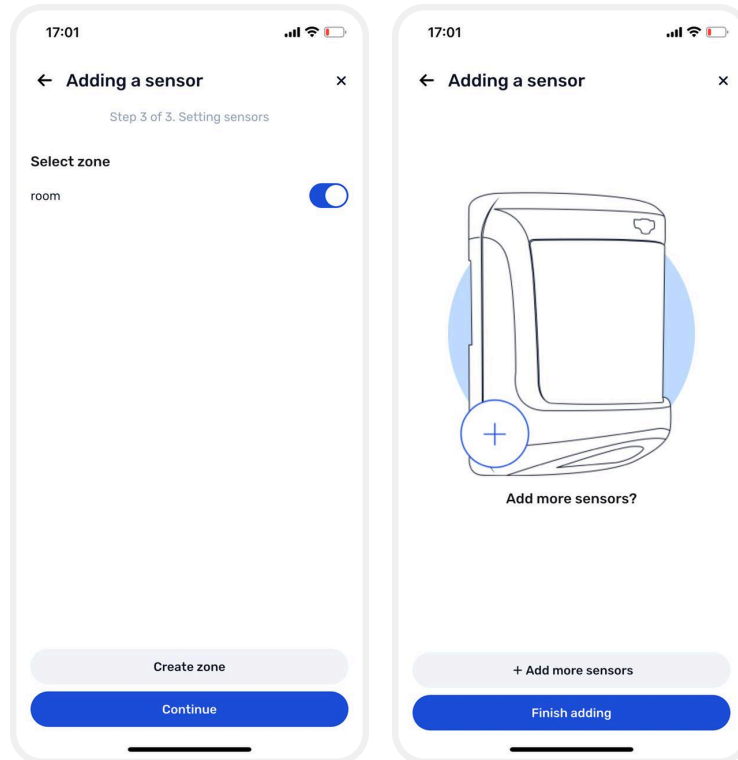
Once the sensor is detected:

1. Assign a name to the sensor
2. Select the sensor type from the list



3. Associate it with an existing zone or create a new one

Sensors not linked to a zone will appear in the list but won't trigger alarms. For guidance on creating sections, see [here](#).

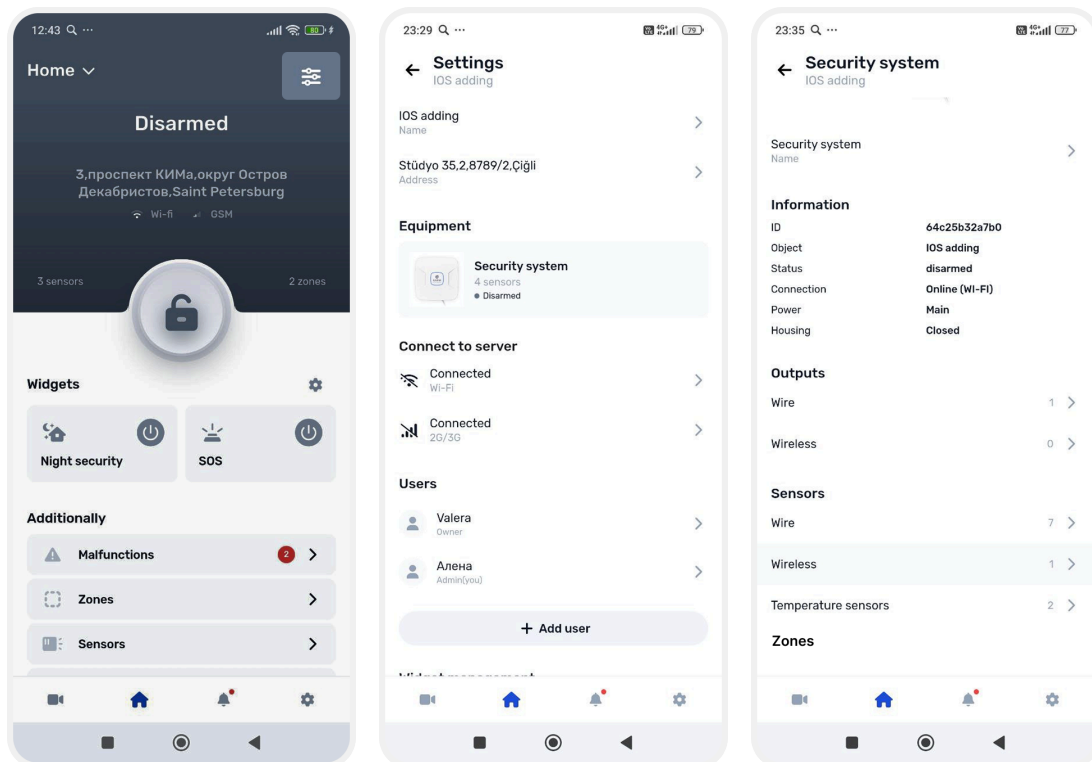


Setting up the sensor

How to enable a sensor

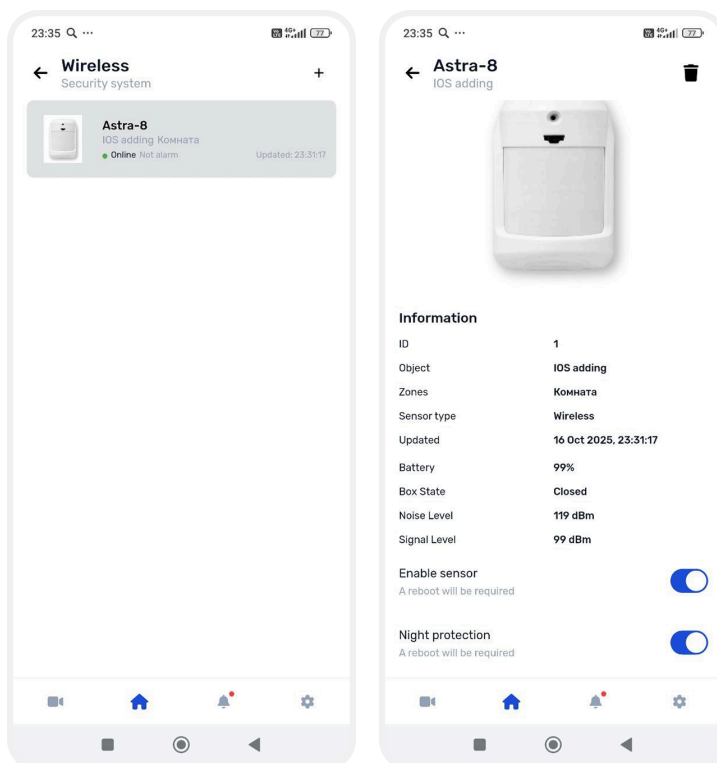
After adding the sensor, enable it:

1. Go to **Object settings** → **Equipment**
2. Tap on the hub to access its settings
3. Under the hub's sensors, select **Wireless**



4. Choose the desired sensor

5. Toggle the **Enable sensor** switch to activate it



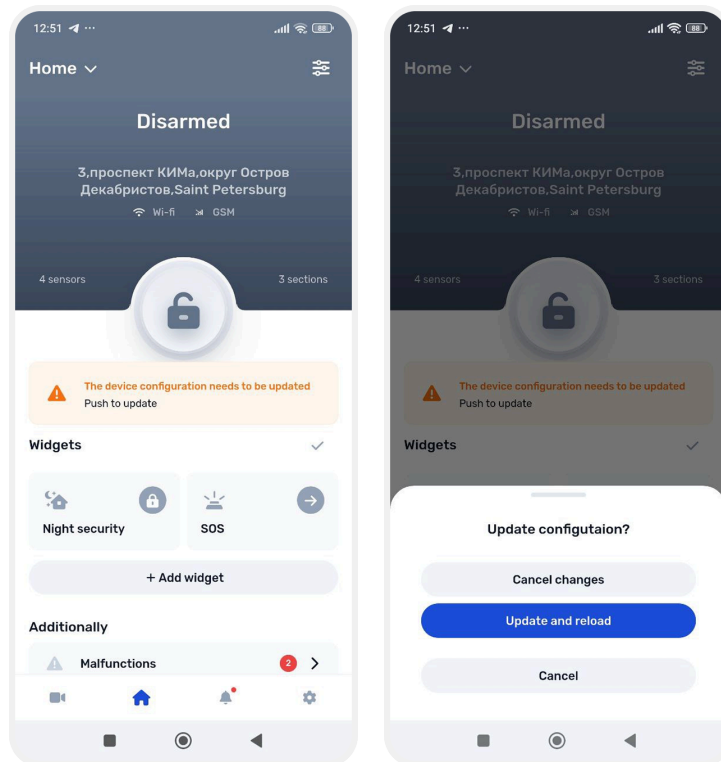
Enabling the sensor

To complete adding the sensor, you need to [update the device](#) configuration.

Updating the configuration

When you add a new ASTRA wireless sensor or modify equipment settings, changes are saved in the app but not immediately applied to the hub. To implement these changes:

1. Return to the main screen
2. A notification stating **The device configuration needs to be updated** will appear at the top — tap it
3. Confirm by tapping **Update and reload**
4. Wait for the update to complete. If you change your mind, you can tap **Cancel changes**

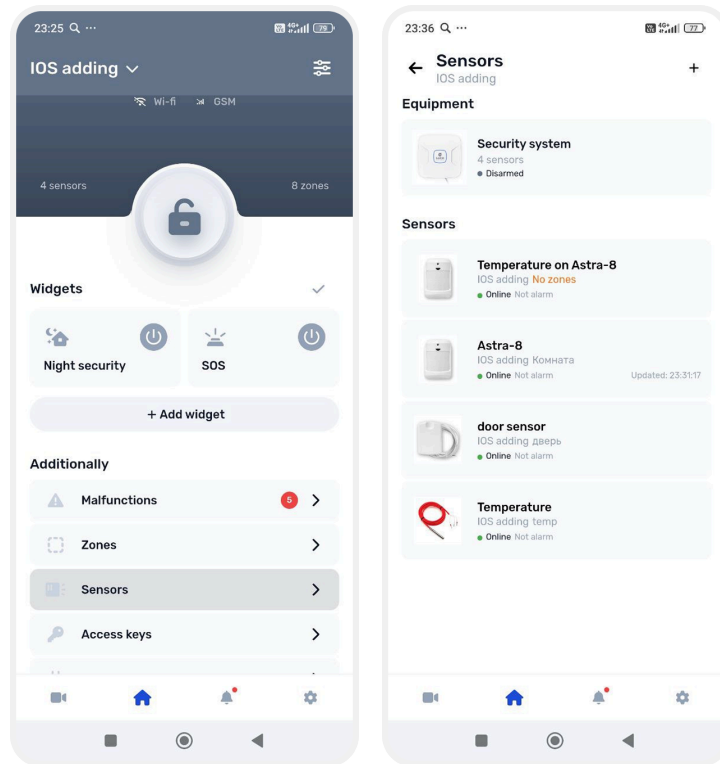


Configuration update

Managing sensors

All active wireless devices are listed on the main screen:

1. Navigate to the **Sensors** tab
2. View the list of all added devices



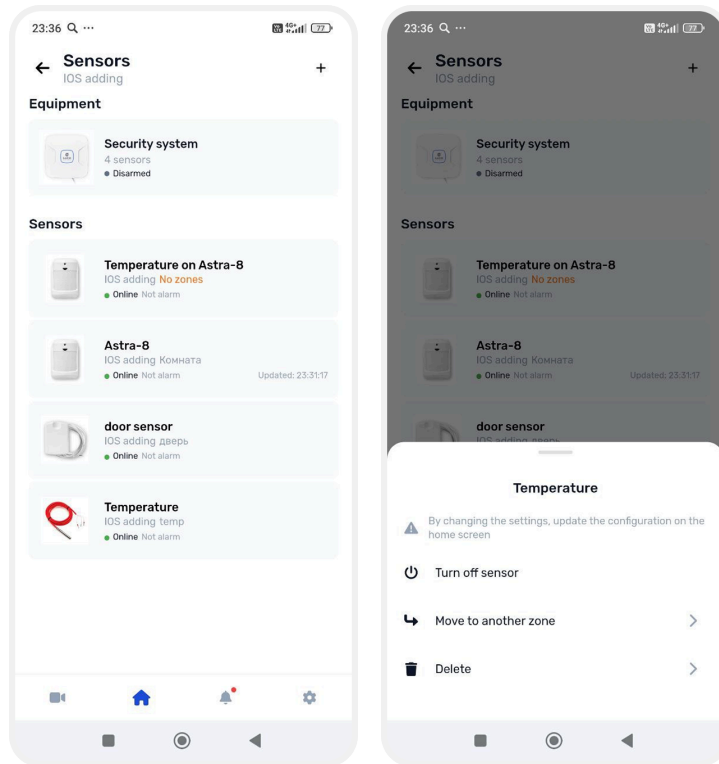
List of active sensors

Sensors not assigned to a zone will also appear here. You can assign them to a zone later.

To move a sensor to a zone

1. Press and hold the desired sensor
2. From the menu, select **Move to another zone**
3. Choose an existing section or create a new one

Sensors not assigned to a zone won't trigger alarms upon activation and will display a "No zones" status.



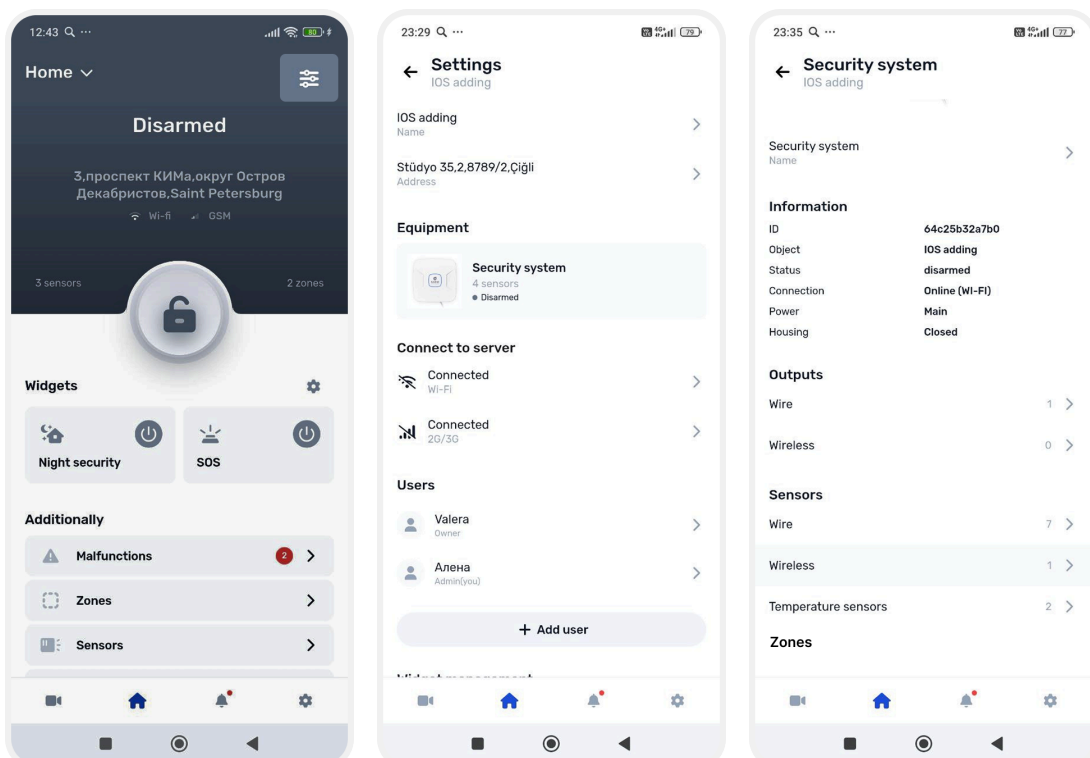
Moving the sensor to the zone

Disabling or removing a sensor

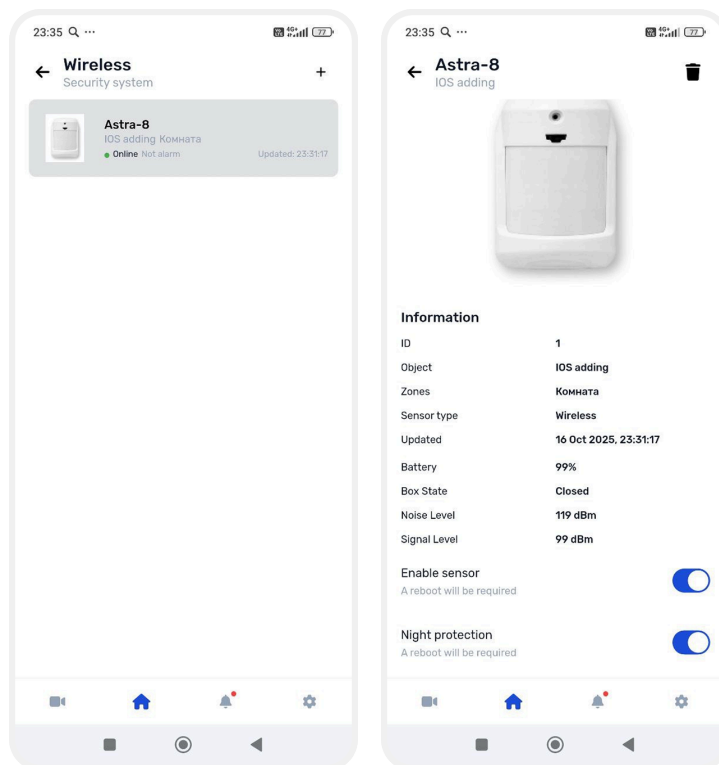
How to disable the sensor

This option is useful if you're not currently using the device but wish to retain its settings.

1. Navigate to **Object settings** → **Equipment** → **Sensors** → **Wireless**



2. Select the sensor and tap **Disable sensor**

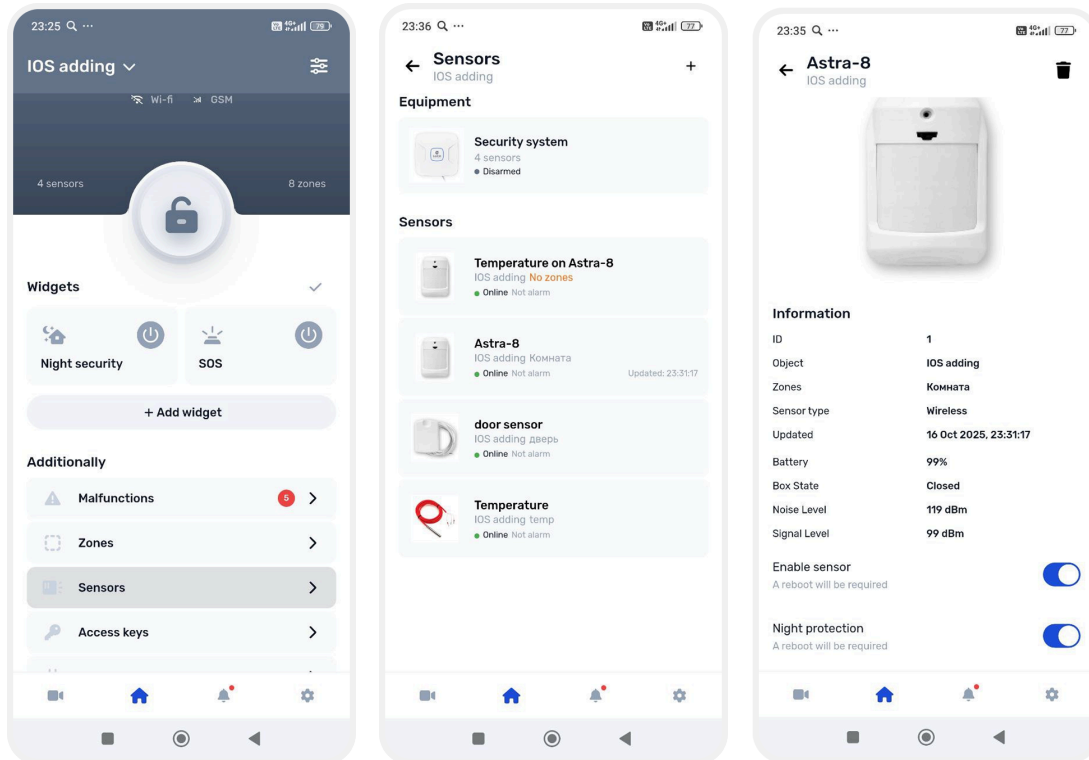


How to delete the sensor

- Via sensor settings

1. Open the specific sensor's settings

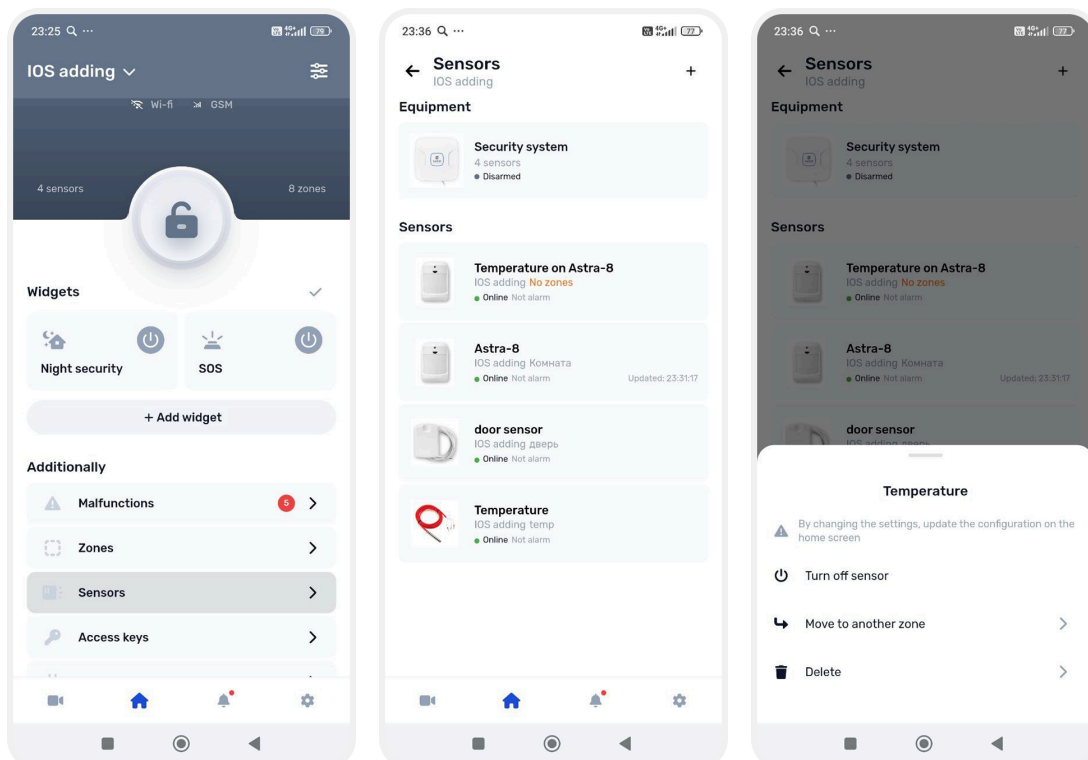
2. Tap the trash bin icon  in the top-right corner



Deleting via sensor settings

- Via the sensor list

1. Go to the **Sensors** tab
2. Press and hold the desired sensor
3. From the menu, select **Delete**



Deleting via the sensor list

How to connect wired inputs

In certain scenarios, using wireless sensors may not be ideal — such as in areas with unstable radio communication or where constant power supply is necessary. In such cases, wired alarm loops offer a reliable solution.

This guide will walk you through connecting wired sensors to the inputs of the hub, configuring them within the application, and ensuring they function correctly.

Inputs are dedicated terminals on the hub or control panel designed for connecting wired sensors and alarm loops. Each input can support up to 10 wired sensors operating on a "dry contact" principle:

- Normally Closed (NC): The circuit is closed by default; an alarm is triggered when the circuit is broken.
- Normally Open (NO): The circuit is open by default; an alarm is triggered when the circuit is closed.

Inputs monitor the loop's state — detecting open circuits, short circuits, normal conditions, or alarms.

Depending on your system's configuration, each input can be assigned a loop type: security, fire, panic, etc.

