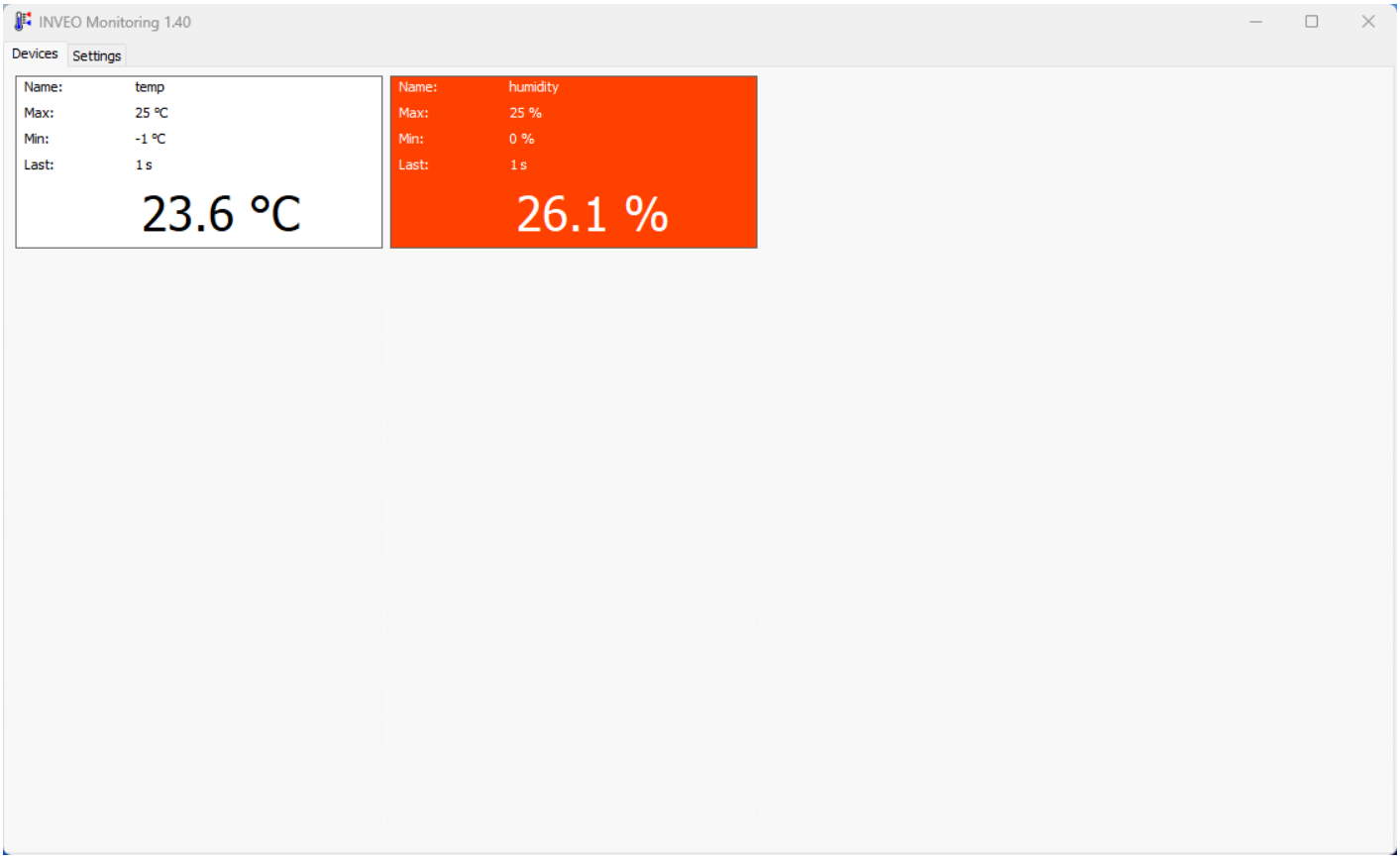
Inveo Sp. z o.o.

Inveo Monitoring

Instruction Manual

Warning

This manual applies only to the program version v1.40 onwards. Inveo does not guarantee that the information contained in this document applies to previous firmware revisions.



Purpose of the application

The application is used to preview the values of sensors and input/output states, write subsequent readings and alarm conditions to a log file, send e-mail and SMS (SMSAPI) messages.

The program uses the MQTT protocol for communication and supports the following Inveo modules:

- **Virtus**
- **Daxi**
- **IQIO PRO**
- **IQIO Sens**
- **Hero Web Sensor**
- **Nano In/Nano Digital Input PoE**
- **Nano Out/Nano Relay Output PoE**
- **Nano Temp/Nano Temperature Sensor PoE**

The program can be used both on Microsoft Windows and Linux operating systems.

Changelog

1.0 22nd of January 2026

- Application version v1.40

Table of contents

Program configuration

After running the installation program, follow the instructions shown on the screen.

