

OPERATION & SAFETY MANUAL



! WARNING

These instructions are for your personal safety. Always ensure that you have read and understood these instructions before using the equipment.

SAVE THESE INSTRUCTIONS FOR FUTURE REFERENCE.

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To watch demonstration videos, take an e-learning course, or to download an electronic copy of this document, please visit www.picoteinstitute.com. Please note that videos and courses are not intended as a replacement or alternative to this Operating and Safety Manual, but only as an additional learning tool.

SAFETY INFORMATION

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WARNING

This section contains important safety information.
Failure to comply could result in serious injury or death.

Safety Symbols

Safety symbols are used throughout this manual to draw attention to potential hazards.



Danger risk of serious injury, follow instructions.

Personal Protective Equipment (PPE)

Safety symbols are used throughout this manual to draw attention to potential hazards.



Suitable eye protection to protect against possible debris when working with pneumatics.



Suitable ear protection to protect against hearing loss.

Operational Safety



1. **Always wear eye and ear protection.** Other personal protective equipment, such as dust mask, chemical resistant gloves and protective clothing should be worn when necessary.
2. Always follow the instructions in the Picote Solutions Operation & Safety Manual.
3. **Before each use** inspect the unit carefully for any potential damage. **Repair damaged parts immediately and before use.**
4. Do not open the lid of the Pressure Guard.
5. If the working environment is extremely hot and humid, or badly polluted by conductive dust, use a GFCI-enabled power outlet to ensure the safety of the operator.
6. Always check the mobile network connection quality prior to using the Pressure Guard.
7. Only use the Pressure Guard with the accessories and spare parts offered by Picote Solutions. Accessories and spare parts should only be used in the manner intended and as described by Picote Solutions.

WARNING

**This section contains important safety information.
Failure to comply could result in serious injury or death.**

ENVIRONMENTAL

Operational Ambient Temperature Range: -20°C to +60°C (-4°F to +140°F) frost and condensation free

Charge: Ambient Temperature Range: 0°C to +45°C (32°F to +113°F) frost and condensation free

Storage: Ambient Temperature Range: -20°C to +45°C (-4°F to +113°F) frost and condensation free

Maximum Altitude: 2000m or 6500 ft. Derate above 1000m or 3280 ft: 1% / 100m or 328 ft

Maximum Humidity: 95% non-condensing

TRANSPORT

The Pressure Guard should be transported covered to protect the unit from the elements.

STORAGE

The Pressure Guard should be stored indoors to protect it from rain and sunlight and somewhere with a constant ambient temperature. The best way to store the device is to use the box that the unit was shipped in. If the device has been stored in an environment colder than +10°C or 50°F, the device should be placed in an area at room temperature for 24 hours before use. If the device has been stored for long periods of time (over 2-3 months), it should be checked and tested before use. Charge the device battery to around 80% capacity before storing for long periods.

DISPOSAL

Pressure Guard electronics and charging cable can be disposed of in Europe at Waste Electrical and Electronic Equipment (WEEE) collection points. The shell can be disposed of as plastic waste.

Always follow local waste handling rules and regulations.

Recycle Li-ion batteries according to local regulations.

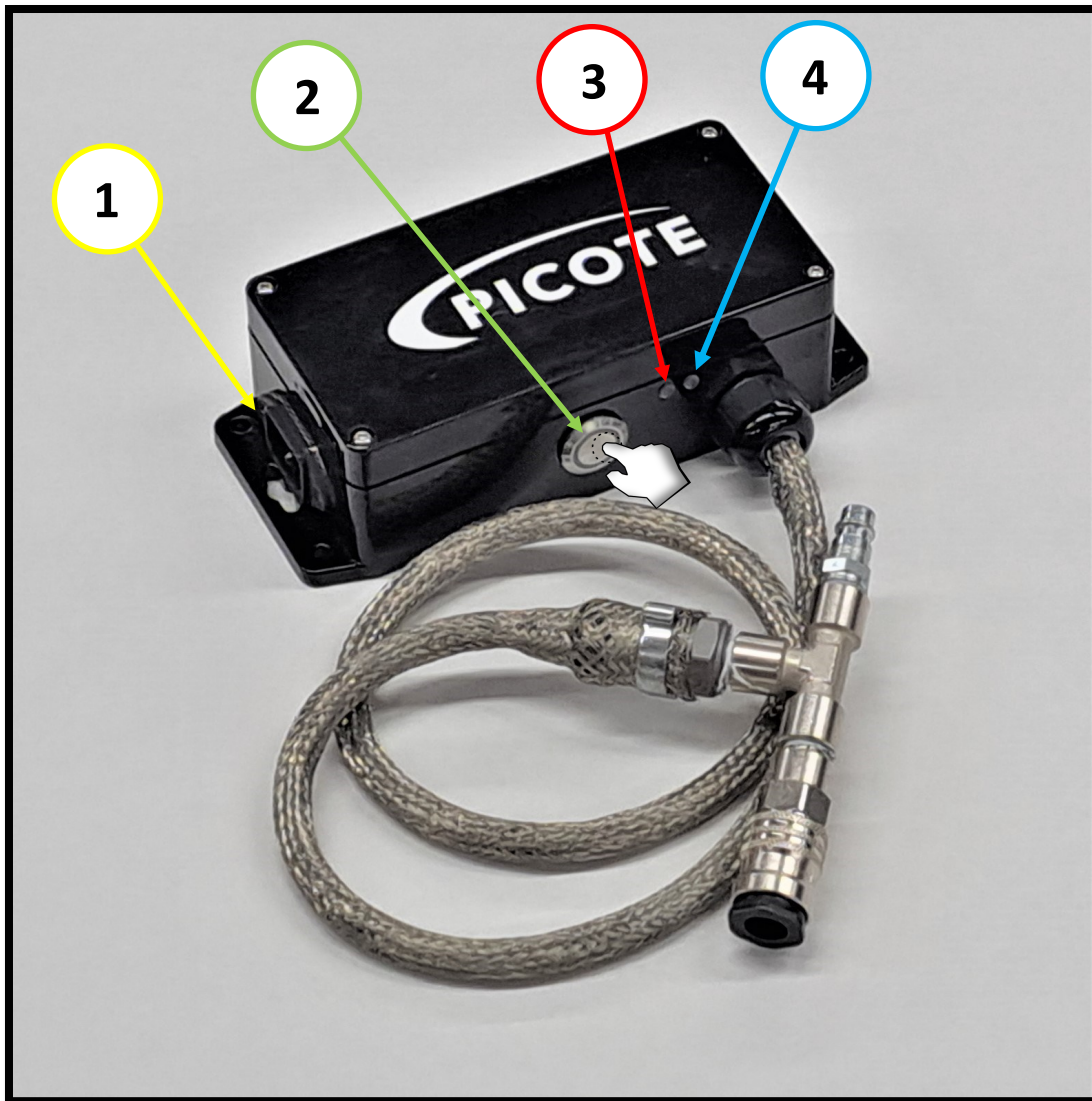
Do not dispose of in fire! Do not puncture!

DEVICE FEATURES AND FUNCTIONS

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The Pressure Guard is designed to monitor, log and notify the user of pressure, temperature and network power in CIPP environments.


1. C14 Charging port. Connect to outlet for charging and for monitoring network power.
2. Toggle switch. Press to turn on. Depress to turn off. Depress, then press to reset reference values.
3. Charging indicating LED. LED off = Not connected to power. LED glows **RED** = Battery charging. LED glows **GREEN** = Battery fully charged.
4. Network activity LED. **BLUE** flash every 1 second = Searching for network. **BLUE** flash every 5 seconds = Registered to network. LED glows **BLUE** = Transmitting over network. **RED** flash = Fault in the device's sensor.




OPERATING INSTRUCTIONS

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1.1. Quick Start Guide

1 Download and install **Telegram** application on your mobile phone. <https://telegram.org> 


2 Scan the device specific **activation QR code** on the right with your mobile phone and open the link using a web browser.

WEB BROWSER 

3


- 1** **Device setup** -page will appear. Please select country code and add your **phone number**.
- 2** Now create your own six digit **PIN code** for your device and press the **NEXT** -button.


Now activate the **Main-IoT alarm service** by pressing the **ACTIVATE MAIN-IOT BOT** -button and opening the link with the **Telegram** application.

TELEGRAM 

4 This will take you to **Main-IoT bot** in **Telegram**. Now please do the following steps in order to activate the alarm service for the device.

- 4** Press **START** button
- 5** Press **ACTIVATE SERVICE** button
- 6** Press **OK** to share your phone number with the bot

PRESSUREGUARD 

5 Now press down the **power button** on the side of the device. Device will now register to network (*this may take several minutes*). When status message appears on the **Main-IoT bot** in **Telegram** the device is ready for use! 

