OPERATING INSTRUCTIONS

WPM GATEWAY IOT

2480.00.91.42

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In the German language, this document is the original version in the EU language of the manufacturer and is labelled with the German national flag.

In the language of a country of use, this document is a translation of the original version and labelled with the national flag of the country of use.

This document is referred to as "instructions" in the following text.

Number of pages in this manual including the title page: 76

These instructions are valid for the product

2480.00.91.42

WPM Gateway IoT

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Contents

1 INTRODUCTION

Read through these instructions carefully before use and store them.

These instructions contain the following important information on the product:

- Proper use
- Safety
- Mounting
- Use
- Maintenance
- Disposal

Proper use also involves

- Reading these instructions
- Complying with the safety information they contain
- Complying with the applicable documents
- Complying with the maintenance requirements

Give these instructions to the user after mounting is complete, and give them to the new owner if the product is sold.

1.1 Intended use

The product WPM Gateway is part of a WPM System.

A WPM system is a customer-specific combination of hardware and software for wireless pressure monitoring .

In the following text of these instructions, the product WPM Gateway is referred to as IoT device.

On the IoT device, the WPM software is installed, which only works in conjunction with the associated components.

With the product WPM Gateway, active WPM pressure sensors and data holders in the receiving area of the Gateway can be identified, observed and evaluated or re-parametrised with the corresponding Professional authorisation level.

Any other use of the product WPM Gateway is considered improper.

1.2 Disclaimer of liability

FIBRO GMBH guarantees the described function of the product as stated in advertising and product information.

Further product properties are not confirmed. FIBRO GMBH assumes no liability for efficiency and flawless functioning if the product is used for a purpose other than the one addressed in the chapter “Proper use”. Compensation for damage is generally precluded.

If this product is used in environments for which it is not suitable or which do not fulfil the technical standards, FIBRO GMBH shall not be held responsible for the consequences.

FIBRO GMBH assumes no liability for damage to facilities and systems near the product caused by a defect in the product or an error in these instructions.

FIBRO GMBH is not responsible for the violation of patents and/or the rights of third parties outside of the Federal Republic of Germany.

FIBRO GMBH is not responsible for damage caused by improper operation and failure to follow the instructions provided in this document.

FIBRO GMBH is not liable for lost profit and subsequent damage resulting from failure to comply with safety and warning notes.

The products from FIBRO GMBH are state of the art in science and technology.
FIBRO GMBH continually conducts studies of the products and the market in order to continually improve and further develop its products.

1.3 Purpose of the document

These instructions describe the operation of the product and contain important information on correct use.

Read these instructions before working on or with the product. The instructions contain important information for your personal safety. All persons who work on or with the product at some phase in the product’s life must read and understand the instructions.

The instructions must be available at the location where the product is used and throughout its entire lifespan. They must be given to the new owner if the product is sold.

The safety notes in the individual chapters must be observed.

These instructions and the other applicable documents are not subject to an automatic change service.

We reserve the right to make changes to the data and figures mentioned in these instructions due to technical developments. FIBRO GMBH can supply the current issue.

1.4 Target group

These instructions are oriented towards persons who commission, configure, operate and maintain the product WPM Gateway.

1.5 Autor's rights

The technical state at the time of the delivery of the product WPM Gateway and the associated instructions shall be decisive if no other information is provided.

We reserve the right to make technical changes without giving special notice. Earlier instructions shall lose their validity. The general sales and delivery conditions of FIBRO GMBH apply.

2 SAFETY

2.1 Safety instructions

These instructions contain safety notices intended to draw attention to possible dangers that should be observed to prevent injury.

The pertinent text describes

- the type of danger
- the source of danger
- the options for preventing injuries
- the consequences in case of non-observance of the warning notices

The safety instructions are emphasised by a colour signal bar with warning triangle and signal word.

The signal bars have the following meaning:

DANGER!

A safety notice on a red signal bar with the signal word DANGER designates a hazard with a high risk level which, if not avoided, will result in death or severe injury.

WARNING!

A safety notice on an orange signal bar with the signal word WARNING designates a hazard with a medium risk level which, if not avoided, might result in death or severe injury.

CAUTION!

A safety notice on a yellow signal bar with the signal word CAUTION designates a hazard with a low risk level which, if not avoided, could result in minor or moderate injury.

2.2 General instructions

In addition to the safety notices, these instructions contain information that must be observed to prevent property damage.

The pertinent text describes

- the possible reason for property damage
- the possibilities for preventing property damage

Notices of possible property damage are emphasised by a blue signal bar and the signal word *ATTENTION*.

NOTICE

Notices for the prevention of property damage are not related to possible injuries.

2.3 Protective measures

NOTICE

Protective measures against unauthorised access

If a service employee from FIBRO GMBH requires access to the Gateway for service and support, the following instructions regarding access to company networks must be observed:

- In order to access the web front-end of the FIBRO application, the service employee from FIBRO GMBH must access the network of the Gateway.
- In order to ensure that the service employee from FIBRO GMBH cannot access the rest of the company network, the Gateway should be disconnected from the network in this case and direct access should be established via network cable from the service employee's notebook to the Gateway.
- Alternatively, suitable Protective measures (firewall, network segments) must be taken to ensure that no unauthorised access can take place.

3 PRODUCT DESCRIPTION

3.1 Supplied components

The product consists of the components

- WPM Gateway
  - IoT device
  - Power supply unit
  - WPM software
- LAN cable
- Quick Start Guide

3.2 Properties

Product features

The product WPM Gateway is an IoT device.

The IoT device has the WPM software installed, which only works in conjunction with the associated components.

WPM software

With the WPM software active, WPM pressure sensors and data holders in the receiving range of the WPM Gateway can be identified, observed and evaluated or re-parametrised with the corresponding Professional authorisation level.

Connection possibilities

The WPM Gateway can be integrated into the IT infrastructure via various connection options.

In addition, the WPM Gateway supports various Industry standards
(OPC UA, EtherCAT, Profinet) for connecting external devices.

3.3 Interfaces and LED indicators

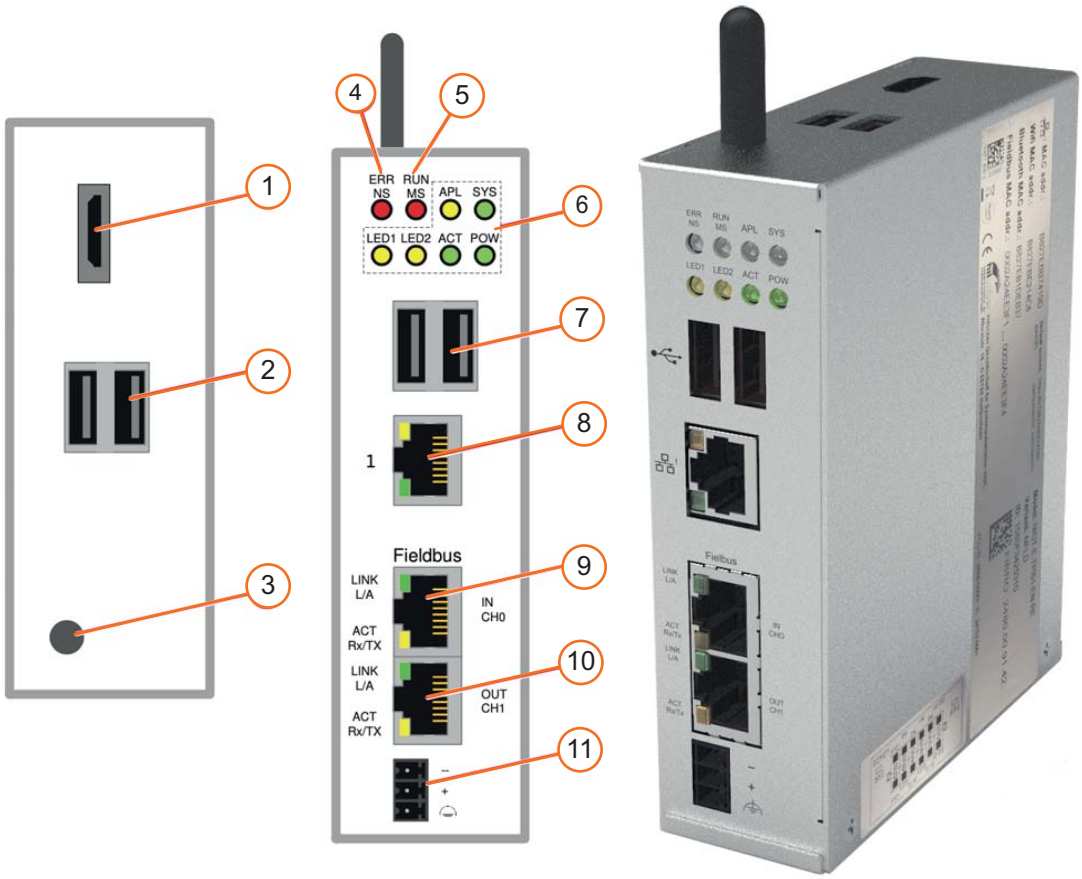
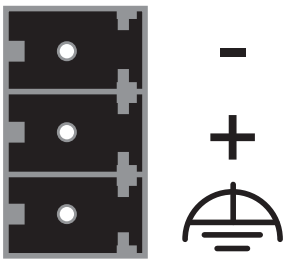


Fig. 3-1 Interfaces and LED indicators

1 HDMI output
2 USB connectors
3 Antenna
4 Status of the fieldbus
5 Status of the fieldbus
6 Status of the fieldbus
7 USB connectors
8 LAN connection
9 EtherCAT or Profinet Connector
10 EtherCAT output
11 Power connection

3.4 Voltage supply

The IoT device must be supplied with a voltage of 24 VDC by a suitable power supply unit.



0 VDC Power supply

24 VDC Power supply

Functional earthing

3.5 Inputs and outputs

Connector for digital inputs and digital outputs

The IoT device has digital inputs and digital outputs for connecting additional components. The exact function of the inputs/outputs is described on the Web interface of the WPM Gateway in a Quick-Start Guide.

The connectors for the inputs/outputs are located on the Connector on the bottom of the IoT device.

Fig. 3-2 Digital inputs/digital outputs

Pin assignment of the digital inputs and digital outputs

A label is attached to the IoT device with the Connection diagram of the digital inputs and digital outputs.

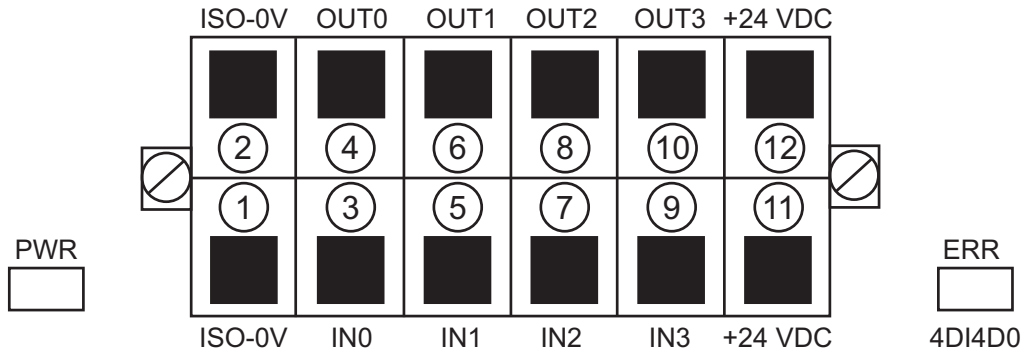


Fig. 3-3 Connection diagram for digital inputs/digital outputs

PIN	Marking	Function
1	ISO-0V	Reference potential external power supply (isolated)
2	ISO-0V	Reference potential external power supply (isolated)
3	IN0	Keyswitch (Initiates the pairing process with the data holder) when engaged
4	OUT0	Green – Data holder connected and no warnings or errors on any sensors
5	IN1	Not used
6	OUT1	Yellow – Data holder connected – Warning present on one or more sensors
7	IN2	Not used
8	OUT2	Red – Data holder connected – Error present on one or more sensors
9	IN3	Not used
10	OUT3	Blue – Flashes with ongoing coupling process/lit continuously upon successful connection
11	+24 VDC	+24 VDC external power supply
12	+24 VDC	+24 VDC external power supply

Tab. 3-1 Pin assignment digital inputs/digital outputs

3.6 System requirements

The WPM software runs entirely on the WPM Gateway. The access to it takes place via a web browser. The following browsers support the operation of the WPM software:

- Google Chrome as of version 86.0.4240.75. (recommended)
- Mozilla Firefox from version 81.0.1 (recommended)
- Microsoft Edge as of version 86.0.622.38
- Microsoft Internet Explorer as of version 11.1082.18362.0

3.7 Licensing

WPM is subject to a license agreement with FIBRO GMBH. The system will not function until a valid license has been stored by an Administrator in the WPM software of the WPM Gateway.

To apply for a license and enter the license key, see the section *Applying for a New License* in chapter 9.1.1 "License and license key" on page 55.

To transfer the license to another WPM Gateway, or to renew the license, please contact your sales partner at FIBRO GMBH.

3.8 Operating modes and functions

The WPM Gateway can be operated at the following authorisation levels:

- Basic mode
  - Allows read access to data holders and sensors. For more information on the scope of functions, see Chapter 3.8.1 "Functions in Basic mode" on page 14.
- Professional mode
  - Extension of the basic authorisation level with permission for device management. For more information on the scope of functions, see Chapter 3.8.2 "Functions in Professional mode" on page 15.
- Administrator mode
  - All authorisations to manage the WPM software on the WPM Gateway. For more information on the scope of functions, see Chapter 3.8.3 "Functions in Administrator mode" on page 15.

3.8.1 Functions in Basic mode

In Basic mode, the following functions are available:

- Display all data holders
- Display data holder properties
- Display data holder sensor overview
- Display data holder chart diagram with limit values
- Display data holder bar chart with limit values
- Display top/bottom data holder tool screen with tool screen download
- Display data holder configuration
- Activate/deactivate data holder
- Activate/deactivate data holder Press mode
- Display sensor properties
- Display sensor measured values; total overview of statuses with chart diagram
- Activate/deactivate sensor
- Display free sensor overview
- Display the user Administration for all users
- Change the language setting
- Select notifications
- Change the password

3.8.2 Functions in Professional mode

In addition to the functions in Basic mode, the following additional functions are available inProfessional mode:

1) Configure the data holder
2) Configure the data holder tool screen
3) Update the data holder firmware
4) Assign the data holder sensor
5) Configure the sensor
6) Reset the sensor to factory settings
7) Update sensor firmware

3.8.3 Functions in Administrator mode

In addition to the functions in Professional mode, the following additional functions are available in Administrator mode:

- Gateway Administration
  - Request a license
  - Save/change the license key
  - Update WPM Gateway software
  - Configure the mail server notifications
  - Configure thresholds/delays for the Press mode filter
  - Configure Fieldbus EtherCAT/Profinet/OPC UA
  - Activate the configuration of MQTT proxy
  - Display Docker statistics
  - Display telegraph statistics
- Create/edit/delete user access to WPM Gateway

4 ASSEMBLY

The installation of the IoT device is described in separate installation instructions.

- 2.7551.00.1220. Installation instructions for the WPM Gateway IoT Device

The information in these installation instructions must be observed during installation.

The selection of a suitable installation site is the responsibility of the operator.

5 COMMISSIONING

5.1 Initial commissioning

5.1.1 Network settings

As default, the WPM Gateway is preset with the static **IP address 10.10.10.10** . This IP address can be changed by a network Administrator when integrating the WPM Gateway into the company IT infrastructure.

To be able to access the WPM Gateway, the PC with which access is to be made must be manually set to a fixed IP address.

The selection of the fixed IP address is at the discretion of the user.

For the following descriptions, the **IP address 10. 10. 10. 100** is used.