Modules configuration

Virtus, Daxi, IQIO

1. Enable the MQTT service in the device's web interface using the **Services / MQTT** tab and enter the minimum required parameters:

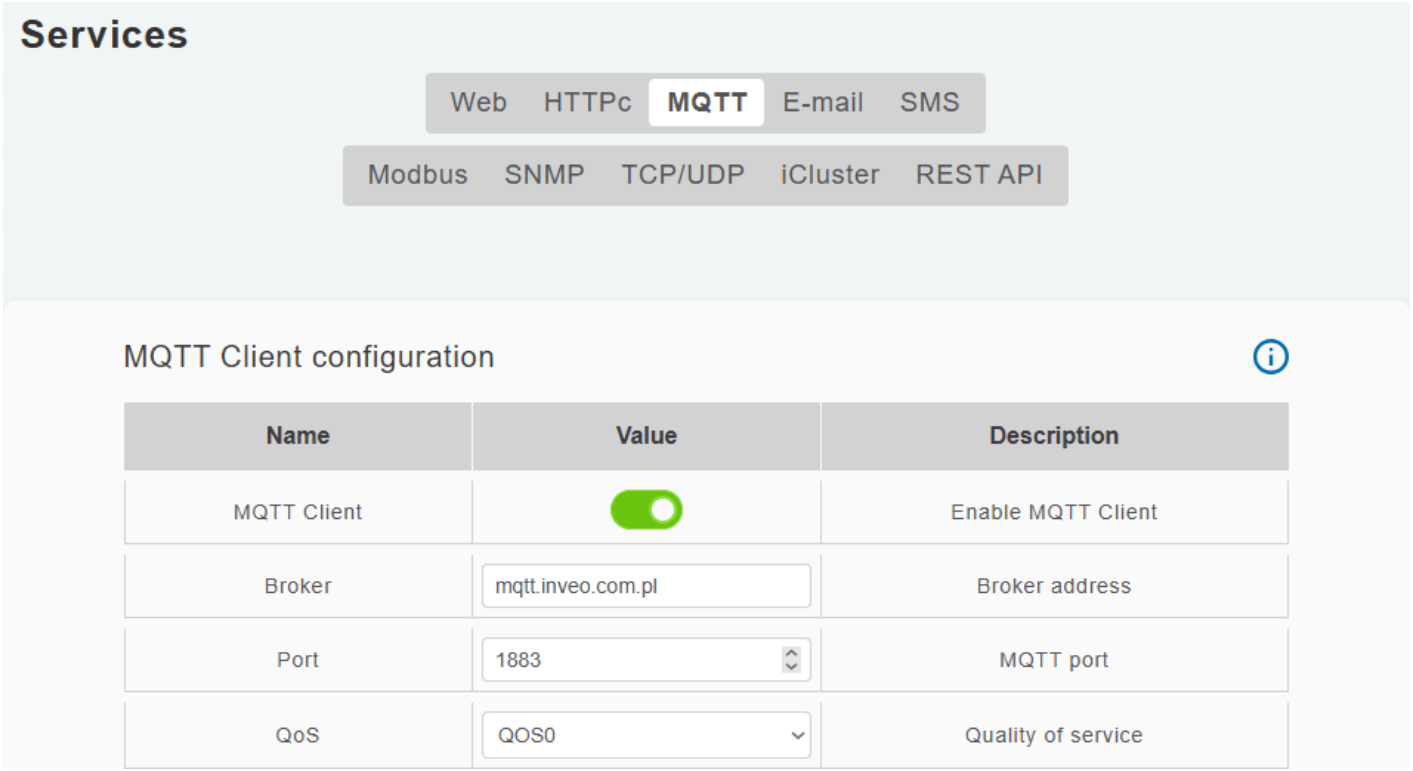
- **Broker** – MQTT broker address,
- **Port**,
- **QoS** – Quality of Service setting:
  - **QOS0** – At most once,
  - **QOS1** – At least once,
  - **QOS2** – Exactly once.

Tip

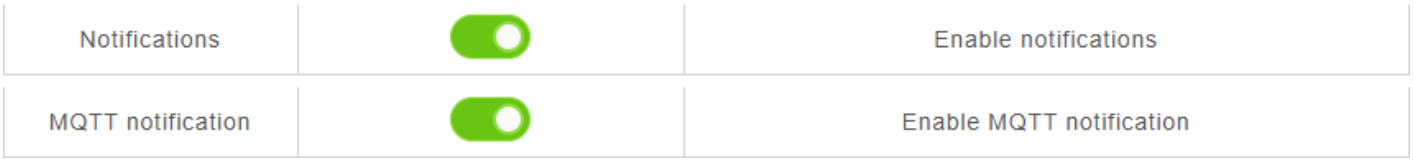
When using the Inveo broker, the following values shoudl be entered: - Broker: mqtt.inveo.com.pl
- Port: 1883

Tip

It is possible to use the PC running Inveo Monitoring as an MQTT broker.
To do this, enter the PC's IP address into the Broker field.

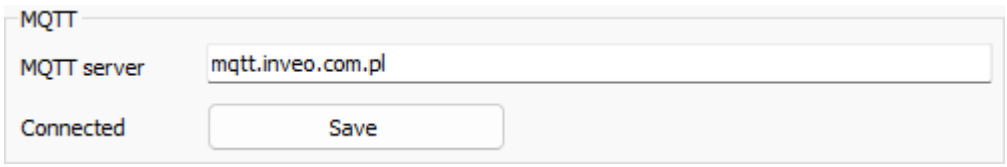


2. In the **Sensors** tab, select the desired sensor. Click the  icon, and select **Notifications** and **MQTT Notification**.