Device setup 1/2 EN

Activate the device by adding a phone number and PIN code for superadmin.

PHONE NUMBER

1 +1

PIN CODE

Create a six-digit PIN code. Keep the code in safe place!

2 create a PIN code

NEXT

Device setup 2/2 EN

Phone number: (XXX) XXX-XXXX

Please confirm the phone number and activate Main-IoT alarm service in Telegram application.

3 **ACTIVATE MAIN-IOT BOT** **BACK**

4 **Start**

5 **ACTIVATE SERVICE**

Share Your Phone Number?

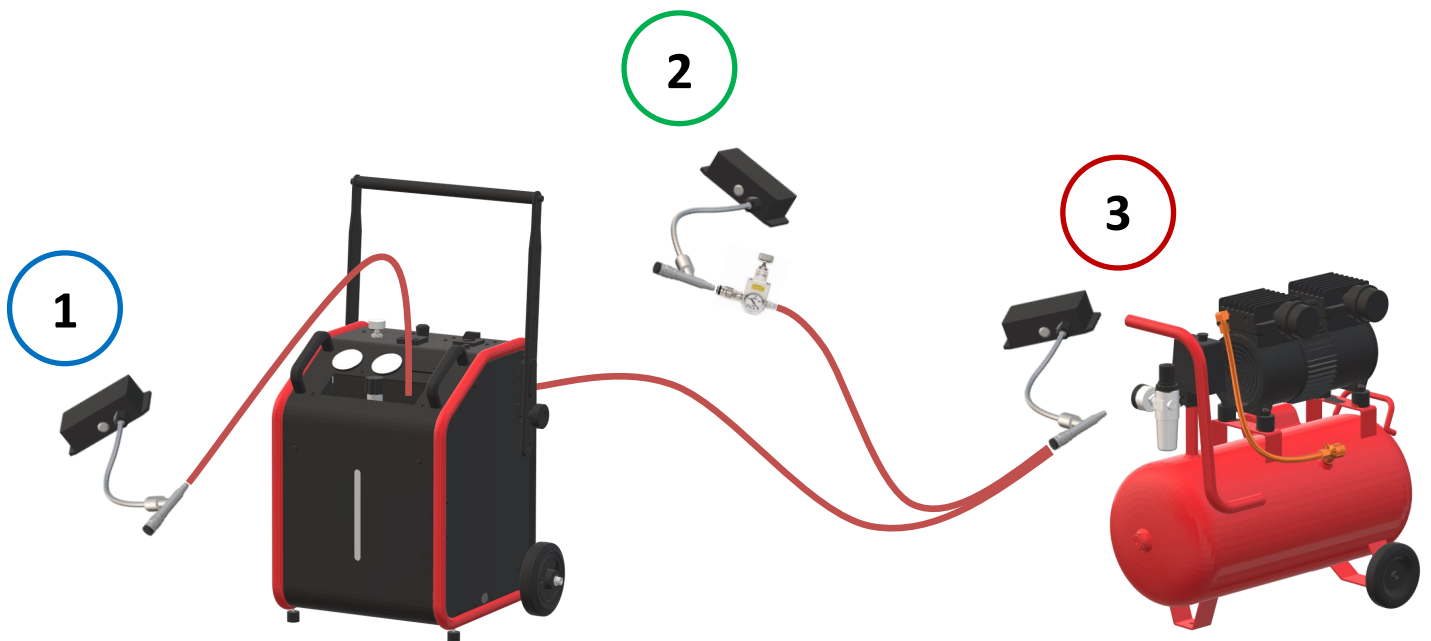
The bot will know your phone number. This can be useful for integration with other services.

Cancel **OK** **6**

1.2. How to use the Pressure Guard

By default the Pressure Guard has limits set from -50% to $+100\%$ for pressure, and -20% to $+20\%$ for temperature. It sets the limits from the pressure and temperature it senses when you turn on or reset it. The Pressure Guard can be used with the default settings only or you can change the settings in the browser UI, Main-lot. See section 3.7 on page 19.

1. You can connect the Pressure Guard in line with the Steamer's outlet hose and any tool, to monitor the pressure and temperature of the installation. If you connect the Pressure Guard's charging cord to the same outlet as the Steamer, it additionally monitors power supply to the Steamer.
2. You can connect the Pressure Guard in line with pressure regulator and any tool to monitor the pressure for that installation.
3. You can connect the Pressure Guard in line after the compressor to monitor compressor pressure. If you connect the Pressure Guard's charging cord to the same outlet as the compressor, it additionally monitors power supply to the compressor.



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2. Communications, Mobile Network

To use the device, the user must have a mobile phone (Android or IOS).

The Pressure Guard is a radio device that operates on the global LTE-M networks of commercial telecom operators. The networks are operated by local telephone operators. The coverage of the device depends on the coverage of the networks. Please note that environmental factors such as thick concrete structures may affect coverage, so it is advisable to verify coverage in a new location.

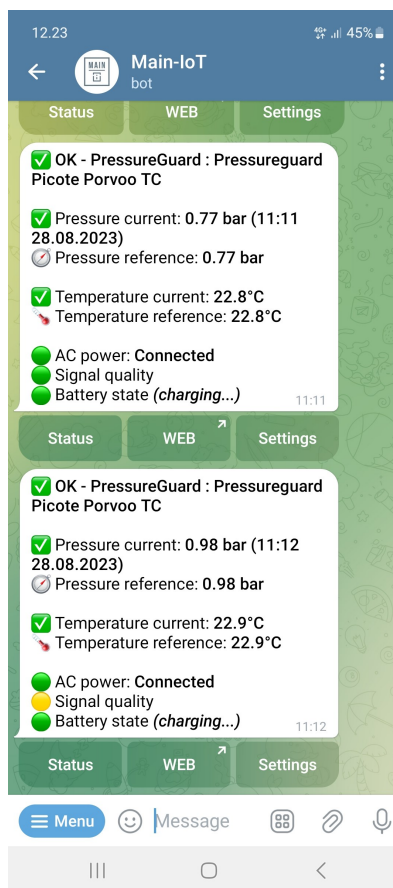
When a limit is exceeded to trigger an alarm, the Pressure Guard calls and sends a Telegram notification to the users.

Via Telegram, users can communicate with the Pressure Guard.

Via the Main-IoT User interface in a web browser, the users can look up data history, change settings and locate the Pressure Guard.

2.1. Telegram App

The Telegram App is a cloud-based, fast and secure messaging app that allows the user to communicate with an electronic device. The app can be downloaded on Google Playstore for Android or on Apple App Store for IOS and on www.telegram.org for mobile and desktop devices.



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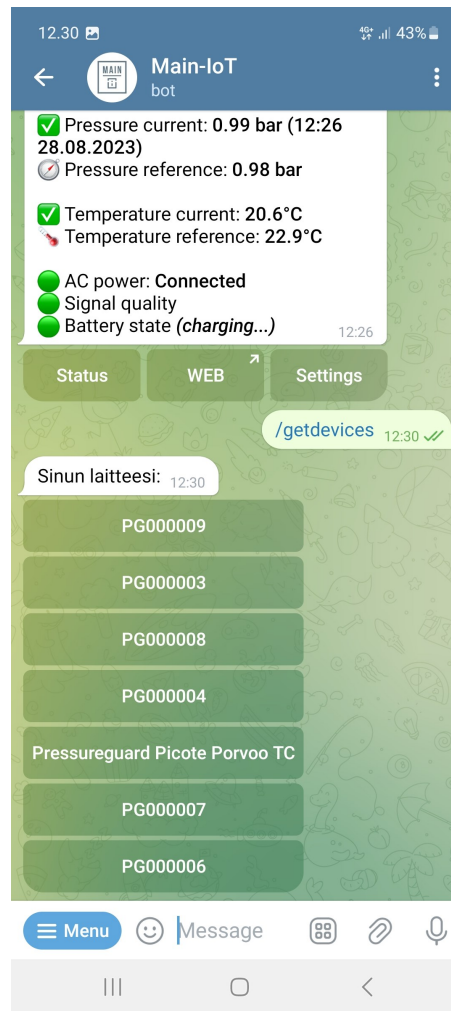
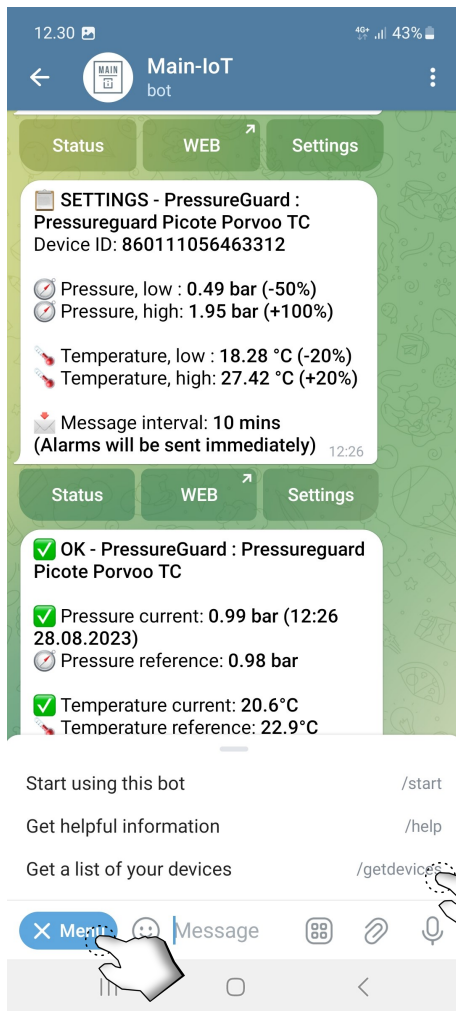
SAVE ALL WARNINGS AND INSTRUCTIONS FOR FUTURE REFERENCE