1) Open the*control panel* of the PC.
2) Open the *Network and Sharing Center*.
3) Open an Ethernet connection.
4) Open the properties in the selection window *Ethernet Status* .
5) In the selection window *Ethernet Properties* open the Internet Protocol, Version 4 (TCP/IPv4).
6) In the *Internet Protocol, Version 4 (TCP/IPv4)* selection window, configure the following settings:
   - Use the following IP address
   - IP address 10. 10. 10. 100
   - Subnet mask 255. 255. 255. 0
7) Confirm settings with OK.

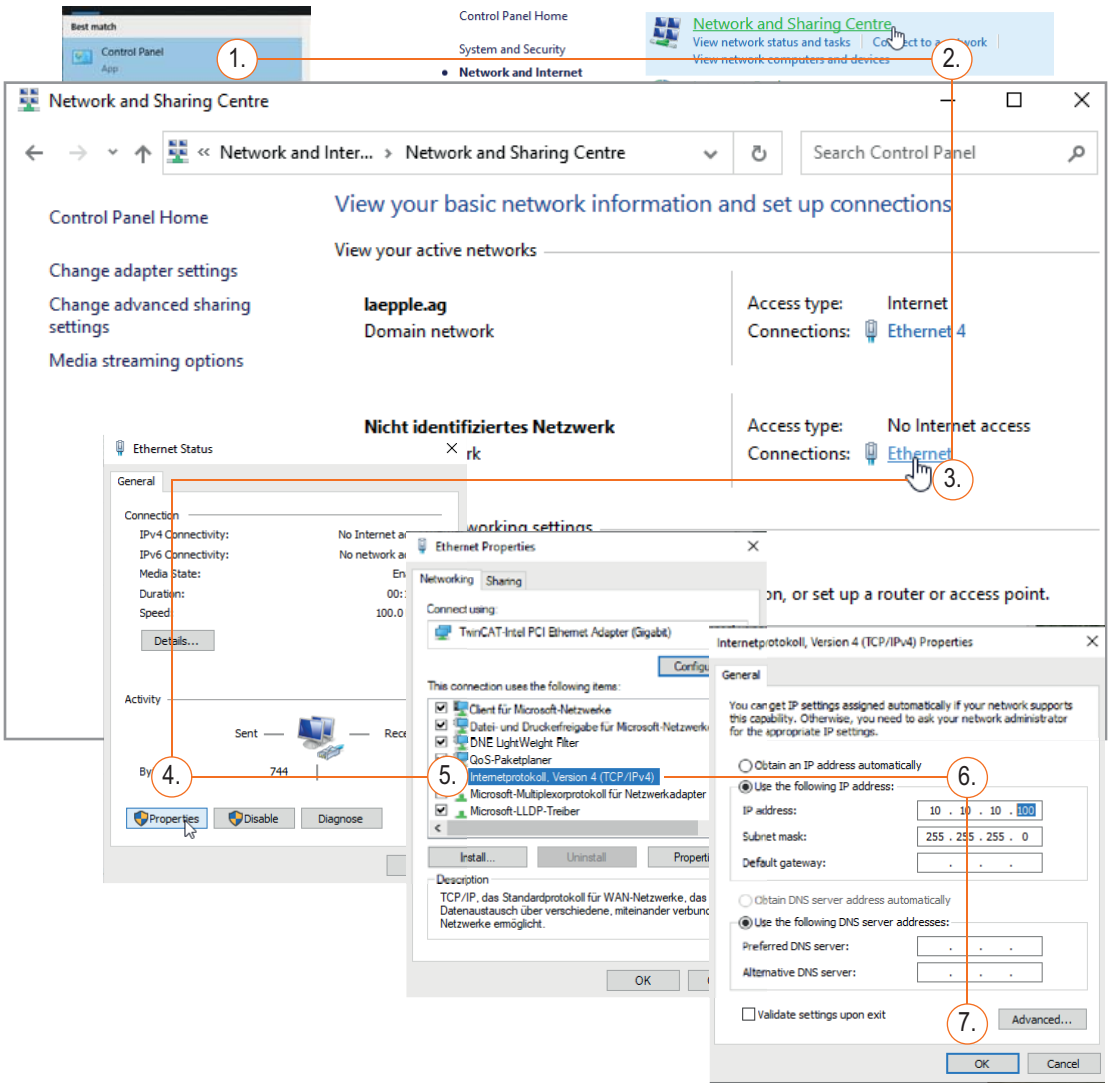


Fig. 5-1 Setting a fixed IP address on the PC

5.1.2 Commissioning the WPM Gateway

After the network settings have been set up on the PC, the WPM Gateway can be put into operation.

1) Connect the WPM Gateway to the power supply via the power supply unit.
2) Connect the WPM Gateway to the PC via a LAN cable.
3) Open the Web browser and enter the IP address http://10.10.10.10 of the WPM Gateway specified in the network setting.
4) When access for the first time, the WPM Gateway Administrator must be set up.
   – Enter the email address of the Administrator.
   – Enter the password of the Administrator.

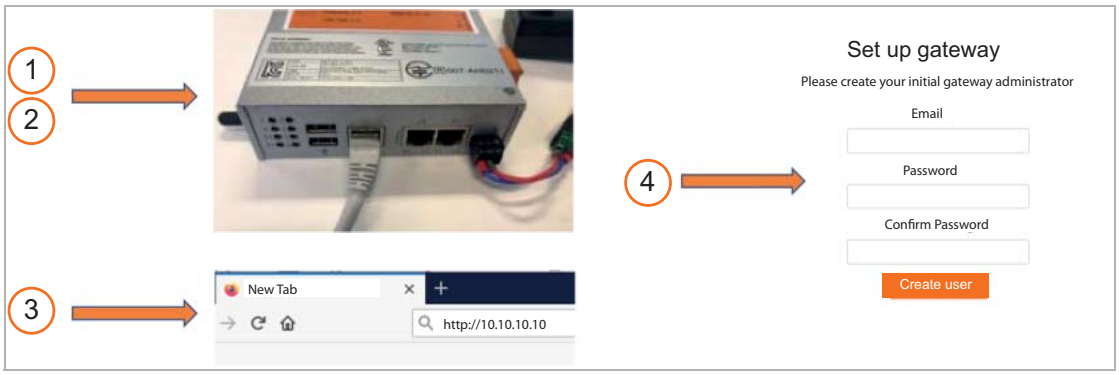


Fig. 5-2 Commissioning the WPM Gateway

With the WPM GatewayAdministrator account, additional users with different permissions can then be set up on the web interface of the WOM Gateway (see Chapter 6.1 "Create users" on page 24).

WPM devices (sensors and data holders) that are within range of the WPM Gateway should be visible.

To enable the full functionality, a WPM Gateway license must be applied for under the Administration menu item (see Applying for a new license in Chapter 9.1.1 "License and license key" on page 55).

The WPM Gateway must be set to the correct time in order for the recorded data to be usable (see Chapter 5.1.3 "Setting the time" on page 20).

5.1.3 Setting the time

If the WPM Gateway is not connected to the internet or cannot obtain the time via NTP, it must be ensured that the current time is set.

For this purpose, the appropriate setting can be made in the Admin Panel.

- Open the Admin Panel at **http://10.10.10.10:8080** in the browser.
- The first time you log in, use the username **admin** and the password **wpmg8way**.
- Follow the prompt to change this one-time access data.
- Use the *System/System time* buttons to open the *Change System Time* window.
- Enter date and current time and confirm with *Change* .

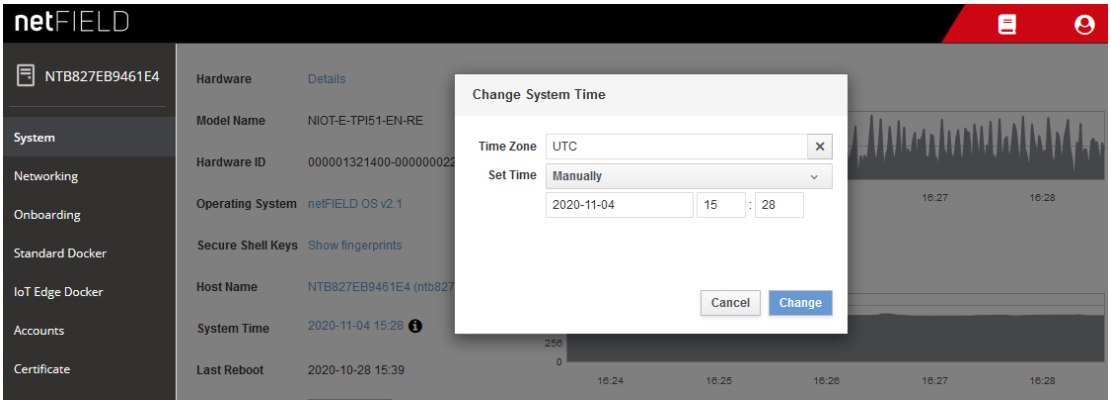


Fig. 5-3 Setting the time

5.2 Network connection

Company network/IP settings

The Admin Panel can be used to configure the WPM Gateway for the company network or to adjust the IP settings.

- Open the Admin Panel at **http://10.10.10.10:8080** in the browser.
- The first time you log in, use the username **admin** and the password **wpmg8way**.
- Follow the prompt to change this one-time access data.

Configure eth0 network interface

- Use the Networking button to open the window.
- Configure network interface eth0.

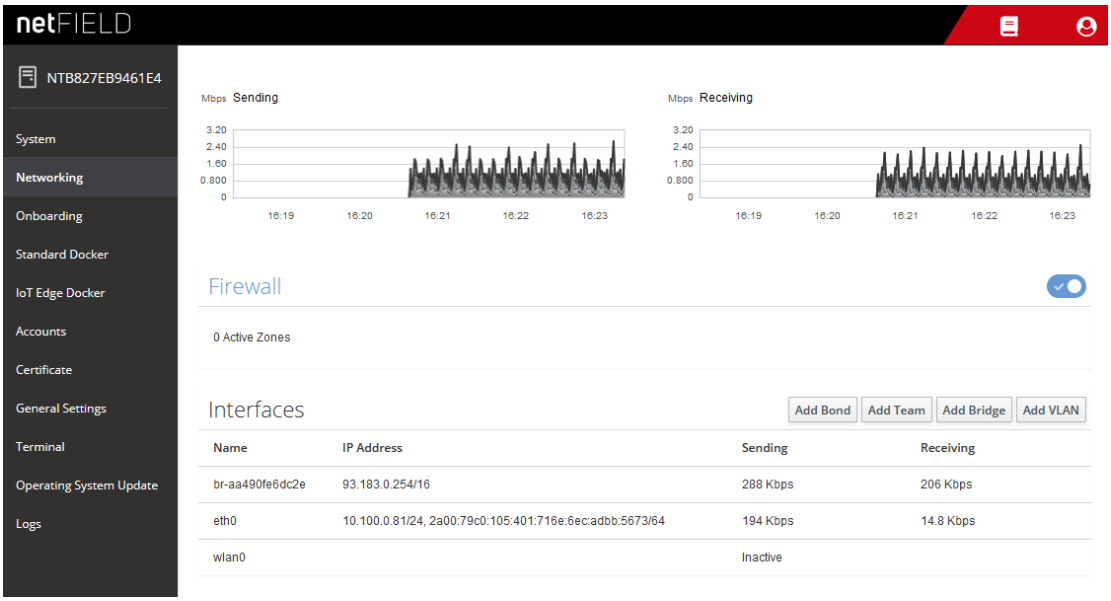


Fig. 5-4 Configure eth0 network interface

Obtain an IP address

- Use the Networking button to open the window.
- For IPv4 and IPv6, specify the desired IP addresses or let the WPM Gateway obtain an IP address from your network via DHCP.

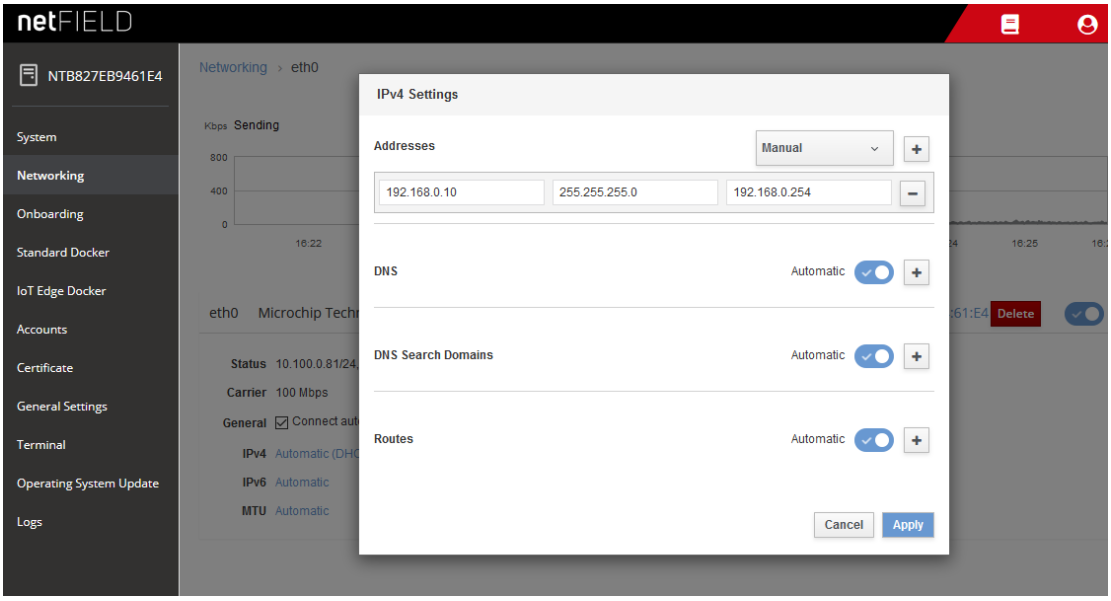


Fig. 5-5 Obtain an IP address

After that, the WPM Gateway can be disconnected from the computer and connected to the infrastructure. Users should later be able to access the application's web interface on the network via port 443. It must be ensured that the WPM Gateway is accessible for the users in the local network.

5.2.1 NetFIELD Device Manager

The Device Manger is an interactive web front-end for the administration of the IoT device.

Normally no settings for the operation of the WPM Gateway have to be configured in the net-FIELD Device Manager.

A manual for the netFIELD Device Manager can be obtained from the manufacturer of the WPM Gateway.

The manual can also be downloaded via the following link:

https://www.hilscher.com/fileadmin/cms_upload/en-US/Resources/pdf/netFIELD_Con-nect_UM_02_EN.pdf.

Fig. 5-6 QR code for instructions netFIELD Device Manager

5.2.2 Network signal strength

Symbol	Meaning
	Signal strength > 80%.
	Signal strength < 80%.
	Signal strength < 60%.
	Signal strength < 40%.
	Signal strength < 20%.

Tab. 5-1 Network signal strength

6 USER MANAGEMENT CONFIGURATION

Only users with the Administrator authorisation level can create additional users, edit existing users, or delete existing users.

6.1 Create users

1) Open the *User administration* menu.
2) Press the *Create User* button.
3) Fill in the fields.
   – Enter email.
   – Set password.
   – Select authorisations and language.
   – Select notifications.
4) Confirm the entries by pressing the *Create* button.
   – The display then jumps back to the *user administration* menu.
   – The newly created user is displayed.