3. After installing and running the **Inveo Monitoring** software, enter the broker address first. To do that, go to the **Settings** tab.

> **Information**
>
> **For correct operation, the broker's address must match the one defined in the module's web interface.**



> **Information**
>
> **The program must be restarted after modifying the broker address.**

4. In the **Add device** section, enter the details of a sensor to be displayed:

- **MQTT topic** – Topic the readings will be received from,

- **Custom name** – Name of the sensor that will be displayed inside its frame for user convenience.

For **Virtus**, **Daxi** and **IQIO** modules, the default topic has the following structure:

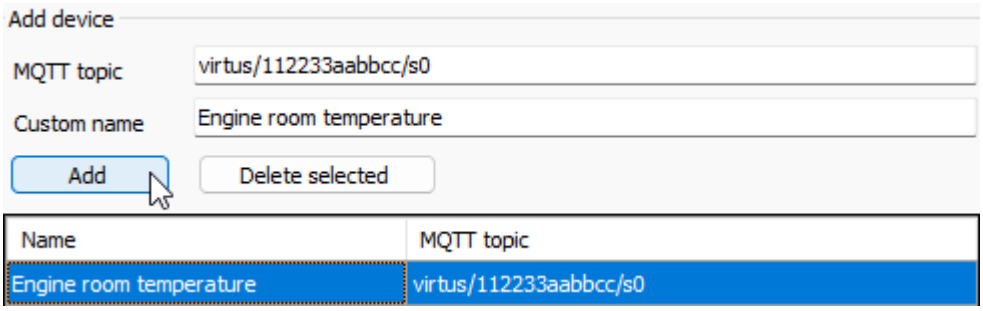
`model/<mac_address>/s[x]`

where:

- `model` is the device's model,
- `<adres_mac>` is the device's MAC address,
- `[x]` is the sensor index (**ID** column in the **Sensors** tab).

> **Example**
>
> **The MAC address of a Virtus module is 11:22:33:AA:BB:CC. We'd like to view the temperature sensor's (ID = 0) readings.**
> **Default topic:** `virtus/112233aabbcc/s0`.

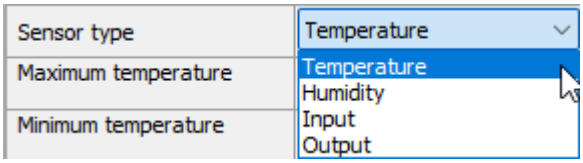
After entering the parameters, click the **Add** icon. The data will be moved to the table below.



Entering correct data here will display the sensor readings in the **Devices** tab.

5. For the values to display correctly, a sensor type should be set. In the **Devices** tab, click the tile of the sensor to be modified and select the **Sensor type**, accepting with **OK**:

- **Temperature**,
- **Humidity**,
- **Input**,
- **Output**.



Hero Web Sensor

1. Enable the MQTT service in the device's web interface using the **Services / MQTT** tab and enter the minimum required parameters:

- **Server Address** – MQTT broker address,
- **Server port**,

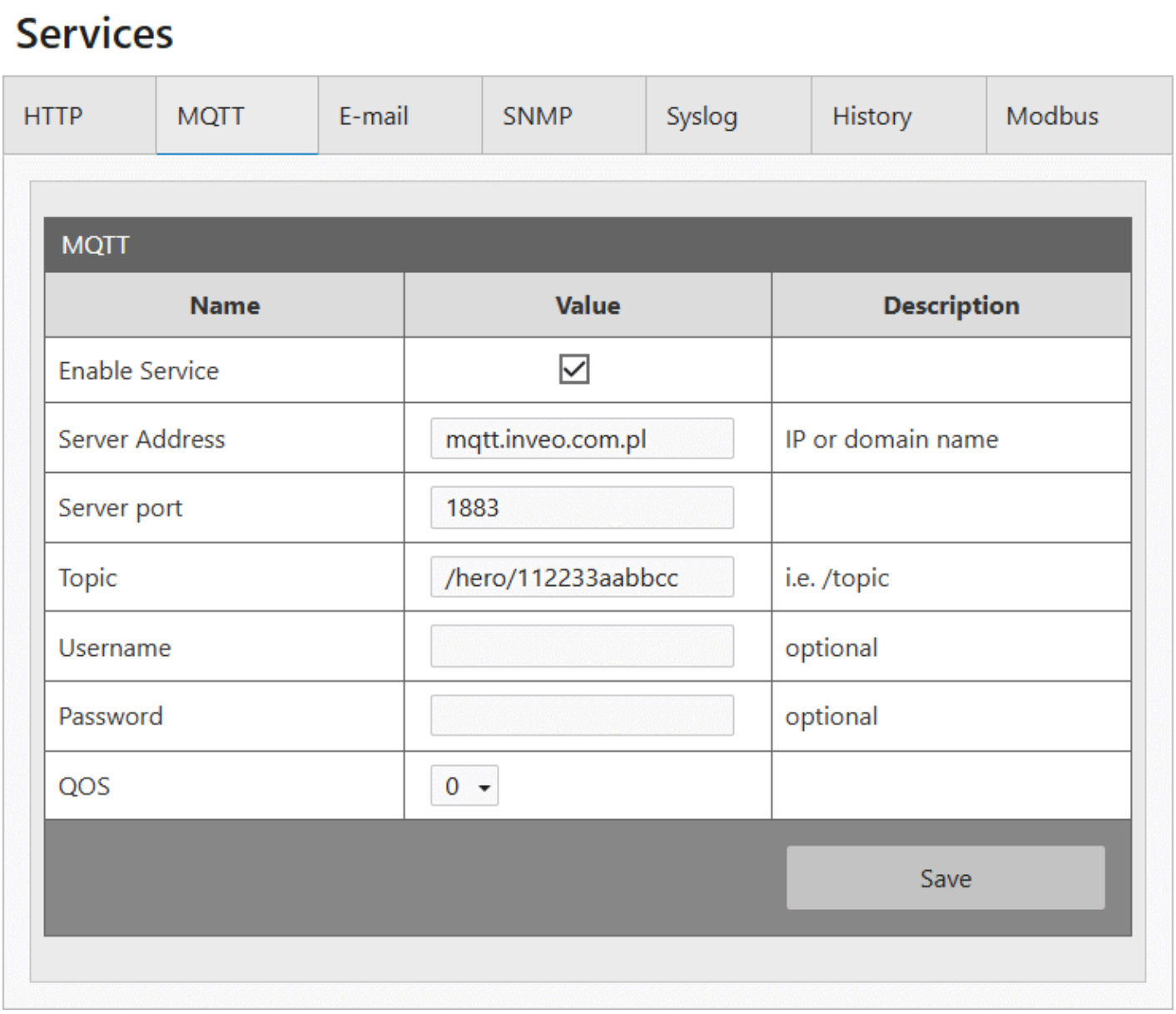
- **Topic**, to which the module will send its readings,
- **QoS** – Quality of Service setting:
  - **QOS0** – At most once,
  - **QOS1** – At least once,
  - **QOS2** – Exactly once.