2.2. Telegram, Menu

When the service has been activated, you can access the menu. To open up the menu click the "Menu"-button in the lower left corner of the screen. On some mobile phones, this button may have three bars instead of a menu.

Via the menu you can access a list of devices your phone number is linked to.

Telegram will list all available devices. By clicking on a device, you can communicate and access that device.



OPERATING INSTRUCTIONS

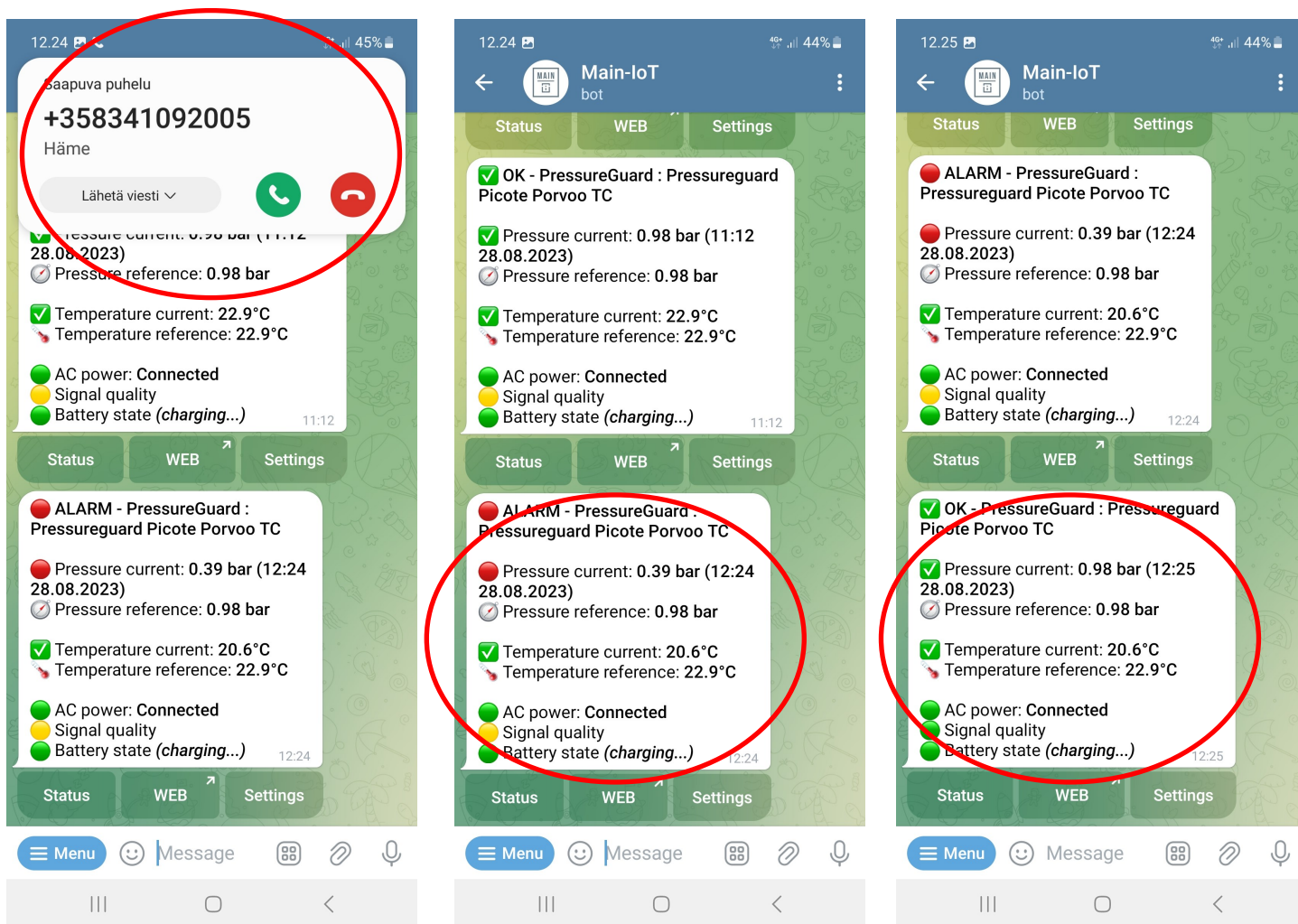
SAVE ALL WARNINGS AND INSTRUCTIONS FOR FUTURE REFERENCE

2.3. Telegram, Alarms

If the Pressure Guard senses a value that exceeds the allowed threshold values set by the user, it will send an alarm via Telegram and call the phone numbers linked to the device.

The alarm in Telegram will display the state, and highlight the reason for the alarm.

When the situation has returned to normal, the users will receive a Telegram message notifying that all values are inside set threshold values.



OPERATING INSTRUCTIONS

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2.4. Telegram, Commands

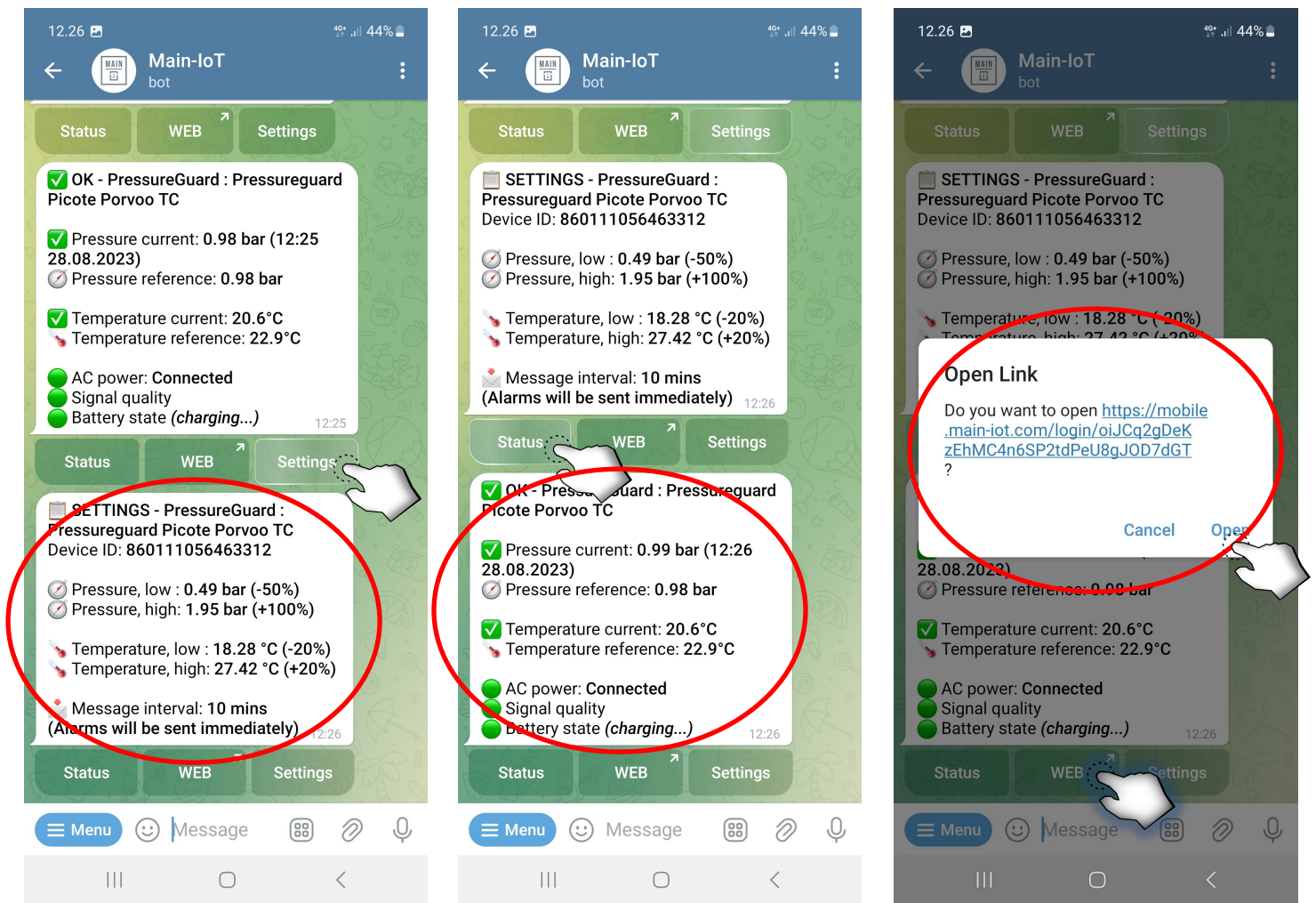
You can ask for current settings or status by pressing the command buttons attached to each message.