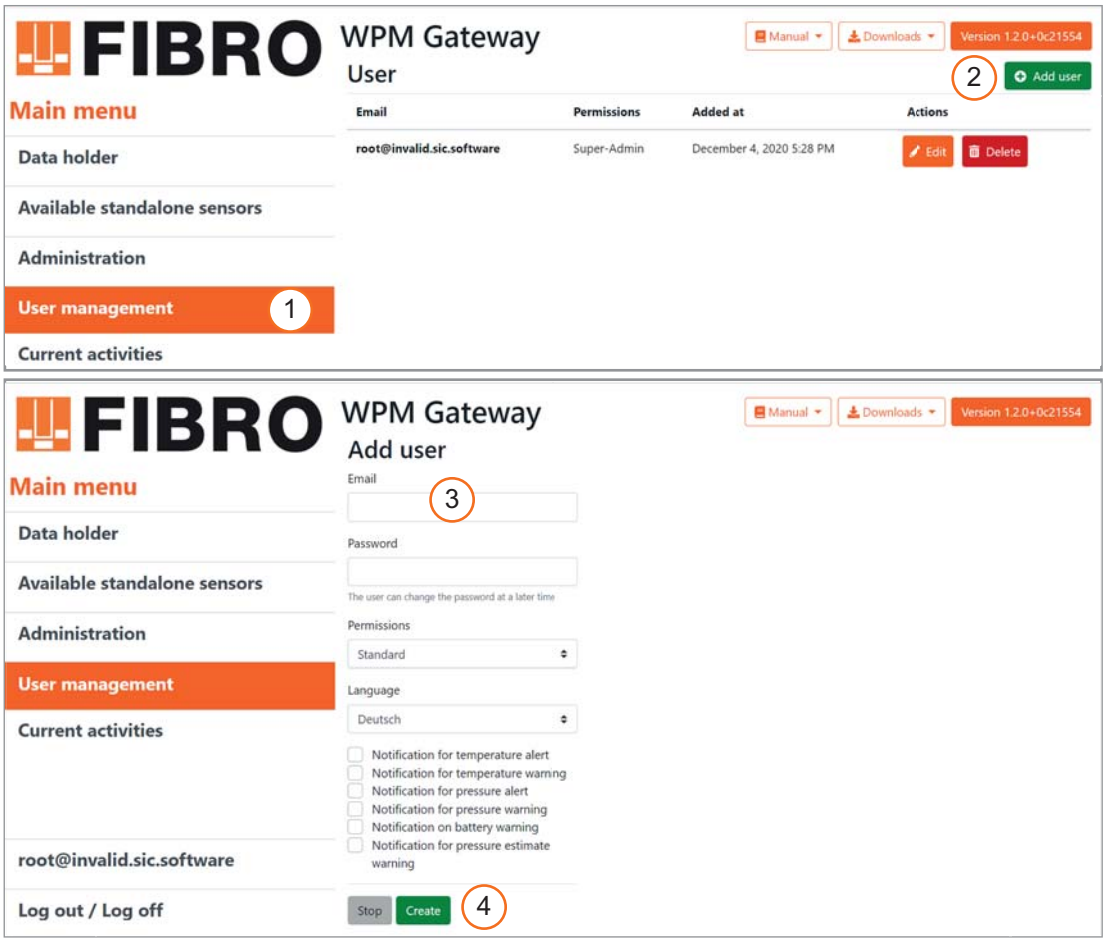


Fig. 6-1 Create users

Fields

Name	Meaning
Email	E-mail address of the user. This is used to log the user into the WPM Gateway and for email notifications.
Password	The user's password for logging into the WPM Gateway (minimum length 8 characters) . This password can be changed by the user at a later time.
Authorisations	Selection of the user's authorisation levels.
Language	Selection of the display language in the WPM Gateway for the user.
Create	Create user.

The following notifications are only active if an email server has been correctly set up to send emails (see Chapter 9.2 "Managing email settings" on page 56).

Temperature alarm notification

Notifies the user by email when temperature alarms occur.

Temperature warning notification

Notifies the user by email when temperature warnings occur.

Pressure alarm notification

Notifies the user by email when pressure alarms occur.

Pressure warning notification

Notifies the user by email when pressure warnings occur.

Battery warning notification

Notifies the user by email when battery warnings occur.

Pressure forecast warning notification

Notifies the user by email when pressure forecast warnings occur.

6.2 Editing a user

1) Open the *User administration* menu.
2) Press the *Edit* button.
3) Edit fields.
4) Save the changes by clicking the *Save* button.
   – The display then jumps back to the *user administration* menu.

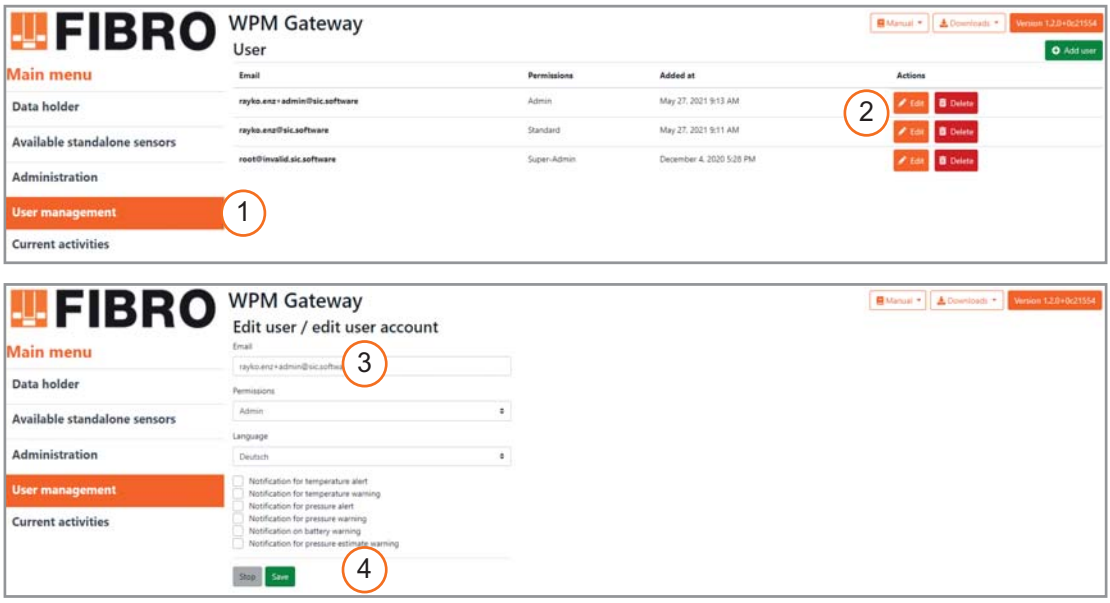


Fig. 6-2 Editing a user

6.3 Deleting a user

1) Open the *User administration* menu.
2) Press the *Delete* button in the line of the user concerned.
3) In the confirmation prompt that appears, delete the user by pressing the *Delete* button.
   – The display then jumps back to the *user administration* menu.

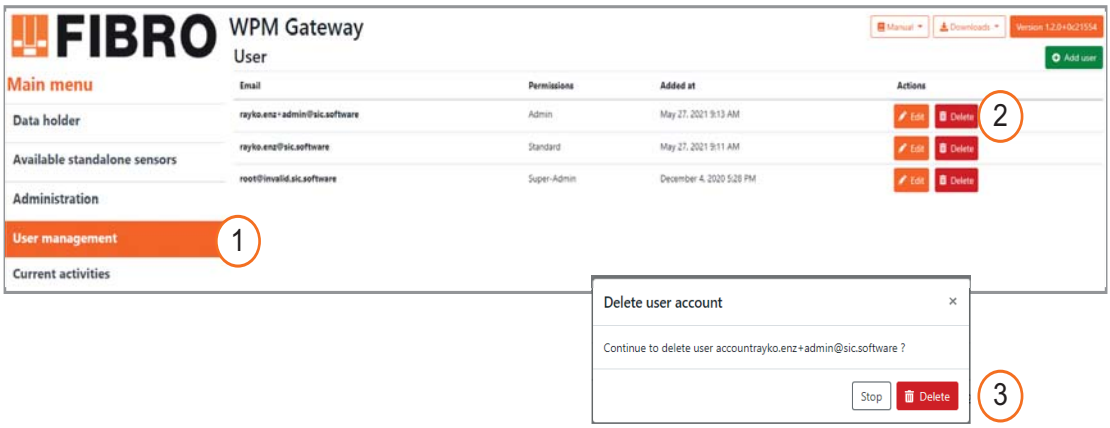


Fig. 6-3 Deleting a user

6.4 Changing a user password

In general, user passwords can only be changed by the respective user themselves.

If the password of a user is no longer known, an Administrator can delete the user via the User Administration and create a new one.

If the access data of the WPM Gateway Administrator is no longer available, a reset key must be requested from FIBRO GMBH (see Chapter9.6 "Reset Administrator password" on page 64).

1) Log in to the WPM Gateway as a user with your own password.
2) Click the logged-in user in the main menu.
   – The *Edit user* input screen with the additional option to change your own password will open.
3) Enter the new password and confirm it by entering it again.
4) Save the new password by pressing the *Save* button.

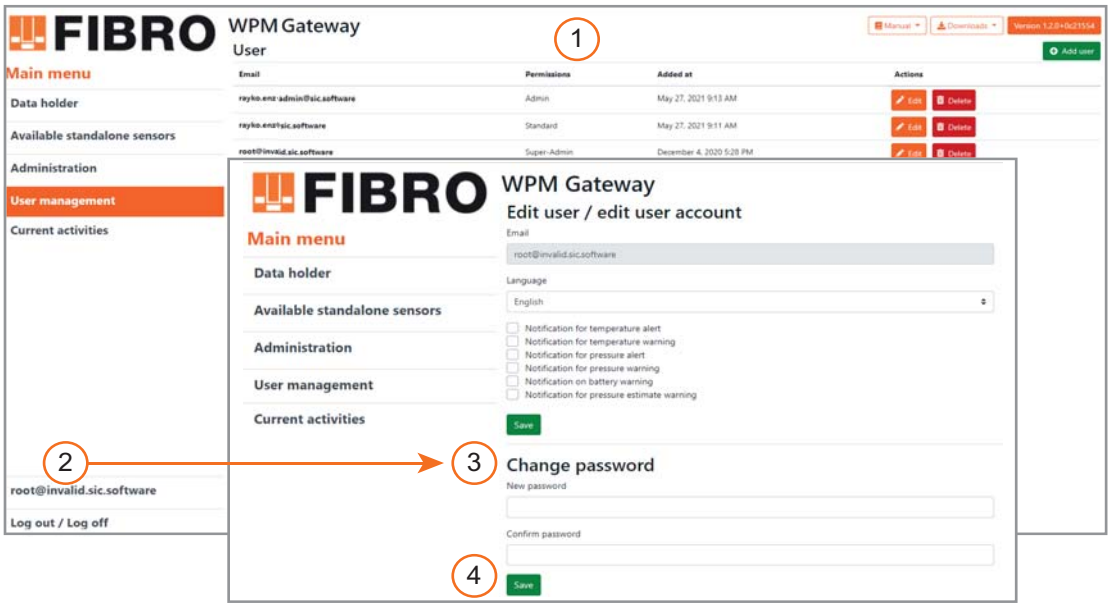


Fig. 6-4 Changing a user password

7 USING THE WPM GATEWAY

7.1 WPM Gateway – Login

If the WPM Gateway is set up and the URL to the WPM Gateway is called in the web browser at http://GATEWAY-IP-ADDRESS, the Login page appears.

1) Fill in the fields.
   – Enter the user email.
   – Enter the user password.
2) Log in by pressing the *Login*button.
   – The display jumps to the main menu.

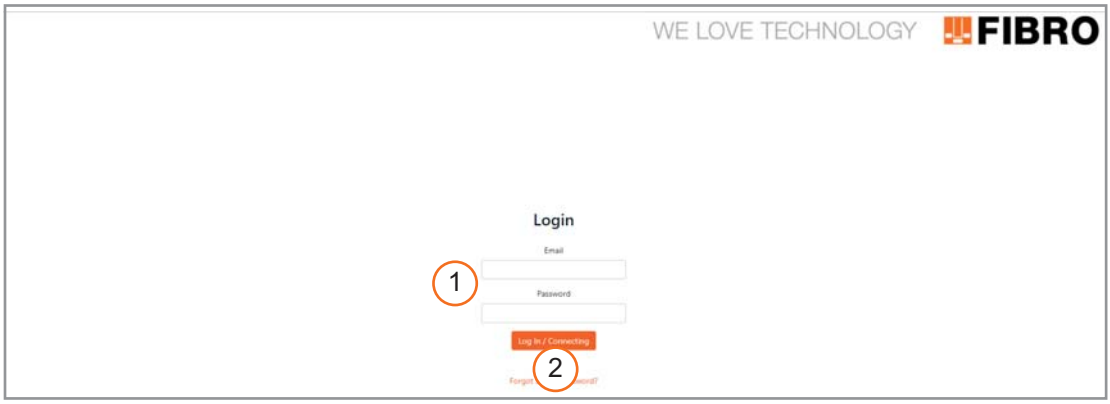


Fig. 7-1 Logging into the WPM Gateway

Fields

Name	Meaning
Email	Email address of the user for authentication by the Gateway.
Password	Password of the user for authentication by the Gateway.
Login	Logging into the WPM Gateway

7.2 WPM Gateway – Display information

Accessing the web interface via HTTPS

The WPM Gateway supports a secured connection via HTTPS using a self-signed SSL certificate created by the WPM software.

The SSL root certificate rootCA.crt can be downloaded via the *Downloads* button.

After the download, the certificate must be stored in the web browser as a trusted certificate.

For the steps required to do this, refer to the documentation for the web browser or operating system.

Displaying operating instructions

Via the *Instructions* button, you can download the Operating instructions of the WPM Gateway.

Versions display

The Gateway software consists of different services. By clicking on the button *Version x.x.x. + xxxxxxx*, the dialogue with all version numbers is opened.

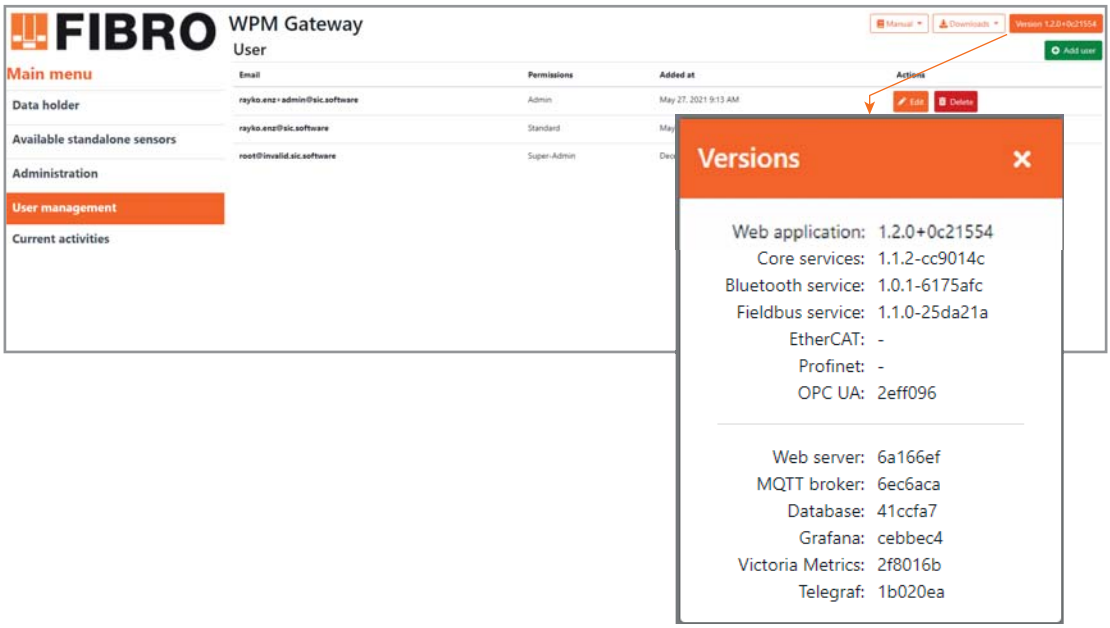


Fig. 7-2 Versions display

7.3 Main menu

After successfully logging into the WPM Gateway, information on data holders, sensors, users, etc. can be viewed and configured according to the authorisation level of the logged-in user.

For information on the scope of functions per authorisation level, see Chapter 3.8 "Operating modes and functions" on page 14.

The individual areas for displaying/managing the data holders and sensors, as well as the users and for administering the WPM Gateway, can be accessed via the *Main menu*.