Tip

When using the Inveo broker, the following values shoudl be entered: - Broker: mqtt.inveo.com.pl
- Port: 1883

Tip

It is possible to use the PC running Inveo Monitoring as an MQTT broker.
To do this, enter the PC's IP address into the Broker field.



2. In the **Sensors** tab, select the desired sensor's index. In the **Warn Matrix** section, **MQTT** row, select the information to be sent via MQTT.

Warn Matrix						
	Info	**Alarm L**	**Warn L**	**Warn H**	**Alarm H**	**Error**
Enable	☑	☐	☐	☐	☐	☐
Out 1	☐	☐	☐	☐	☐	☐
Out 2	☐	☐	☐	☐	☐	☐
E-mail On	☐	☐	☐	☐	☐	☐
E-mail Off	☐	☐	☐	☐	☐	☐
SNMP Trap	☐	☐	☐	☐	☐	☐
HTTP On	☐	☐	☐	☐	☐	☐
HTTP Off	☐	☐	☐	☐	☐	☐
MQTT	☑	☐	☐	☐	☐	☐
Syslog	☐	☐	☐	☐	☐	☐

It's possible to set the reading transmission frequency by changing the **Info period** value in the **Sensors** tab.

Info period	5	Info time [s]

Information

Apply all changes using the Save button.

3. After installing and running the **Inveo Monitoring** software, enter the broker address first. To do that, go to the **Settings** tab.

Information

For correct operation, the broker's address must match the one defined in the module's web interface.

Information

The program must be restarted after modifying the broker address.

4. In the **Add device** section, enter the details of a sensor to be displayed:

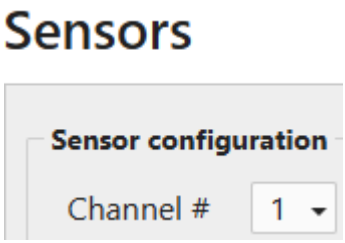
- **MQTT topic** – Topic the readings will be received from,
- **Custom name** – Name of the sensor that will be displayed inside its frame for user convenience.

The default topic has the following structure:

`topic/sensor[x]`

where:

- `topic` is the value from the **Topic** field (**Services** tab),
- `[x]` is the sensor index (**Channel** field in **Sensors**).



Example

The user entered the following topic: `/hero/112233aabbcc` **. We'd like to view the readings from a sensor assigned to channel 1. The topic will look like this:** `/hero/112233aabbcc/sensor1`

After entering the parameters, click the **Add** icon. The data will be moved to the table below.

Entering correct data here will display the sensor readings in the **Devices** tab.

Nano series modules

1. Enable the MQTT service in the device's web interface by clicking **Enable MQTT Inveo** in the **Adminsitration** tab. Clicking **Show Info** will open a window containing the information required for configuration.

Save all changes by clicking **Save Config**.