Key input parameters

- Power supply voltage: 12 V
- Signal type: Dry contact (no voltage applied)
- Recommended loop resistance: 4.7 k Ω
- Current consumption: Varies based on sensor type and quantity

Connecting a wired loop to the hub input

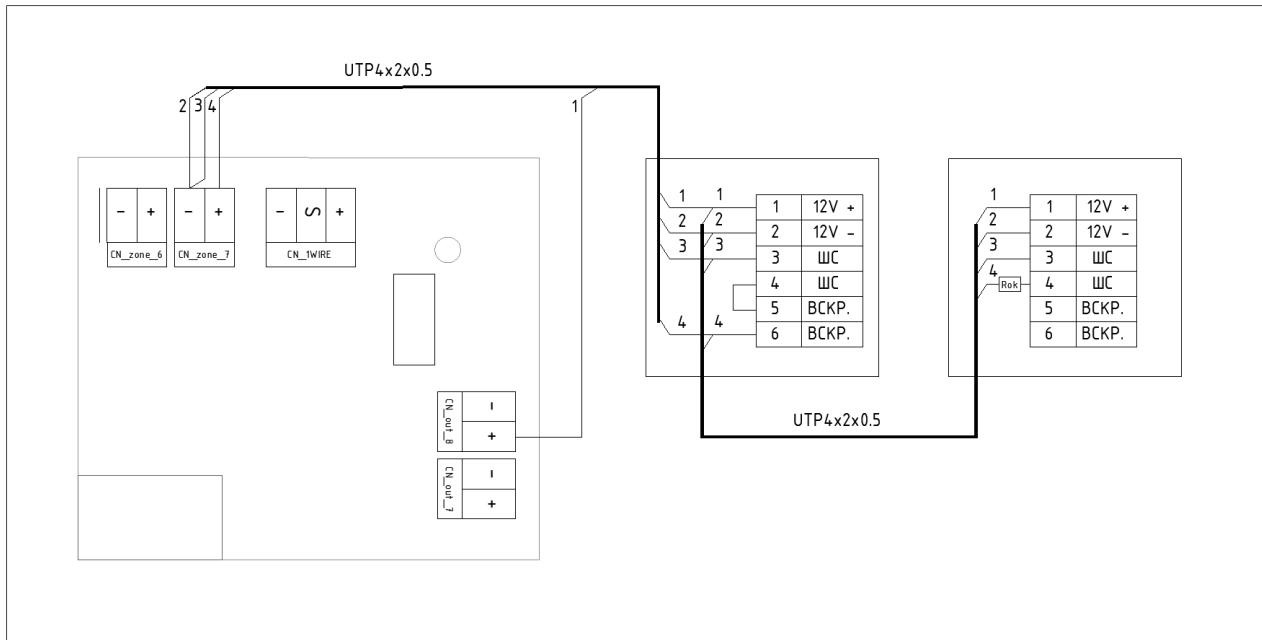
Sensors are connected to the hub via terminals.

Terminal designations on the hub:

- +CN_OUT: Provides +12 V power for sensors
- +CN_ZONE: Signal input for monitoring the loop's state
- -CN_ZONE: Common ground for both power and signal circuits

Connection steps:

1. Connect the sensor's positive power wire (+) to the +CN_OUT terminal
2. Connect the sensor's negative power wire (–) to the –CN_ZONE terminal
3. Connect the loop's signal wire to the +CN_ZONE terminal



Wiring an alarm loop to an input

If the sensor requires a separate power supply — for example, a motion (PIR) sensor:

- Connect the power wire (+) to the +CN_OUT terminal
- Connect the power wire (-) to the -CN_ZONE terminal

This ensures the circuit closes correctly for proper operation.

The loop wiring type depends on the sensor logic:

- Normally Closed (NC) — an alarm is triggered when the circuit is broken.
- Normally Open (NO) — an alarm is triggered when the circuit is closed.

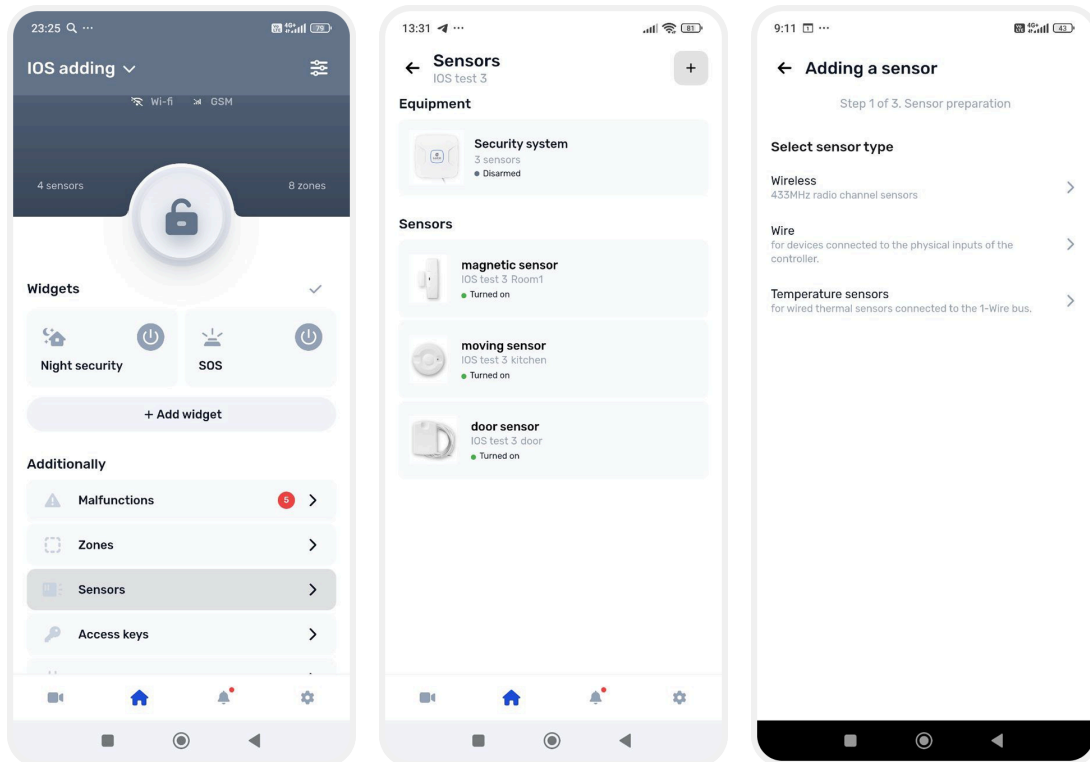
If multiple sensors are connected to a single loop:

- For NC contacts — sensors should be connected in series (one after another).
- For NO contacts — sensors should be connected in parallel (each on a separate branch).

Adding an input in the application

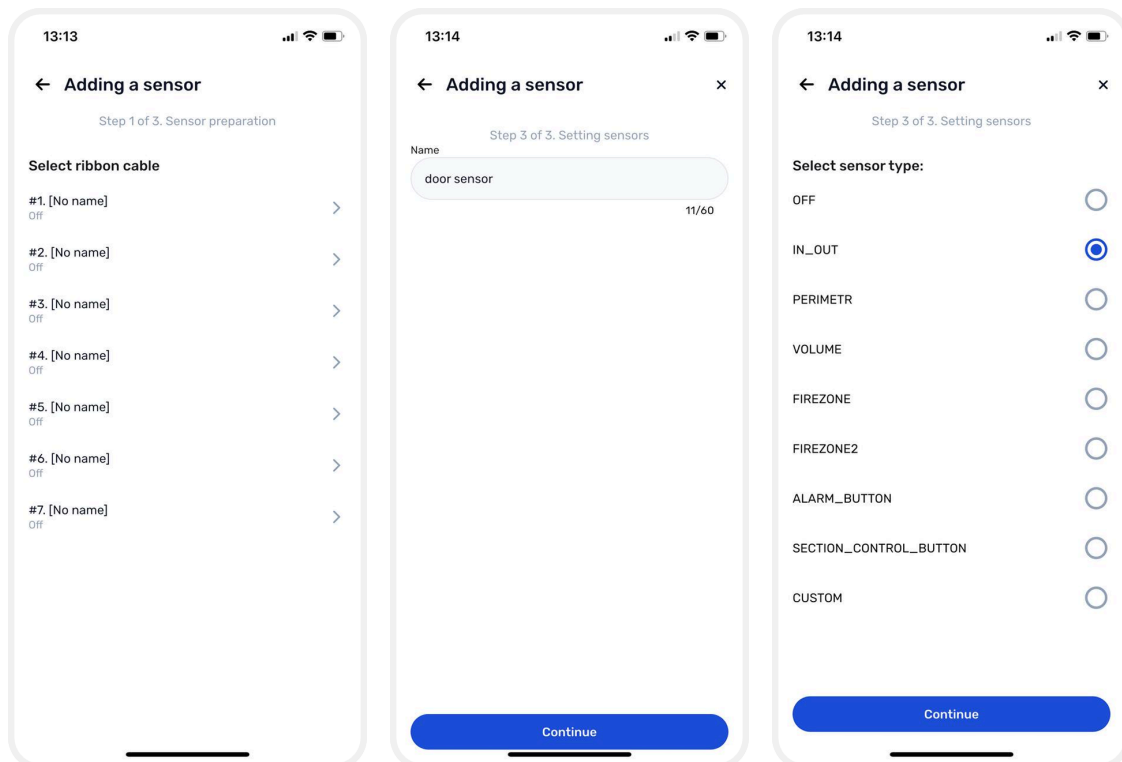
After physically connecting the sensors, add the input in the application:

1. Navigate to the main screen in the application
2. Open the **Sensors** tab
3. Tap the **+** icon in the top-right corner
4. Select **Wire** as the sensor type



Proceed to configure the sensor:

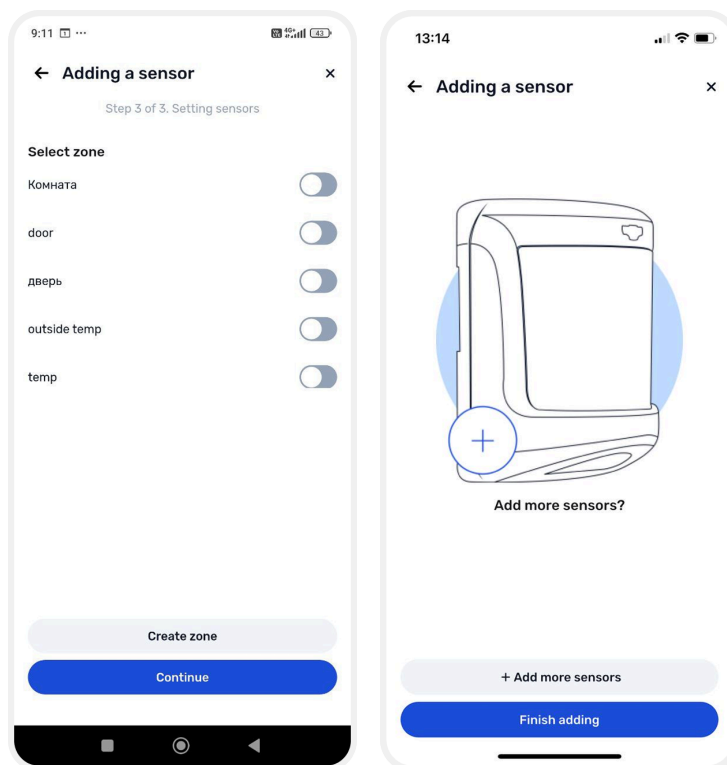
1. Select the loop
2. Assign a name to the sensor
3. Choose the sensor type from the list



4. Associate it with an existing zone or create a new one. For guidance on creating zones, refer to the article

[How to create and manage zones](#)

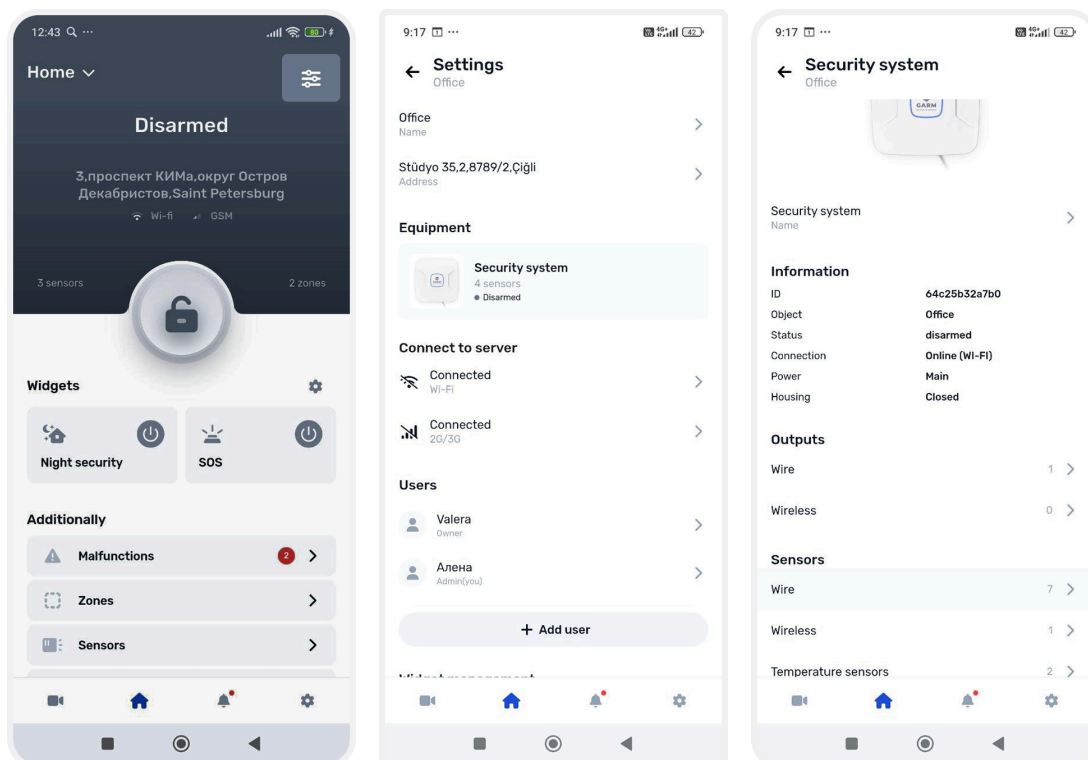
5. Tap **Finish adding**



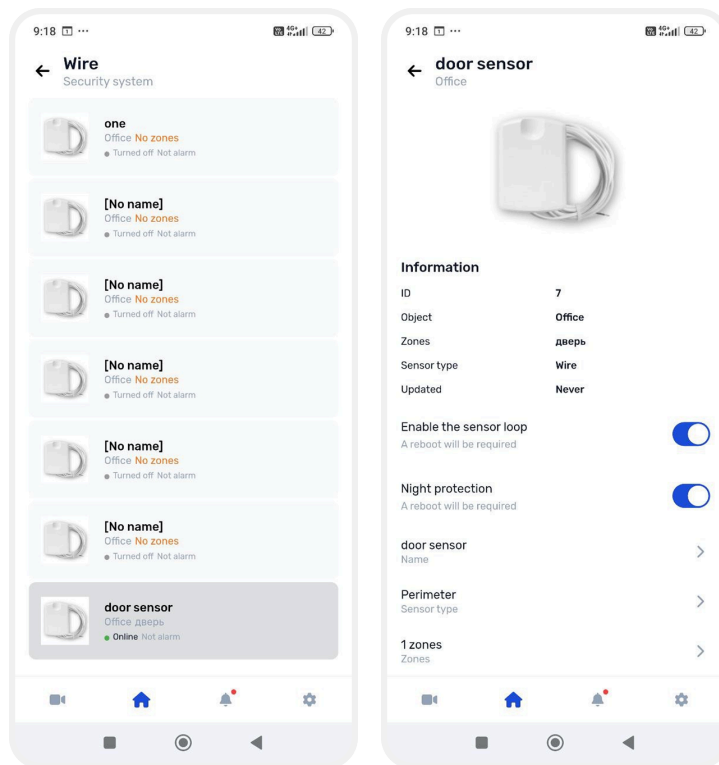
Adding and configuring an input

Enabling the input in the application

1. Go to **Object settings** → **Equipment**
2. In **Equipment**, select the hub to access its settings
3. Under the hub's sensors, choose **Wire**



4. Select the desired input
5. On the input's page, toggle the **Enable the sensor loop** switch



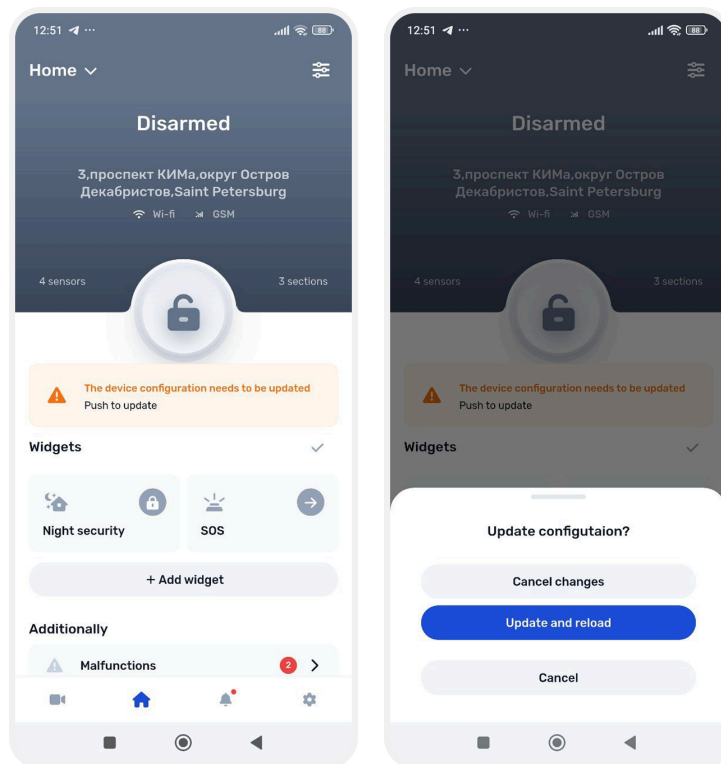
Enabling an input

To complete adding the input, you need to update the device configuration.

Updating the configuration

When you add a new input or make changes to equipment settings, these modifications are initially saved in the application but not immediately applied to the hub. To implement them, you need to update the configuration:

1. Return to the main screen
2. At the top, a notification will appear: **The device configuration needs to be updated**— tap on it
3. Confirm the update by tapping **Update and reload**
4. Wait for the update to complete. If you change your mind, you can tap **Cancel changes**



Configuration update

How to connect wired outputs

To enable the security system not only to monitor events but also to respond — such as activating a siren, unlocking a door, or turning on a light signal — wired outputs are used.

This guide explains which devices can be connected to the hub's outputs, how to connect them properly, and how to configure their operation through the application.

Outputs are special terminals on the hub designed for connecting actuators:

- Sirens
- Light signals (lamps, strobe flashes)
- Electromagnetic locks
- Relays
- Other devices that respond to alarms or commands

Key output parameters

- Power supply voltage: 12 V
- Maximum load current: Varies by control panel model. Consult your model's technical documentation to avoid overloading.

Output types

Depending on the task, two output types are available:

- Relay: dry contact, galvanically isolated. Used for switching circuits with their own power supply
- Constant +12 V output: active upon triggering (e.g., during an alarm). Suitable for supplying power to a device at the moment of an event

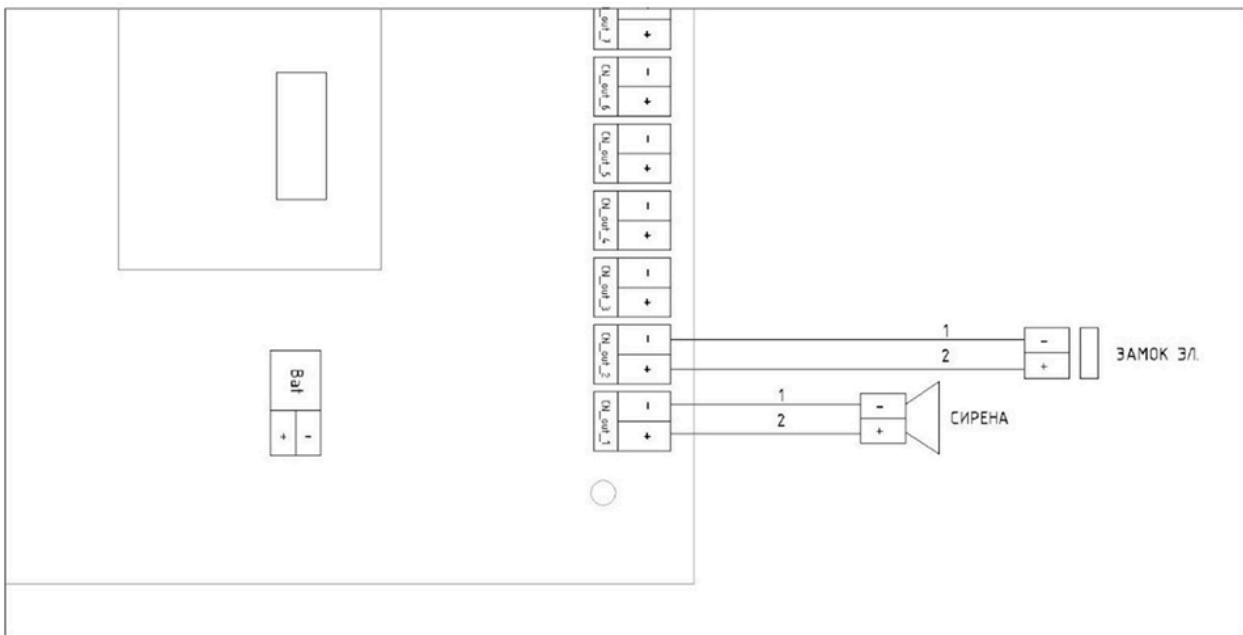
Supported control modes

- Activation/deactivation upon alarm
- Pulse mode — brief activation, e.g., for unlocking an electric lock
- Programmable activation delay — for gradual activation or temporary logic (availability depends on the output type)

Connecting an actuator

If using a constant +12 V output, connect as follows:

1. Connect the device's positive power wire (+) to the +CN_OUT terminal.
2. Connect the device's negative power wire (–) to the –CN_OUT terminal.

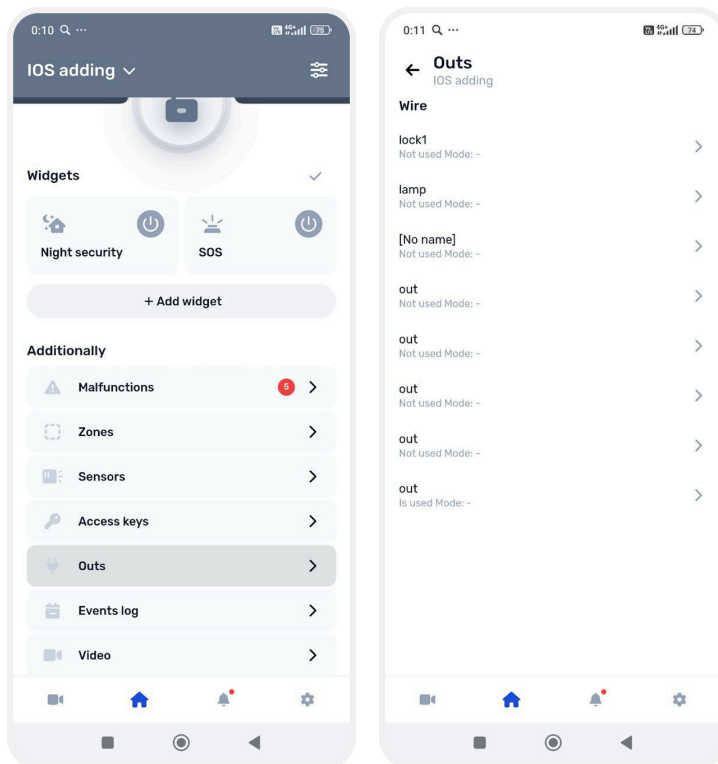


Connecting the actuator

- Up to 10 devices can be connected to one output, but ensure the total current of all connected devices does not exceed the permissible load.
- If a device consumes a lot of power (e.g., an electromagnetic lock), it's advisable to connect it through an additional relay or amplifier.