Fig. 7-3 Main menu

Fields

Name	Meaning
Data holder	In the *Data holder* menu, you can manage the individual data holders with assigned sensors.
Free sensors	Display all sensors that are not currently assigned to a data holder.
Administration	Manage WPM Gateway settings; display WPM Gateway statistics. This menu item is only displayed for users with the Administrator authorisation level.
User management	Create, edit or delete users with access to the WPM Gateway.
Current activities	Display all activities currently being performed.
Registered user	Display and edit the user settings of the logged-in user.
Logout	Log the logged-in user out of the WPM Gateway.

7.4 Data holder

7.4.1 Data holder – Overview

When the *Data holder* menu is opened, a list of all data holders known to the system is displayed.

In the top area, the list can be searched by data holder name and filtered based on the alarm states of the data holders.

In the bottom area, you can navigate between the individual pages of the data holder list.

As soon as a data holder has sent data to the Gateway, it appears in the data holder list.

Open view: *Main menu => Data holder*

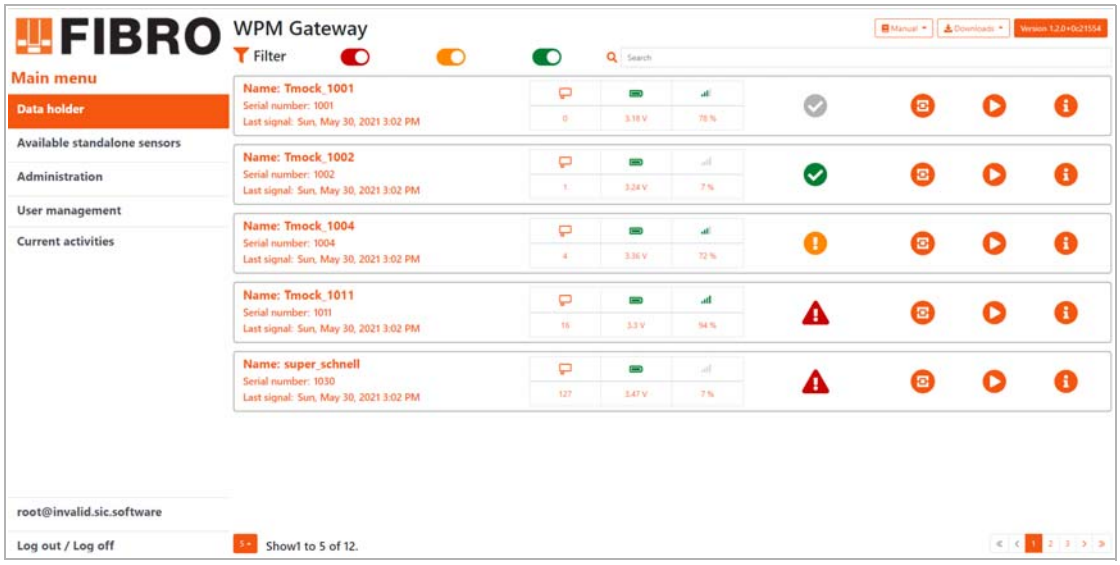


Fig. 7-4 Data holder overview

Symbols

Symbol	Meaning
Filter:	
	Data holders whose sensors comply with all limit values.
	Data holders with at least one sensor for which a warning was triggered due to a limit value violation.
	Data holders with at least one sensor for which an alarm was triggered due to a limit value violation.
	Filter is not active.
Information:	
	Number of configured sensors of the data holder.
	Battery charge indicator of the data holder. See section on Battery voltage status in Chapter 10.4 "Changing the battery" on page 68.

Symbol	Meaning
	Signal strength of the data holder. See Network signal strength status.
Data holder alarm status:	
	All sensors of the data holder comply with the respective limit values.
	A warning was triggered for at least one sensor of the data holder due to a limit value violation.
	An alarm was triggered for at least one sensor of the data holder due to a limit value violation.
	Data holder has no sensors.
Press mode:	
	The data holder's Press mode is enabled. Click to deactivate.
	The data holder's Press mode is deactivated. Click to activate.
Data holder mode:	
	Data holder is deactivated. Click to activate.
	Data holder is enabled. Click to deactivate.
	Open detailed view of the data holder.

Messages

Inactive data holder
Data holders that are known to the WPM Gateway but have not sent any data to the WPM Gateway for a certain time period are marked as inactive in the data holder list.


7.4.2 Data holder – Details

7.4.2.1 Data holder – Assigned sensors

Display sensors assigned to a data holder

The *Data holder* menu shows an overview of all sensors assigned to the data holder.

In the top area, the list can be searched by the name and serial number of a sensor via a search field, and can be filtered based on the alarm states of the sensors.

In the lower area, you can navigate between the individual pages of the sensor list.

Open view: *Main menu* => *Data holder* =>  => *Sensors*

Fig. 7-5 Data holder – Details

Symbols

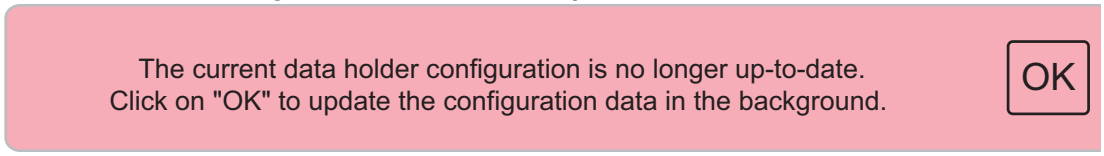
Symbol	Meaning
Filter:	
	Display sensors that comply with all limit values.
	Display sensors for which a warning has been triggered due to a limit value violation.
	Display sensors for which an alarm was triggered due to a limit value violation.
	Filter is not active.
Actions (Professional and Administrator):	
	Open the dialogue for assigning free sensors to the data holder.
	Close the dialogue without making any changes.

Symbol	Meaning
	By clicking on the check box, the sensor can be either selected or deselected.
	All selected non-transmitting sensors are removed from the data holder.
Sensor alarm status:	
	The measured values of the sensor comply with all limit values.
	The measured values of the sensor trigger a warning due to a limit value violation.
	The measured values of the sensor trigger an alarm due to a limit value violation.
Information:	
	Sensor temperature
	Sensor pressure
	Battery charge indicator of the sensor. See section on *Battery voltage status* in Chapter 10.4 "Changing the battery" on page 68.
	Signal strength of the sensor. See Network signal strength status.
Sensor mode:	
	Sensor is deactivated. Click to activate.
	Sensor is enabled. Click to deactivate.
	Open the detailed view of the sensor.

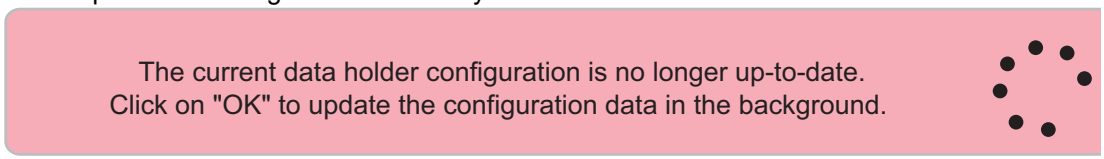
Messages

In the Sensor view of a data holder, various messages can be displayed depending on the status of the data holder.

The data holder configuration has not been updated.

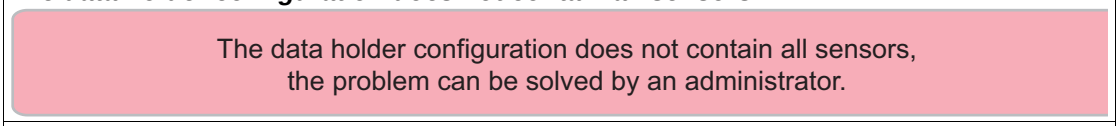


This message is displayed if the configuration of the data holder has not yet been loaded. Click *OK* to update the configuration. This may take a moment.

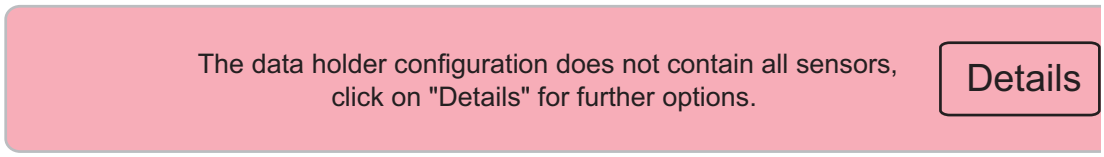


The data holder configuration is currently being updated. After a successful update, this message disappears.

The data holder configuration does not contain all sensors.

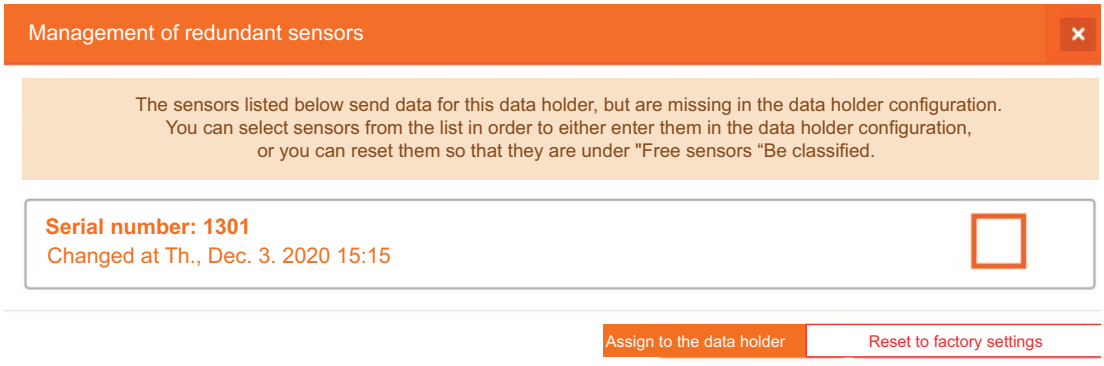


This message appears when sensors send data for a data holder that is not yet assigned. This problem can only be fixed by a user with the Administrator authorisation level.



Data holder configuration does not contain all sensors for Professionals or Administrators.

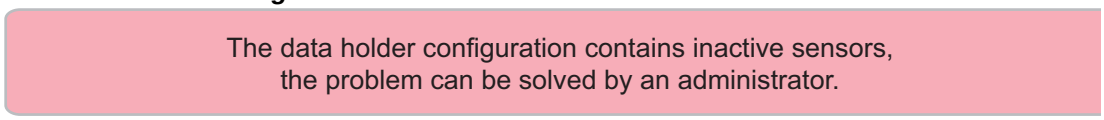
If you click the button *Details*, a dialogue appears with all redundant sensors for the data holder.



Clicking the *Assign to data holder* button assigns all selected redundant sensors to the data holder.

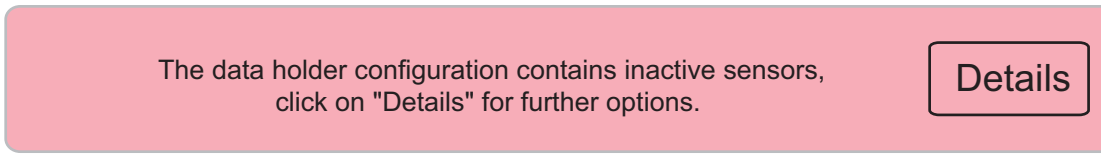
If you click on the *Reset to factory settings* button, all selected sensors are reset to the factory settings and no longer send data for the data holder.

The data holder configuration contains inactive sensors.



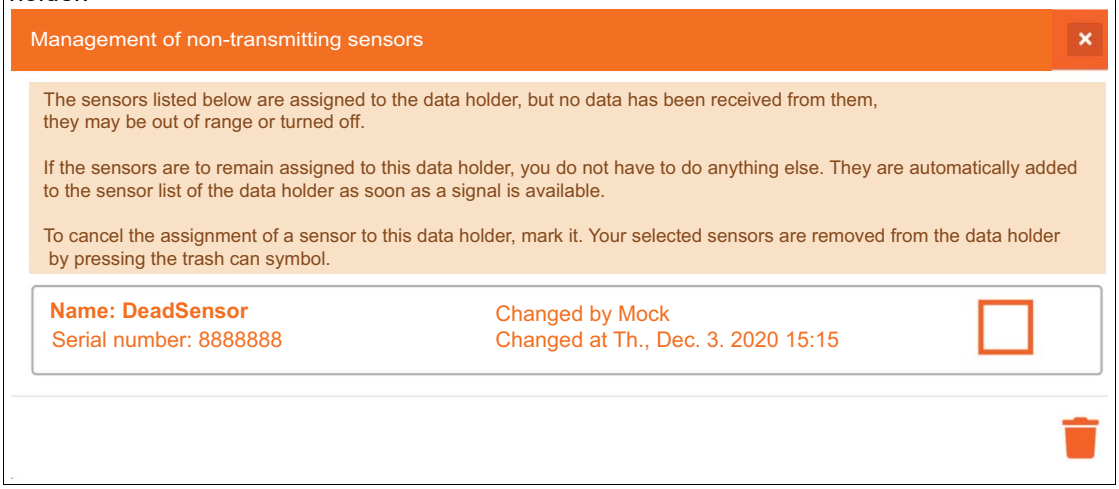
This message is displayed when sensors are assigned to the data holder, but no data has yet been received from them.

This problem can only be fixed by a user with an Administrator authorisation level.



Data holder configuration contains inactive sensors for Professionals or Administrators.

If you click the *Details* button, a dialogue appears with all non-transmitting sensors of the data holder.



7.4.2.2 Data holder – Sensor readings diagram view

The diagram view for a data holder shows a sensor's measured values for pressure and temperature over time.

In the top area, the time period of the area displayed, as well as the refresh rate for the diagram, can be set.

Open view: *Main menu => Data holder =>* ℹ *=> Diagram*

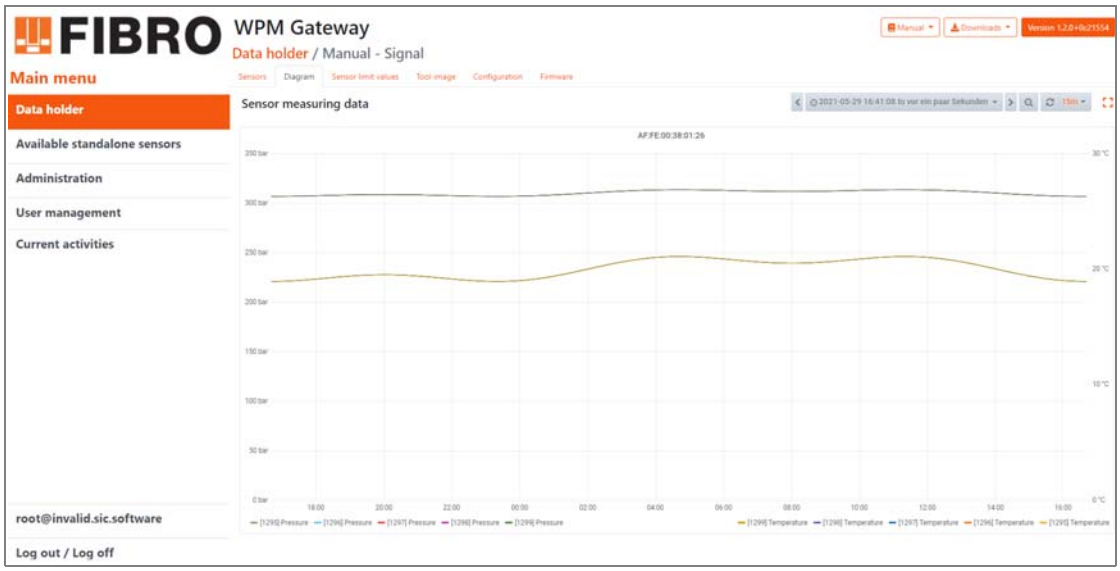


Fig. 7-6 Data holder – Sensor readings diagram view

7.4.2.3 Data holder – Sensor limit values

Display of all sensor limit values of a data holder

In this view, the respective limit values of the individual sensors assigned to the data holder are displayed.