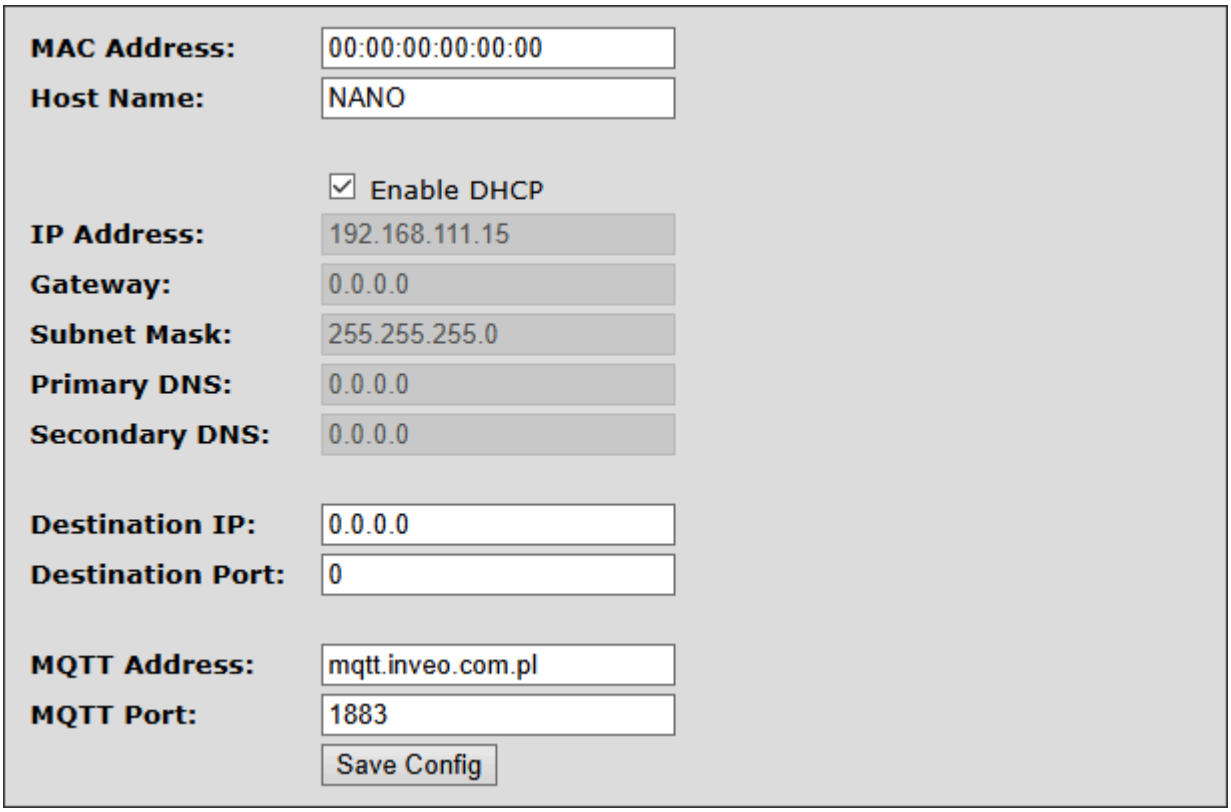
2. In the **Network** tab, configure the MQTT broker **address** and **port**.

Tip

When using the Inveo broker, the following values shoudl be entered: - Broker: mqtt.inveo.com.pl
- Port: 1883

Tip

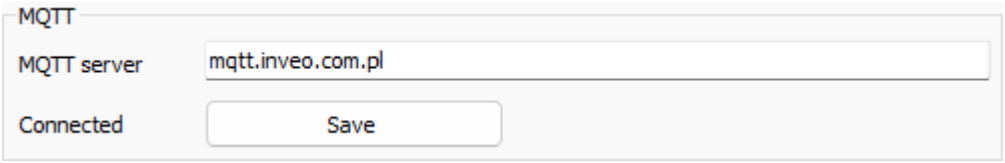
It is possible to use the PC running Inveo Monitoring as an MQTT broker.
To do this, enter the PC's IP address into the Broker field.



3. After installing and running the **Inveo Monitoring** software, enter the broker address first. To do that, go to the **Settings** tab.

Information

For correct operation, the broker's address must match the one defined in the module's web interface.



Information

The program must be restarted after modifying the broker address.