Configuring outputs in the application

1. Navigate to the **Outputs** tab on the main screen
2. Select the output number you wish to configure
3. Tap it to open its settings



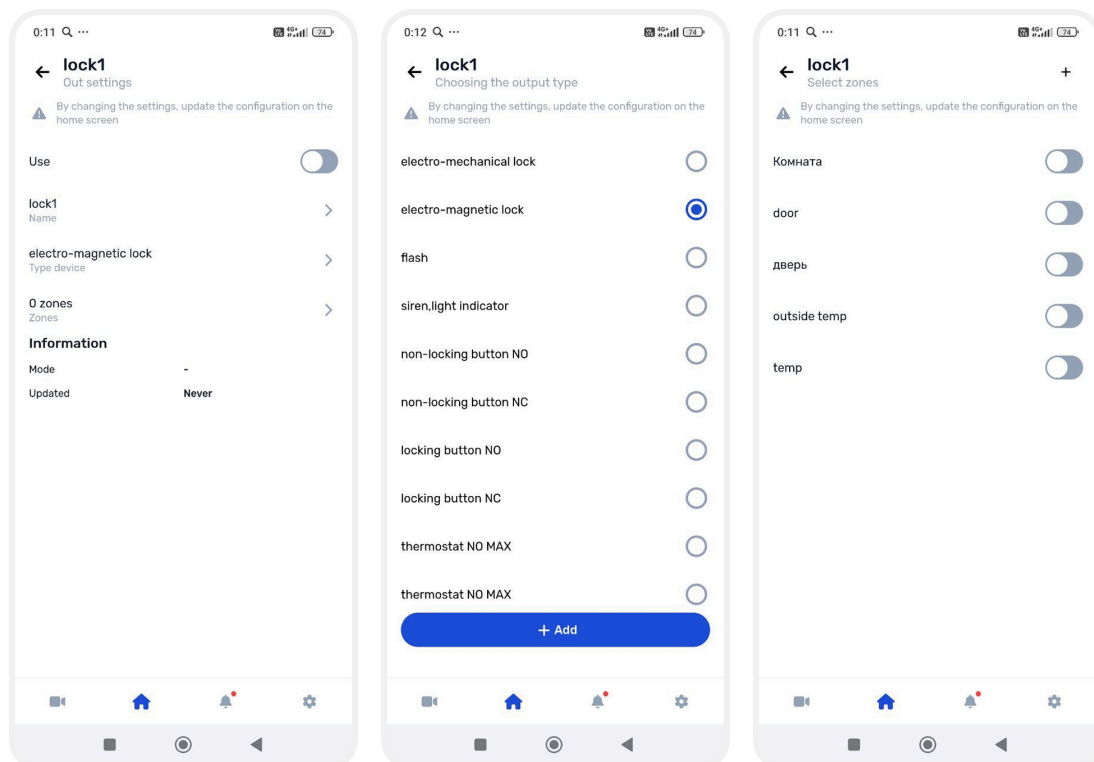
Selecting an output for configuration

4. To activate the output, switch **Use** to the active position

5. Configure the following:

- Output name
- Output type corresponding to the connected device
- Zone the output should be associated with

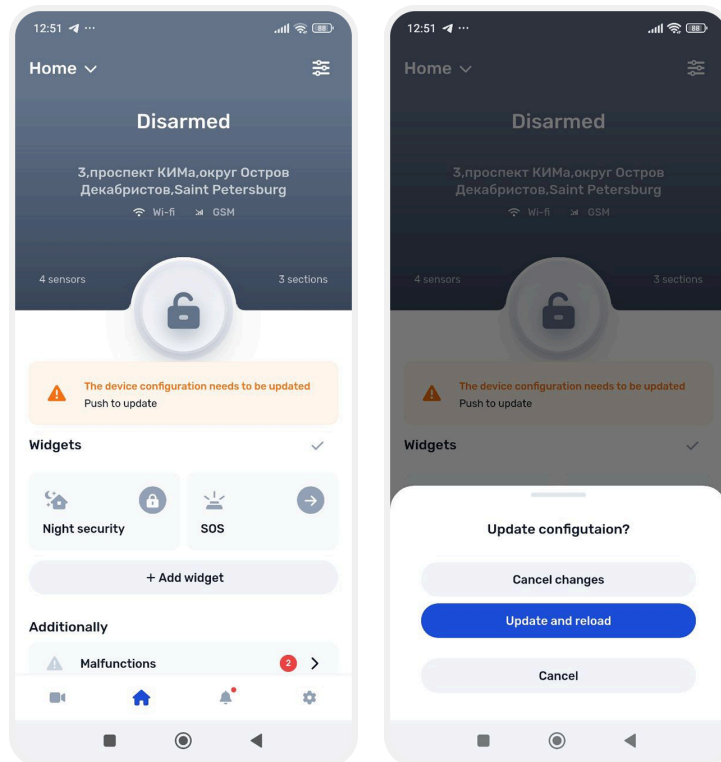
If no zone is selected, the output will not function.



Setting up the output

To finalize the output setup, update the device configuration:

1. Return to the main screen
2. A notification will appear at the top: **The device configuration needs to be updated** — tap it
3. Confirm the update by tapping **Update and reload**
4. Wait for the update to complete



Configuration update

How to configure wired temperature sensors

The GARM system supports the integration of digital wired temperature sensors via the 1-Wire interface. These sensors are ideal for monitoring temperature in various environments such as indoor spaces, outdoor areas, boiler rooms, warehouses, or refrigeration units.

This guide provides instructions on how to connect these sensors to the hub, configure their display, and set threshold values for system responses.

Before installation

You can connect up to 15 temperature sensors to a single GARM hub. However, for optimal performance, it's recommended to connect no more than 10 sensors to a single 1-Wire bus.

Installation Recommendations:

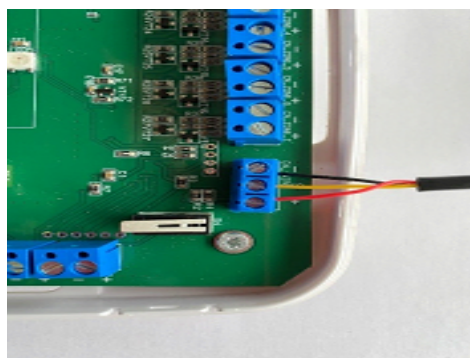
- Use cables with a cross-sectional area not exceeding 0.5 mm².
- Prefer shielded cables to minimize electromagnetic interference.
- Ensure the cable length does not exceed the manufacturer's specified limits, typically between 100–150 meters.
- Avoid routing cables near high-voltage (220 V) lines.
- Ensure reliable connections and protect contacts from moisture, especially in damp environments or outdoor installations.
- Each sensor must have a unique digital address for proper identification within the system.

To ensure accurate detection of all connected temperature sensors, verify that each sensor possesses a unique digital address.

Additionally, it's crucial to properly terminate the 1-Wire line in accordance with standard requirements. Proper termination ensures stable data transmission and prevents operational failures.

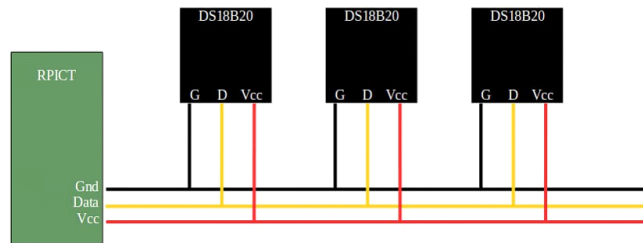
Connecting the sensor to the hub

1. Locate the 1-Wire terminal on the hub controller
2. Connect the sensor to the terminal following the appropriate wiring diagram



Connecting the temperature sensor

For multiple sensors, employ a parallel connection scheme to allow the system to recognize each sensor individually.



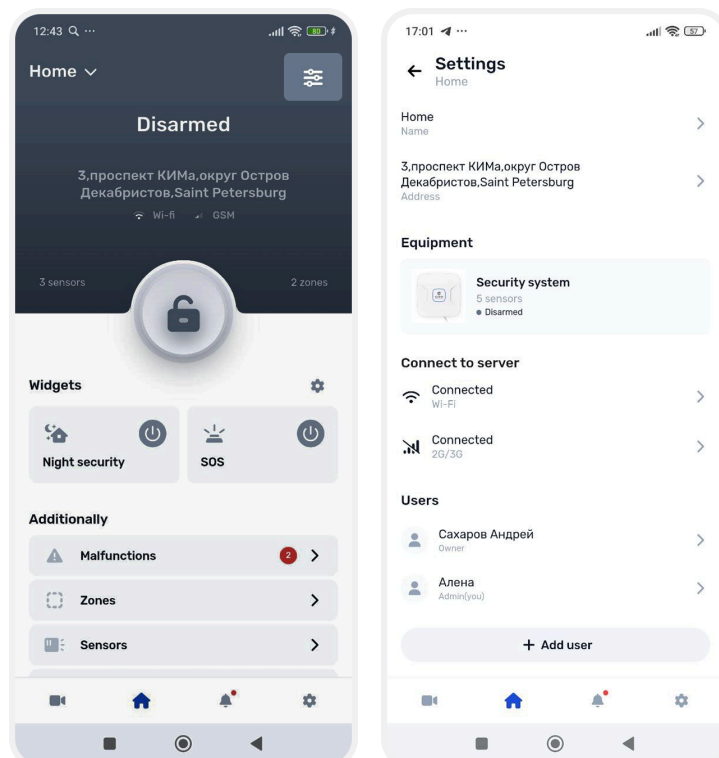
Connecting multiple sensors

Ensure correct polarity during connection and do not exceed the recommended number of sensors on a single 1-Wire line.

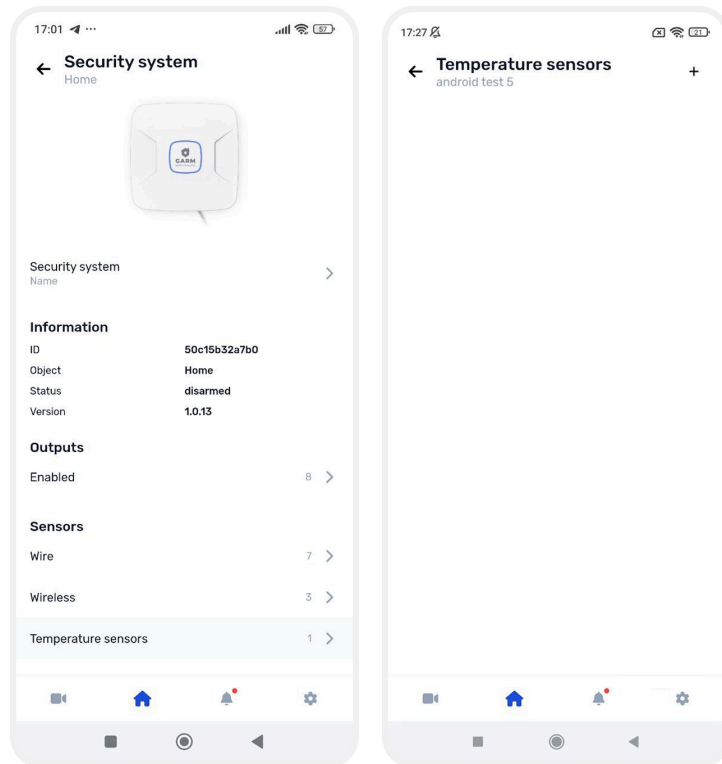
Adding the sensor in the application

After physically connecting the sensor to the hub, proceed with the following steps in the GARM application:

1. Open the GARM application
2. Navigate to the main screen
3. Go to **Object settings** → **Equipment**

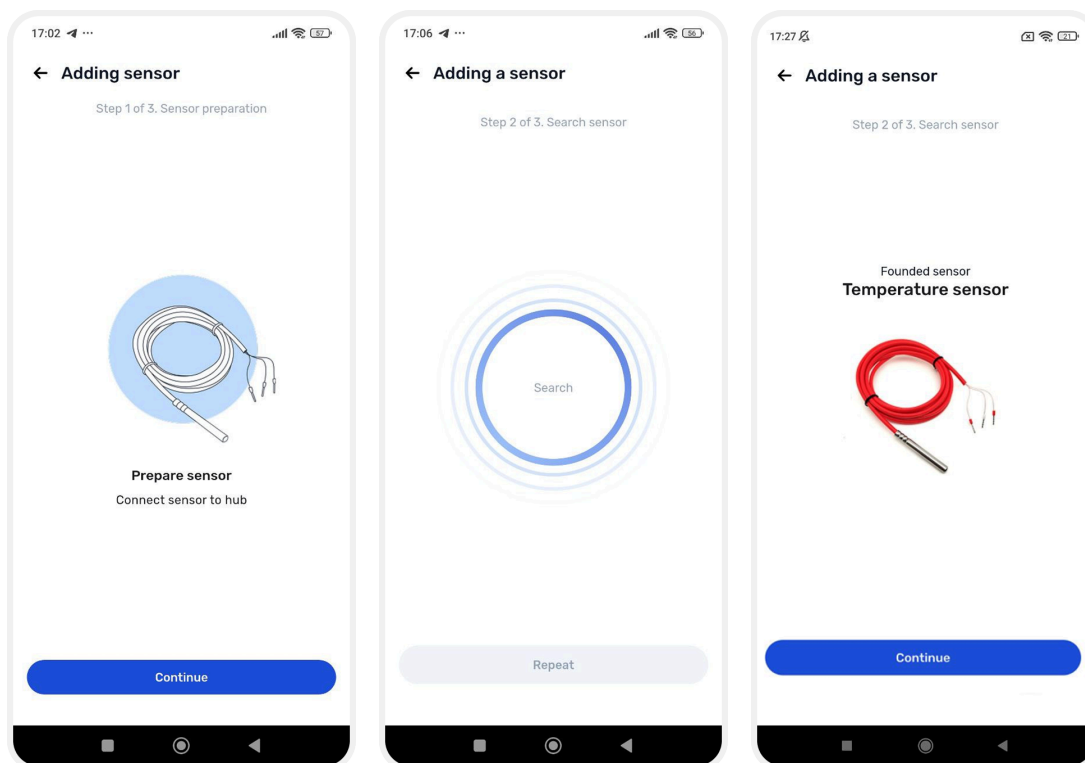


4. In **Equipment**, select the hub to access its settings
5. Under the hub's sensors, choose **Temperature sensors**
6. Tap the **+** icon in the upper corner of the screen to add a new sensor



Adding a sensor

7. The application will initiate a search for connected sensors.
If the sensor is properly connected, it will be detected automatically.

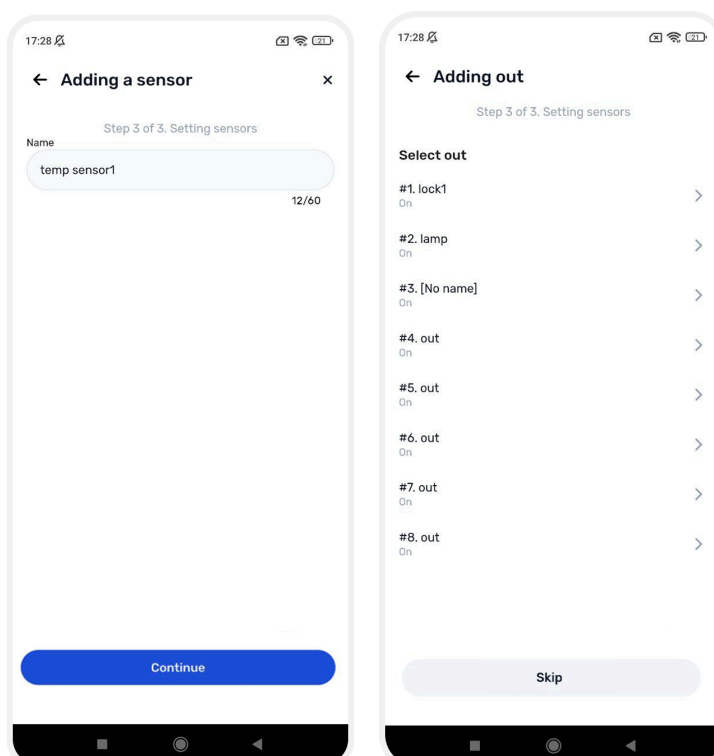


Adding a sensor in the application

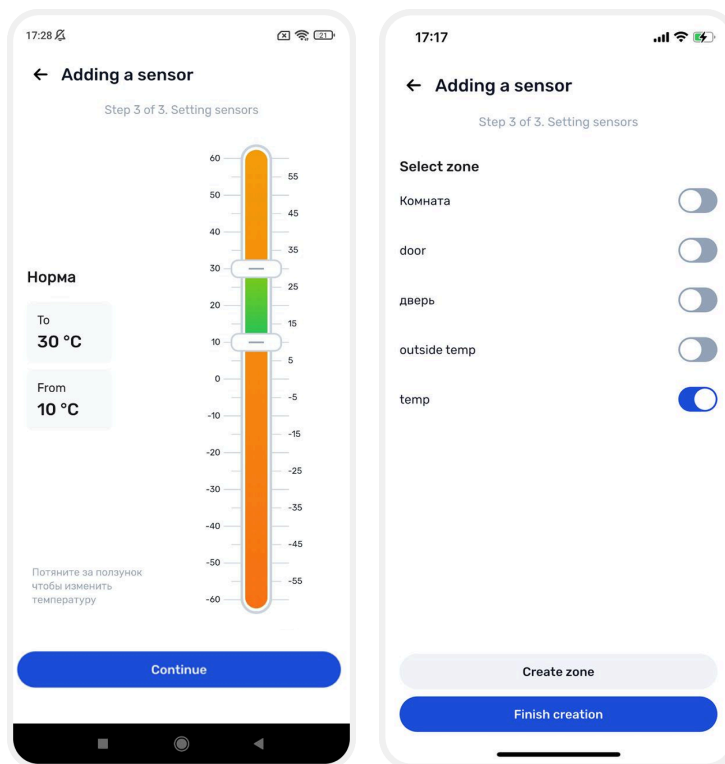
Configuring the sensor

Once the sensor is detected:

1. Assign a name to the sensor
2. If necessary, associate the sensor with a specific output. Refer to the article on outputs for detailed instructions



3. Set threshold values — these are temperature limits that trigger system actions, such as activating or deactivating a relay
4. Optionally, link the sensor to a specific zone. For guidance on managing zones, consult the article [How to create and manage zones](#)



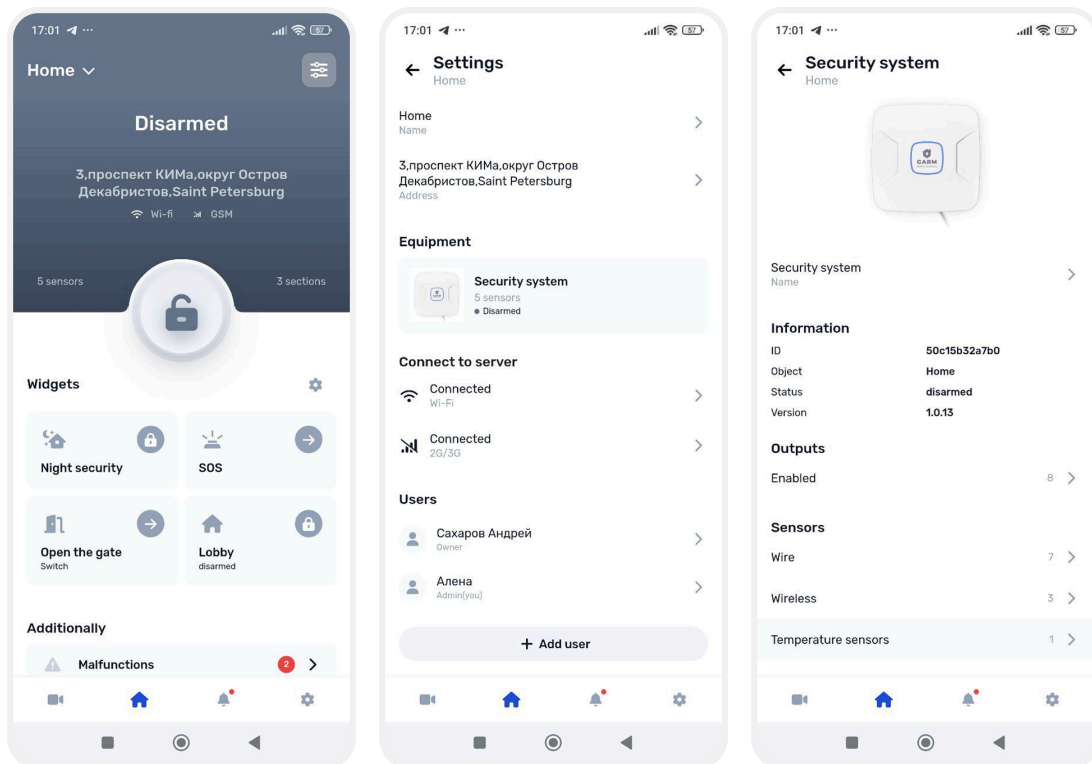
Configuring the sensor

Displaying temperature on the object screen

To have the temperature readings appear on the object's page:

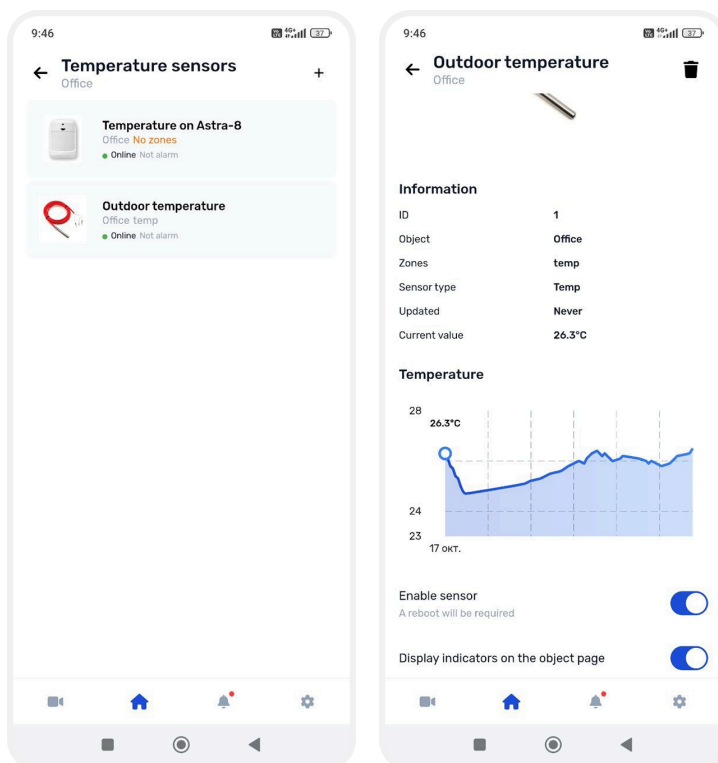
1. Ensure the sensor is enabled

To enable the sensor, navigate to **Object settings** → **Equipment** → **Hub settings** → **Temperature sensors**, and toggle the **Enable sensor** option for the desired sensor.



2. Activate the **Display indicators on the object page** option

3. After making these changes, update the device configuration to apply the settings



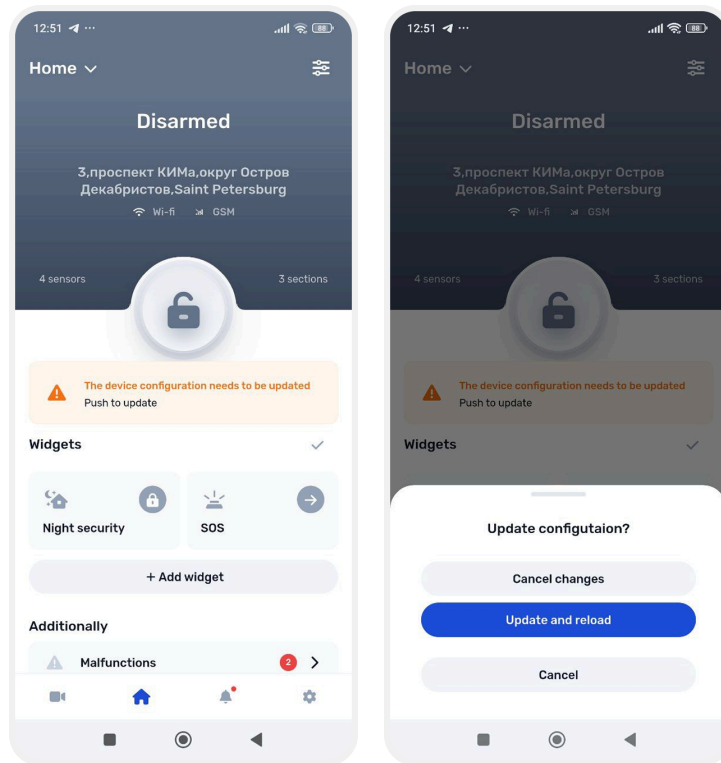
Setting up temperature display on the object page

Updating the configuration

To apply any changes made to the equipment settings:

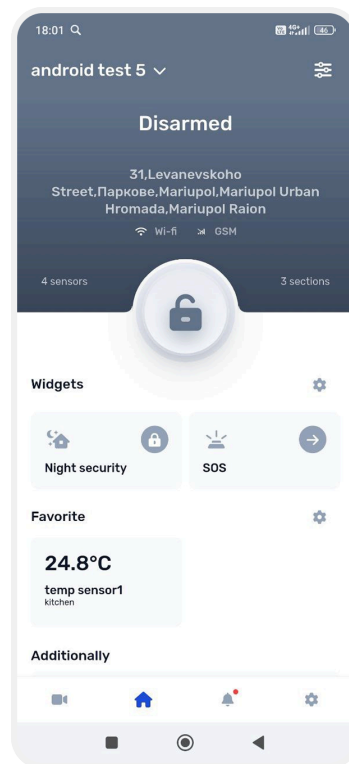
1. Return to the main screen of the object

2. A notification stating **The device configuration needs to be updated** will appear at the top — tap on it
3. Confirm the update by selecting **Update and reload**
4. Wait for the update process to complete



Configuration update

Following the update, the sensor's data will be displayed in the **Favorites** section on the object's main page.



Sensor readings on the object screen

How to create and manage zones

Zones are logical groups of devices combined for convenient control, monitoring, and automated response to events.

Instead of checking and configuring each device separately, you can manage the entire zone as a single unit.