The setting will display currently set parameters and threshold values for the device.

The status will display latest data that the device has communicated to the servers. This communication happens every ten minutes, except for alarms, that are near instant.

By pressing the button that says "WEB", Telegram will display a popup that prompts you to access the web browser set User Interface. By clicking the link, or by pressing "Open", a new window in a web browser will open.

You will land on the "DATA" tab of the interface. See section 2.2.2 on page 13.



3. UI, Browser user interface, Main IOT-Service

Main IoT Mobile is a web-based interface that allows users to remotely connect to Main-IoT enabled devices. The service allows you to set and adjust limits using a smartphone or a computer, and add up to ten (10) phone numbers to your device for Telegram pressure alert notifications. Three (3) of these optional phone numbers will also receive an alarm call. The user interface makes it easy and convenient to control the equipment from anywhere, at any time. The service provides real time information and visualisations of the status of the connected Main-IoT devices.



Main-iot.com

OPERATING INSTRUCTIONS

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3.1. UI, Navigating User Interface, Data, Settings, Devices

The User Interface has three tabs: Data, Settings and Devices. You can access each tab by clicking on the text in the upper part of the screen, as shown in the examples below.

For more information on the Data Tab, see section 3.3 and 3.4 on pages 15-16.

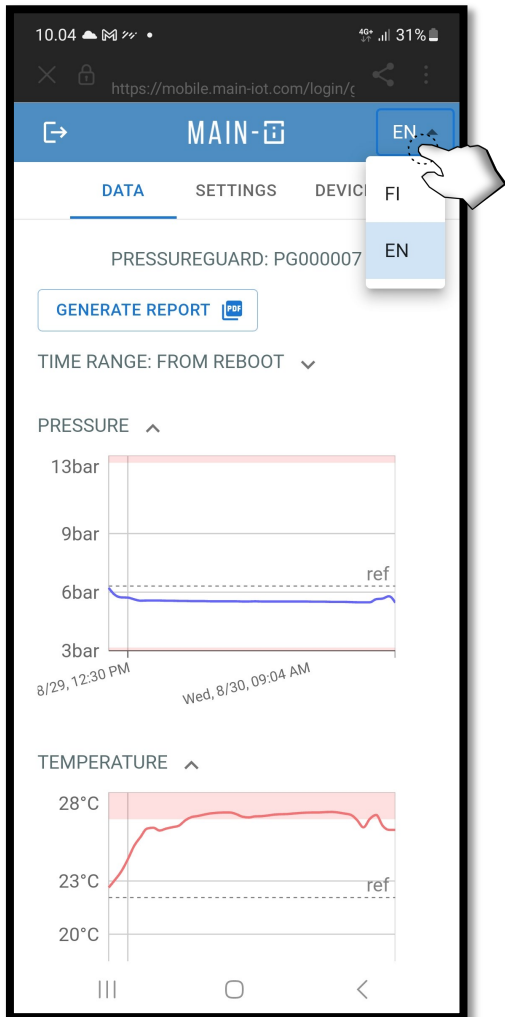
For more information on the Settings Tab, see section 3.5 to 3.10 on pages 17-22.

For more information on the Devices Tab, see section 3.11 on page 18.



3.2. UI, Changing Language

You can change the language of the interface by clicking on the dropdown menu in the upper right corner of the interface. The selected language will be used in the web browser User Interface and in Telegram.



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3.3. UI, Retrieving and Interpreting Data History

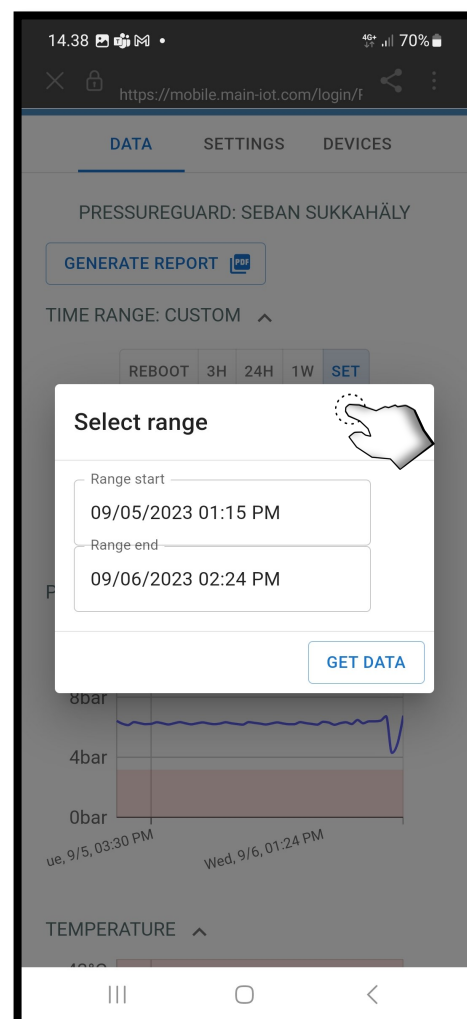
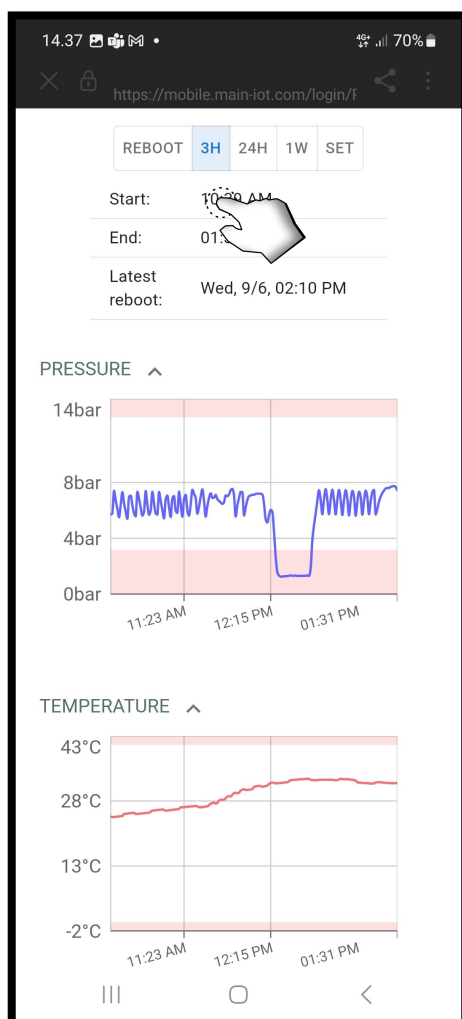
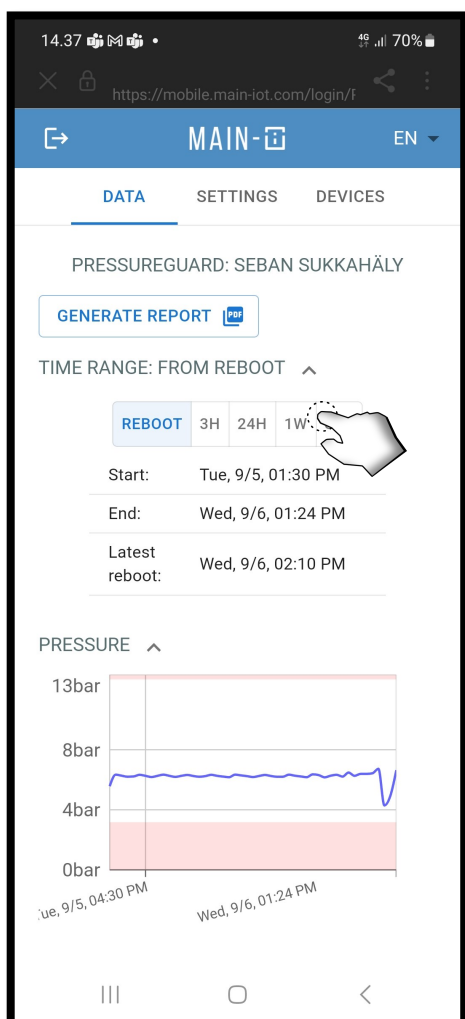
The sensor data from your Pressure Guard is stored on Main-lot servers. You can access the data as long as you have the Pressure Guard active.