4. In the **Add device** section, enter the details of a sensor to be displayed:

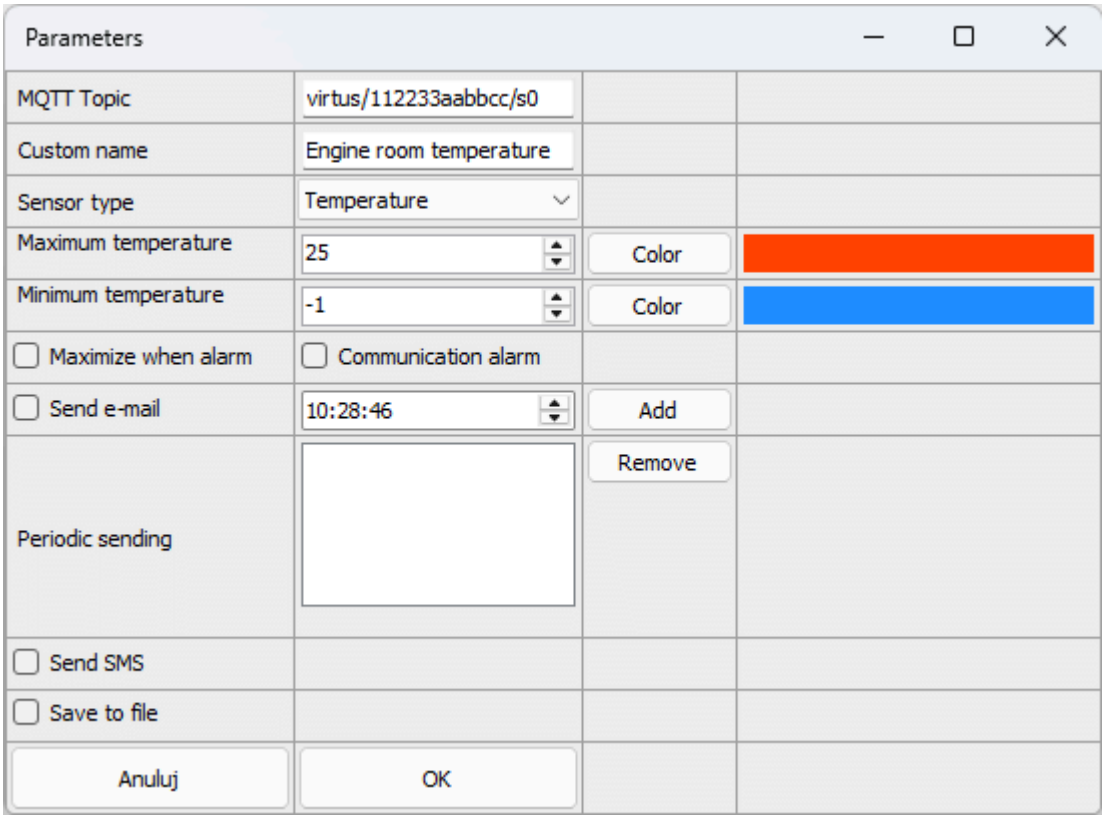
- **MQTT topic** – Topic the readings will be received from,
- **Custom name** – Name of the sensor that will be displayed inside its frame for user convenience.

After entering the parameters, click the **Add** icon. The data will be moved to the table below.

Entering correct data here will display the sensor readings in the **Devices** tab.

Application main screen – Devices tab

Clicking the sensor tile will display additional settings.



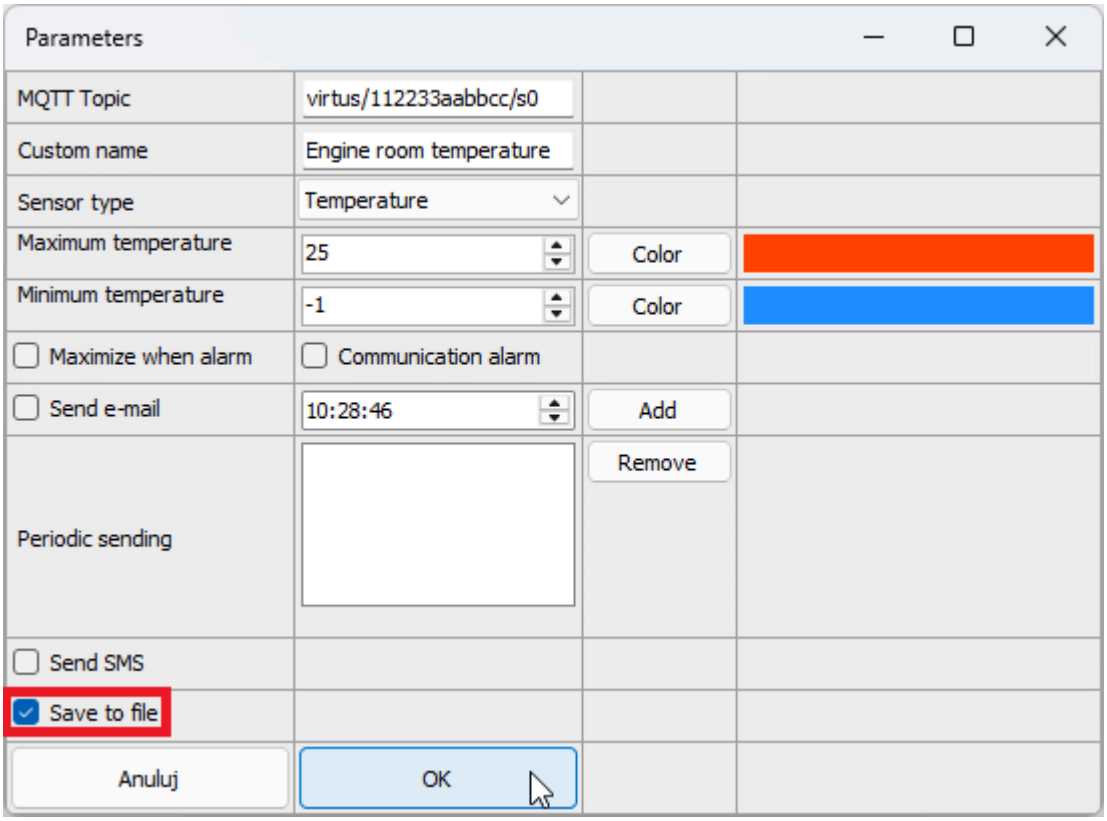
- **MQTT Topic** – Sensor's topic,
- **Custom name**,
- **Sensor type**: Temperature, Humidity, Input, Output,
- **Maximum temperature** – Applies to the temperature sensor only – upper limit of temperature, exceeding of which will trigger an alarm. Default value: 25°C,
- **Minimum temperature** – Applies to the temperature sensor only – lower limit of temperature, exceeding of which will trigger an alarm. Default value: -1°C,
- **Maximum humidity value** – Applies to the humidity sensor only – maximum allowed humidity value, exceeding of which will trigger an alarm,
- **Minimum humidity value** – Applies to the humidity sensor only – minimum allowed humidity value, exceeding of which will trigger an alarm,
- **Alarm when** – Applies to input, output modules – sets the alarm condition to:
  - **0** – Relay open/input not triggered,
  - **1** – Relay closed/input triggered,
  - **2** – Alarm inactive.
- **Color** – Sensor tile background colour during an alarm condition,
- **Maximize when alarm** – The program window will be maximized during an alarm,
- **Communication alarm** – Activating this option will trigger an alarm if communication is lost,