A zone can include sensors, outputs, actuators, and cameras — for example, you can create zones such as Home, Garage, Living Room, or Yard.

This makes it easier to monitor the system status, arm or disarm security, manage devices, and receive event notifications for specific areas.

In this article, you will learn how to create and configure zones and add devices to them.

How a zone works

All devices within a zone operate together — the system monitors their state and reacts if something happens. For example, when one of the sensors is triggered, the system determines the type of event (alarm, fire, fault, etc.) and performs the appropriate action: activates a siren, sends a notification, or turns on another device.

Key features of zones

- Grouping devices by purpose (for example, Perimeter, Indoor areas, Fire detectors)
- Flexible alarm response configuration:
 - entry and exit delay
 - disabling selected sensors
 - different levels of notifications
- Arming and disarming an entire zone with one command

You can create up to 10 zones in the system.

Tips for creating zones

For optimal operation, organize your sensors by zone and function:

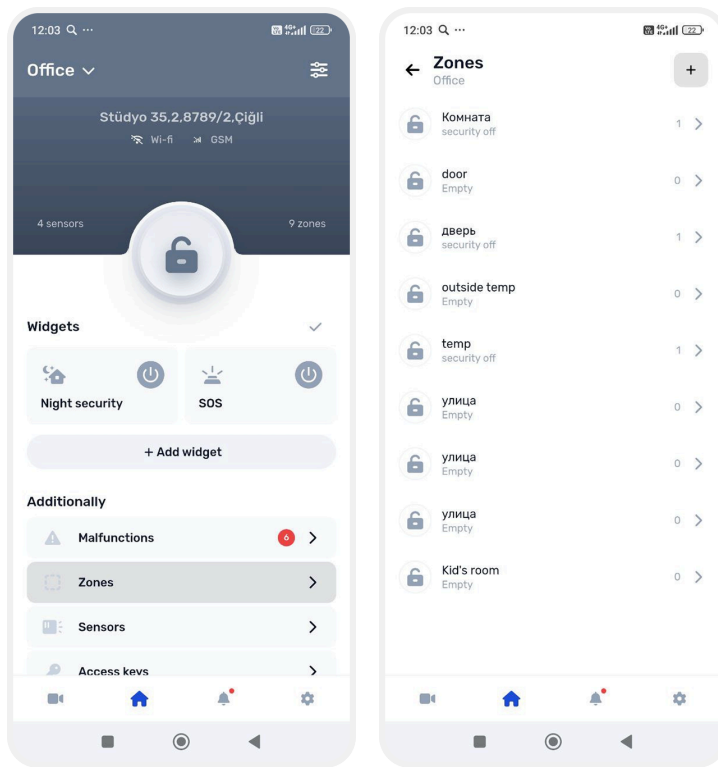
- Zone 1 – Window and door sensors (perimeter security)
- Zone 2 – Indoor motion sensors
- Zone 3 – Fire detectors

This structure makes it easier to manage security and adjust reactions for real scenarios.

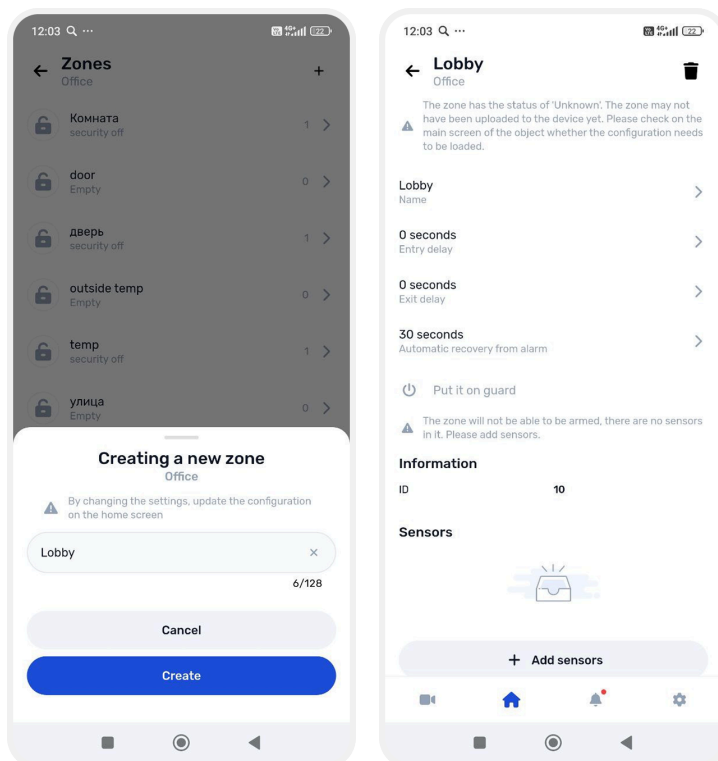
How to create a zone

To create a new zone:

1. Open the **Zones** tab on the main screen
2. Tap the add icon in the top-right corner



3. Enter the zone name
4. Tap **Create** — the new zone will appear in the list

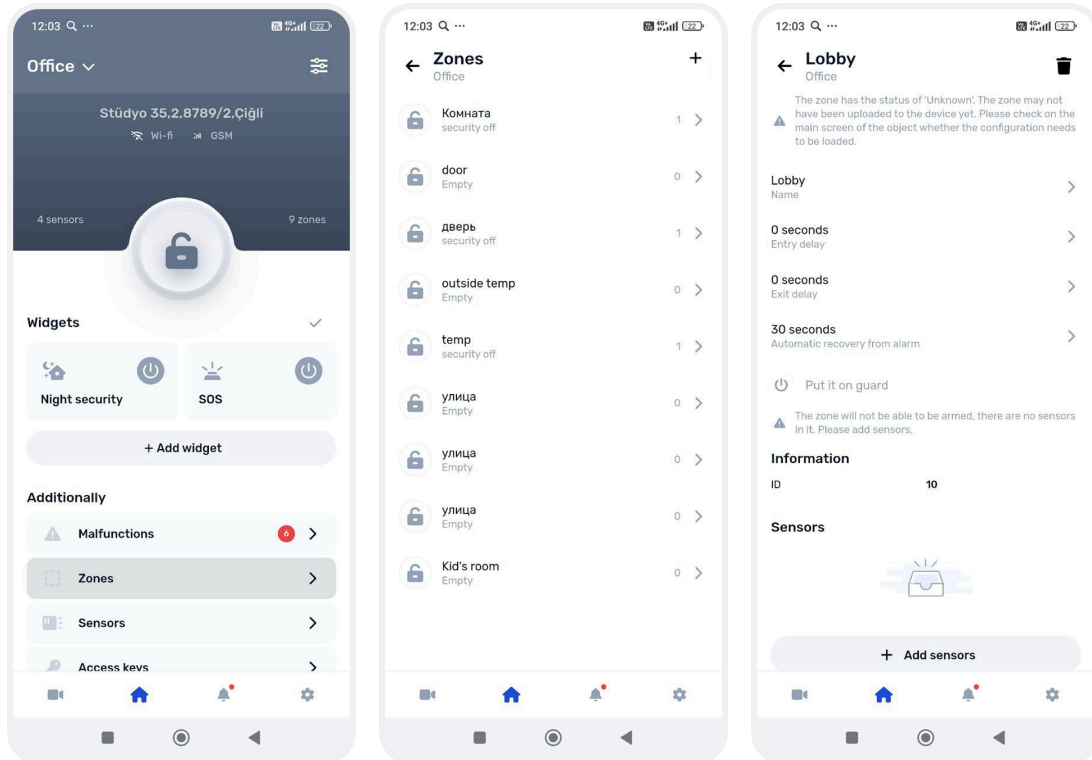


Creating a zone

How to configure a zone

After creating a zone, open its settings:

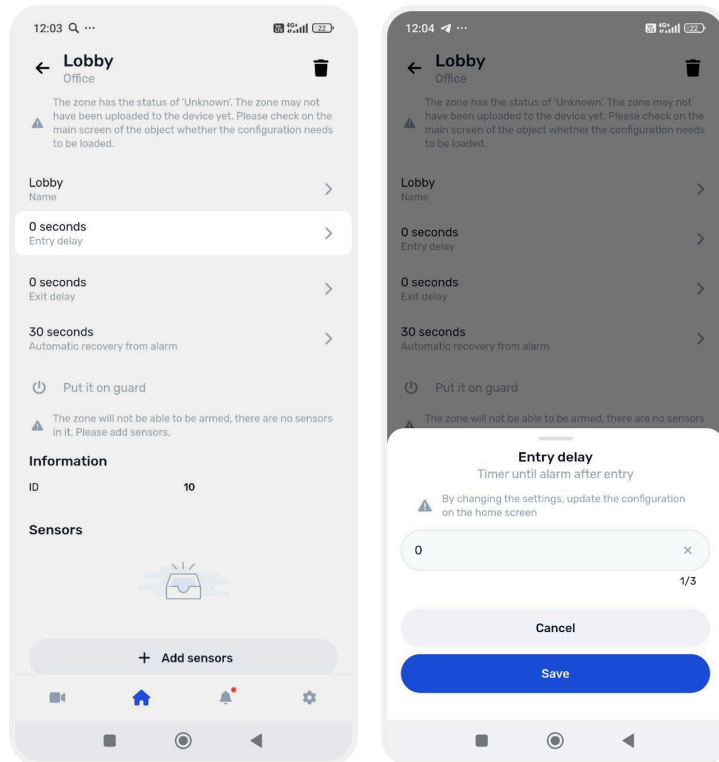
1. Go to the **Zones** tab and select the desired zone



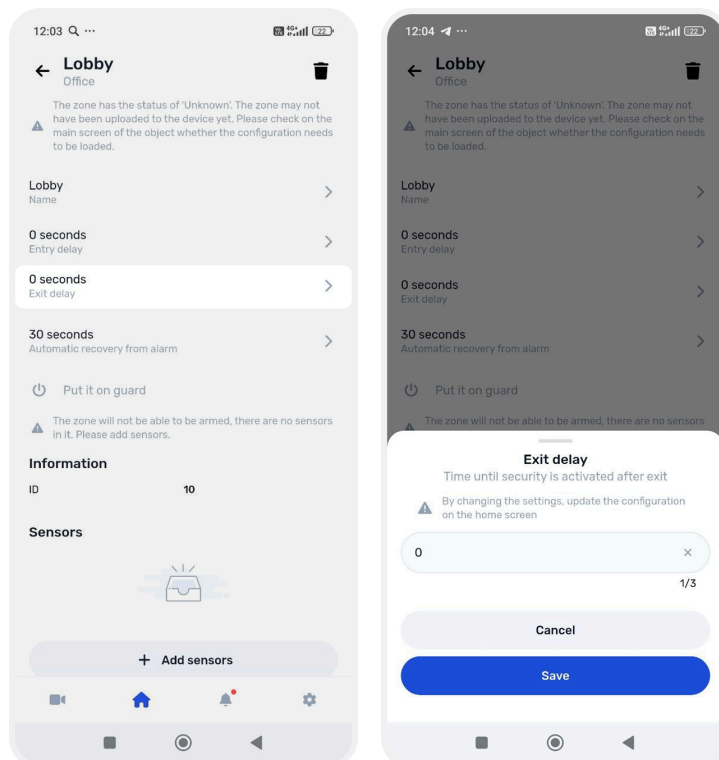
Zone settings

2. In the settings, you can:

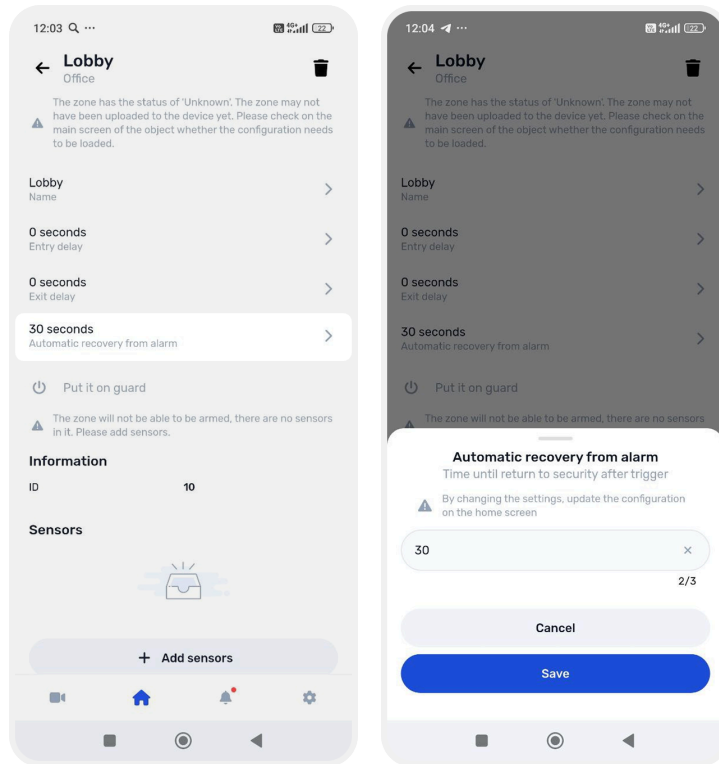
- change the zone name
- set an entry delay — time before the alarm triggers after entering



— set an exit delay — time before arming starts after leaving



— enable auto-restore — return the zone to armed mode after an alarm

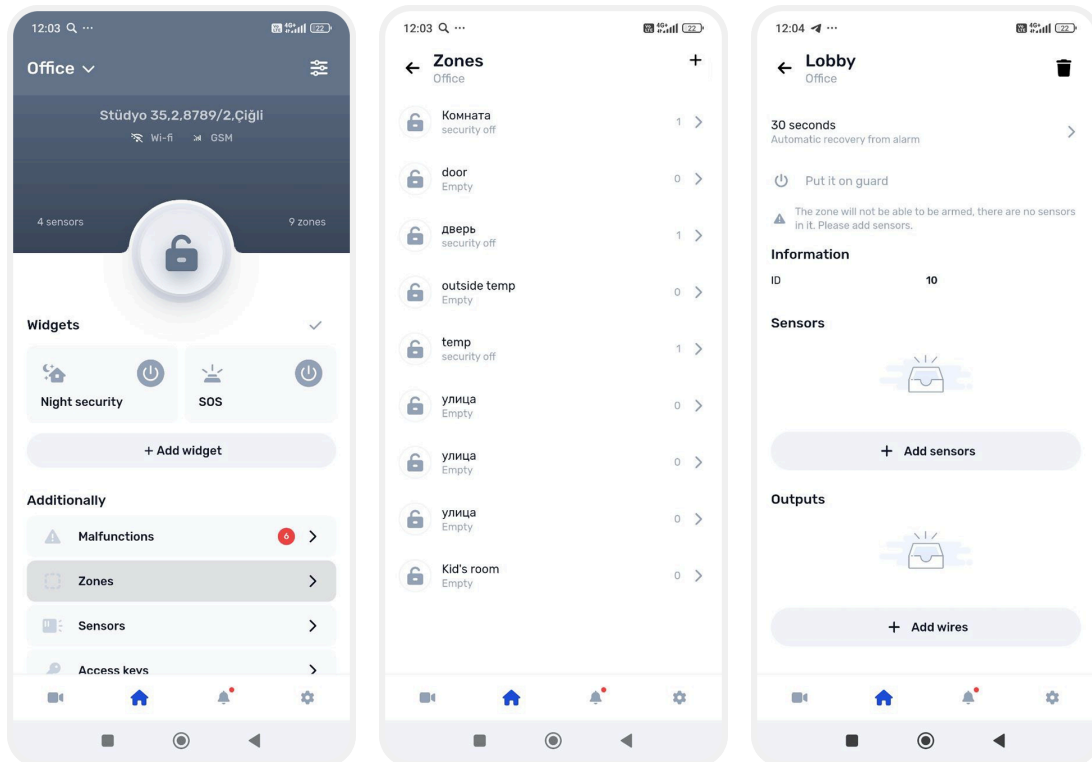


3. Tap **Save**, then [update the device configuration](#) on the main screen

How to add devices to a zone

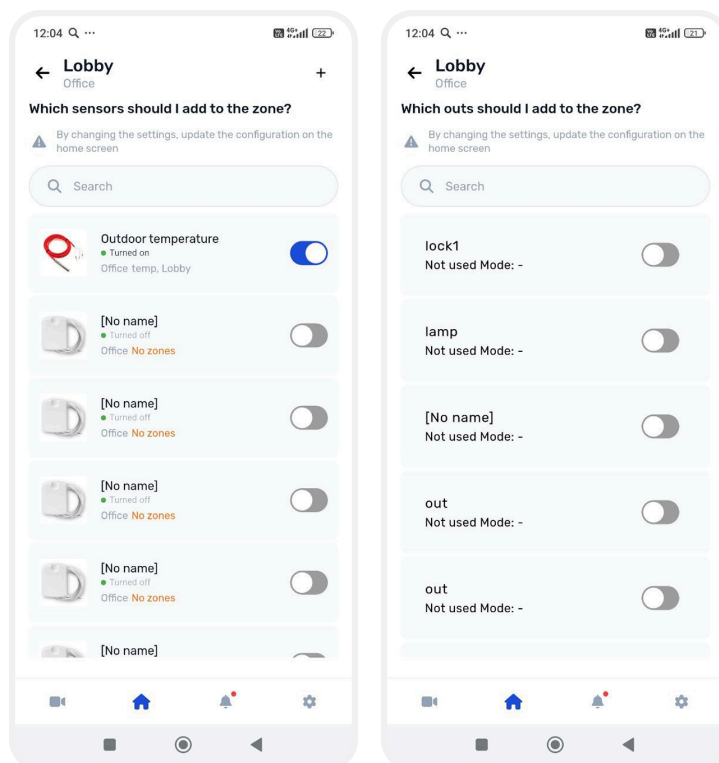
To make a zone fully functional, add sensors and outputs:

1. Open the **Zones** tab
2. Select the desired zone
3. Tap **Add sensors** or **Add outputs**



4. In the list, enable the required devices by switching their toggles to the active position

5. After adding devices, [update the configuration](#) on the main screen

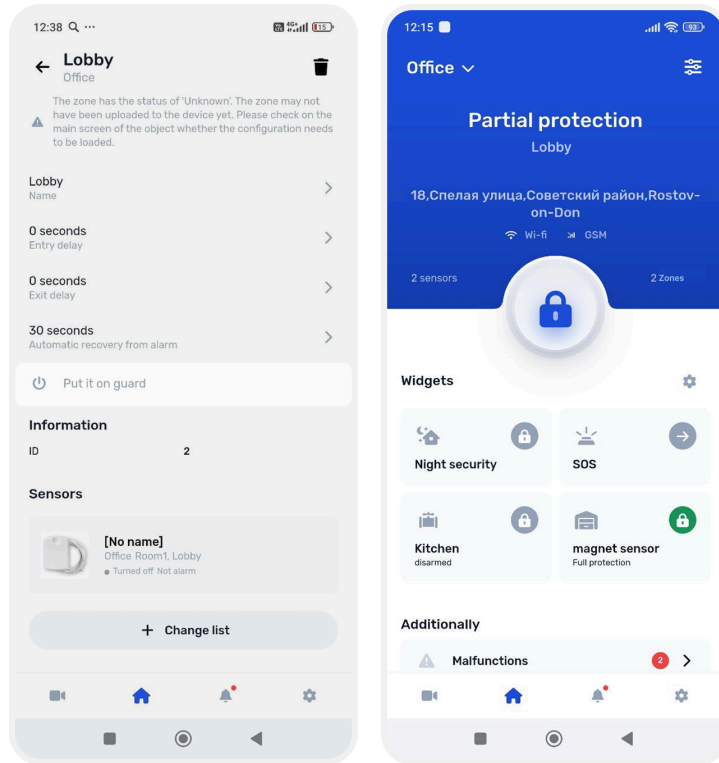


Adding sensors and outputs to a zone

How to arm a zone

1. Open the **Zones** tab

2. Select the desired zone
3. Tap **Put it an guard** — the zone will switch to security mode



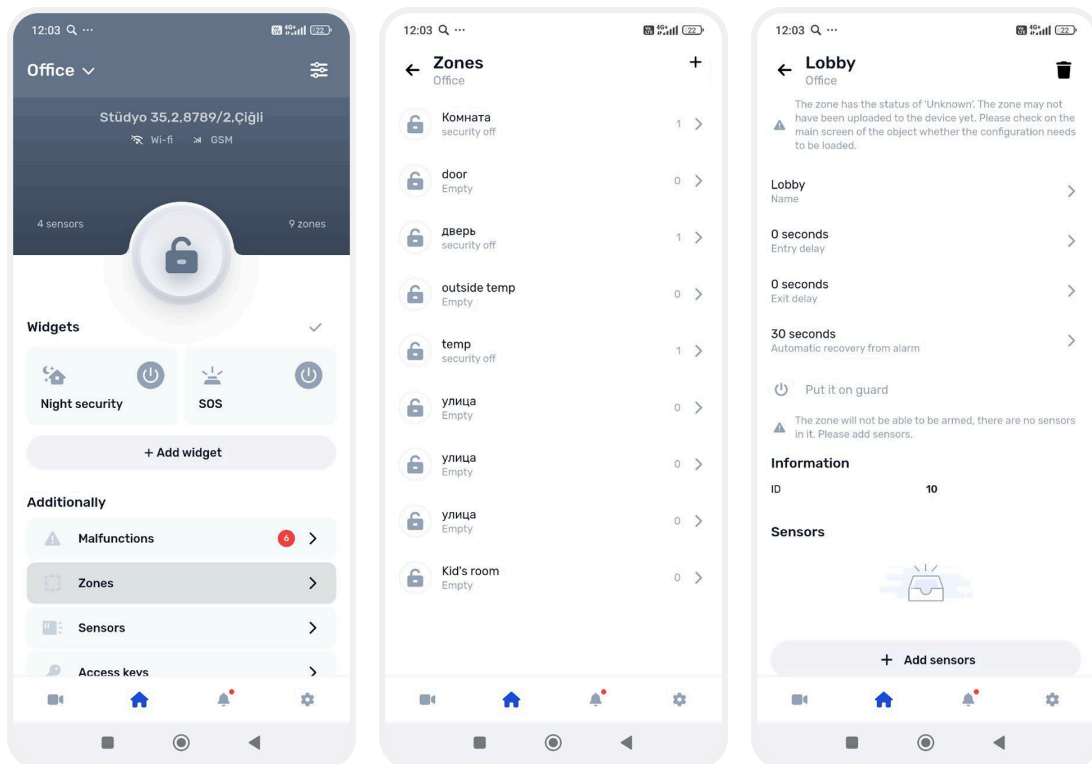
Setting the zone to security

How to delete a zone

You can delete a zone in two ways:

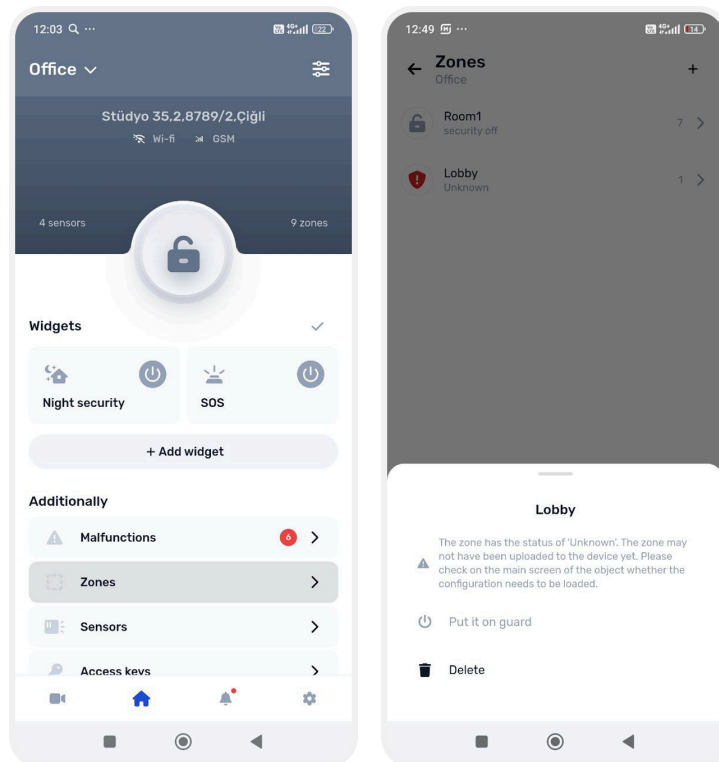
Method 1:

1. Go to the Zones tab
2. Select the desired zone
3. Tap the menu icon in the top-right corner and confirm deletion



Method 2:

1. In the zones list, press and hold the needed zone
2. A context menu will appear — select **Delete**

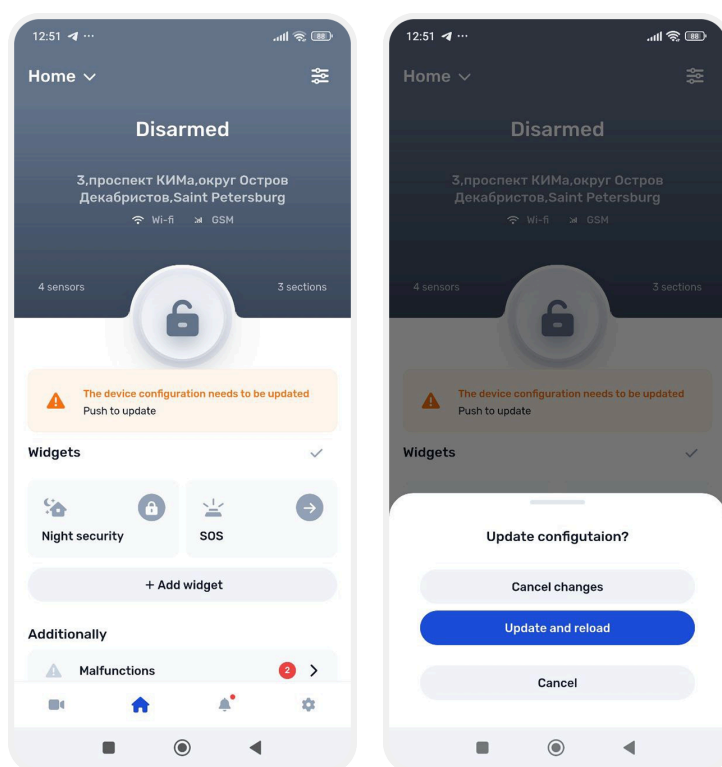


Deleting a zone

Updating the configuration

To apply any changes made to the equipment settings:

1. Return to the main screen of the object
2. A notification stating **The device configuration needs to be updated** will appear at the top — tap on it
3. Confirm the update by selecting **Update and reload**
4. Wait for the update process to complete



Configuration update

How to manage security modes

In this guide, you'll learn how to arm or disarm your object fully or partially, how to use night mode, and how to quickly request help using the SOS panic button.