By pressing on the "Time Range" drop down menu, you can choose from Reboot, 3H, 24H, 1W and Custom Data sets.

"3H" will display measured sensor data for the latest 3 hours, "24H" will do the same for the latest 24H.

"1W" will display the latest 1 week. "Reboot" displays the measured sensor data since the device was last turned on or reset. There is no upper limit.

"Set" will prompt you for a range. Clicking "Get Data" will retrieve that period from the servers for display.



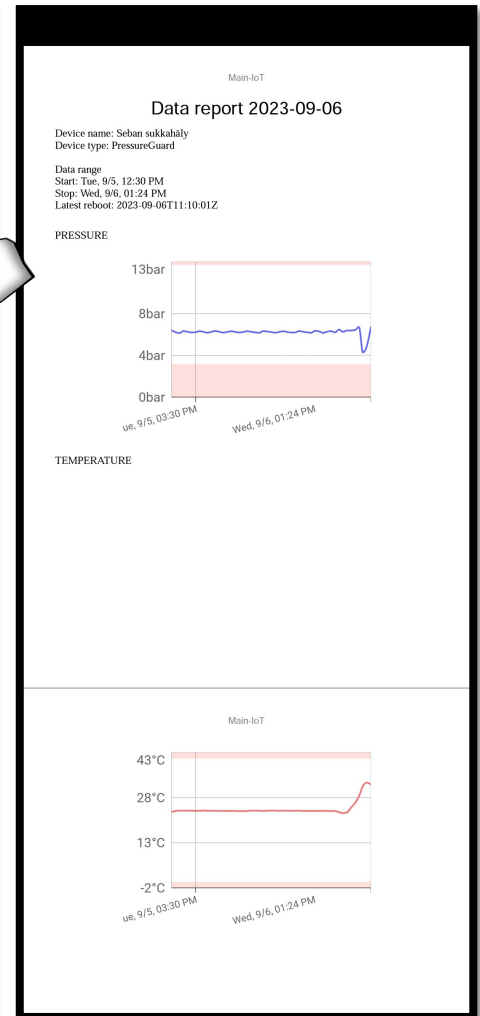
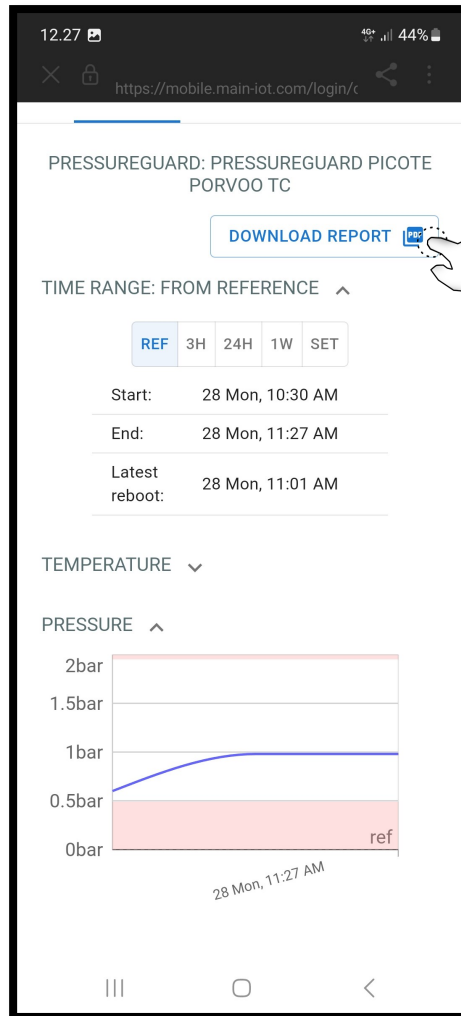
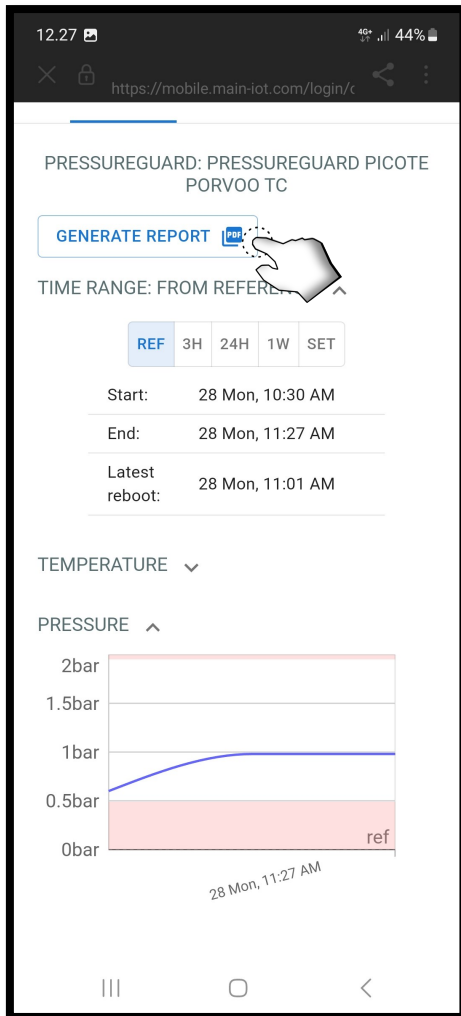
OPERATING INSTRUCTIONS

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3.4. UI, Creating and Downloading Data History Report

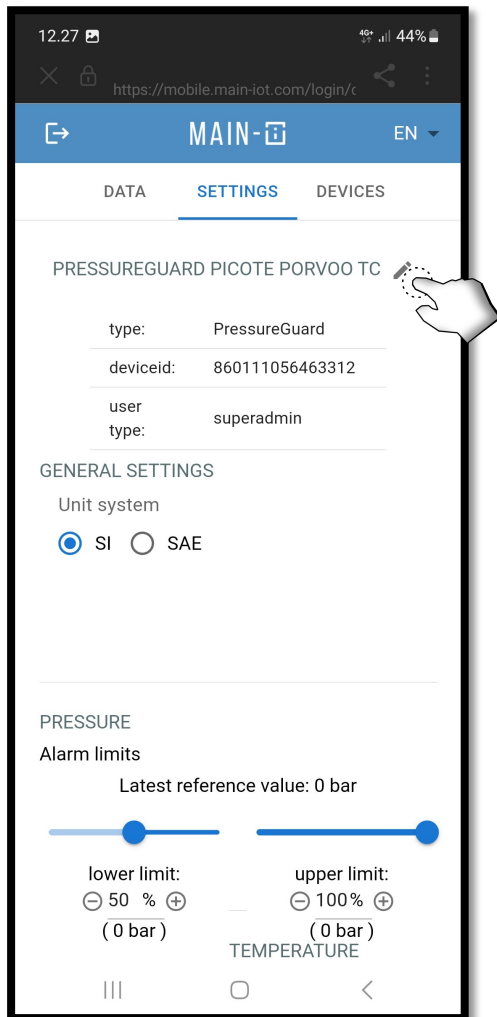
You can export a PDF report of your currently displayed data history set.

Click on the **"Generate Report"** button. The server will prepare your report. You can then click on **"Download Report"** to download a PDF report. The report contains information about the device, time range and measured sensor data.



3.5. UI, Changing the Name of the Device

You can change the displayed name for your Pressure Guard by clicking on the **pencil** symbol next to the current name, on the Settings tab.