- **Send e-mail** – Selecting this option will send e-mail messages containing the current sensor values and alarm notifications,
- **Add** – Sets the time range of sending notifications via e-mail or SMS,
- **Remove** – Removes the time range described above,
- **Periodic sending** – Displays the time ranges of e-mail notifications,
- **Send SMS** – Activating this option will send SMS messages containing the current sensor values and alarm notifications,
- **Save to file** – Zapisywanie kolejnych odczytów w pliku określonym w zakładce **Settings**.

Save readings to a file

Inveo Monitoring allows subsequent sensor readings to be saved to a file located in a user-specified folder.

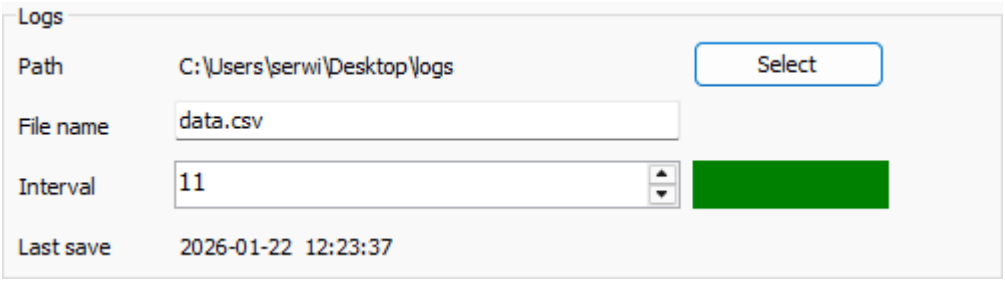
1. In the **Devices** tab, open the sensor settings window by clicking its tile. Tick **Save to file**.



2. In the **Settings** tab, fill the **Logs** section:

- **Path** – Target folder access path,
- **File name** – Target file name,
- **Interval** – Data saving interval (in seconds).

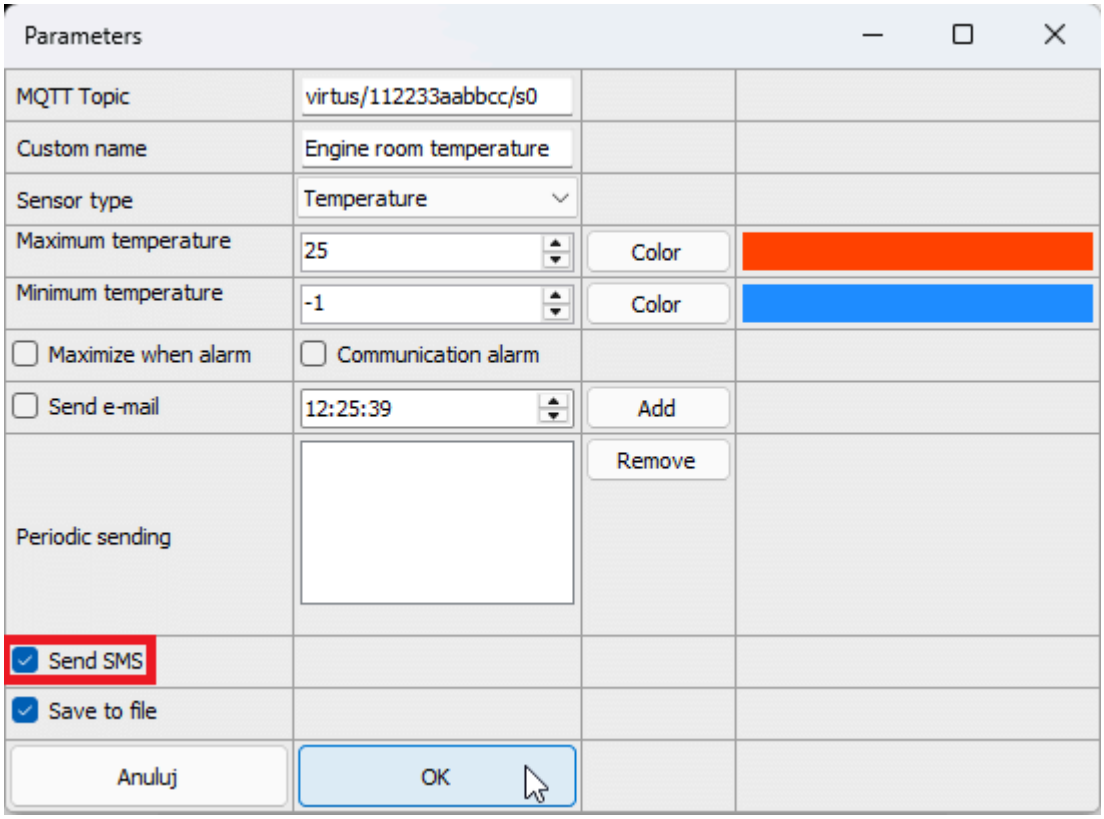
> **Tip**
>
> **The green status bar in the Logs sections indicates a successful write operation. The colour red apears when Inveo Monitoring can't write the file, for example while it's open.**