Security modes in the system

The system offers several modes to adapt to different situations:

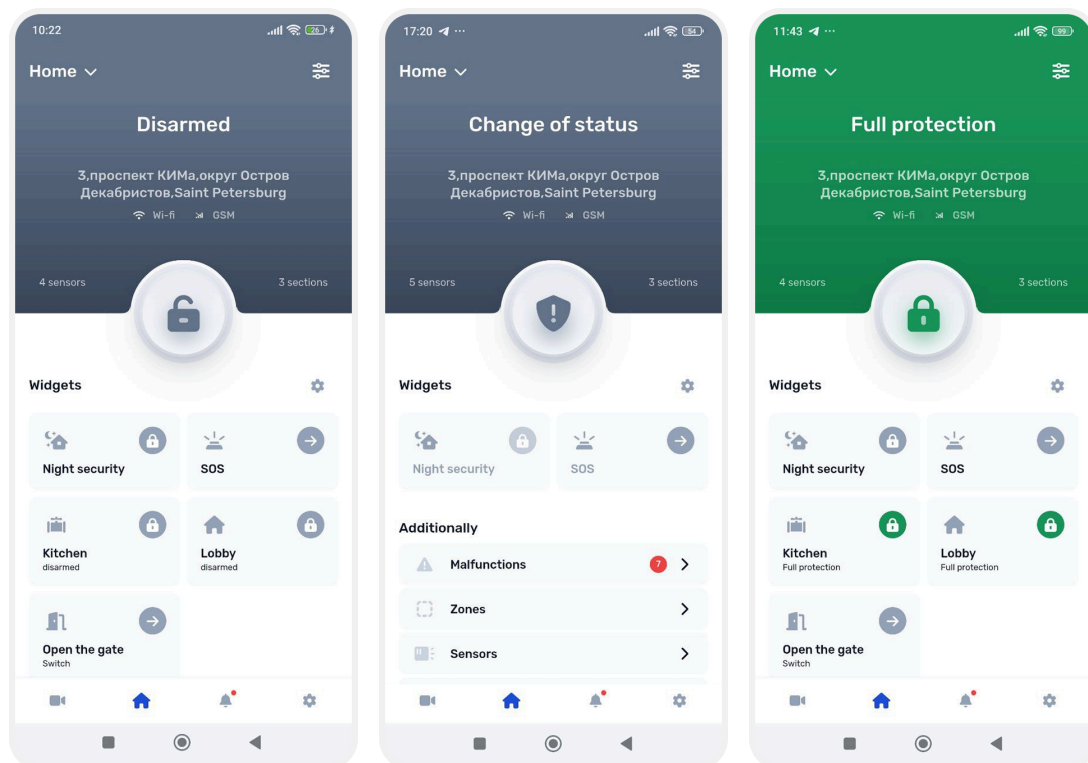
- Full protection – all sections are armed
- Night protection – selected sections or full arming, depending on configuration
- Partial protection – only selected sections are armed
- SOS – an emergency panic alarm

How to arm or disarm an object

To arm or disarm your object:

1. On the object's main screen, tap the lock icon
2. Your phone will show the **Changing status** message — this means the command is being sent
3. Once the server processes the command, the hub status will update to **Armed** or **Disarmed**

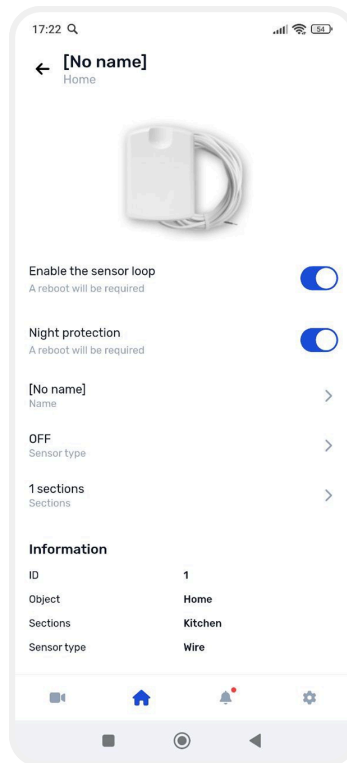
Arming or disarming may take a few seconds (typically 2–10 seconds), since commands are processed through the server.



Arming or disarming an object

How to enable night mode

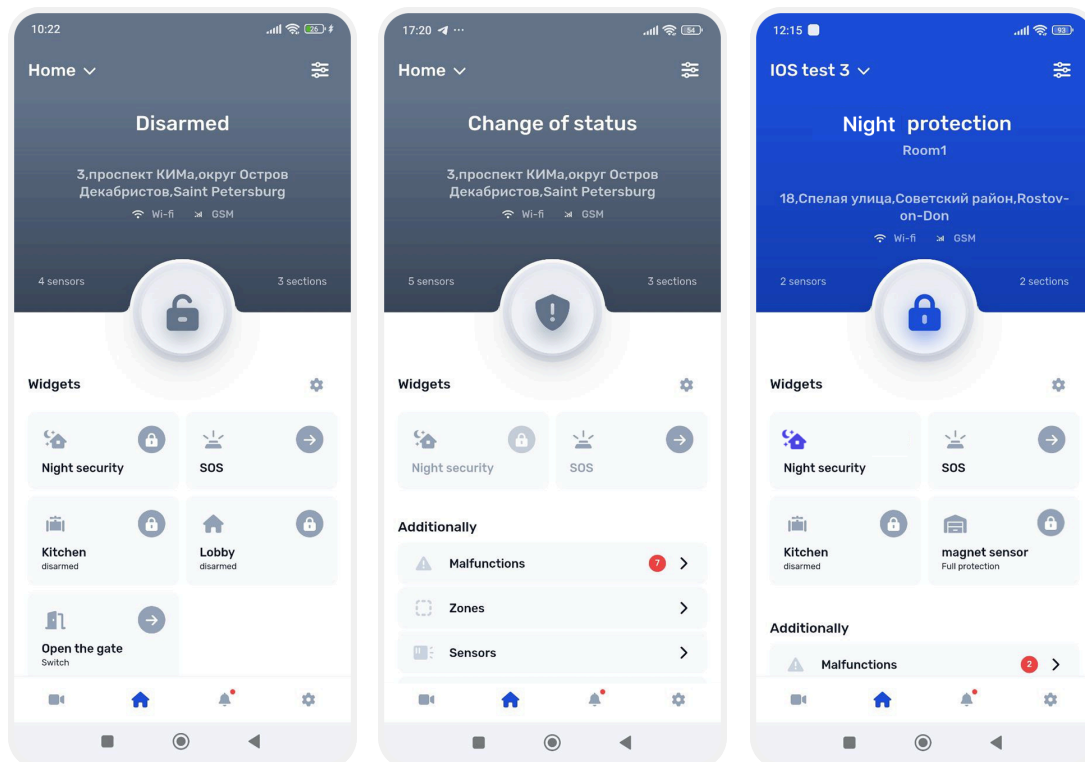
Night mode arms only those sensors that have **Night mode** enabled in their individual settings. You'll see this setting in the sensor's configuration screen under the toggle for **Night mode**.



The Night mode function is enabled on the sensor page

To activate or deactivate night mode:

1. Go to the main screen
2. Find the **Night security** widget
3. Tap the widget:
 - To enable — the button turns blue and the object status changes to **Night protection**
 - To disable — tap again, the button turns white and the status reverts



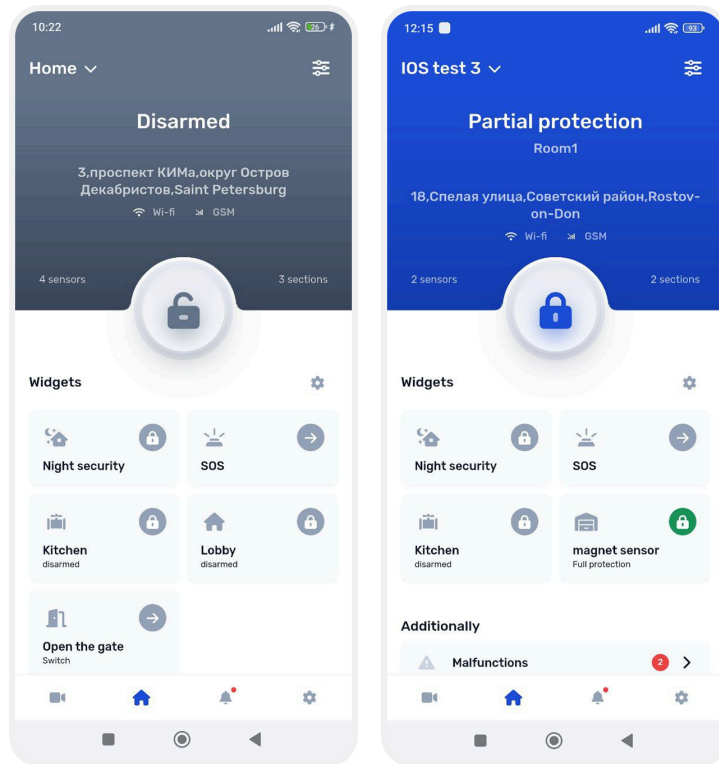
Setting up night mode

How to enable partial arming for selected sections

To arm or disarm individual sections:

1. On the object's main screen, tap the widget that contains the relevant section(s)
2. Once tapped, the object status will change to Partial arming, and the widget will turn blue

To learn how to create a widget for a specific section, see [here](#).



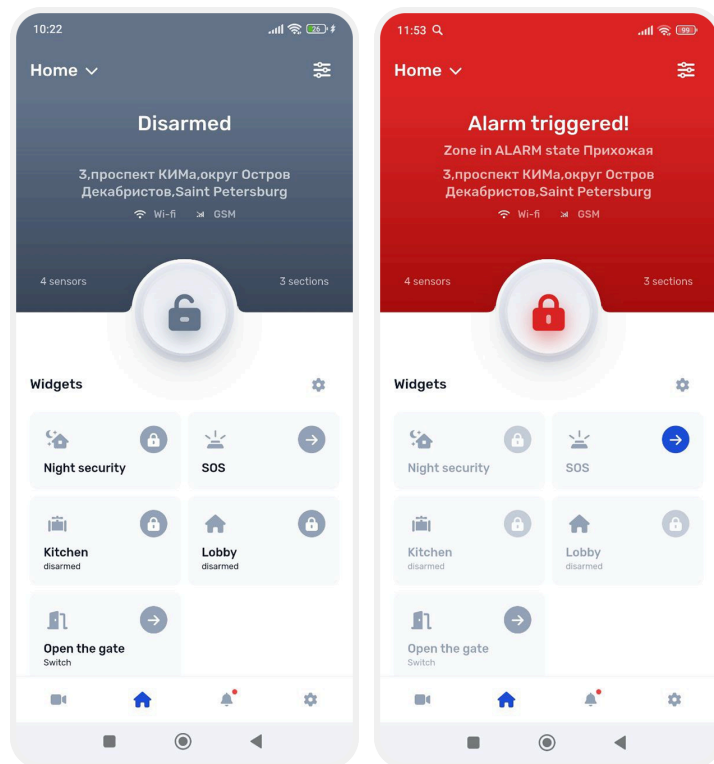
Setting the section to security

How to activate the SOS panic button

Use the SOS button in the mobile app for quick emergency assistance.

To trigger an SOS alarm:

1. On the object's main screen, find the **SOS** widget
2. Tap the widget
3. After the command is sent, the hub immediately enters alarm mode, and the system reacts instantly



Enabling the SOS button

How to manage security using Touch Memory keys

In addition to mobile app control, the system supports local management using Touch Memory (TM) keys — a convenient option when:

- The internet connection is temporarily unavailable
- Your phone is out of battery
- You want to grant access to others without using the app

With TM keys, you can:

- Arm and disarm the object
- Control outputs on the controller (e.g., open a lock or turn on lights)

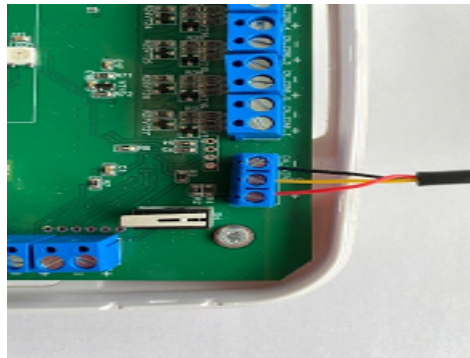
You can register up to 25 keys and assign individual functions to each.

How to connect a Touch Memory reader

Before adding a key, make sure the TM reader is properly connected to the controller.

To connect the reader:

1. Locate the 1-Wire terminal on the hub's controller
2. Connect the TM reader to the 1-Wire terminal (this same terminal is used for [temperature sensors](#))

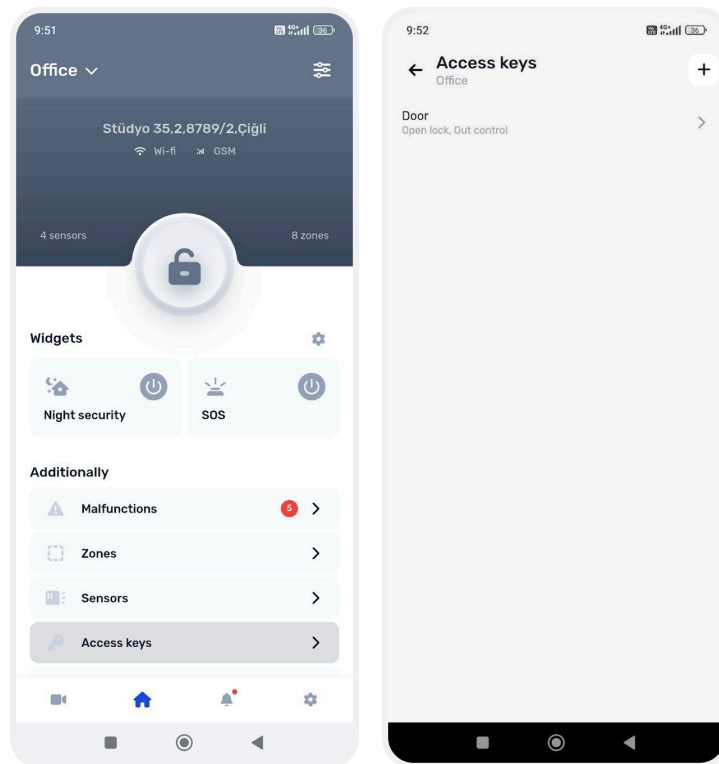


Connecting the Touch Memory reader to the controller

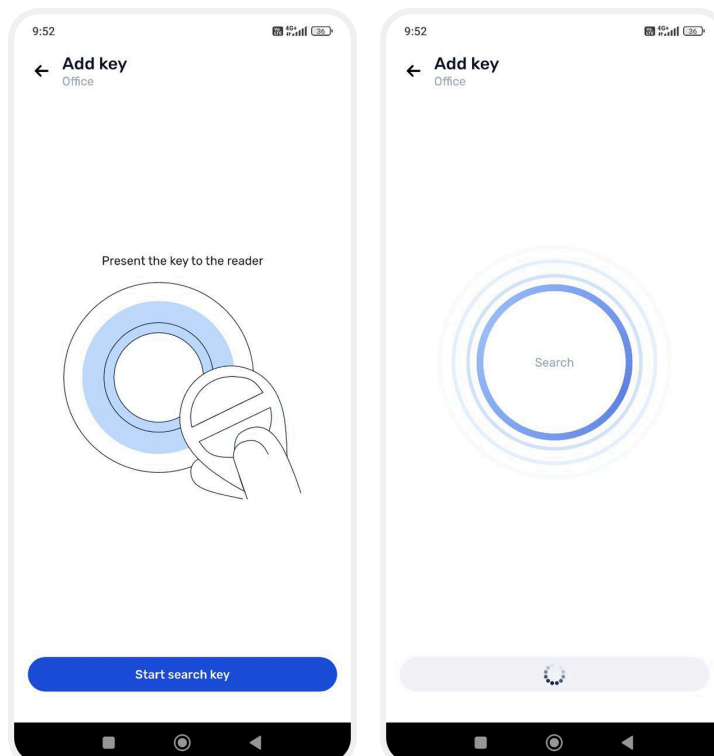
How to add a key

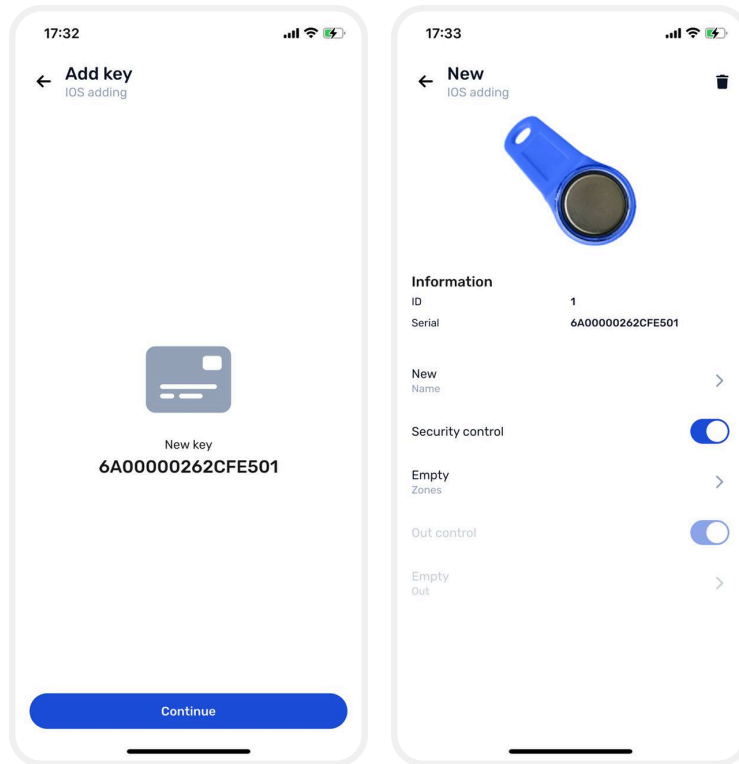
To register a new Touch Memory key:

1. Open the mobile app and go to **Object settings** → **Access keys**
2. Tap the plus icon **+** in the top right corner



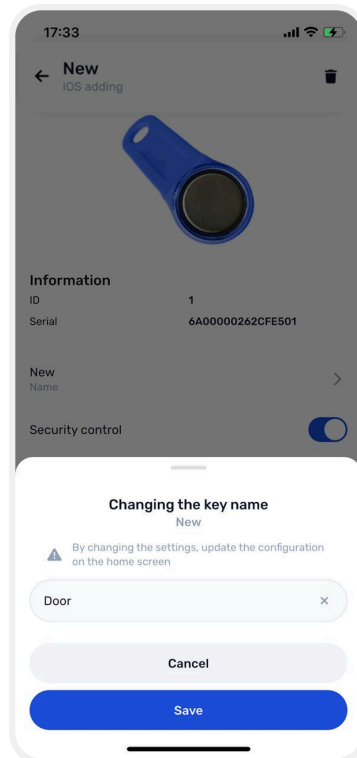
3. Follow the on-screen instructions — hold the key to the reader and start the search



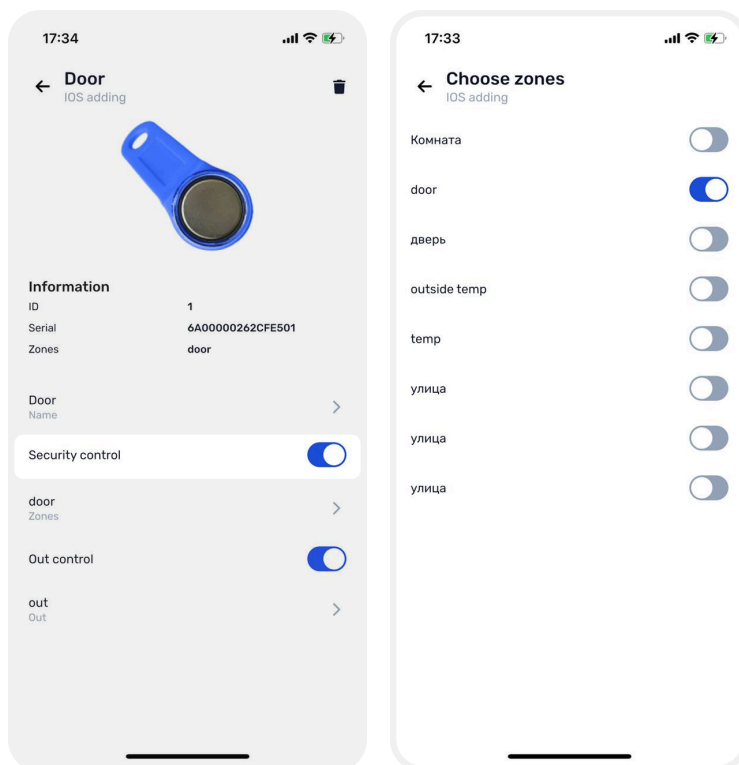


Adding a key in the application

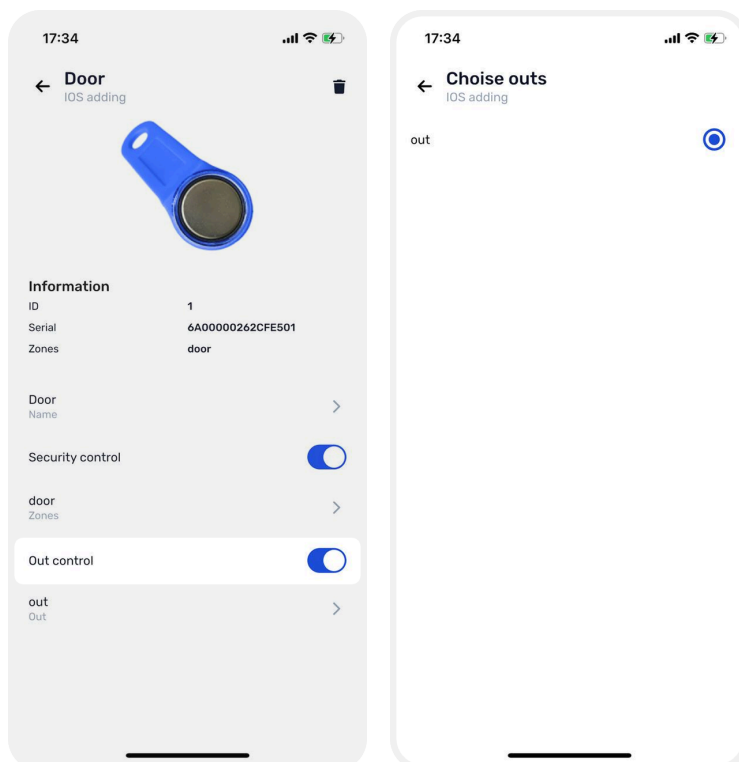
Once the key has been read, you can change its name and assign it a control function:



- Security control — choose the zone this key will arm/disarm



- Output control — choose which output (e.g., a lock or lighting circuit) the key will manage



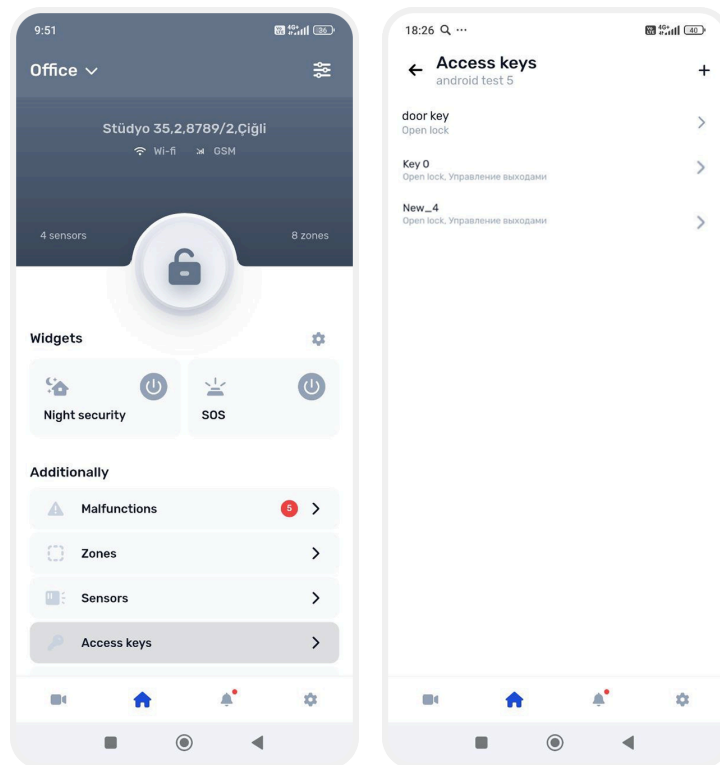
A single key can control both a section and an output, depending on how you configure it.