Open view: *Main menu => Data holder =>* ℹ *=> Sensor limit values*

Fig. 7-7 Sensor limit values of a data holder

Displayed limit values per sensor

Symbol	Meaning
Temperature limit values:	
18 °C	Temperature limit value is adhered to.
21 °C	Temperature limit value has been exceeded and a warning has been triggered.
35 °C	Temperature limit has been exceeded and an alarm has been triggered.
Voltage limit values:	
3.5 V	Voltage limit value is adhered to.
3.1 V	The voltage has fallen below the voltage limit value.
2.9 V	The voltage has fallen below the voltage limit values.
Pressure limit values:	
	
The pressure limit value display takes the form of a bar graph with the ranges: • Red: The value has fallen below the limit value and an alarm has been triggered. • Yellow: The limit value has been undershot/exceeded and a warning has been triggered. Note: The range for exceeding the limit value is only displayed if a value for the maximum pressure warning has been specified in the corresponding sensor configuration. • Green: Limit value is adhered to. The current pressure of the sensor is displayed in colour above the bar together with a triangle, depending on the limit value range.	

7.4.2.4 Data holder – Positioning of the sensors

Positioning of the sensors with the help of the tool screen

For a data holder, a tool screen can be uploaded for the top and bottom side, on which the individual sensors can be positioned.

The view is divided into two sections: a list view with all sensors, and a view for managing the tool screens and positioning the sensors.

Open view: *Main menu* => *Data holder* => => Tool screen

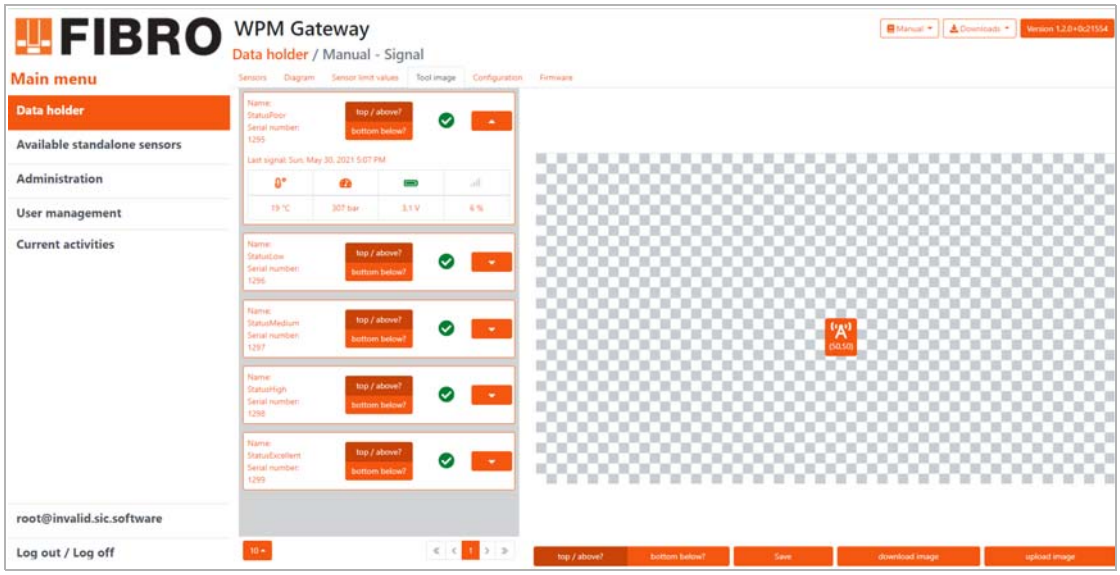


Fig. 7-8 Positioning of the sensors with the help of the tool screen

Symbols

Symbol	Meaning
Entries for a sensor:	
Name:	Name of the sensor.
Serial number:	Serial number of the sensor.
top / above? bottom / below?	Positioning of the sensor on the tool screen in terms of the top or bottom side. In this case, the tool screen for the bottom side is selected.
	Alarm status of the sensor.
	Show or hide the Sensor toolbar. The Sensor toolbar shows the current readings for temperature, pressure, battery charge voltage and reception strength, as well as the time stamp of the last received signal.
Positioning of the sensor on the tool screen:	
(50,50)	The selected sensor, this is automatically in the foreground.

Symbol	Meaning
	Sensor not selected.
(50,50)	Position of the sensor in the tool screen as relative (x,y) coordinates, each in the value range between 0...100. Note: When a sensor is placed on the bottom or top of a tool, it is initially displayed in the centre. If several sensors are placed in this way, they are all directly above each other, with the currently selected sensor on top.
Tool screen management:	
	Display upper or lower tool screen.
	Download selected tool screen.
Tool screen management (Professional and Administrator only):	
	Save the positions of the individual sensors.
	Upload a new tool screen for the top or bottom.

7.4.2.5 Data holder – Current parameters

Current parameters of a data holder

This view shows the currently configured parameters of a data holder.

Open view: *Main menu* => *Data holder* => ℹ => Configuration

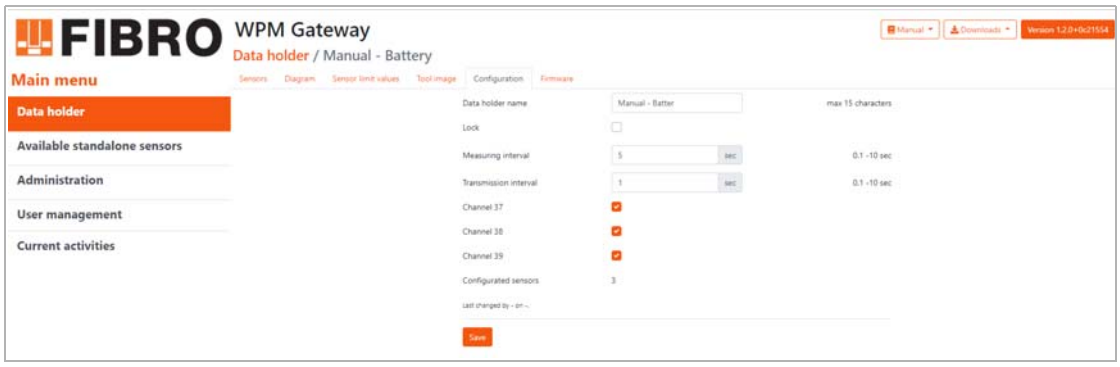


Fig. 7-9 Current parameters of a data holder

Fields

Name	Meaning
Data holder name	Self-assigned name for the data holder (maximum 15 characters).
Lock	If this option is enabled, a change in the configuration of the data holder is only made after confirmation via a confirmation prompt.
Measurement interval	Time interval at which the operating status is to be measured (0.1 to 10 seconds).
Transmission interval	Time interval at which the Bluetooth Low Energy Advertising packets are sent. A high time interval has a positive effect on the energy consumption of the data holder (0.1 to 10 seconds).
Channel 37/38/39	Bluetooth Low Energy Advertising channels to be used for Advertising.
Configured sensors	Number of sensors assigned to the data holder.
Save	Save configuration

7.4.3 Data holder – Sensors – Details

All sensors assigned to a data holder are listed in the *Data holder* menu. For additional information, see Chapter 7.4.2.1 "Data holder – Assigned sensors" on page 33.

Open view: *Main menu* => *Data holder* => ⓘ => Sensors

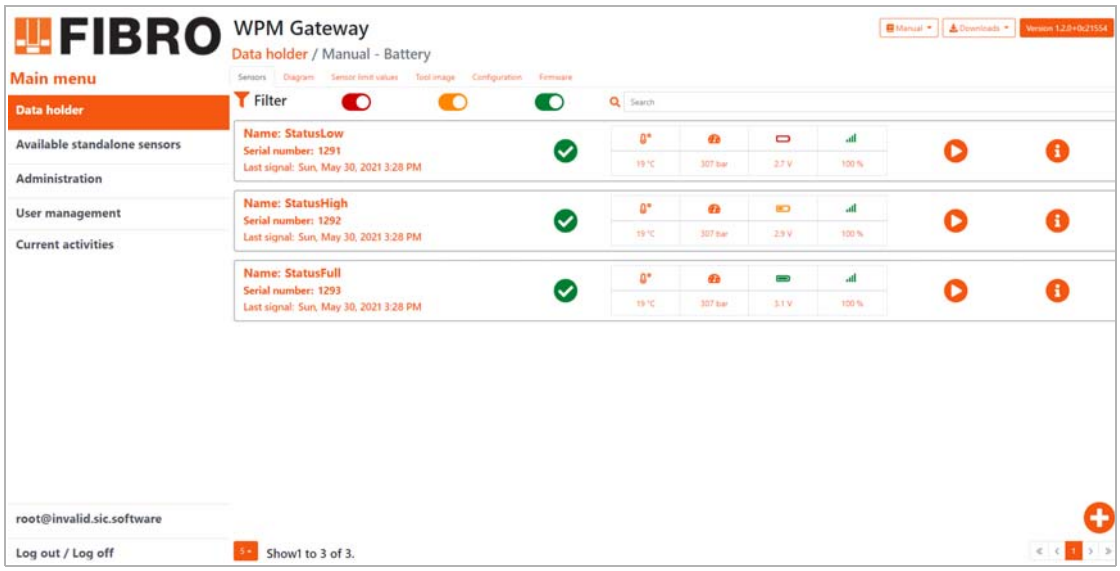


Fig. 7-10 Data holder – Details – Sensors

7.4.3.1 Measured values and forecasts of a sensor

The top diagram, Sensor readings, shows the temperature and pressure values measured over time together with the limit values for alarms and warnings.

Using the Pressure forecast diagram below, it is possible to estimate when a warning or alarm will be triggered due to a limit value violation.

The most important settings for the sensor are displayed on the right-hand side.

Open view: *Main menu* => *Data holder* => ⓘ => *Sensors* => ⓘ => *Diagram*

Fig. 7-11 Data holder – measured values and pressure forecasts of a sensor

7.4.3.2 Current parameters of a sensor

Current parameters of a sensor

In this view, the currently set parameters of a sensor are displayed.

Open view: *Main menu* => *Data holder* => ℹ => *Sensor* => ℹ => *Configuration*

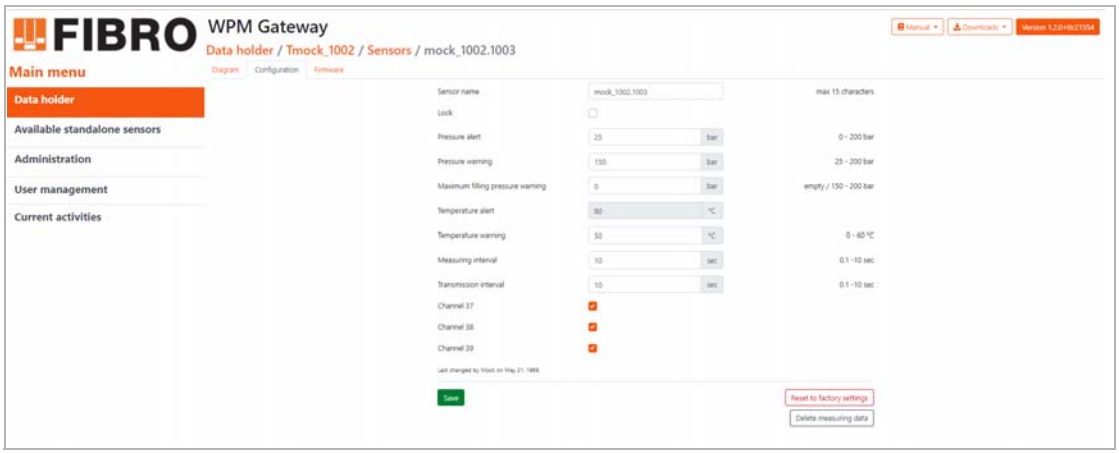


Fig. 7-12 Current parameters of a sensor

Fields

Name	Meaning
Sensor name	Self-assigned name for the sensor (maximum 15 characters).
Lock	If this option is enabled, the configuration of the sensor is only changed after confirmation via a confirmation prompt.
Pressure warning	Limit value (in bar) that triggers a warning if it is undershot.
Maximum pressure warning	Limit value (in bar) that triggers a warning when exceeded. Nothing is specified as the default value, so, in this case, there is no warning if the maximum pressure is exceeded.
Pressure alarm	Limit value (in bar) that triggers an alarm if it is undershot.
Temperature warning	Limit value (in °C) that triggers a warning if exceeded.
Temperature alarm	Fixed limit value (in °C) that triggers an alarm if exceeded. (preset to 70°C).
Measurement interval	Time interval at which the sensor should take measurements.
Transmission interval	Time interval (0.1 to 10 seconds) at which the Bluetooth Low Energy Advertising packets are to be sent. A high time interval has a positive effect on the energy consumption of the data holder.
Channel 37/38/39	Bluetooth Low Energy Advertising channels to be used for Advertising.
Save	Save configuration

Name	Meaning
Reset to factory settings	Reset the configuration of the sensor to the factory settings. The assignment to a data holder is also cancelled.
Delete measuring data	Delete all measurement data of the sensor for the currently assigned data holder.

7.5 Free sensors – Overview

Free sensors are all sensors that are not currently assigned to a data holder.

In the top area, the list can be searched by the name and serial number of a sensor via a search field, and can be filtered based on the alarm states of the sensors.

In the lower area, you can navigate between the individual pages of the sensor list.

Open view: *Main menu => Free sensors*

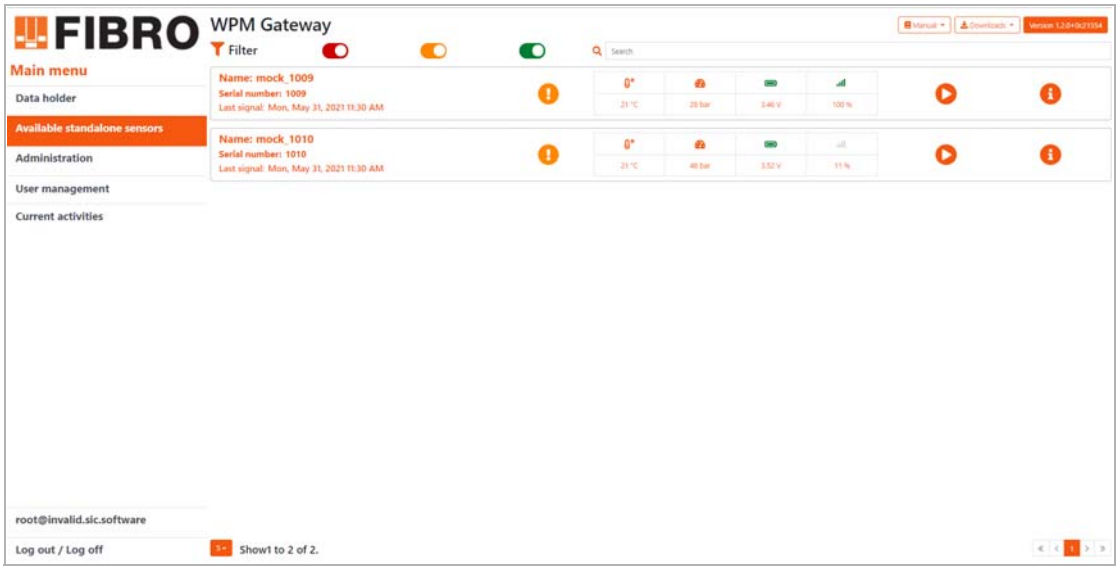


Fig. 7-13 Free sensors – Overview

7.6 Current activities

This view lists all activities currently performed via Bluetooth. These include:

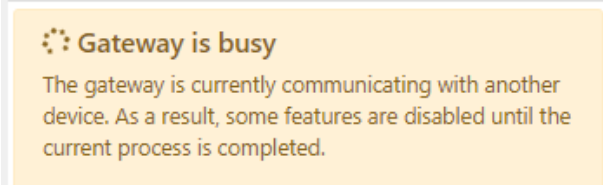
- Activation or deactivation of a data holder.
- Activation or deactivation of a sensor.
- Reading out and configuring a data holder.
- Reading out, configuring and resetting a sensor.

Open view: *Main menu => Current activities*

Fig. 7-14 Current activities

While an activity is running, no other activities can be started. The corresponding buttons are then greyed out.

In addition, the following message is displayed in the main menu:



7.7 Export diagram data

Export diagram data as a CSV file

The measured values of data holders and sensors shown in the diagrams can be exported as a CSV file.

Open view: *Main menu => Data holder or sensor =>* ⓘ *=> Diagram*

1) Click on the title of the diagram with the ID of the data holder/sensor.
2) Click *Export CSV* in the submenu.
3) Enter the required configuration settings in the window that appears.
4) Click the *Export* button to save the CSV file.

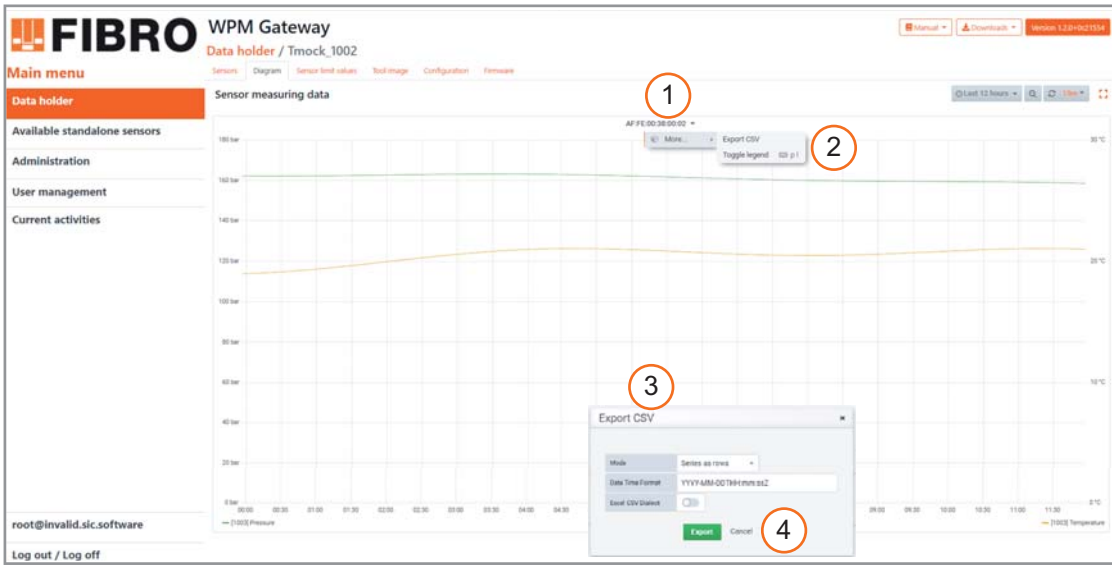


Fig. 7-15 Export diagram data as a CSV file

Fields

Name	Meaning
Mode	Save time series in rows or columns.
Date time format	Time stamp date format of the entries.
Excel CSV dialect	If enabled, the time sequences are saved comma-separated. Otherwise, the separation is done with semicolons.
Export	Export data as a CSV file.
Cancel	Close the dialogue without exporting the data as a CSV file.

The time period for exporting the data can be set using the button in the upper part of the diagram.

8 SET UP WPM GATEWAY

8.1 Data holder – Changing parameters

In the *Configuration* view of a data holder, the individual parameters of a data holder can be changed.

Open view: *Main menu* => *Data holder* => ⓘ => *Configuration*

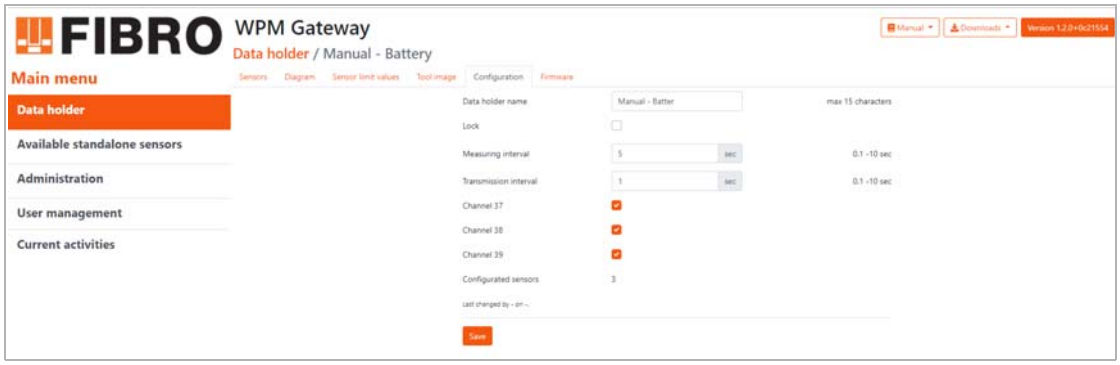


Fig. 8-1 Data holder – Changing parameters

Data holder – Change name

1) Enter a new data holder name in the *Data holder name* input field (maximum 15 characters).
2) Click the *Save* button to apply the new data holder name.

Data holder – Lock changes

1) In the *Lock* selection box, activate the lock parameter by checking the check box.
   – If the lock parameter is enabled, data holder parameters can only be changed after confirmation via a confirmation prompt.
2) Clicking the *Save* button applies the new status to the lock parameter.

The other parameters of a data holder can be changed in the same way.

Descriptions of the parameters can be found in Chapter 7.4.2.5 "Data holder – Current parameters" on page 41.

8.2 Data holder – Assigning free sensors

In the *Sensors* view of a data holder, free sensors can be assigned to a data holder.

Open view: *Main menu* => *Data holder* => => Sensors

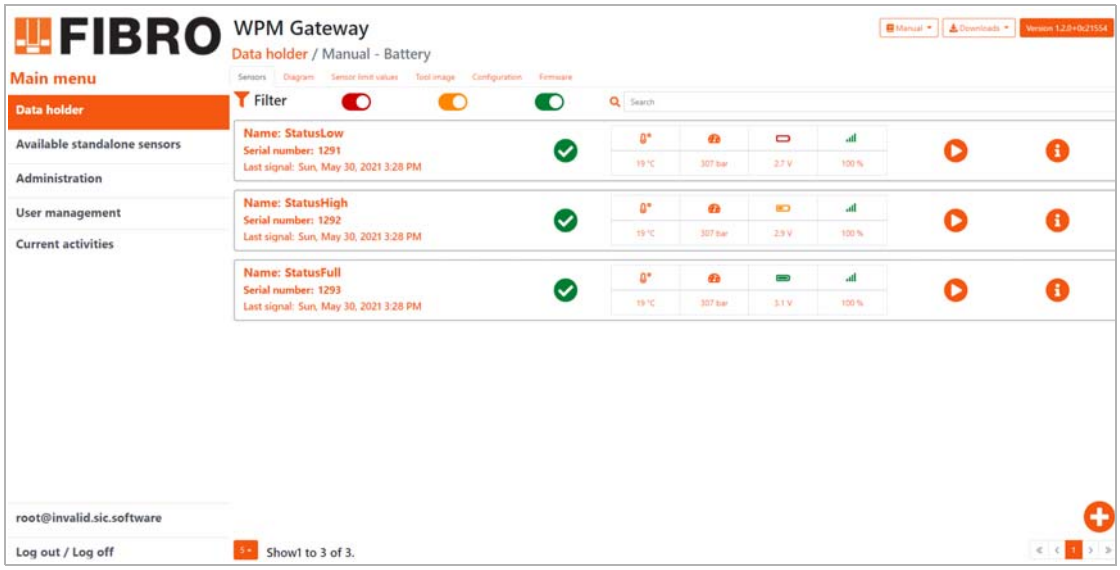


Fig. 8-2 Data holder – Assigning free sensors

By clicking the button, the dialogue listing all free sensors with their current measured values is displayed.

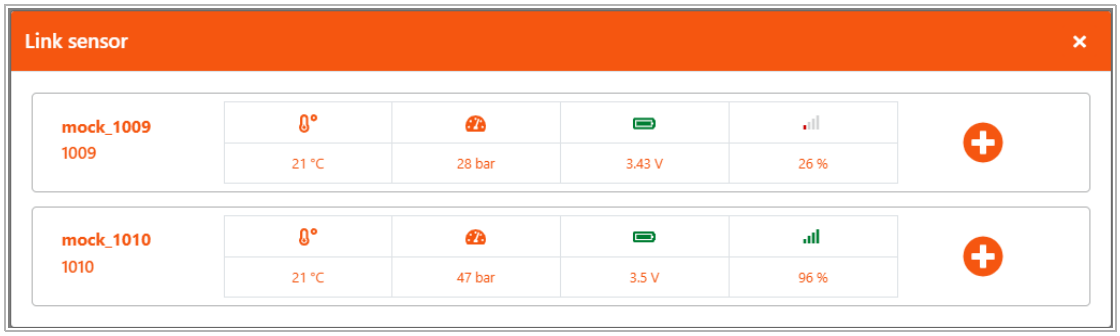


Fig. 8-3 Data holder – Selecting a free sensor

By clicking on the button, the sensor is assigned to the data holder.

After assigning a free sensor to a data holder, the sensor must be parametrised. A parametrisation dialogue is displayed.

For a description of the parameters, see Chapter 7.4.3.2 "Current parameters of a sensor" on page 43.

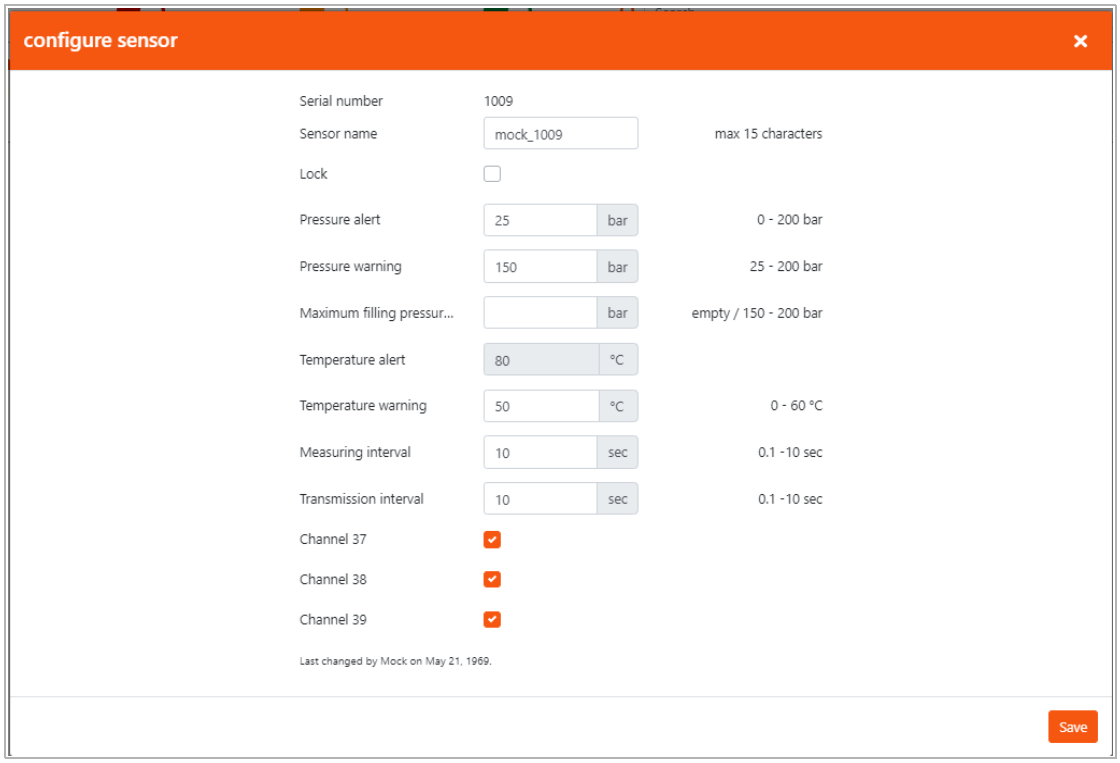


Fig. 8-4 Data holder – Parametrising an assigned sensor

Click the *Save* button to save the sensor parameters. The dialogue is closed and the sensor appears in the *Sensors* view of the data holder.

8.3 Data holder – Tool screen assignment

In the Tool screen view of a data holder, the positioning of the sensors on the tool can be displayed.

A data holder can be assigned a tool screen for both the top and bottom side.

Open view: *Main menu* => *Data holder* => ⓘ => *Tool screen*

Fig. 8-5 Data holder – Tool screen assignment

1) Use the *Top Bottom* button to select whether the tool screen is assigned for the top or bottom side.
2) Select the *Upload screen* button.
   – A dialogue is displayed for selecting the tool screen.
   – After confirmation in the dialogue, the selected tool screen for the selected page is displayed in the *Tool screen* view of the respective data holder.

Download tool screen

In the *Tool screen* view of a data holder, the *Download screen* button can be used to download the currently selected tool screen for the selected top or bottom side.

8.4 Positioning sensors on the tool screen

Before sensors can be positioned on the tool screen, a tool screen must be assigned to the data holder for the respective top or bottom side (see Chapter 8.3 "Data holder – Tool screen assignment" on page 50).

Open view: *Main menu* => *Data holder* => => *Tool screen*

Fig. 8-6 Positioning sensors on the tool screen

1) Use the *Top Bottom* button to select the top or bottom tool screen for the sensor.
2) Select a sensor in the sensor list and set the position to the top or bottom.
3) The icon of the sensor appears in the middle of the tool screen.
   – The icon can be dragged and dropped to the appropriate position within the tool screen.
   – The coordinates of the sensor are displayed as relative (x,y) coordinates.
4) To accept the position, press the *Save* button.

When the sensor is placed, it is displayed in the centre of the tool screen. If several sensors are placed, they are all directly above each other. The currently selected sensor is on top.

8.5 Sensors – Changing parameters

In the *Configuration* view of a sensor, the individual parameters of a sensor can be changed.

Open view: *Main menu* => *Data holder* => ⓘ => *Sensors* => ⓘ => *Configuration*

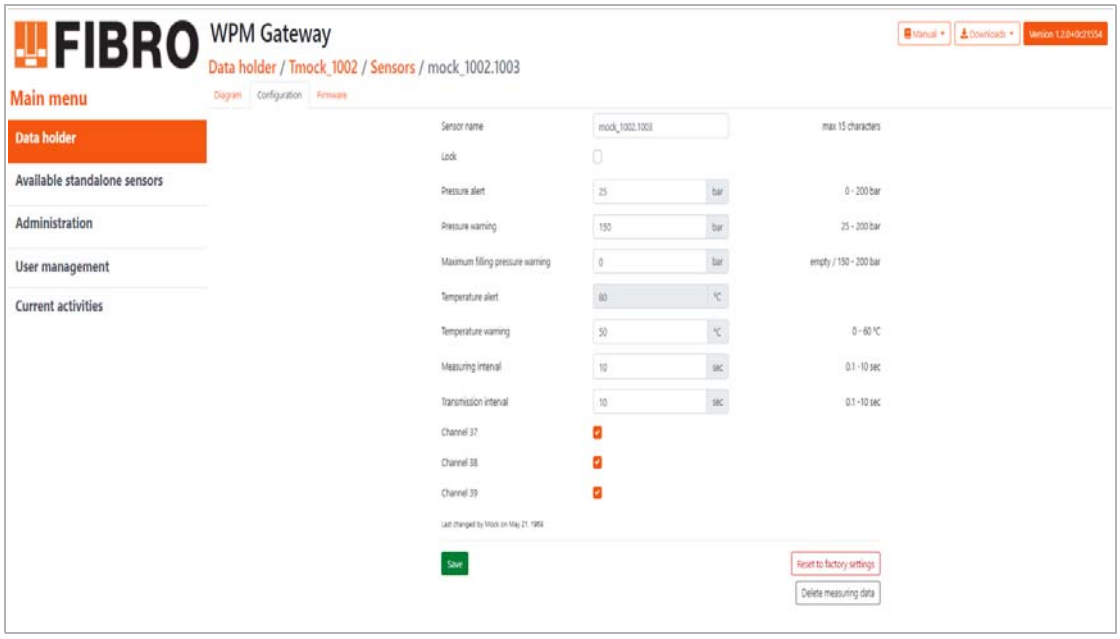


Fig. 8-7 Sensors – Changing parameters

Change sensor name

1) Enter a new sensor name in the *Sensor* name input field (maximum 15 characters).
2) Click the *Save* button to apply the new sensor name.

Sensor – Lock changes

1) In the *Lock* selection box, activate the lock parameter by checking the check box.
   – If Lock parameter is enabled, sensor parameters can only be changed after confirmation via a confirmation prompt.
2) Clicking the *Save* button applies the new status to the lock parameter.

The other parameters of a sensor can be changed in the same way.

Descriptions of the parameters can be found in Chapter 7.4.3.2 "Current parameters of a sensor" on page 43.

Sensor – Delete measurement data

In certain cases, it is useful to delete the collected measurement data of a sensor for the currently assigned data holder.

Example: This is necessary, for example, when a sensor in the WPM Gateway is assigned to another data holder for another press tool, but the sensor is not installed until later. In this case, the data collected from the sensor up until the installation does not match the data holder and should be deleted.

Sensor – Resetting to factory settings

The respective sensor can be reset to its factory settings. This means that the sensor parameters are reset to the default values and that the assignment to the data holder is lost.

Default values of the sensors (factory setting)

- Sensor name: not assigned
- Lock: disabled
- Pressure warning: 150 bar
- Pressure alarm: 25 bar
- Temperature warning: 50 °C
- Temperature alarm: 85 °C
- Measurement interval: 10s
- Transmission interval: 10s
- Channel 37: enabled
- Channel 38: enabled
- Channel 39: enabled
- Data holder assignment: cancelled
- Tool screen position: cancelled

9 WPM GATEWAY ADMINISTRATION

9.1 WPM Gateway Settings

In the *Gateway* view, WPM Gateway general settings can be configured, the license for using the WPM Gateway can be managed and the WPM Gateway software can be updated.

Open view: *Main menu => Administration => Gateway*

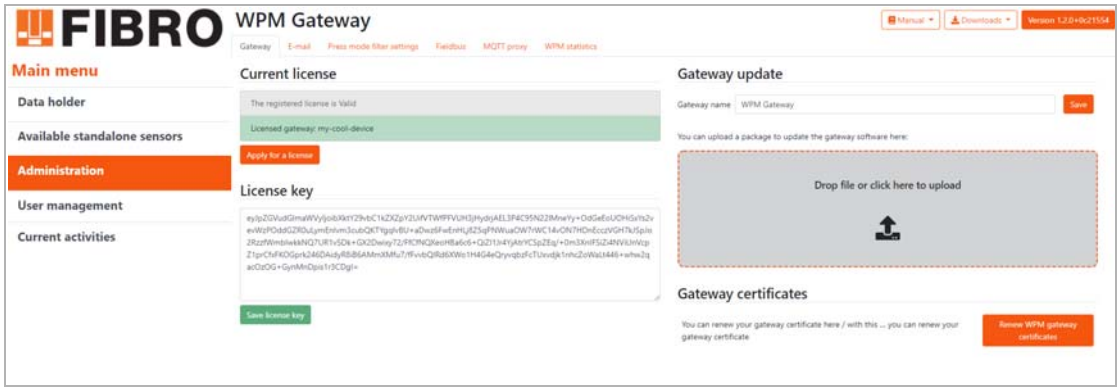


Fig. 9-1 WPM Gateway Settings

Fields

Name	Meaning
Current license	In the *Current license* area, you will find all information about the validity, the licensed Gateway and the licence period.
License key	In the *License Key* area, the current license key is displayed.
Gateway update	In the *Gateway Update* area, an update file can be uploaded and installed to update the Gateway software.
Gateway certificates	In the *Gateway Certificates* area, you can renew the Gateway certificates.

9.1.1 License and license key

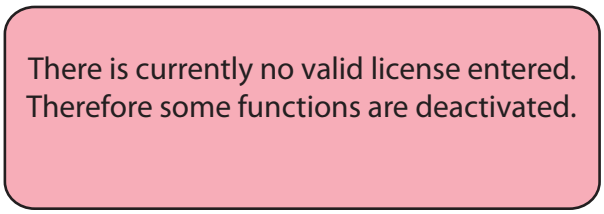
Apply for a new license

A new license can be requested in the *Current license* view.

Open view: *Main menu => Administration => Gateway => Current license*

1) Click the *Request license* button.
2) Follow the link in the dialogue that appears.
   – A new license key will be sent from FIBRO GMBH.
3) Enter the new license key in the *License key* input field.
4) Click the *Save license key* button.
   – The new license is displayed in the *Current license* field.

If no license is stored in the Gateway, the following message is displayed in the main menu:



9.1.2 Assigning/changing the WPM Gateway name

In the *Gateway update* view, a WPM Gateway update can be performed.

Open view: *Main menu => Administration => Gateway => Gateway update*

Enter/change name

The name WPM Gateway is entered as the default.

In the *Gateway update* area, a new name for the WPM Gateway can be assigned, or the existing name can be changed. Click on the *Save* button to apply the new name.

Upload the update file

In addition, an update of the gateway software can be uploaded via the drag & drop field. The update process may take some time (see Chapter 10.1 "WPM Gateway – Update" on page 65).

9.1.3 WPM Gateway certificates

The SSL certificates provided by the WPM Gateway for secure communication via HTTPS and OPC UA have a limited validity and must be renewed by an Administrator as required (see Chapter 7.2 "WPM Gateway – Display information" on page 29 and Chapter 9.4.2 "Connection with an OPC UA Client" on page 60).

Certificates can be renewed in the *Gateway certificates* view.

Open view: *Main menu => Administration => Gateway => Gateway certificates*

To do this, click on the Renew WPM *Gateway certificates* button in the *Gateway certificates* view.

As soon as the certificates have been renewed, a success message is displayed.

To do this, click the Renew WPM Gateway certificates button in the Gateway certificates view.

9.2 Managing email settings

If limit value violations occur, which subsequently trigger a warning or an alarm, a notification via email can be set up for this.

Open view: *Main menu => Administration => Email*

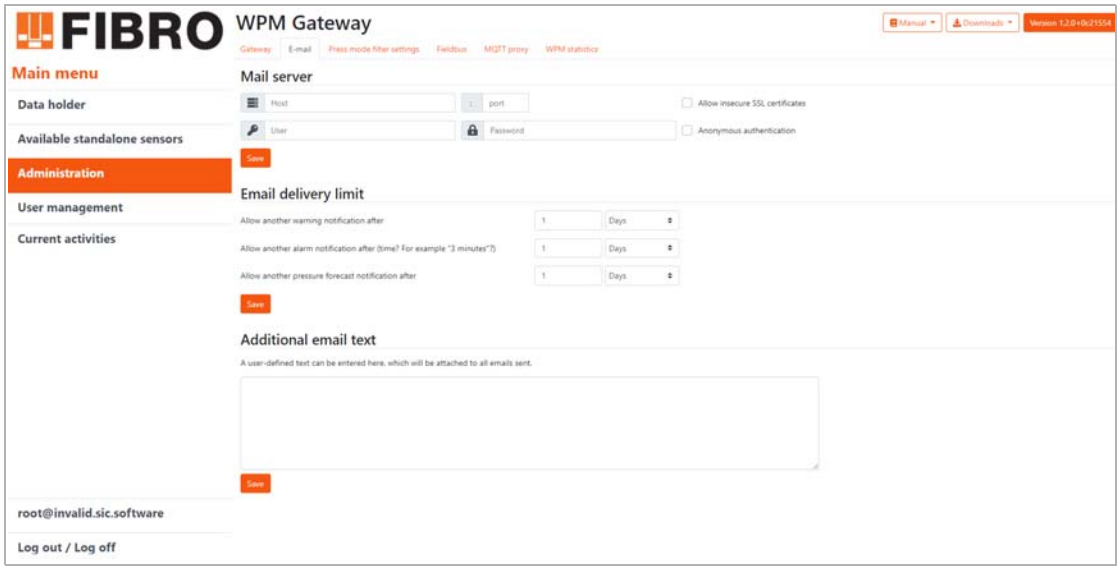


Fig. 9-2 Managing email settings

Mail server

To send emails, a mail server must be entered on the Gateway.

Fields

Name	Meaning
Host	Address at which the mail server can be reached.
Port	Port of the mail server (default: 587).
Allow unsecure SSL certificates	If active, SSL certificates are not verified, which can be a security risk.
User	Username of the mail account. Also used as sender address.
Password	Password to authenticate the user
Anonymous authentication	If active, a separate authentication is not necessary.
Save	Save settings.

Mail delivery limit

The mail delivery limits allow you to restrict the number of notifications for prolonged limit value violations.

- Allow new warning notification after X days/hours/minutes.
  - If a limit value violation occurs at a sensor, which triggers a warning, the next notification for this sensor will only be sent again after the selected time period if the limit value violation has not yet been rectified.
- Allow new alarm notification after X days/hours/minutes.
  - If a limit value violation occurs at a sensor, which triggers an alarm, the next notification for this sensor will only be sent again after the selected time period if the limit value violation has not yet been rectified.
- Allow new pressure forecast notification after X days/hours/minutes.
  - If a notification occurs at a sensor due to a pressure forecast, the next notification for that sensor will not be sent again until after the selected time period if the pressure forecast continues to approach the limit values.

Required action:

- Select limits.
- Click the *Save* button to save the selection.

Additional email text

In this area, additional text can be entered, which will be added to every email sent by the WPM Gateway.

Required action:

- Enter additional text
- Click the *Save* button to save the input.

9.3 Setting the filter for Press mode

Various threshold values can be set to compensate for short-term fluctuations in the sensor values. In this case, an alarm or warning is only issued at the outputs of the WPM Gateway when the threshold values have been exceeded.

Open view: *Main menu => Administration => Press mode filter*

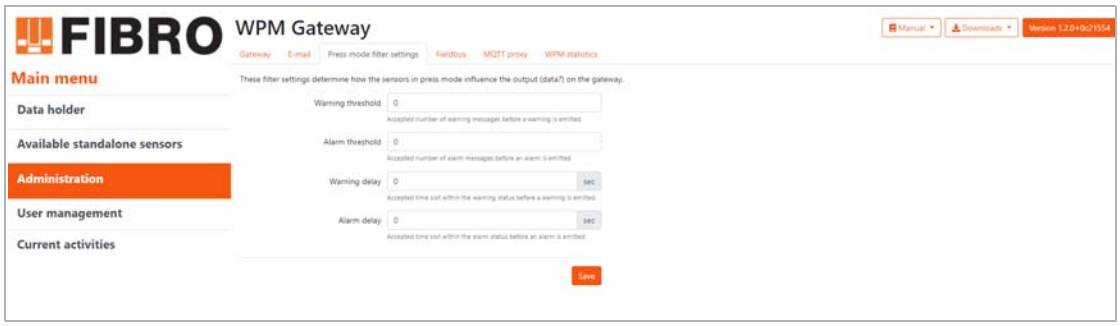


Fig. 9-3 Setting the filter for Press mode

Fields

Name	Meaning
Threshold values based on the number of messages	
Warning threshold	Accepted number of warning messages before a warning is emitted.
Alarm threshold	Accepted number of alarm messages before an alarm is emitted.
Threshold values based on a time delay	
Warning delay	Accepted time period in warning status before a warning is emitted
Alarm delay	Accepted time period in alarm status before an alarm is emitted.
Save	Save the set threshold values on the Gateway.

9.4 Connecting press control

External devices can be connected to the WPM Gateway via the interfaces of the WPM Gateway for data exchange or control.

9.4.1 Connection via EtherCat or Profinet

Set up connection via a Fieldbus interface – EtherCAT or Profinet

The WPM Gateway has a Fieldbus interface, which enables connection to an EtherCat network or a Profinet network.

Open view: *Main menu => Administration => Fieldbus*

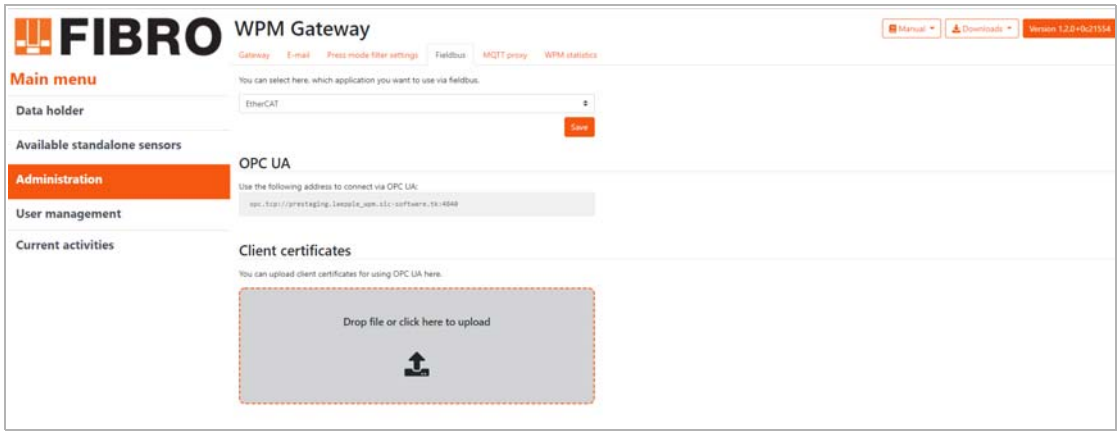


Fig. 9-4 Connection via Fieldbus interface

1) Connect the WPM Gateway to the EtherCAT or Profinet network via the Fieldbus network interface.
2) Select the EtherCAT or Profinet application.
3) Confirm the selection by clicking the *Save* button.

It is not possible to use both applications at the same time.

The device description files for the EtherCAT or Profinet Fieldbus connection can be downloaded via the *Downloads* button.

- For EtherCAT, download the file Fieldbus_EtherCAT_Gateway.xml
- For Profinet, download the file Fieldbus_Profinet_Gateway.xml.

For the functional scope of the EtherCAT or Profinet application, contact a representative at FIBRO GMBH.

9.4.2 Connection with an OPC UA Client

Connect an OPC UA Client with the WPM Gateway

On the WPM Gateway, an OPC UA server is executed, which supports the data exchange with OPC UA clients.

Open view: *Main menu => Administration => Fieldbus*

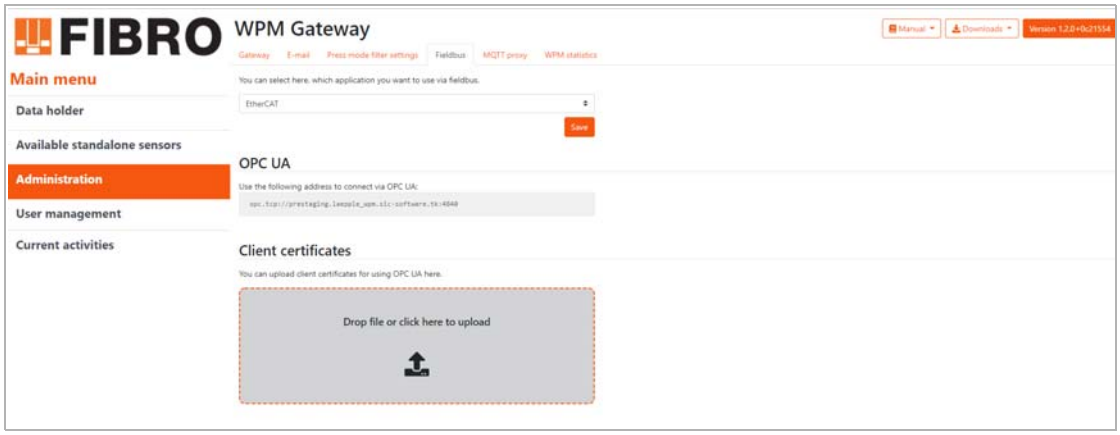


Fig. 9-5 Connection via Fieldbus interface

Ensure that the OPC UA Client is in the same network as the WPM Gateway.