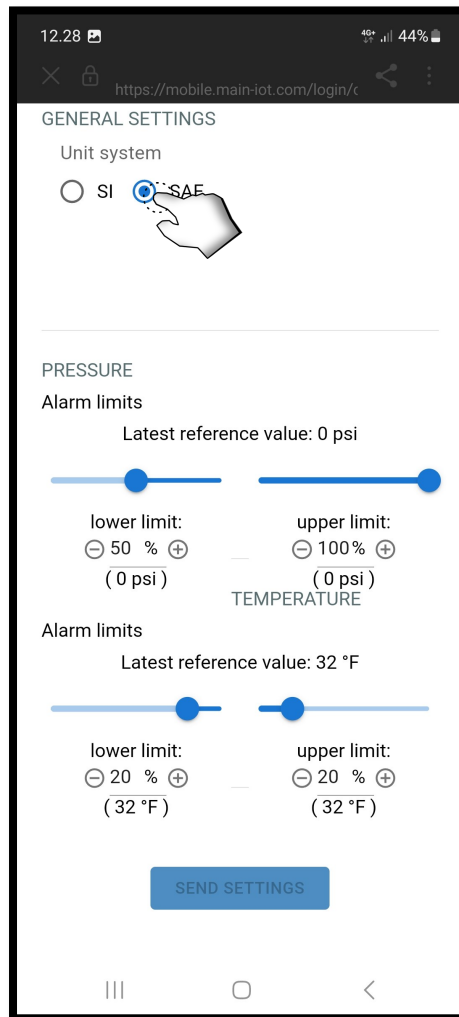
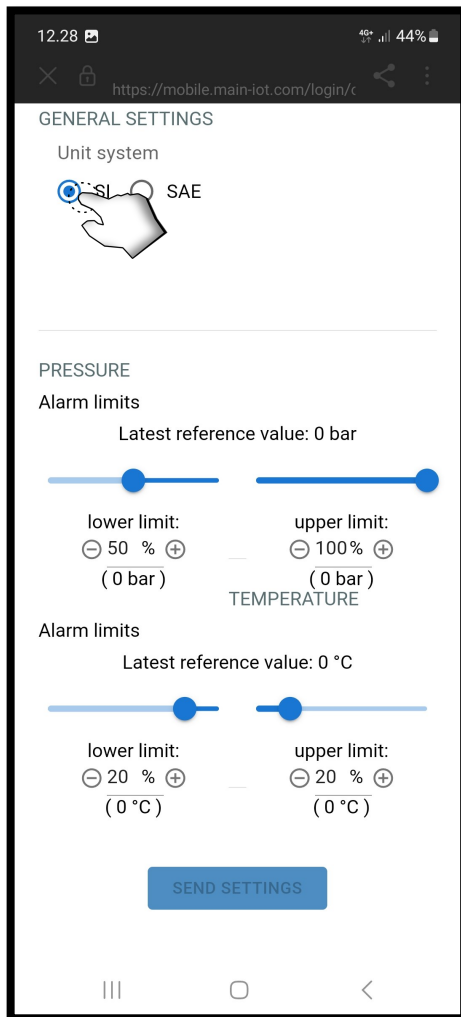


3.6. UI, Changing values between Metric and Standard American English

You can change the displayed values by clicking on the check marker next to the desired system on the settings tab. You have a Metric and a Standard American English option to choose from.

SI will display Bar and Celsius.

SAE will display PSI and Fahrenheit.

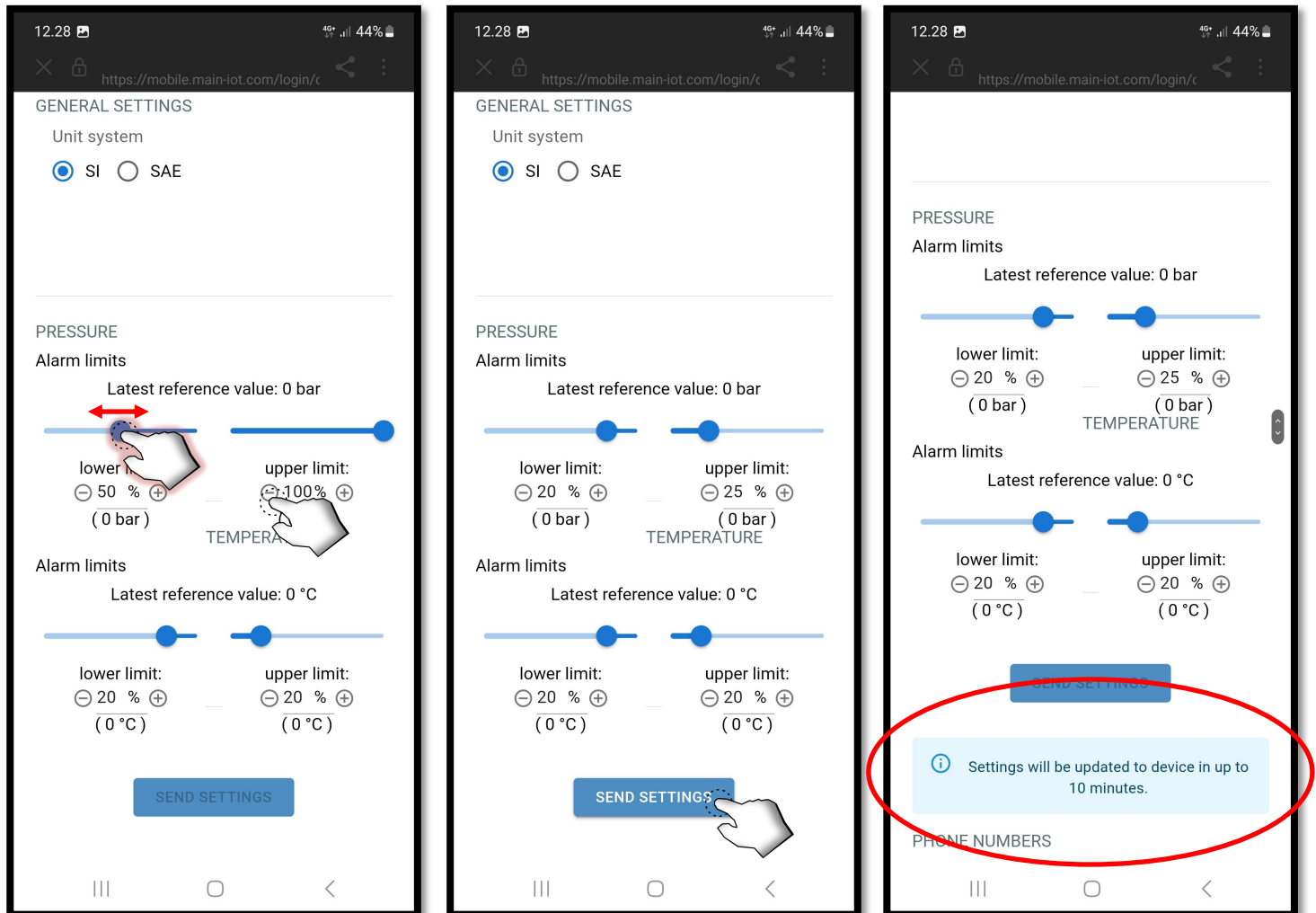


3.7. UI, Changing Alarm Treshold Settings

You can change the alarm thresholds by adjusting the sliders or by writing in the desired percentage.