If you scan a key that has already been registered, the system will display a **Duplicate key found** message.

In that case, tap **Search again** and present a different, unregistered key.

How to view all registered keys

To see a list of all registered TM keys go to **Access keys** on the object's main screen.

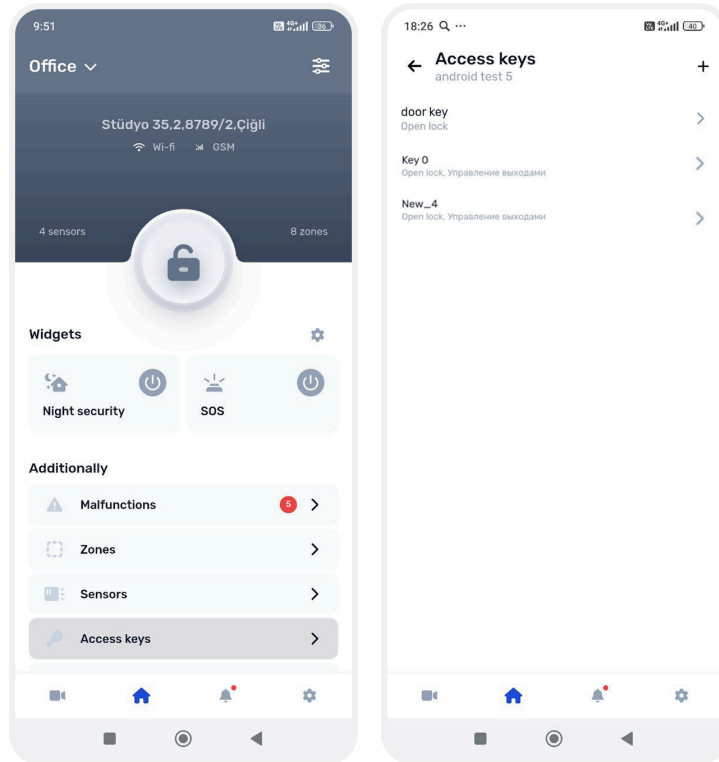


List of keys

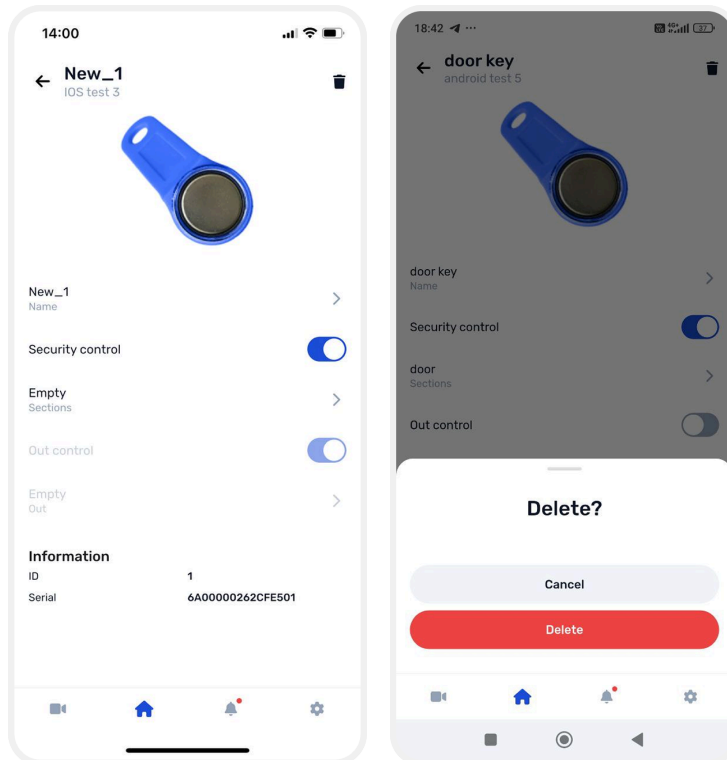
How to delete a key

To remove a key you no longer need:

1. Go to Access keys from the object's main screen
2. Select the key you want to delete



3. Tap the delete icon  in the top right corner and confirm the deletion



Deleting a key

How to invite users and set access rights

To keep your object secure and well-managed, you can invite others — family members, coworkers, or staff — to help manage it. Each user can be assigned a specific role with a defined level of access: some may only arm or disarm security, while others can fully manage settings.

In this article, you'll learn how to:

- [What types of users exist](#)
- [How to invite new people to manage an object](#)
- [How to check the invitation status](#)
- [How to see who already has access](#)
- [How to change permissions](#)
- [How to delete a user](#)

User roles

There are three roles available in the system, each with its own level of access:

Object owner

The person who created the object and added the hub. The owner has full control, including:

- Managing security and viewing the event log
- Editing and deleting the object
- Changing all settings
- Updating the hub firmware
- Adding, removing, and configuring all devices
- Inviting and removing users, and assigning admin rights

Object admin

Appointed by the owner. Admins have nearly the same permissions as the owner, except:

- Cannot delete the object
- Cannot remove the owner
- Cannot assign admin roles to others

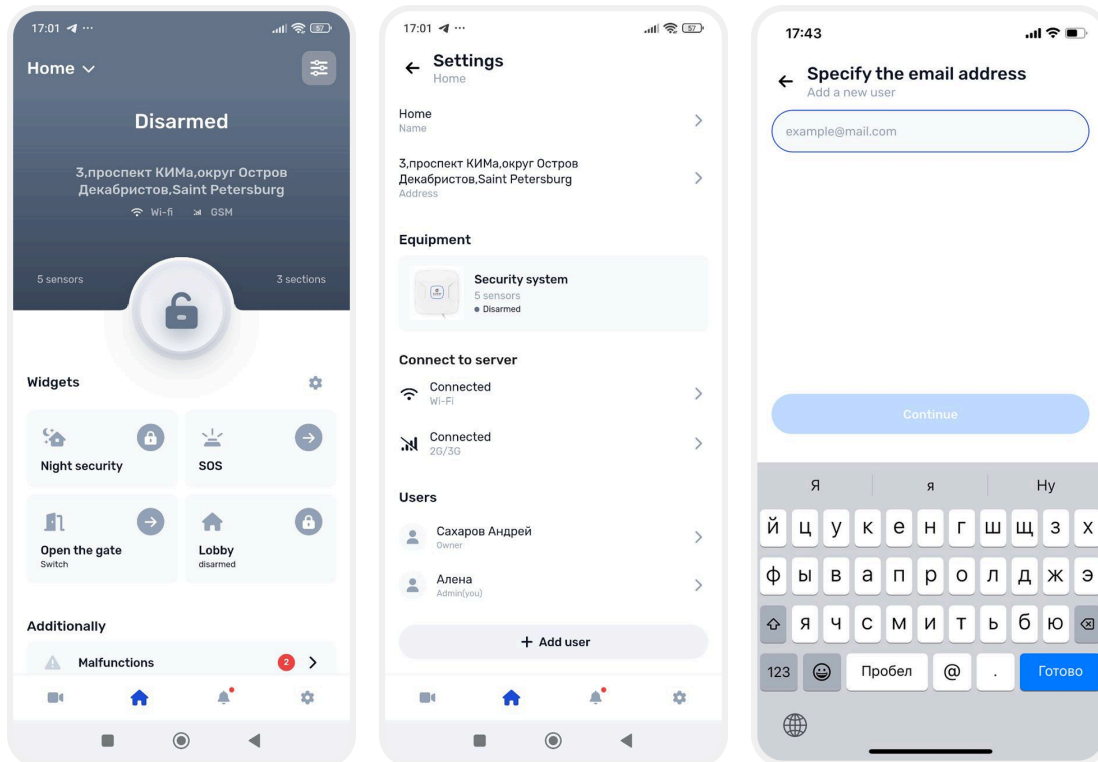
Guest

Invited users with limited permissions. For example, a guest can arm or disarm security, view events, and control specific sections or outputs. Owners or admins can fine-tune which functions are available to each guest.

How to invite a user

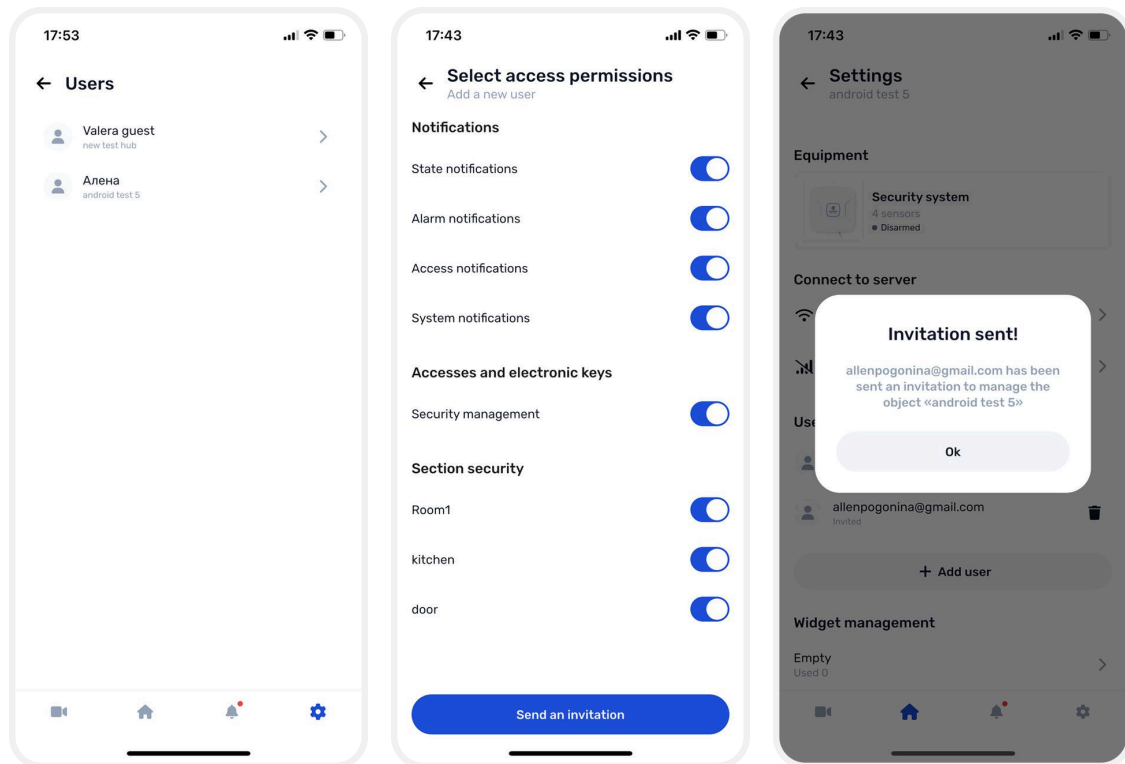
To give someone access to your object:

1. Go to **Object settings** → **Users**
2. Tap **Add user**
3. Enter the person's email address



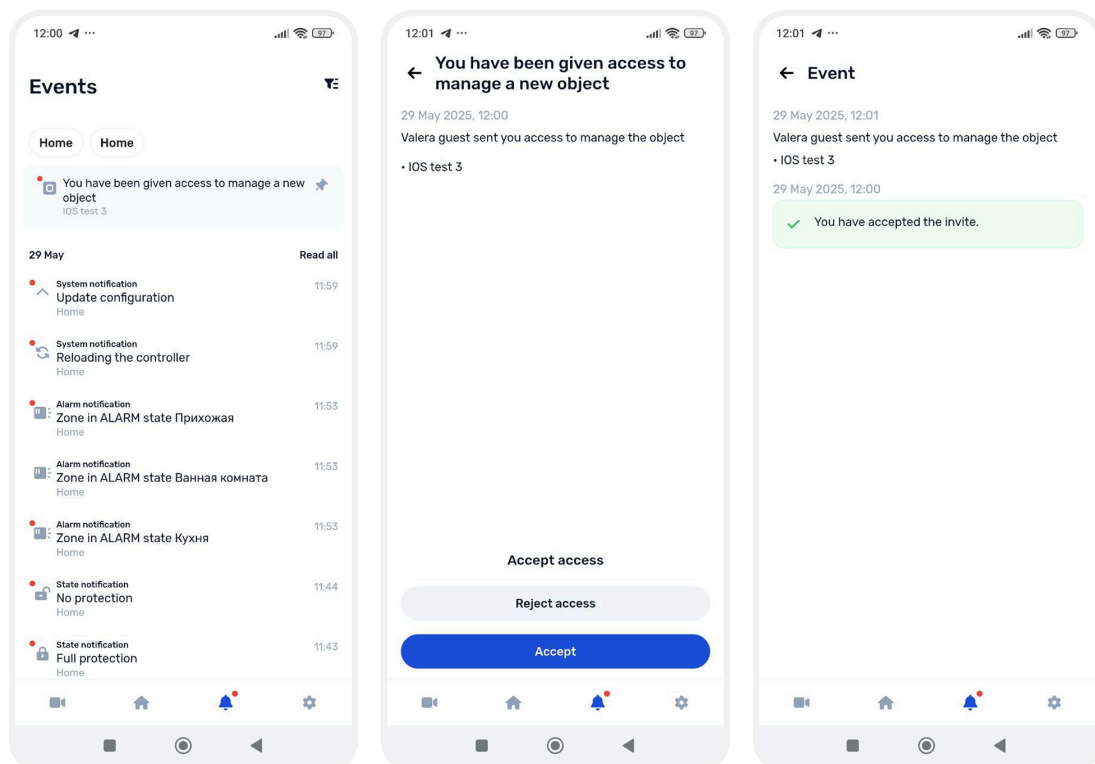
4. Choose a role — Admin or Guest
5. Select which permissions the user should have
6. Tap **Send invitation**

The invited user will receive an email with instructions. If they already have the app installed, they'll see an in-app notification.



Inviting a user

The invited user will receive an email with instructions. If they already have the app installed, they'll see an in-app notification.



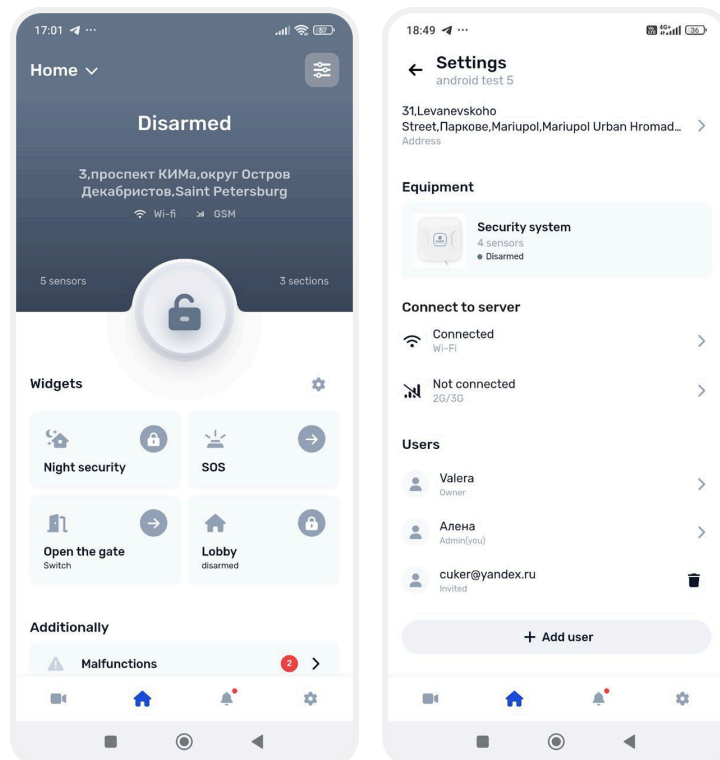
In-app notification about granted access

How to check invitation status

To track whether a user has accepted the invitation:

1. Go to **Object settings** → **Users**
2. You'll see a status next to each invited user (e.g., "Invited")

Once the user accepts the invitation, they'll appear in the list of users for that object.

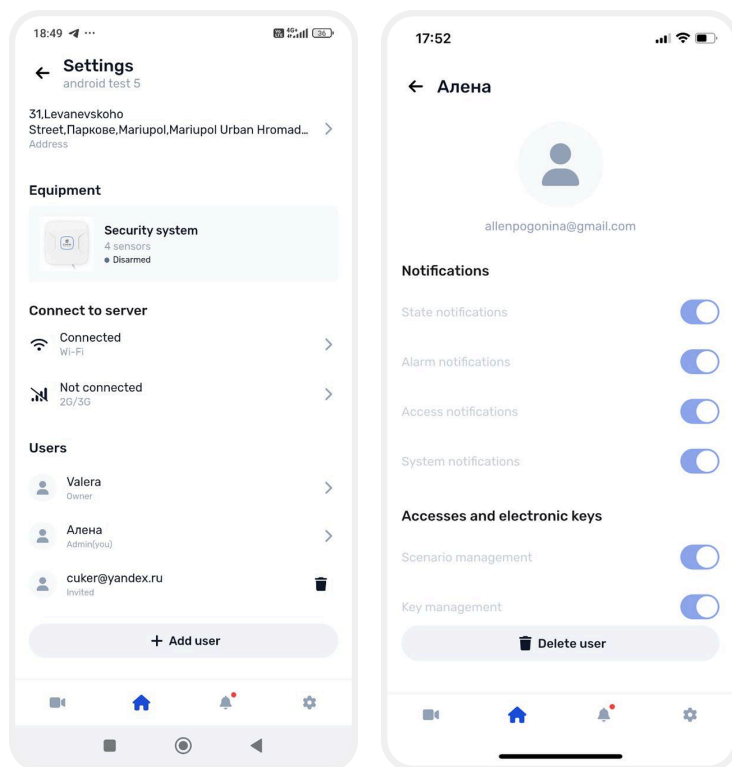


Invited user status

How to change guest permissions

To adjust what a guest user can access:

1. Go to **Object settings** → **Users**
2. Tap on the guest's name to open their user card
3. You'll see a list of available functions
4. Use the toggles to enable or disable access to each function



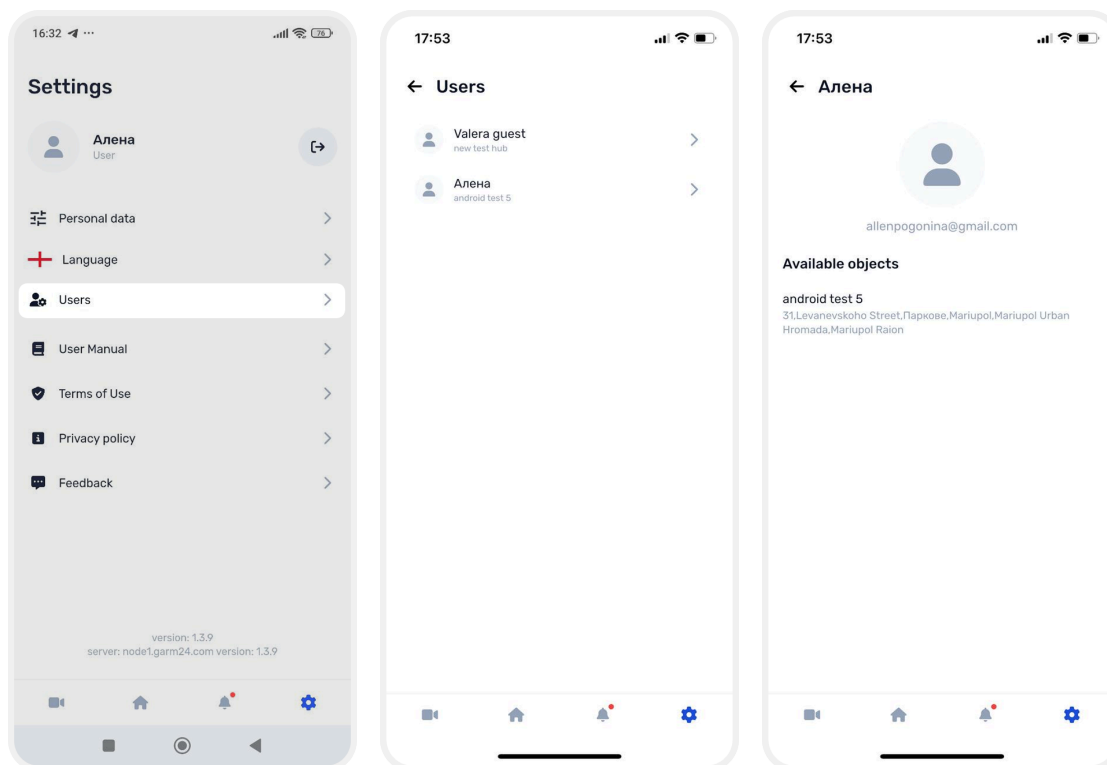
Editing guest permissions

Viewing all users

To see everyone who has access to your object:

1. Go to **Account settings** ⚙️
2. Open the **Users** tab

Here, you can review all accepted users and manage their access at any time.



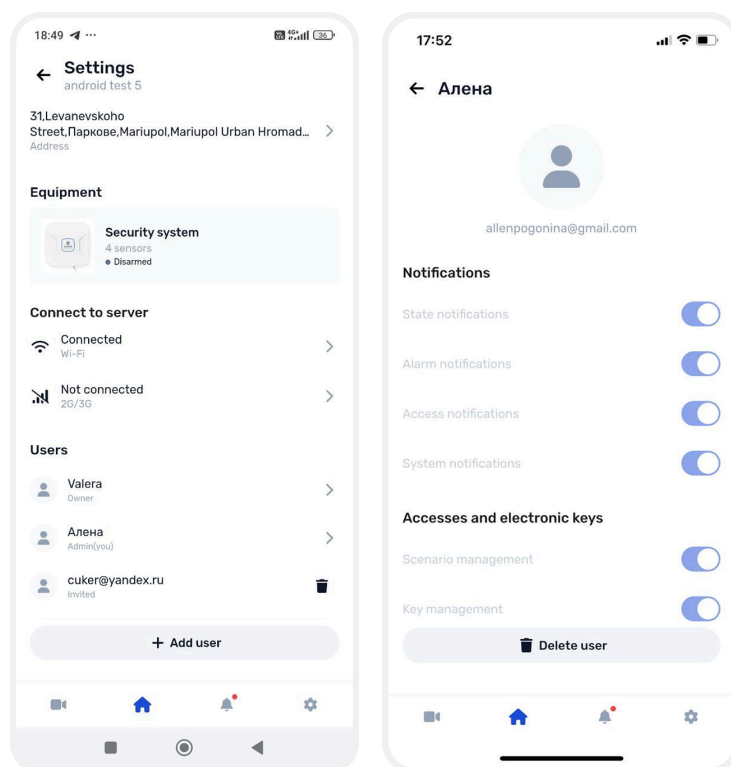
User information

How to delete a user

To remove someone's access to your object:

1. Go to **Object settings** → **Users**
2. Select the user you want to remove
3. Tap **Delete user**
4. Confirm the delete

Once removed, the user will no longer have access to your object.



Deleting user

How to connect video surveillance

Surveillance cameras allow you to see what's happening at your object in real time and record events for later viewing.

Through the app, you can:

- watch live video from your cameras;
- receive notifications about motion or alarms;
- view recordings and event history;
- link cameras with other devices in your security system.

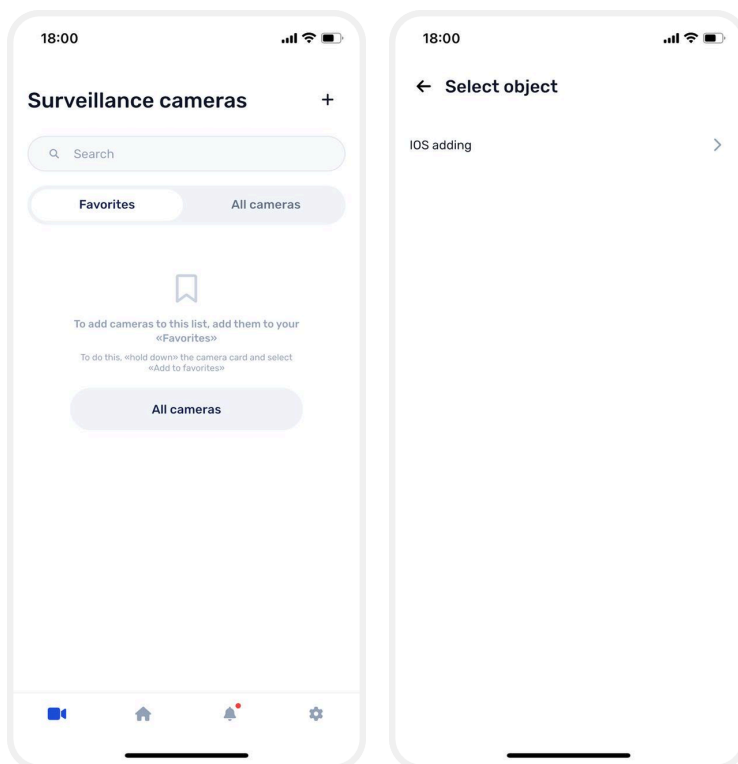
How to connect a camera

1. Open the **Surveillance cameras** section

Here you will see all connected cameras and devices added to **Favorites**

2. Tap **+** in the upper-right corner of the screen to add a new camera

3. Select the object to which you want to link the camera



Adding a camera

4. Select the connection type:

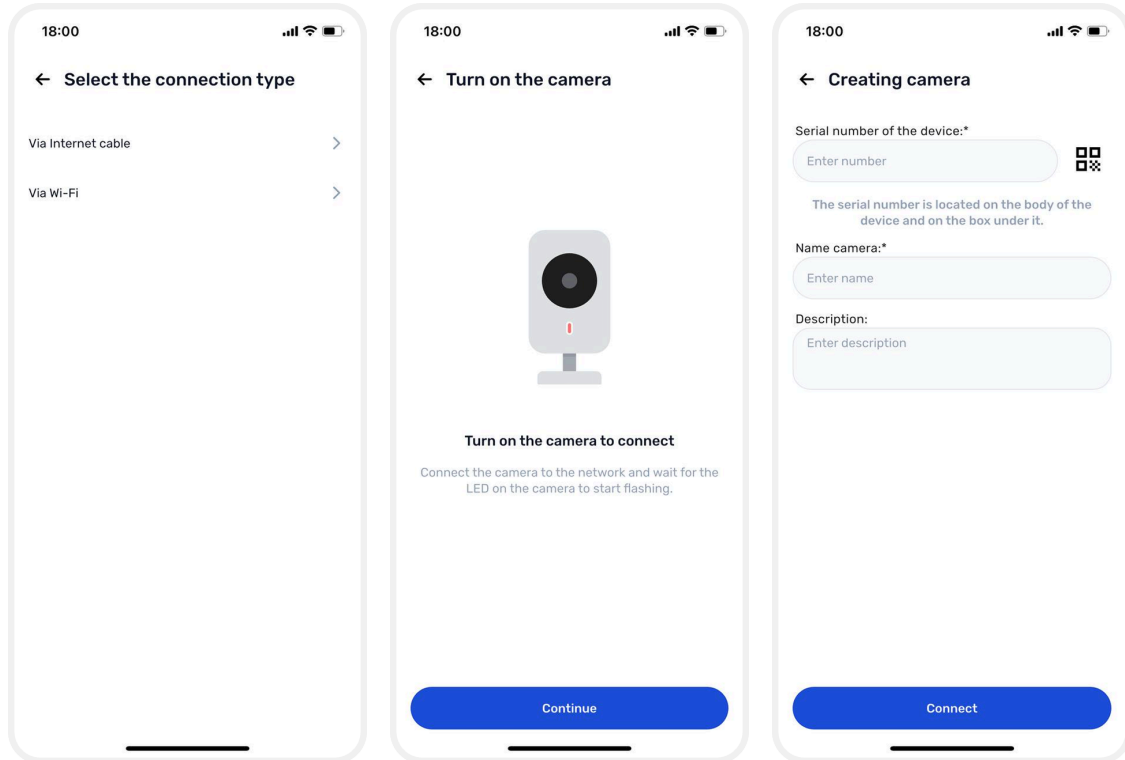
- Internet cable — for a wired connection
- Wi-Fi — for a wireless connection

5. Power on the camera — connect it to power and wait until the indicator light starts blinking

6. Tap **Continue**

7. Enter the camera details:

- Serial number (printed on the device and the box)
- Camera name — for example, Balcony or Yard
- Description (optional)

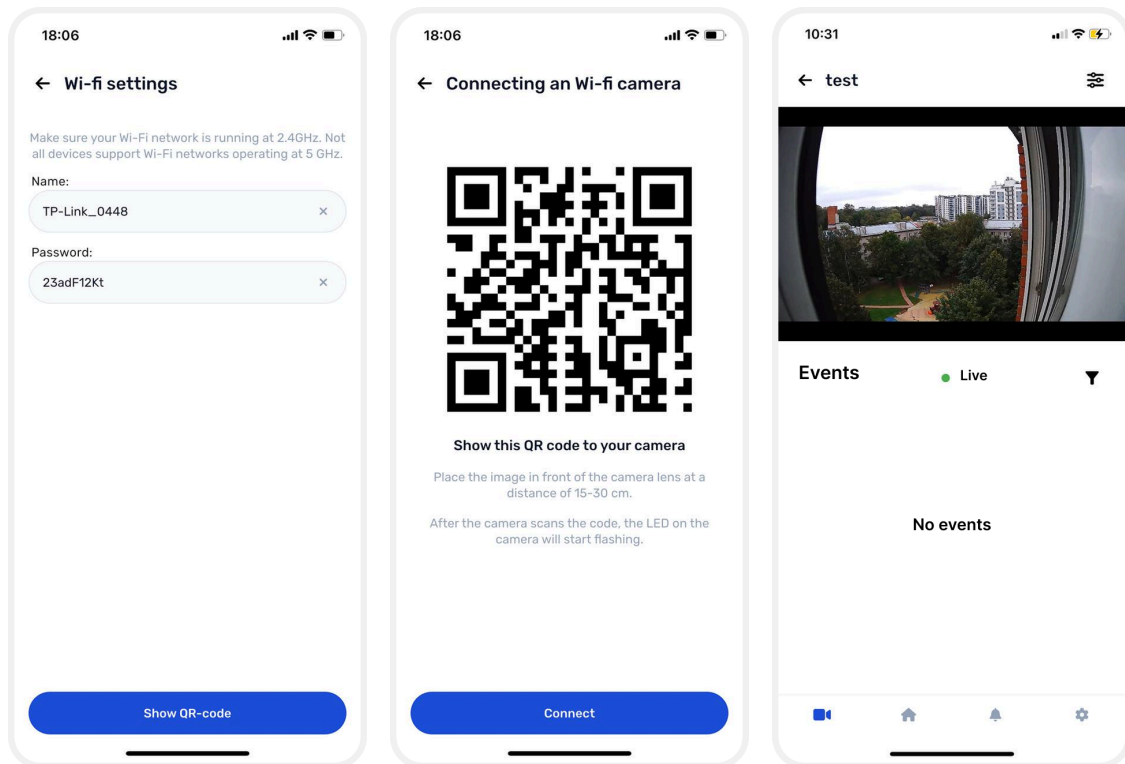


Connecting via Wi-Fi

If you choose Wi-Fi:

- Connect to your home Wi-Fi network and tap **Show QR code**
- A QR code will appear on the screen — hold your smartphone 15–30 cm in front of the camera lens
- Wait for the camera to scan the code

After successful connection, the camera will appear in the list of devices, and you will see the live video stream.



Connecting via Wi-Fi

Connecting via Internet cable

If you chose Internet cable:

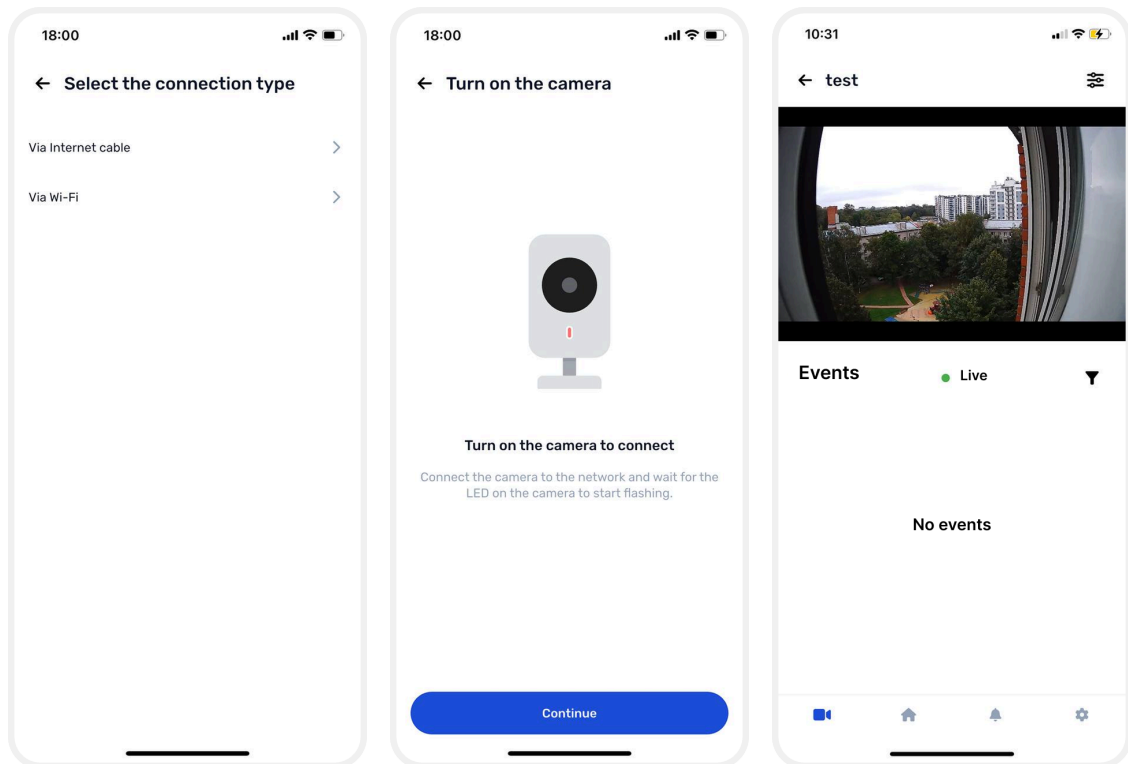
1. Connect the camera to power and wait until the indicator light starts blinking — this means the device is ready
2. Tap **Continue**
3. Connect the camera to your router using a LAN cable

The hub and the camera must be connected to the same network so the system can detect the camera automatically

4. Enter the camera details:

- Serial number (found on the device or the box)
- Camera name — for example, Balcony or Yard
- Description (optional)

5. After saving the settings, the camera will automatically be added to the system and appear in the device list. You can then open it and see the live video stream.



Connecting via an internet cable

How to configure the hub via web interface

In this article, you'll learn how to configure your Garm Link PRO hub using the web configurator — a browser-based interface for managing device settings. You'll see how to connect to the hub over Wi-Fi, adjust essential parameters, and update the device firmware. This allows you to manage your equipment independently and keep it up to date.

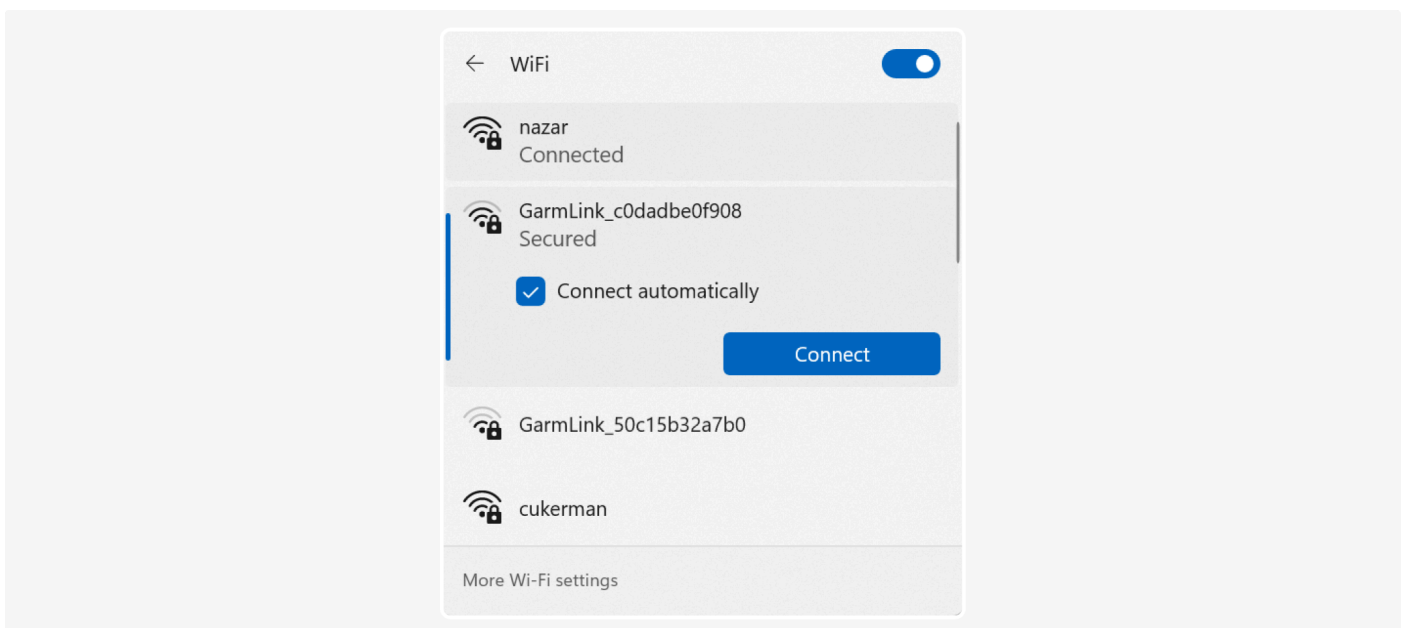
How to access the web configurator

To configure your Garm Link PRO hub, use the built-in web configurator — a special interface available through your browser.

Follow these steps:

1. Connect to the hub's Wi-Fi access point

On your device, go to Wi-Fi settings and look for a network named GarmLink_xxxxxxxxxx, where xxxxxxxxxxxx is a unique set of characters.



2. Enter the Wi-Fi password

The password is the same as the last part of the network name.

For example, if the network is GarmLink_1234567890AB, the password is 1234567890AB.

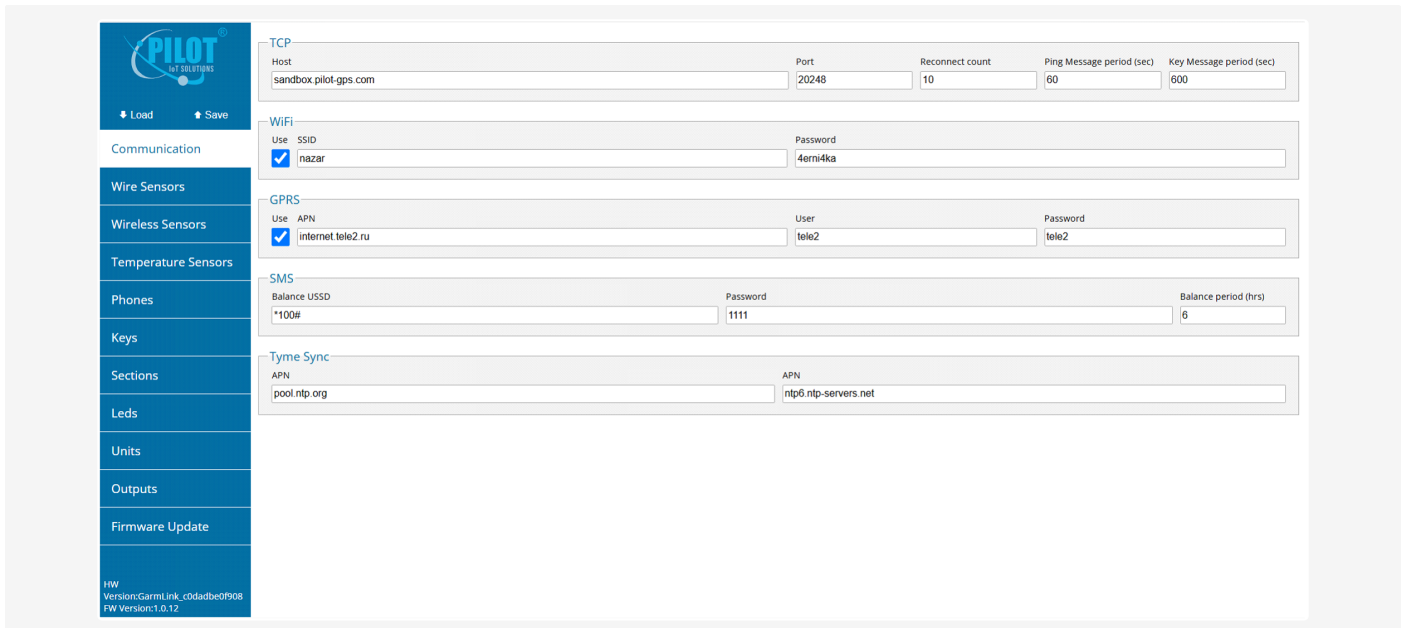
3. Open your browser

After connecting to the Wi-Fi network, open a browser and go to the following IP address:

192.168.4.1

4. Wait for the configuration page to load

If the page doesn't load immediately, refresh it (press the refresh icon or hit F5).



Settings window

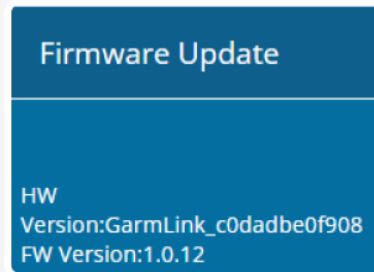
What you can configure via the web interface

The web configurator allows you to:

- Connect the hub to the internet via Wi-Fi or GPRS (SIM card)
- Add ASTRA wireless sensors
- Enable and configure wired inputs
- Add digital temperature sensors
- Register Touch Memory keys
- Create security sections
- Configure LED indicators
- Enable and configure wired outputs
- Update the hub firmware

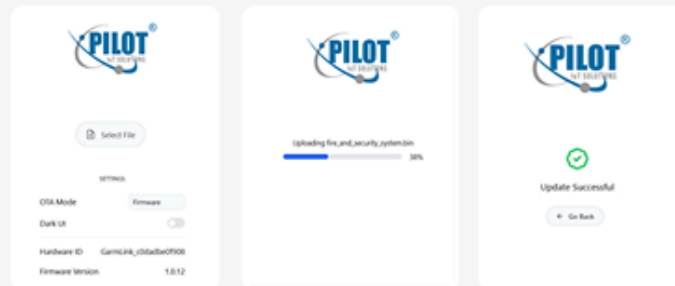
How to update the firmware

1. On the configuration page, click the **Firmware Update** button in the bottom left corner



Firmware update

2. On the update page, select the latest firmware file from your device



Uploading the firmware file

3. Click **Upload** to begin the installation

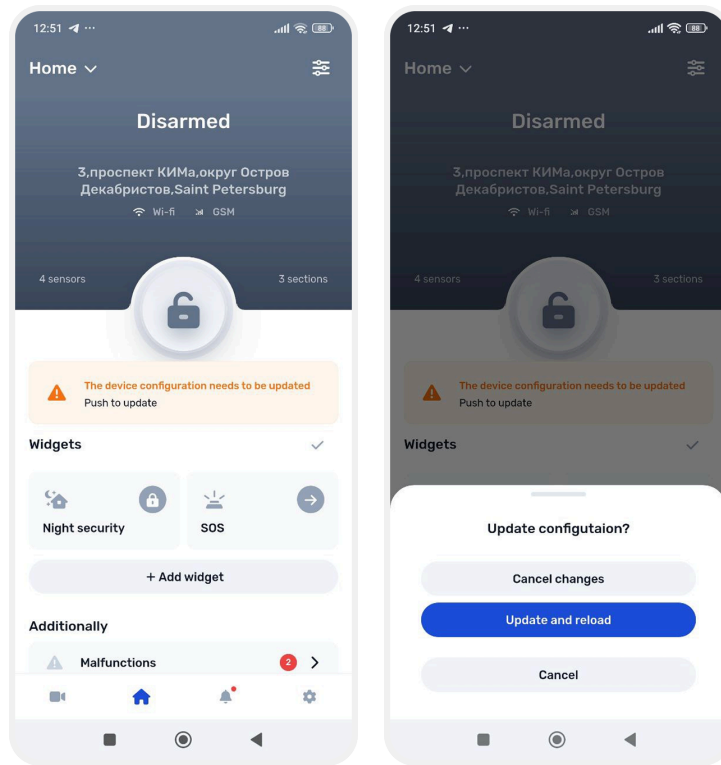
4. After the upload is complete, the hub will restart automatically

After you've saved changes to the hub through the web interface, you'll see a notification in the mobile app prompting you to update the object configuration.

To apply the new settings:

1. Open the object's main screen in the app

2. Tap the banner at the top that says **The device configuration needs to be updated**
3. Tap **Update and reload** to confirm
4. Wait for the update process to finish



Configuration update

Frequently asked questions about GARM

We've gathered answers to the most common questions from GARM users — from the initial choice and installation to everyday use.

If you're just getting started with the system, begin with the first questions.

If you're already using it, simply find the question you need.

If you don't find an answer here, you can always contact our support team via the website: garm24.com or through the GARM mobile app.

What can the GARM system do?

GARM is your assistant for home security, device control, and comfort. The system reacts instantly to any unusual events — motion, smoke, water leaks, or break-in attempts — and notifies you wherever you are. You can manage the system right from your smartphone — at home, work, your country house, or even abroad.

What you can do with GARM:

- Arm and disarm the security system
- Open and close gates, doors, and gates
- Control lighting
- Receive event notifications
- Connect cameras and watch video footage

What do I need to get started?

The main component is the GARM Link PRO hub — the brain of the entire system.

You can connect to it:

- Any wired sensors with dry contacts (from any manufacturer)
- ASTRA wireless sensors, which are fully compatible out of the box

You decide how many devices you need. You can start with one or two ASTRA sensors and add more later (for example, smoke or water leak detectors).

One hub supports up to 32 ASTRA wireless devices.

Can I install the system myself or do I need a professional?

You can install GARM yourself — no special technical skills are required, especially if you use wireless devices.

How to install:

1. [Download](#) the GARM app (use the QR code on the website or controller box, or find it in Google Play/ App Store).

2. [Register](#) with your email address.

3. Connect the hub:

- Insert a SIM card if you want backup cellular connectivity.
- Plug the hub into a power outlet.
- Set up Wi-Fi and/or mobile internet in the app.

4. [Add the hub](#) to the app — follow the step-by-step instructions.

5. Add sensors and devices — connection instructions will be provided directly in the app.

If you are connecting wired sensors and relays, you might need professional help.

When is the best time to plan system installation?

If you plan to use wired devices, it's best to lay cables during construction or renovation.

If you choose wireless sensors, you can install them anytime after finishing work — no drilling or wall chasing required.

Does the system work only via the internet?

The internet is required for:

- Initial system setup
- Remote control via the app
- Notifications
- Server communication

Without internet, the system will work in a limited mode:

- The alarm will trigger and sound.
- But you won't know which sensor was triggered.
- Scenario and device activation confirmations won't be received.

What if there's no wired internet connection?

Use a SIM card with mobile internet.

We recommend a 3G/4G router (optionally with an external antenna to boost signal).

What happens if the hub or sensors are damaged?

All sensors send data to the hub every minute. The hub regularly reports its status to the app.

If someone tries to:

- Disable a sensor
- Jam the signal
- Tamper with the system —

an alarm will automatically trigger, and you will receive an instant notification. The signal will also be sent to the monitoring center if you are connected to professional monitoring.

What should I do if I lose my phone?

1. Install the GARM app on your new smartphone.
2. Log in to your account.
3. Change your password.

Always enable screen lock on your phone for extra protection against unauthorized access.

Where can I buy the system?

You can buy it on our official website: garm24.com

Also through our official partners and dealers (see the list on the website under "Where to buy").

How to choose a SIM card and tariff for the GARM hub?

The GARM hub works with SIM cards from any mobile operator. The key is having a good signal where the hub is installed (for example, a country house).