The device description files for the OPC UA connection can be downloaded via the *Downloads* button.

- Download OPC_UA_Gateway.xml

The data connection between an OPC UA Client and the WPM Gateway is generally established via a secure connection. Therefore, the certificate of the OPC UA Client that will be connected to the WPM Gateway must be uploaded to the WPM Gateway.

Upload OPC UA Client certificates to the Gateway

To obtain the OPC UA Client certificate, see the documentation for the OPC UA Client.

1) The certificate must be in DER format.
2) Drag and drop the DER file of the certificate into the upload area.
   – Alternatively, clicking in the upload area opens a file selection dialogue.
3) The certificate is automatically imported into the WPM Gateway.

OPC UA Client connection settings

1) Use the specified url in the OPC UA section to connect the OPC UA client to the WPM Gateway.
2) In the OPC UA Client, select Basic256SHA256 as Security Policy.
3) Authentication takes place via user name and password.
   – To create/change the user or password, see Chapter 6 "User management configuration" on page 24.

Download the OPC UA certificate for the WPM Gateway

The WPM Gateway provides a self-signed certificate for secure communication via OPC UA.

You can download the SSL Root certificate opc_ua.crt.der via the Downloads button.

For certificate storage in the OPC UA Client, see the OPC UA Client documentation.

9.4.3 Setting up MQTT proxy

The WPM Gateway uses MQTT for inter-service communication. By setting an MQTT proxy, the MQTT events can be forwarded to an external MQTT broker.

The description of the MQTT Topics can be found under the link WPM Gateway MQTT Topics .

Open view: *Main menu => Administration => MQTT-Proxy*

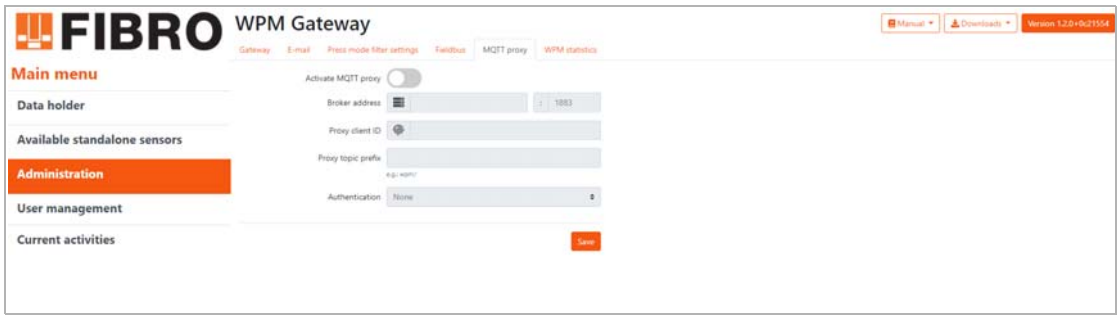


Fig. 9-6 Setting up MQTT proxy

Fields

Name	Meaning
Set up MQTT proxy	
Enable MQTT proxy	Activation/deactivation of the forwarding of the MQTT events to the stored MQTT broker.
Broker address	IP address or DNS name of the MQTT broker and specification of the port. By default, port 1883 is set.
Proxy client ID	Client ID of the Gateway used to connect to the external MQTT broker. By default, wpm_proxy is set.
Proxy topic prefix	For grouping all sent MQTT events of the Gateway under a common MQTT topic.
Authentication	Authentication settings of the Gateway for the external MQTT broker. See MQTT proxy authentication.
MQTT proxy authentication	
None	Anonymous authentication at the external MQTT broker.
Credentials	Authentication via username and password for the external MQTT broker.
SSL/TLS client certificate	Authentication via X.509 certificate.
Root CA	Root CA file from the external broker.
Client certificate	A client certificate authorised by the root CA from the external broker.
Client private key	Private key associated with the client certificate.
Save	Save MQTT proxy settings.

9.5 WPM Gateway – Operating statistics

The software installed on the WPM Gateway consists of various services and is based on Docker container virtualisation. In this view, various statistics on CPU usage, memory usage and network traffic of the individual services, as well as for the WPM Gateway itself can be viewed.

The statistics are used by the support team to help clarify problems.

Open view: *Main menu => Administration => WPM statistics*

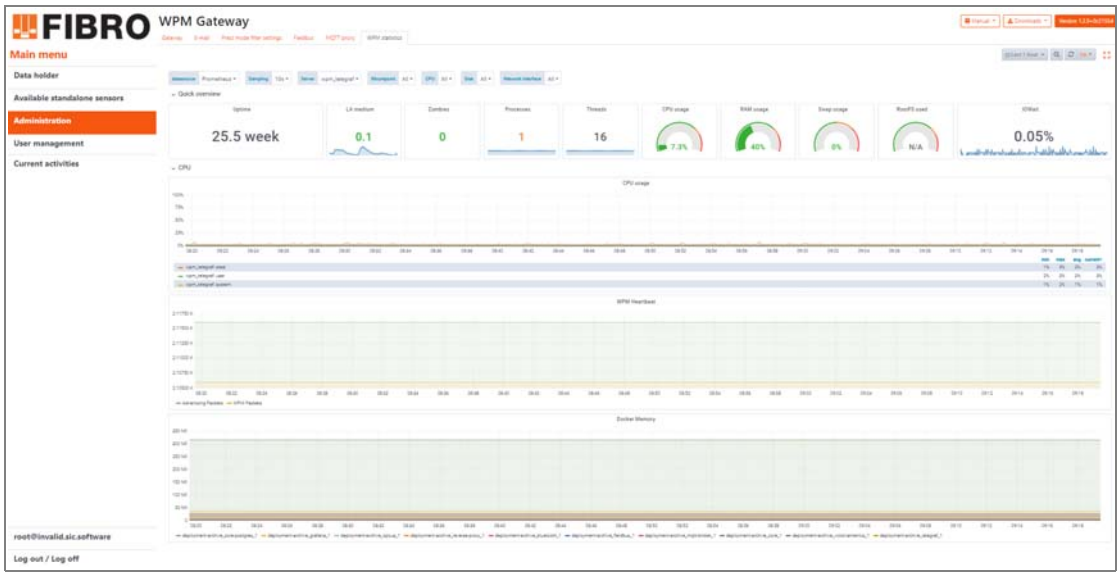


Fig. 9-7 WPM Gateway Operating Statistics

9.6 Reset Administrator password

If the access data of the WPM Gateway Administrator is no longer available, a reset key must FIBRO GMBH be requested.

1) Log into the web browser with the email address of the WPM Gateway Administrator.
   – If users are already logged in, they must be logged out to access the login page.
2) Click the Forgot *Admin Password* button.
   – A page for requesting a reset key is displayed.
3) Request a reset key via the displayed link.
4) Enter the reset key received in the input window.
5) Press the *Next* button.
   – A form for creating the WPM Gateway Administrator is displayed.

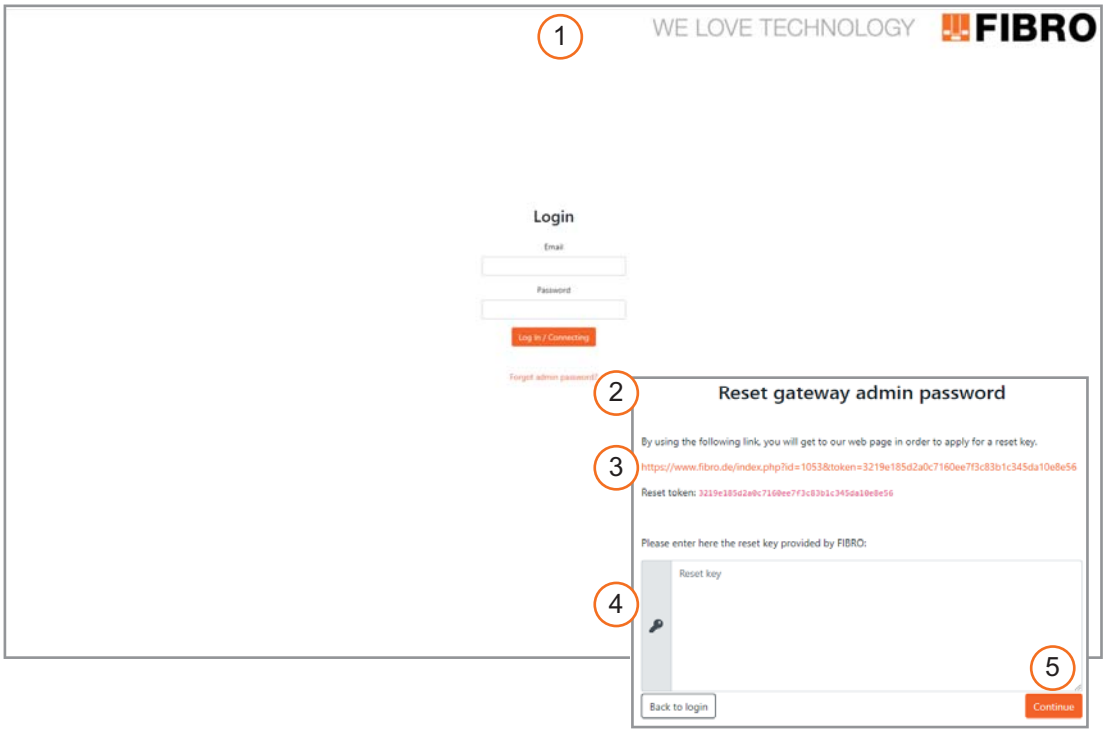


Fig. 9-8 Reset Admin password

10 MAINTENANCE

10.1 WPM Gateway – Update

A WPM Gateway update can be performed by an Administrator.

Open view: *Main menu => Administration => Gateway => Gateway update*

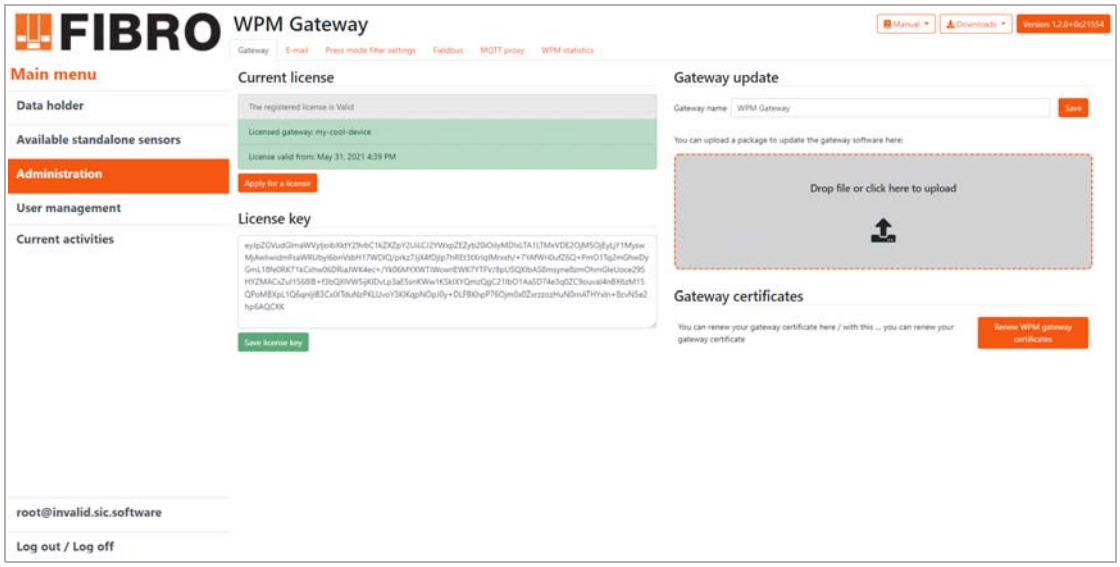
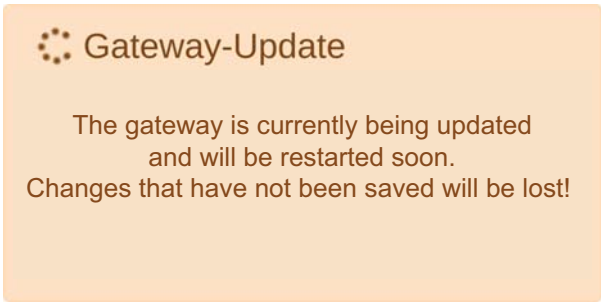


Fig. 10-1 WPM Gateway Update

1) WPM Gateway updates are each provided as a TAR file.
2) Drag & drop the TAR file into the upload area.
   – Alternatively, clicking in this area opens a file selection dialogue.
3) The upload of the TAR file starts automatically. The update process then begins.
   – Do not close the browser window during the upload!
   – An update can take between 30–40 minutes, depending on the network connection.

While the update is in progress, the following message appears in the main menu:



10.2 Data holder – Updating firmware

A data holder firmware update can be performed by a user with the authorisation level Professional or Administrator.

View information about the installed firmware on the data holder and update the firmware.

Open view: *Main menu => Data holder =>* ⓘ *=> Firmware*

Fig. 10-2 Data holder – Updating firmware

1) Drag and drop the firmware file to the firmware upload area to updating.
   – Alternatively, clicking in this area opens a file selection dialogue.
   – Firmware update starts automatically.

Fields

Name	Meaning
Article number	Article number of the data holder.
Order number	Order number of the data holder.
Revision	Version of the firmware.

10.3 Sensor – Updating firmware

A sensor firmware update can be performed by a user with the authorisation level Professional or Administrator.

Open view: *Main menu => Data holder =>* ⓘ *=> Sensors =>* ⓘ *=> Firmware*

Fig. 10-3 Sensor firmware update

1) Drag and drop the firmware file to the firmware upload area to updating.
   – Alternatively, clicking in this area opens a file selection dialogue.
   – Firmware update starts automatically.

Fields

Name	Meaning
Article number	Part number of the sensor.
Order number	Order number of the sensor.
Revision	Version of the firmware.

10.4 Changing the battery

The products of the WPM series from FIBRO GMBH are equipped with batteries.

If the WPM Monitor indicates a lower battery voltage for a WPM component, the battery needs to be replaced.

The documentation for the WPM component concerned describes how to replace batteries.

The used battery must be properly disposed of (see the chapter 11.1 "Disposing of the battery" on page 69).

Battery voltage status

Symbol	Meaning
	Battery is charged.
	Battery is half charged.
	Battery voltage is low. Battery needs to be replaced.
	Battery voltage is unknown. The battery must be checked and replaced if necessary.

Tab. 10-1 Battery voltage status

11 DISPOSAL

11.1 Disposing of the battery

NOTICE

Dispose of the battery properly

The battery consists of lithium metal cells. Lithium is a valuable raw material and a hazardous material. Improper disposal may cause environmental damage and may be prosecuted.

- ▶ The battery must be removed from the device.
- ▶ The battery must be disposed of according to the pertinent, customary national and regional laws and guidelines.
- ▶ The local regulations on proper waste recovery or removal must be complied with.

12 INDEXES

12.1 Third-party products

The product contains no components from third-party companies.

12.2 Glossary

Term	Explanation
Operator	Person or organisation that uses the product or system responsibly.
User	Users are generally persons who can use the product.
Basic	Basic users generally have read access. Additionally, data holders, sensors and press mode may be enabled/disabled.
Professional	Professional users have more device management authorisations than the Basic user. Data holders, as well as sensors, can be configured, assigned and reset.
Administrators	Administrators have all authorisations to manage the Gateway.

12.3 Index of figures

12.4 Index of tables

13 APPENDIX

13.1 Personal notes

14 INDEX

More information at

www.fibro.de/downloads-springs-gas springs/

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