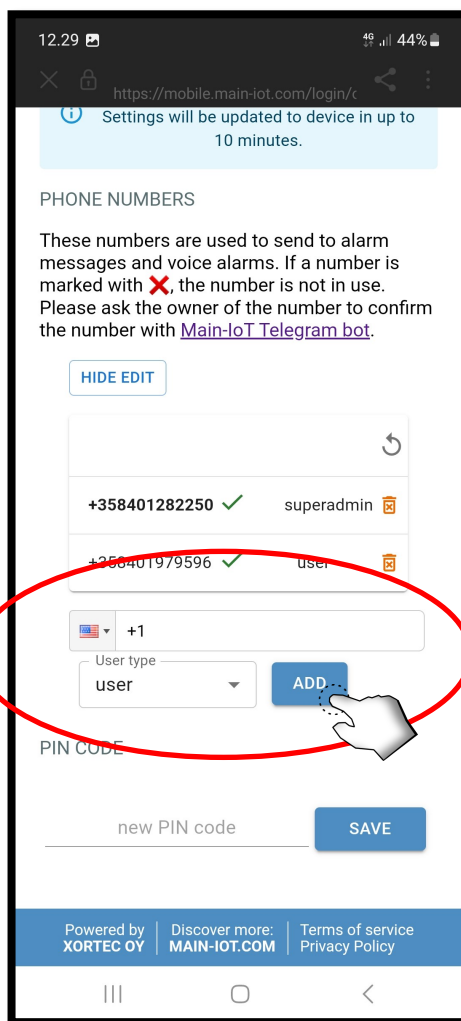
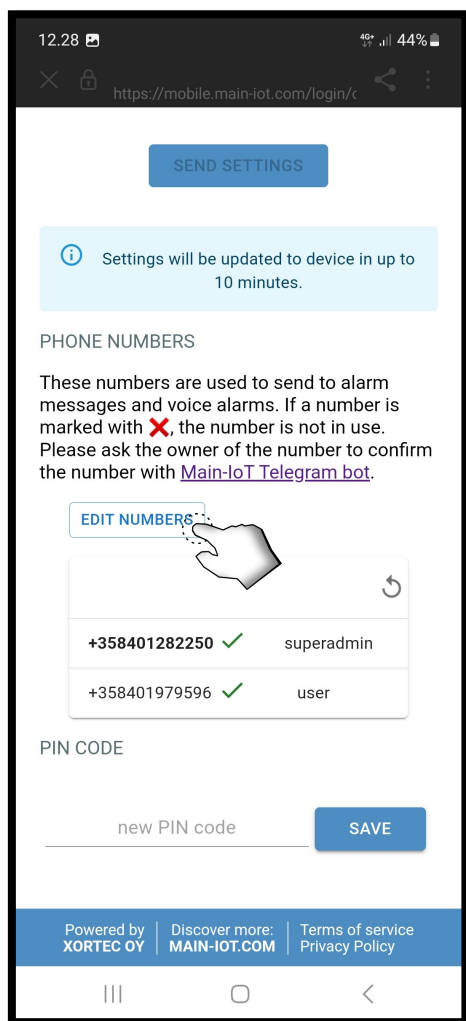
When you are satisfied with the changes, click "Send Settings" to send the new setting to your device.

The new settings will be set the next time the device contacts the server.



3.8. UI, Editing Phone Numbers

You can add up to ten (10) phone numbers that will receive alarms and notifications. Each recipient must have the Telegram app and have activated the Main-IoT service in Telegram. Three (3) of these numbers can get a call when an alarm is triggered.

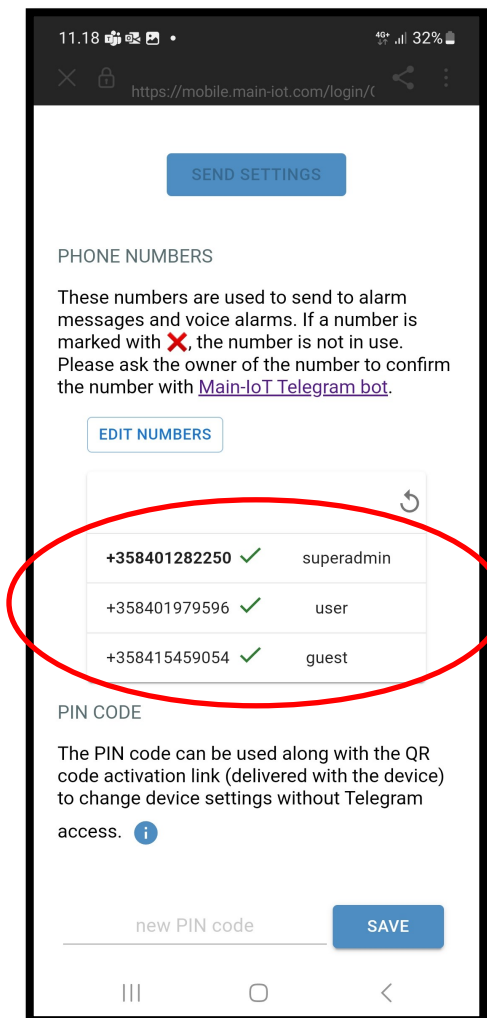


3.9. UI, User Classes and Rights

There are four classes for users.

The superadmin class is given to the phone number that activated the device via the QR-code on the Quick Start Guide supplied with the Pressure Guard.

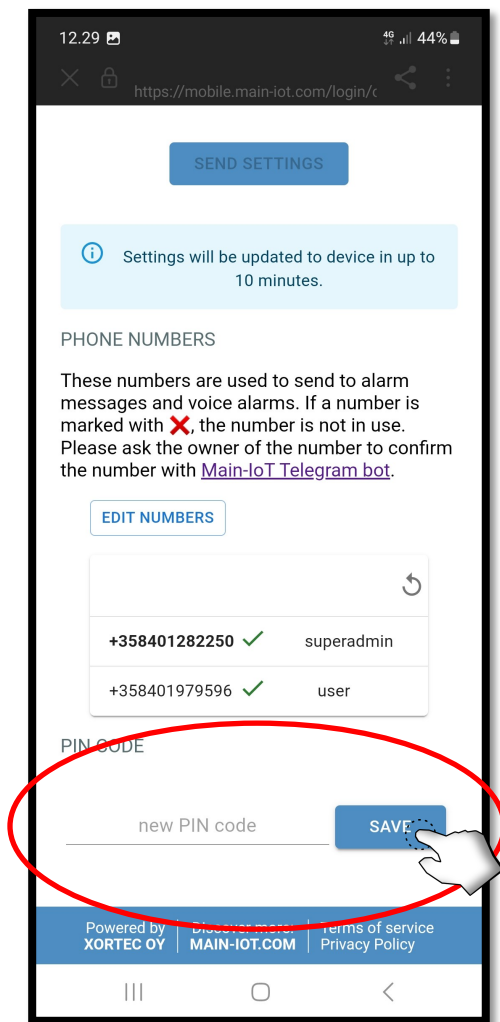
- Can change pin code: **Superadmin**
- Can add phone numbers: **Superadmin, Admin**
- Can remove phone numbers: **Superadmin, Admin** (Exc.superadmin), **User** (Only own number)
- Can change alarm limits: **Superadmin, Admin, User**
- Can access data history: **Superadmin, Admin, User, Guest**



3.10. UI, Changing the Pin Code

The pin code can be changed by the superadmin.

Enter a new pin and click "SAVE". The user interface will prompt you for the previous pin.



OPERATING INSTRUCTIONS

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3.11. UI, Device list, Device Menu and Device Location

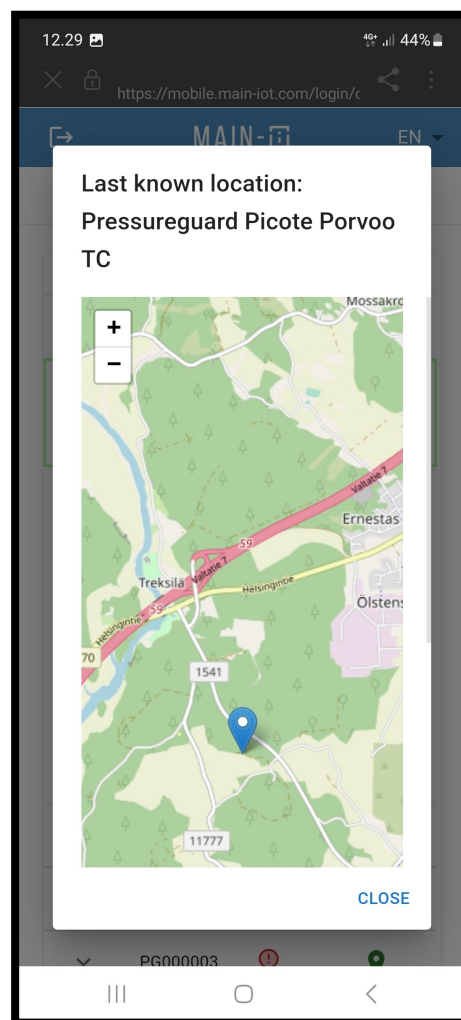
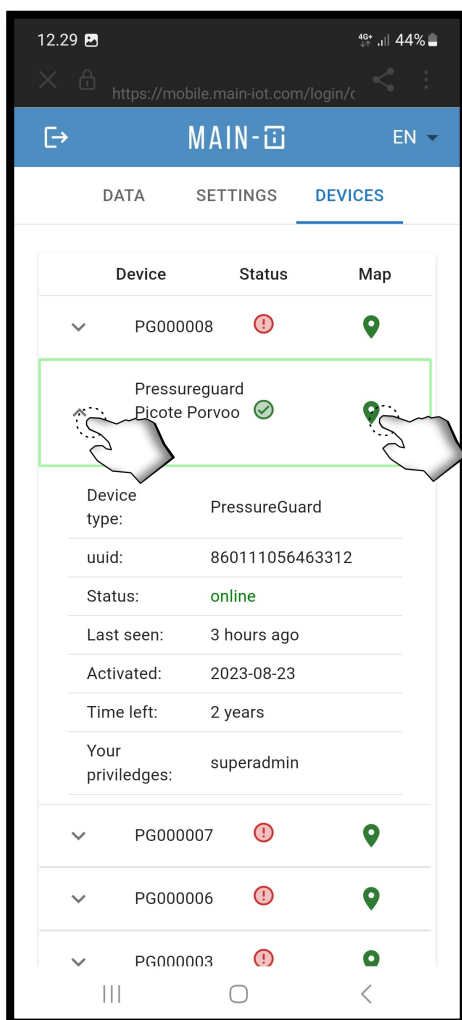
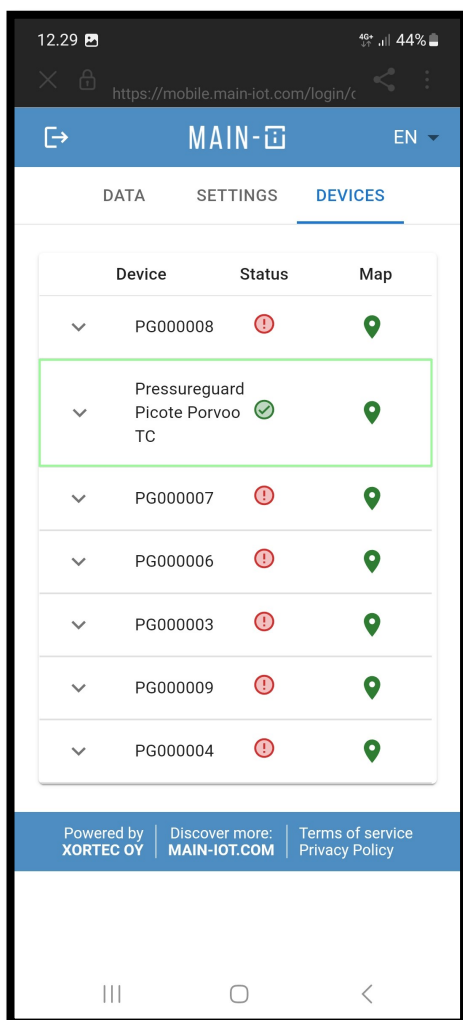
On the Devices tab you get a list of all the Pressure Guards that have your phone number registered.