Test it by inserting the SIM into your smartphone and checking signal strength, internet access, SMS delivery, and calls. If everything is stable, you can use this SIM for the hub.

Choose a basic plan that includes:

- Internet access
- Ability to send SMS
- Ability to make calls (only for emergencies)

The system uses very little data:

- Up to 50 MB of internet per month
- Up to 10 SMS
- Up to 10 minutes of calls

This ensures low costs while keeping the system connected and able to notify you of important events.

Can I control gates without a radio relay?

Yes. Even without a radio relay, you can control gates and gates via GARM.

The GARM Link PRO hub has dedicated wired outputs. Simply connect one of these outputs to the control board of your gates or gates — and control them from the app.

For convenience, you can create a control widget in the GARM mobile app and open/close gates with a single tap.

Which cameras are supported by GARM?

GARM already supports Ivideon cameras.

You can connect Ivideon cameras to GARM and monitor your home directly in the mobile app.

Watch live video and receive event notifications.

To store and access recordings anytime, an Ivideon cloud subscription is required. You choose the plan that suits you best.

Where to buy cameras?

You can select and order Ivideon cameras on our [website](#) — we've picked optimal models guaranteed compatible with GARM.

Is video analytics available?

Yes, GARM offers video analytics features:

- Face recognition — the system identifies people in the frame
- License plate recognition — useful for controlling entry and exit

These features work with supported cameras and require a paid subscription. You can choose a plan that fits your needs. Details are on our pricing page.

Can I use RTSP cameras?

This feature is currently in development. We will notify you when RTSP integration becomes available.

What other cameras can be connected to GARM?

Currently, Ivideon cameras are integrated.

We are working on adding support for HIKVISION cameras — one of the most popular brands. Soon you will be able to use their cameras with GARM.

Can I mix wired and wireless sensors in the GARM system?

Yes, this is one of GARM's main advantages.

You can use wired and wireless sensors together as you prefer — for example, wireless motion and smoke detectors combined with wired relays for gates or engineering systems.

The key is to choose the right sensor types for your needs.

Which ASTRA wireless sensors are supported?

GARM supports a range of popular ASTRA sensors:

Motion and opening sensors:

- ASTRA 5131
- ASTRA 3321
- ASTRA 361
- ASTRA 431
- ASTRA 421

Fire and security sensors:

- ASTRA 621
- ASTRA RI-M RPDK

Additional devices:

- ASTRA 2331 — combined light-sound alarm
- ASTRA 8231 — wireless relay
- ASTRA 4511 — radio call button (panic button)

How to connect to a security company?

The connection interface depends on the security company's requirements.

If you need assistance, contact us and we'll recommend the best solution.

GarmLink PRO-V1 hub passport

This section contains the official manual for the GARM Link PRO-V1 device.

Here, you will find all the essential information about the product — technical specifications, connection diagrams, operating instructions, and warranty details.

The manual is provided in its original form so that you can refer to it whenever you need guidance for maintenance or when contacting the service center.

DEVICE PASSPORT for the IoT Controller "Garm Link PRO-V1"



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1. General Information

This document provides the technical specifications, package contents, operating conditions, and warranty obligations for the GARM Link PRO-V1 terminal control and monitoring device (TCMD).

The manufacturer reserves the right to make design or technical modifications aimed at improving the product without prior notice.

All changes will be reflected in the next revision of this passport.

2. List of Abbreviations

Table 1 — List of Abbreviations

Abbreviation	Description
TCMD	Terminal Control and Monitoring Device — main control and communication unit of the GARM system
AWS	Automated Workstation — operator's workplace software
CMS AWS	Automated Workstation of the Central Monitoring Station — interface for system monitoring and event management
GARM PC	GARM Software Suite — includes server software, field devices, CMS application, mobile and web clients
Astra-RI-M System	Wireless Fire and Security Alarm System "Astra-RI-M"
BAT	Rechargeable Battery — internal backup power source installed in the TCMD
LC	Loop Circuit (Signaling Line) — connection line for security or fire sensors

3. Purpose and Scope

3.1. The Control and Indication Panel (TCMD) is designed to organize security, fire, alarm, emergency, and other types of signaling at a facility as part of the GARM Software Suite (GARM PC).

3.2. The TCMD provides the following functions:

- Reception of information from ASTRA wireless sensors via the 433 MHz radio channel;
- Monitoring of the status of wired sensors connected to the TCMD inputs;
- Encrypted data exchange between the facility and the server through commercial TCP/IP networks (Internet), GSM (GPRS) mobile communication, and wired Ethernet connection.

4. General Information and Features

4.1. The TCMD registers and processes the status of up to 32 wireless sensors of the Astra-RI-M system.

4.2. It ensures data exchange with the CMS AWS and Internet applications through the server using:

- Primary channel — Wi-Fi 802.11 b/g/n (up to 150 Mbps)
- Backup channel — SIM card (GPRS/EDGE, GSM)
- Channel priority: Wi-Fi first, then SIM card

4.3. Configuration and maintenance of the TCMD are performed using the CMS AWS or web applications according to the user manual.

The mobile application can be installed from the app store.

4.4. The external power supply for the TCMD is provided by two independent sources in any combination:

- From the main power source via a 220/12 V 2 A adapter (DC connector)
- From a backup 12 V power source via the +12VR- terminals on the board

Continuous monitoring and notification of the power supply status are provided.

4.5. For power redundancy, the TCMD includes:

- A connector for an internal Li-Ion battery (3.7 V, 1800 mAh) installed inside the housing

- A connector for an external AGM battery (12 V, 7 Ah) installed outside the housing

4.6. Power Supply Notes

- The battery connection must be made immediately before applying external power to the TCMD.
- Startup from a battery alone is not possible. Startup without a battery is allowed.
- When switching to the internal Li-Ion battery, the TCMD:
 - Maintains communication via both Wi-Fi and GPRS channels
 - Powers wired sensors (the "Fault" message is generated)
 - Does not power wired outputs
- When switching to the external AGM battery, the TCMD:
 - Maintains communication via both Wi-Fi and GPRS channels
 - Powers wired sensors (the "Fault" message is generated)
 - Powers wired outputs

4.7. The TCMD includes a built-in Touch Memory (TM) input for connecting iButton-standard key readers and/or digital temperature sensors.

TM codes are registered through the CMS AWS and user applications.

4.8. The TCMD is equipped with 8 programmable open-collector outputs (+CN_OUT_x-) with configurable operating modes.

Output configuration is performed through the CMS AWS and web applications.

4.9. The TCMD includes 7 pairs of individually programmable inputs (+CN_ZONE_x-), which can operate in various modes:

- Output mode ("open collector") — when powered from +12 V, allows connection of external devices (e.g., Foton-9 siren) for manual or automatic control.

Operation logic ("indicator lamp," "siren," etc.) is configured via the CMS AWS and web applications.

In this mode, the +CN_ZONE_x- terminal is not used and may serve as an "intrusion" or "technical" input.

- Input mode ("intrusion" or "technical" loop) — allows connection of sensors with a "dry contact" output operating on open/close principle (to +CN_ZONE_x-, 12V-, or 12VR- terminals).

In this mode, the +CN_OUT_x- terminal is not used and can be assigned as an output.

- Input mode ("fire" or "fire with dual triggering") — allows connection of two-wire alarm loops with fire detectors powered via the loop (to +CN_ZONE_x- terminals).

5. Wiring Diagrams

5.1. Connecting Security Sensors

The zone status is determined by the TCMD by measuring the loop resistance.

Security logic thresholds:

$0 \leq \text{"Alarm"} < 3.3 \text{ k}\Omega$

$3.3 \text{ k}\Omega \leq \text{"Normal"} \leq 5.6 \text{ k}\Omega$

$5.6 \text{ k}\Omega < \text{"Alarm"}$

It is recommended to use the following wiring diagram for security sensors with Normally Closed (NC) and Normally Open (NO) contacts (see Figure 1).

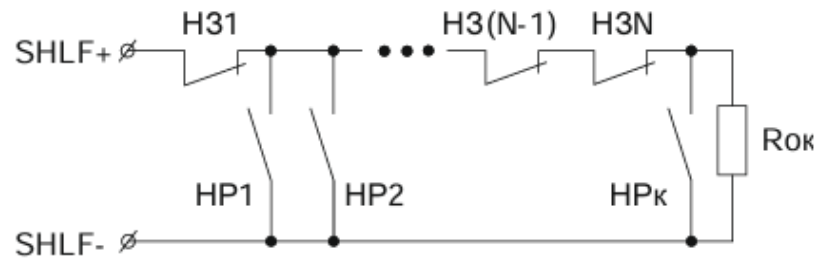


Figure 1. Security Sensor Wiring Diagram

NC — Normally Closed security sensor contact

NO — Normally Open security sensor contact

Rterm — Terminal resistor, $4.7\text{ k}\Omega \pm 5\%$

5.2. Connecting Fire Sensors

5.2.1. Zone States

- Fire type zones have three states:
- Normal
- Fire (Alarm)
- Fault (short circuit or open circuit)
- Fire type 2 zones have four states:

Normal

Attention (First threshold violation)

Fire (Second threshold violation)

Fault (short circuit or open circuit)

5.2.2. State Indication

Fire — flashing red indicator on the triggered zone

Fault — steady red indicator (short or open loop)

Attention — green indicator flashing at 1 Hz

Normal — continuous green indicator

5.2.3. Special Features

- In the Fire state, the sound alarm can be disabled using TM keys.
- The TCMD disables power to fire loops for 25-second intervals to reset fire sensors.
- The state of the fire loop is determined by loop resistance.

5.2.4. Thresholds

Fire logic:

$0 \leq \text{Fault} < 220\ \Omega$

$220\ \Omega \leq \text{Fire} < 2.5\text{ k}\Omega$

$2.5\text{ k}\Omega \leq \text{Normal} \leq 7\text{ k}\Omega$

$7\text{ k}\Omega < \text{Fire} \leq 20\text{ k}\Omega$

$20\text{ k}\Omega < \text{Fault}$

Two-threshold fire logic:

$0 \leq \text{Fault} < 220\ \Omega$

$220\ \Omega \leq \text{Fire} < 1.2\text{ k}\Omega$

$1.2\text{ k}\Omega \leq \text{Attention} < 2.5\text{ k}\Omega$

$2.5\text{ k}\Omega \leq \text{Normal} \leq 7\text{ k}\Omega$

$7\text{ k}\Omega < \text{Attention} \leq 12.5\text{ k}\Omega$

$12.5\text{ k}\Omega < \text{Fire} \leq 20\text{ k}\Omega$

$20\text{ k}\Omega < \text{Fault}$

5.2.5. Recommended Wiring Diagrams

Diagram 1. Connecting Fire Heat Sensors (type "Fire")

- D1...DN — sensor contacts
- Rterm — terminal resistor $5.6\text{ k}\Omega \pm 5\%$
- RD1, RD2...RDN — additional resistors $5.6\text{ k}\Omega \pm 5\%$
- Maximum wire resistance: $470\ \Omega$

(see Figure 2)

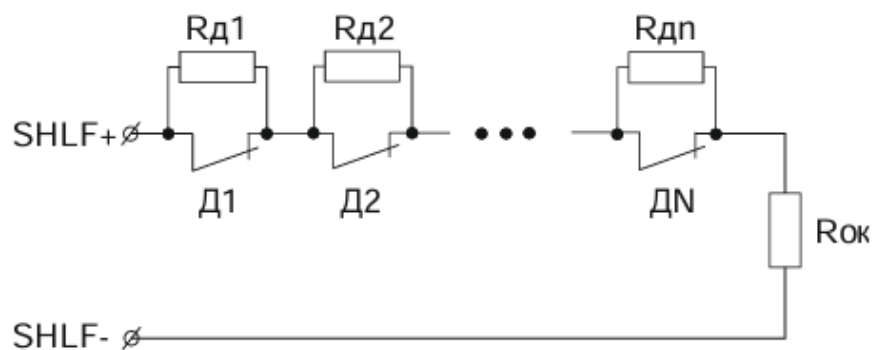


Figure 2. Wiring diagram of fire heat sensors for a "Fire" type zone

Diagram 2. Connecting Fire Smoke Sensors (type "Fire")

- D1...DN — sensor contacts
- Rterm — terminal resistor $5.6\text{ k}\Omega \pm 5\%$
- RD1, RD2...RDN — additional resistors $2.2\text{ k}\Omega \pm 5\%$
- Maximum wire resistance: $470\ \Omega$

(see Figure 3)

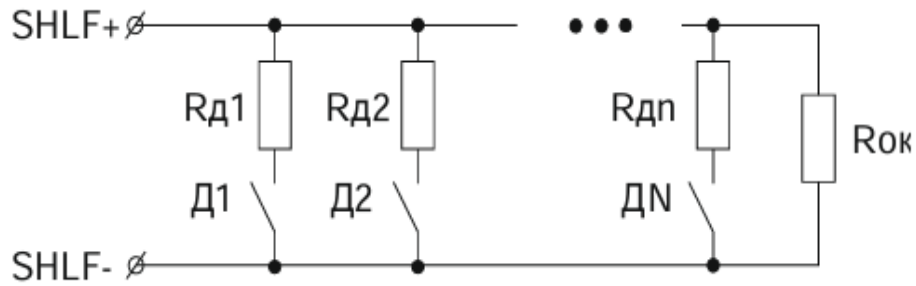


Figure 3. Wiring diagram of fire smoke sensors for a "Fire" type zone

Diagram 3. Connecting Fire Heat Sensors (type "Fire 2")

- D1, D2 — sensor contacts
- Rterm — terminal resistor $4.3\text{ k}\Omega \pm 5\%$
- RD1, RD2 — additional resistors $6.8\text{ k}\Omega \pm 5\%$
- Maximum wire resistance: $470\text{ }\Omega$

(see Figure 4)

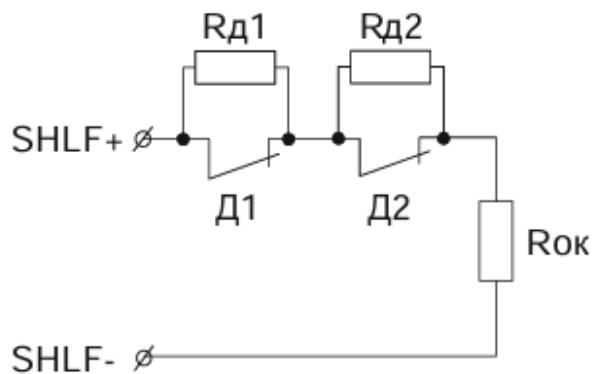


Figure 4. Wiring diagram of fire heat sensors for a "Fire 2" type zone

Diagram 4. Connecting Fire Smoke Sensors (type "Fire 2")

- D1, D2 — sensor contacts
- Rterm — terminal resistor $5.6\text{ k}\Omega \pm 5\%$
- RD1, RD2 — additional resistors $2.2\text{ k}\Omega \pm 5\%$
- Maximum wire resistance: $470\text{ }\Omega$

(see Figure 5)

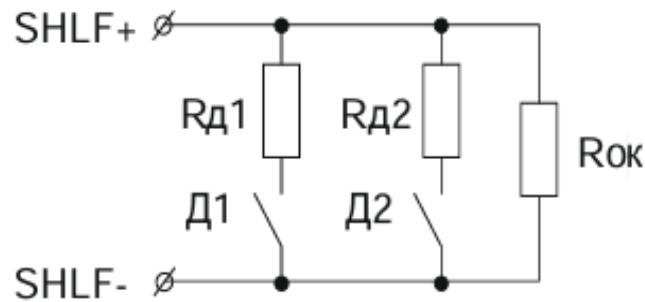


Figure 5. Wiring diagram of fire smoke sensors for a "Fire 2" type zone

5.3. Connecting Temperature Sensors

The following diagram is recommended for connecting DS18B20 temperature sensors:

- D1...Dn — temperature sensors
- Maximum number of connected sensors: 10

(see Figure 6)

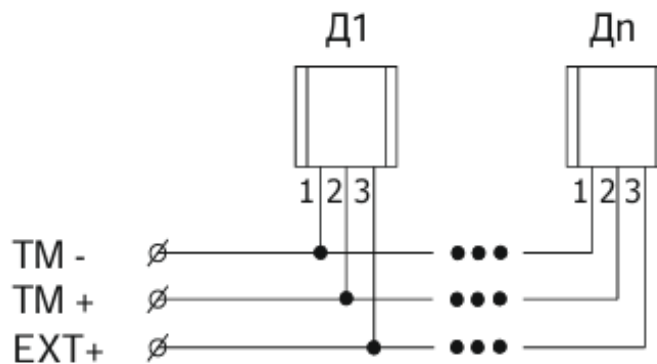


Figure 6. Wiring diagram of temperature sensors

5.4. External Connections

External connections of the TCMD include connecting power sources, backup batteries, sensors, and actuators.

The recommended external wiring diagram is shown in Figure 7.

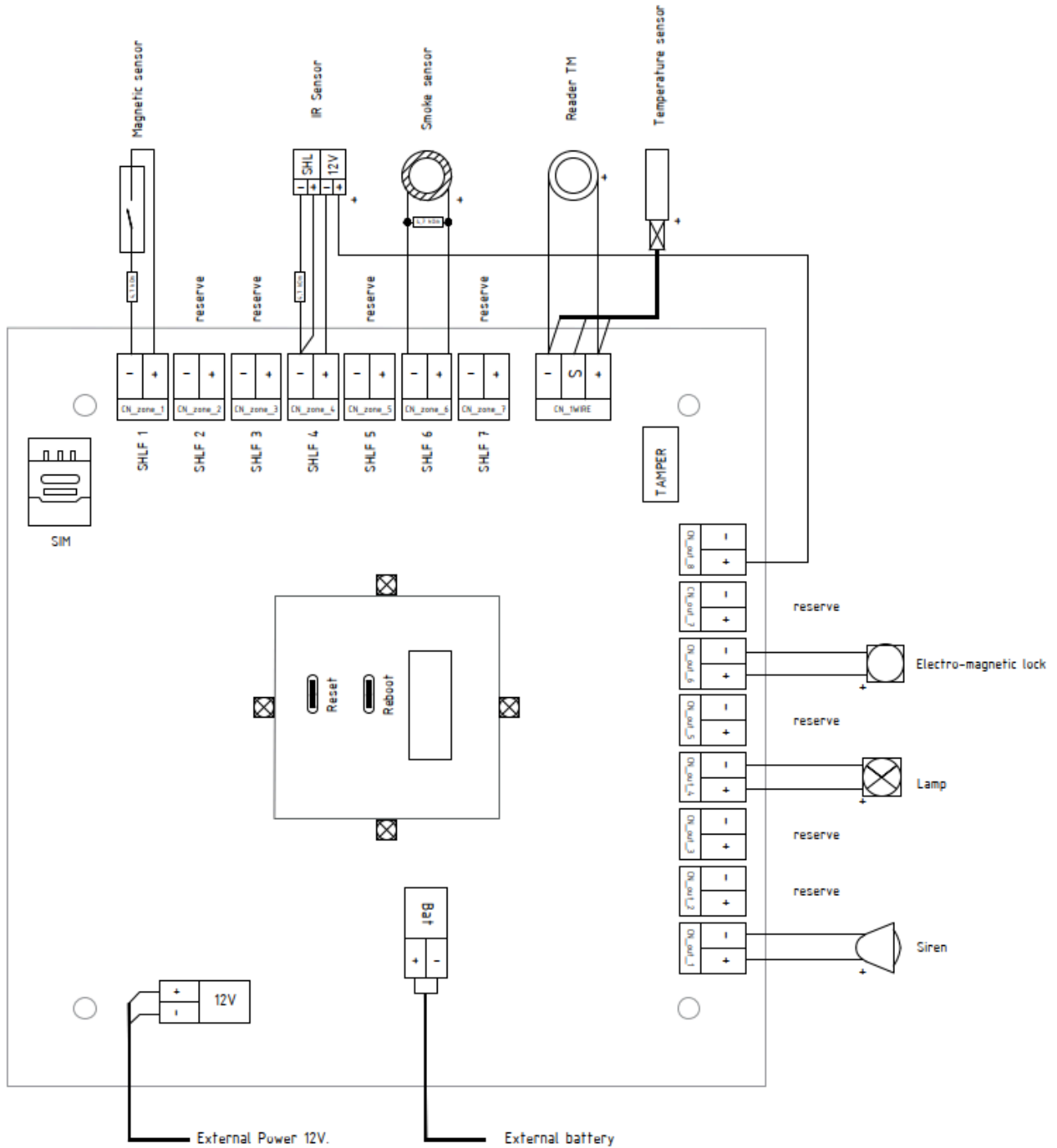


Figure 7. Recommended external connection diagram

6. LED Indication

The TCMD has LED indicators.

The table below shows the main LED indication modes for various states.

Table 2 — TCMD LED Indication

No.	State	Color	Effect	Frequency	Duration
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1	Connection to server via Wi-Fi	Green–Blue	Pulsing	Slow	Continuous
2	Connection to server via GPRS	Green–Orange	Pulsing	Slow	Continuous
3	No connection to server	Red	Pulsing	Slow	Continuous
4	Zone Fault	White–Black	Blinking	Fast	30 s
5	Zone in ATTENTION mode	Orange–Black	Blinking	Fast	30 s
6	FIRE detected	Red–Black	Blinking	Very fast	60 s
7	Zone in ALARM state	Red–Blue	Color switching	Very fast	60 s
8	Arming delay timer	Green–Red	Color switching	Very fast	120 s
9	Zone armed	Green	Steady color	—	Continuous
10	Zone disarmed	Green	Steady color	—	Continuous
11	Zone armed, Wi-Fi connection	Green–Blue	Pulsing	Fast	Continuous
12	Zone armed, GPRS connection	Green–Orange	Pulsing	Fast	Continuous
13	Searching for wireless devices on Astra module	Light Green–Blue	Color switching	Slow	60 s
14	Searching for iButton	Light Blue–Purple	Color switching	Slow	60 s

7. Main Technical Specifications

Table 3 — Main Technical Specifications

No.	Parameter (unit)	Value
1	Number of connected Astra radio devices (pcs.)	Up to 32
2	Number of inputs (pcs.)	Up to 7
3	Number of 1-Wire type inputs (pcs.)	1
4	Number of outputs (open collector type) (pcs.)	Up to 8
5	Number of additional Touch Memory keys (pcs.)	Up to 25
6	Number of zones (pcs.)	Up to 10
7	Number of DS18B20 temperature sensors (pcs.)	Up to 10
8	Supply voltage (V, DC)	12
9	Current consumption (A)	2
10	External backup battery (V / Ah)*	12 / 7
11	Built-in battery (Li-Ion) (V / Ah)	3,7 / 1,8
12	Tamper protection type	Tamper sensor
13	Operating frequency of RI-M radio channel (MHz)	433,42
14	Radio signal range (m)**	Up to 100
15	Communication channels	GSM/GPRS (900/1800 MHz), Wi-Fi (2.4 GHz)

16	Number of SIM cards (pcs.)	1
17	Protection rating	IP20
18	Dimensions (mm)	160 × 160 × 39
19	Weight, max (kg)	0,64
20	Average service life (years)	8
21	Operating temperature range (°C)	–10...+50
22	Permissible humidity at +25 °C, without condensation (%)	Up to 98

Notes:

* The external battery is replaceable.

** Radio signal range is specified under conditions without obstacles (walls, doors, ceilings). Range may decrease in presence of interference or specific site conditions.

8. Package Contents

Table 4 — Package Contents

No.	Item	Quantity
1	GARM Link PRO Security Control and Monitoring Device	1 pc.
2	Battery A (Li-Ion), 3.7 V, 1800 mAh	1 pc.
3	Screw 3×30	4 pc.
4	Wall plug 6×30	4 pc.
5	Passport / User Manual	1 copy

9. Disposal Information

9.1. The TCMD does not pose any danger to human life, health, or the environment.

9.2. At the end of its service life, the device can be disposed of without requiring special environmental protection measures.

9.3. It is recommended to dispose of the battery by returning it free of charge to a retail organization, service center, manufacturer, or a specialized organization that accepts used batteries and power cells.

10. Warranty

10.1. The manufacturer guarantees that the TCMD meets technical specifications, provided the user complies with the conditions of transportation, storage, installation, and operation.

10.2. Warranty storage period — 5 years from the date of manufacture.

10.3. Warranty service period — 5 years from the date of commissioning, but no more than 5 years from the date of manufacture.

10.4. The average service life of the TCMD is 8 years.

10.5. During the warranty period, the manufacturer undertakes to repair or replace the TCMD.

10.6. The warranty does not cover cases of:

- Non-compliance with the user manual
- Mechanical damage to the TCMD
- Repairs performed by persons not authorized by the manufacturer

10.7. The warranty applies only to the TCMD. Equipment from other manufacturers used together with the TCMD (batteries, connection cables, etc.) is not covered by the warranty.

10.8. The manufacturer is not responsible for any damage to health or property, as well as any direct or indirect losses resulting from improper use, malfunction, temporary inoperability of the TCMD, or claims by the user regarding the TCMD failing to perform its functions.