Sending data via SMS

Inveo Monitoring enables the sensor readings and alarm conditions to be sent via SMS (smsapi.pl).

1. In the **Devices** tab, open the sensor settings window by clicking its tile. Tick **Send SMS**.



2. In the **Settings** tab, fill the **SMS Api Configuration**.

- **Username**,
- **Password**,
- **Sender**,
- **Receiver**.

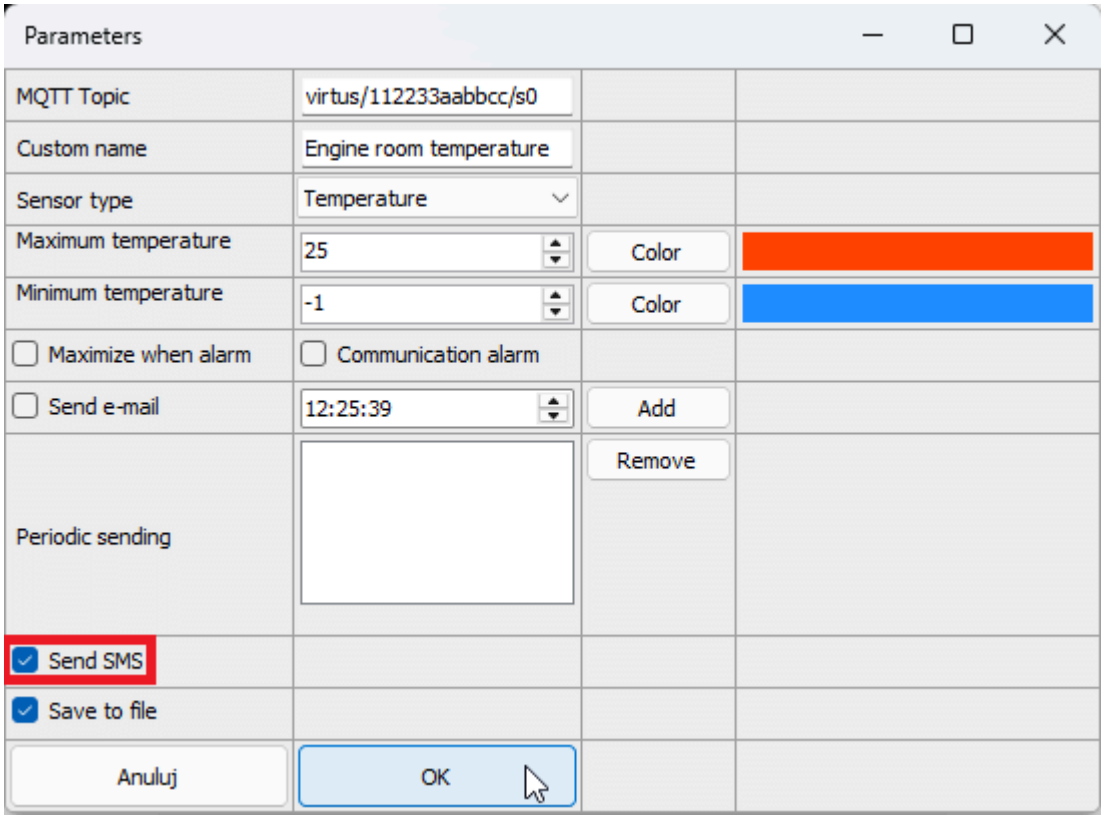
Clicking **Send test SMS** allows the user to verify the correctness of entered parameters by sending a test SMS.

Successful configuration will cause the program to send sensor readings and alarm notifications when they appear during the hours specified.

Sending data via e-mail

Inveo Monitoring enables the sensor readings and alarm conditions to be sent via e-mail.

1.In the **Devices** tab, open the sensor settings window by clicking its tile. Tick **Send email**.



2. In the **Settings** tab, fill the **Mail Configuration**.

- **Server** – Outbound SMTP server address,
- **Port**,
- **Username**,
- **Password**,
- **Receiver**.

Clicking **Send test e-mail** allows the user to verify the correctness of entered parameters by sending a test e-mail.

Successful configuration will cause the program to send sensor readings and alarm notifications when they appear during the hours specified.