Additional information - Active time left

Clicking on the arrow on the left of the name displays additional info about the device, such as IMEI, current status, last seen, when the service was activated, how much active time is left, and your user class for the device.

Location

When you click on the location pin to the right of the device's name, you get a popup with a map for the last known location of the device. The location is based of cell tower triangulation. Accuracy varies between 500m-1,500m (1,640-4920 ft)



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4. Device Recovery

If the Pressure Guard can no longer be accessed by the numbers it has registered, you can reconnect to it by scanning the QR-code on the Quick Start Guide supplied with the Pressure Guard. If the Quick Start Guide has been lost, there is a backup QR-code inside the Pressure Guard on the inner side of the lid.

The Pressure Guard will then prompt for the PIN that the superadmin has set.

If the PIN has been lost, the device can only be reset by Main-lot. To recover a PIN-locked Pressure Guard, the owner of the Pressure Guard must contact their Picote reseller.

Change of ownership can be done by removing the superadmins phone number from the device. After that the new owner must scan the Pressure Guard's unique QR-code, and follow the steps in the Quick Start Guide.

5. Maintenance

Before each use:

- Check that the shell of the Pressure Guard is intact and in good shape.
- Check that the fittings are clean and intact.
- Check that the electromagnetic protection on the sensor cord is intact.
- Check that the pressureGuard lid is not excessively hot. Excessive heat could mean a failing battery.
- **Under no circumstances use the Pressure Guard if one or more of the above fails check.**

After each use:

- Clean the Pressure Guard thoroughly. Do not rinse with water.
- Store the Pressure Guard in a dry environment

6. Product Numbers, Accessories and Spare Parts

Product number	Description	Detail
6100000040	Picote Pressure Guard EU	Supply Cable EU and STD EU air connectors
6100000040AU	Picote Pressure Guard AU	Supply Cable AUS and STD EU air connectors
6100000040UK	Picote Pressure Guard UK	Supply Cable UK and STD EU air connectors
6100000040US	Picote Pressure Guard US	Supply Cable US and STD US air connectors
900002312	Supply Cable EU	Type F - C13
9540004037	Supply Cable UK	Type G - C13
9540004038	Supply Cable US	Type B - C13
900002311	Supply Cable AUS	Type I - C13

CE DECLARATION OF CONFORMITY

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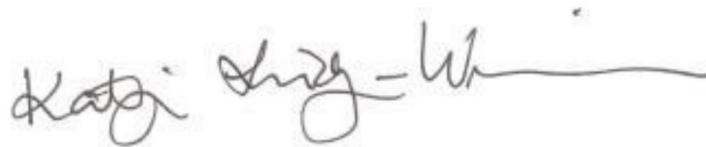
We Picote Solutions Oy Ltd as the responsible distributor, declare that the following Picote Solutions Oy Ltd / Xortec Oy monitoring device:

Pressure Guard Model No: 6798

is of series production and are in compliance with **Directive 2015/863/EU** of the European Parliament and of the Council of 4 June 2015 of the restriction of the use of certain hazardous substances in electrical and electronic equipment's (RoHS Directives) and **Directive 1999/45/EC** and repealing **Council Regulation (EEC) No 793/93** and **Commission Regulation (EC) No 1488/94** as well as **Council Directive 76/769/EEC** and **Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC** of the European Parliament and of the council of 18 December 2006 concerning the Registration, Evaluation, Authorization and Restriction on of Chemicals (**REACH 08-Jul-2021**). The stated product families/part numbers are deemed to be compliant as per definitions given in the directives.

The technical documentation is kept by our authorised representative in Europe who is:

Picote Solutions Oy Ltd, Pienteollisuustie 24
06450 Porvoo, Finland
11th September 2023



Katja Lindy-Wilkinson
C.E.O.
Picote Solutions Oy Ltd

WARRANTY POLICY & PROCEDURE

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Limited Warranty:

Picote warrants to the original End User that the Product purchased by such End User will operate in accordance with, and substantially conform to their published specifications when shipped or otherwise delivered to the End User and for a period of one (1) year, except electric motors and batteries for which the warranty period shall be six (6) months, provided, however, that Picote does not warrant any claim or damage under this Warranty if such claim or damage results from:

1. Consumable parts or normal wear and tear resulting from use of the Products,
2. Regular periodic maintenance of Products,
3. Misuse, neglect, or improper installation or maintenance of the Products, or use of Products not for their intended purpose,
4. Products that have been altered, modified, repaired, opened or tampered with by anyone other than Picote or an authorized Picote Service Centre, or unsuitable or unauthorized spare parts, accessories or third party products when using the Products or;
5. the use of the Products not in compliance with their respective Documentation, user manuals, safety and maintenance instructions, and any usage restrictions contained therein, or
7. accident, fire, power failure, power surge, or other hazard.

Otherwise, the Products are sold AS IS. End User is responsible for using the Products within their specifications and instructions as contained in the Documentation.

EXCEPT AS SPECIFIED IN THIS WARRANTY, ALL EXPRESS OR IMPLIED CONDITIONS, REPRESENTATIONS, AND WARRANTIES INCLUDING, WITHOUT LIMITATION, ANY IMPLIED WARRANTY OR CONDITION OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, NON INFRINGEMENT, SATISFACTORY QUALITY OR ARISING FROM A COURSE OF DEALING, LAW, USAGE, OR TRADE PRACTICE, ARE HEREBY EXCLUDED TO THE EXTENT ALLOWED BY APPLICABLE LAW. TO THE EXTENT AN IMPLIED WARRANTY CANNOT BE EXCLUDED, SUCH WARRANTY IS LIMITED IN DURATION TO THE WARRANTY PERIOD. BECAUSE SOME STATES OR JURISDICTIONS DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, THE ABOVE LIMITATION MAY NOT APPLY. This disclaimer and exclusion shall apply even if the express warranty set forth above fails of its essential purpose.



Please Contact:
Your Reseller / Salesperson or Picote

www.picotegroup.com



International Offices

Finland. United Kingdom. USA.

Technical Support

support@picotesolutions.com

Production & R&D

Pienteollisuustie 24
06450 Porvoo, Finland
support@picotesolutions.com

E-Learning

Free Connection Collar 2.0 - Equipment
101 E-learning course is available at:
www.picoteinstitute.com

Claims

claims@picotesolutions.com

Authorised Resellers:

www.picotesgroup.com/resellers

Revision number: Rev. 3

Date: Oct 12, 2023

Author:

Accepted: