SCHNEIDER MESSTECHNIK

Quickstart Manual

WIKA Flow Manager

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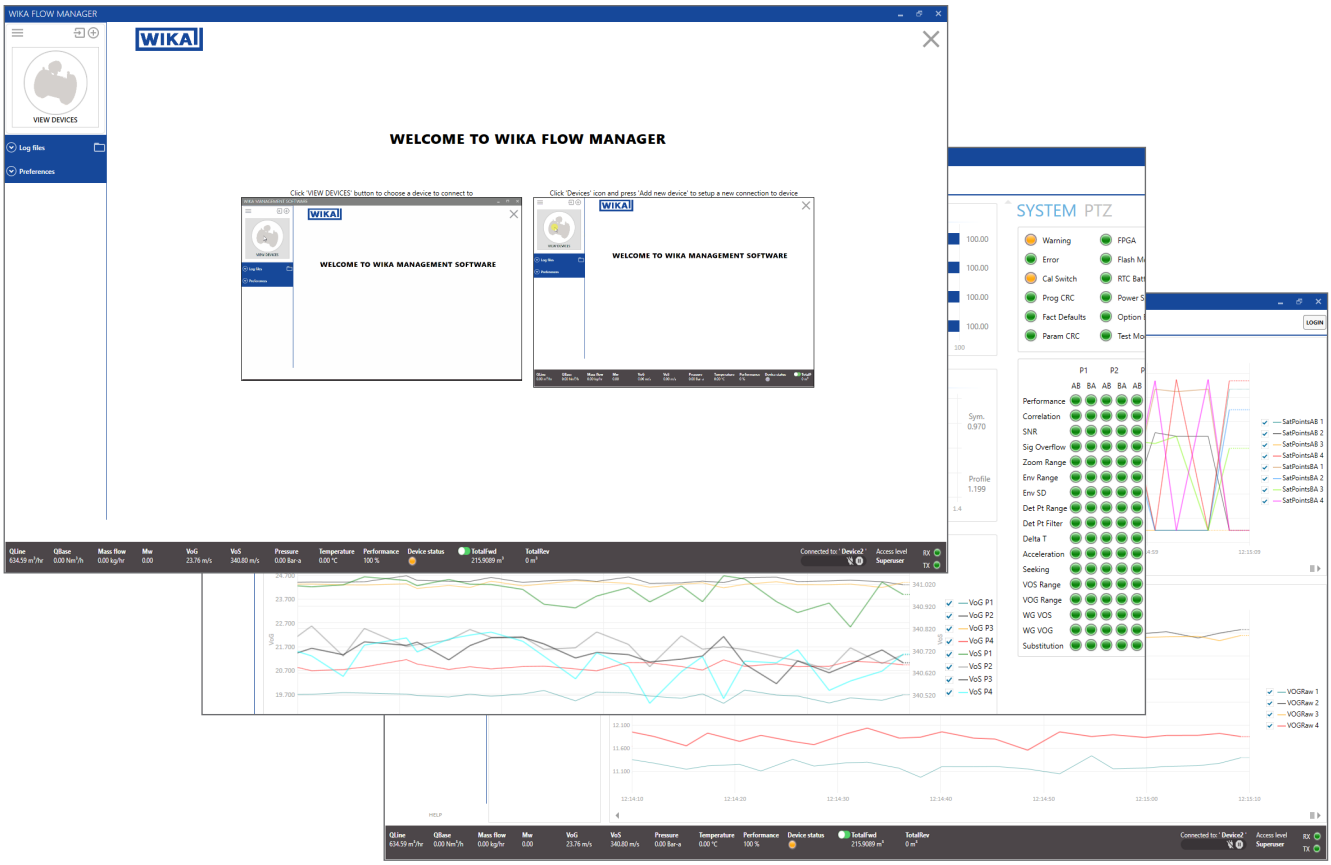

Software

WIKA

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WIKA Flow Manager

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Additional languages available on www.wika.com

Prior to starting any work, read the operating instructions!
Reading this manual thoroughly, you will be able to perform correct installation and fully use the product in total safety.
Keep for later use!

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Table of contents

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1. Introduction

This manual provides information for installing and performing the basic functions of WIKA Flow Manager (WFM). It is the Microsoft Windows based software to program, run diagnostics and troubleshoot the FLC-EM series ultrasonic gas flowmeter. It contains guidelines for setting up a connection and perform the basic functions in WFM. Before operating the product read and understand this manual. Strictly follow the safety instructions and warnings.

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ATTENTION!
In the event of questions or need for additional information regarding specific matters about the FLC-EM Series, please refer to the Installation and operating instructions or contact WIKA via email or telephone.

This Quickstart manual is based on the latest information at the time of writing. It is provided subject to changes and updates. We reserve the right to change the configuration and/or construction of our products at any time without obligation to update previously shipped products.
The warranty provisions stipulated in our Terms and conditions are applicable to the product. WIKA shall have no obligation in the event that:

- Repair or replacement of equipment or parts has been required through normal wear and tear, or due to negligence of the purchaser;
- The equipment, or parts, have been maintained or repaired by other than an authorized representative of WIKA, or have been modified in any manner without prior express written permission of the manufacturer;
- Non-original parts are used;
- Equipment is used improperly, incorrectly, carelessly or not in line with its nature and/or purpose;
- Use of this product with unauthorized equipment or peripherals, including, but not necessarily limited to, cables, testing equipment, computers, voltage, etc.

WIKA is not responsible for the incidental or consequential damages resulting from the breach of any express or implied warranties, including damage to property, and to the extent permitted by law, damage for personal injury.
No license is required for WIKA Flow Manager. These software programs are provided on an as-is basis.
In no case WIKA will be liable for direct, indirect, incidental or consequential damages resulting from a defect in the software, or the unintentional or deliberate misuse of the software.

1.1 Conventions

The following symbol and indication conventions are used throughout this manual.

WARNING!
A warning indicates hazards or unsafe practices that could result in severe personal injury or death.

ATTENTION!
This sign indicates potential hazardous or unsafe operations that could result in minor personal injury or damage of product or property. It is also used to indicate operations or practices that could cause the product to operate in an unexpected way or provide results outside its specification.

1.2 Related documents

The last version of the referenced document is leading, unless otherwise specified.

[1] FLC-UFL Series Safety Instructions
Author: Euromisure
Document Code: 81500907 FLC-UFL Series Safety Instructions.

[2] FLC-UFL Series Operating Instructions
Author: Euromisure
Document Code: 81500908 FLC-UFL Series Installation, Operation and Maintenance Manual

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1.3 Abbreviations

The following abbreviations may be used throughout the document:

ATEX	ATmosphère Explosive
CSA	Canadian Standards Association
EMC	Electromagnetic Compatibility
FM	Factory Mutual
IEC	International Electrotechnical Commission
IECEx	International Electro technical Commission certification scheme for Explosive atmospheres
IS	Intrinsic Safety
ISO	International Organization for Standardization
LCD	Liquid Crystal Display
OIML	Organisation Internationale de Métrologie Légale
PCBA	Printed Circuit Board Assembly
RTF	Rich Text Format
SPU	Signal Processing Unit
WFM	WIKA Flow Manager
USM	Ultrasonic Flow meter

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2. Installation

This chapter describes the minimum system requirements and instructions for the installation of WFM.

2.1 Minimum system requirements

The minimum system requirements necessary to run WIKA Flow Manager are:

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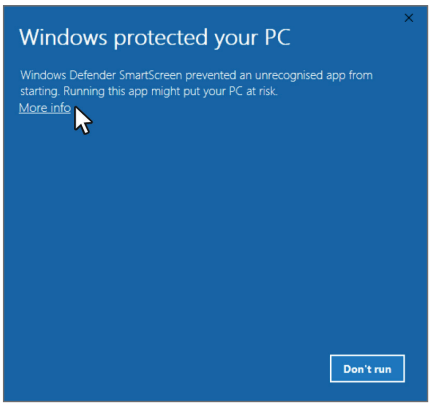
- Windows 7 or higher with .NET framework 4.6 or higher;
- Installation requires Local Administrator Rights;
- Free disk space with a minimum of 500 MB;
- 4 GB RAM
- Screen resolution of 1366 x 768 or better for optimum viewing experience.

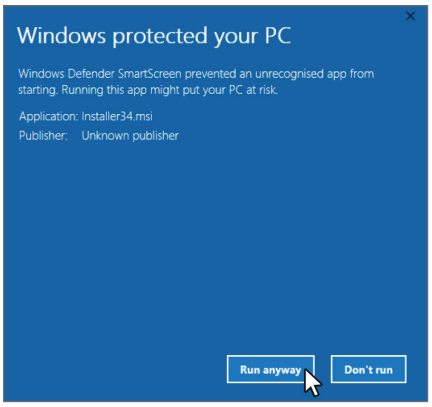
2.2 Installing WFM

ATTENTION!
We recommend installing WFM under the account of the user that will use it. The user will need to have administrator rights to install WFM.

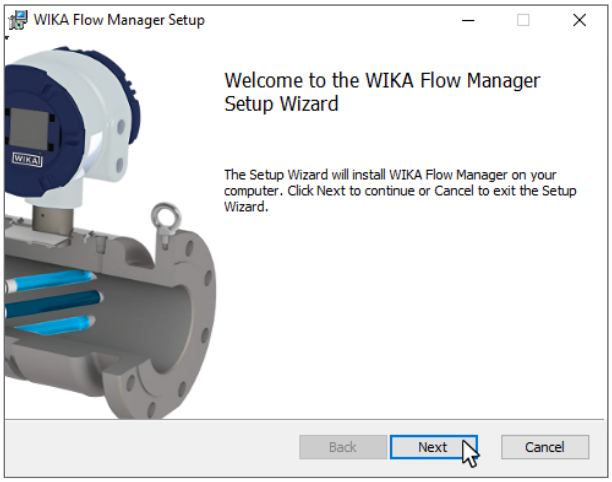
Go to the WIKA website download section and download the latest version of WFM. Save it to your downloads folder. When the download is complete, open the installer package and follow the steps below to complete the installation.

1 - Run the WikaInstaller165.msi Windows might give you a warning message when it doesn't recognize the app. Click **More Info** and then click **Run anyway** to proceed.





2 - Click **Next** in the following screen.



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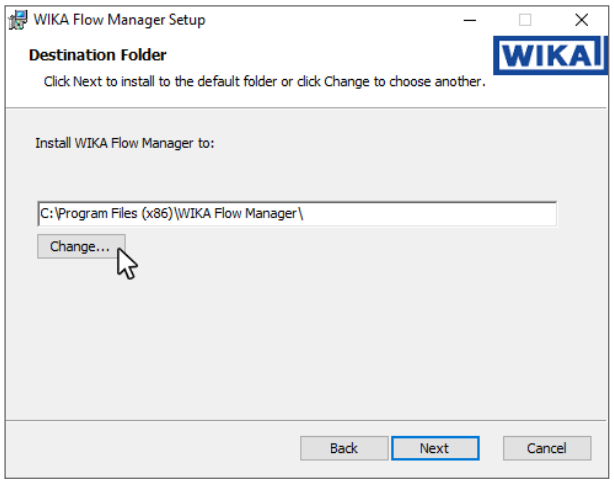
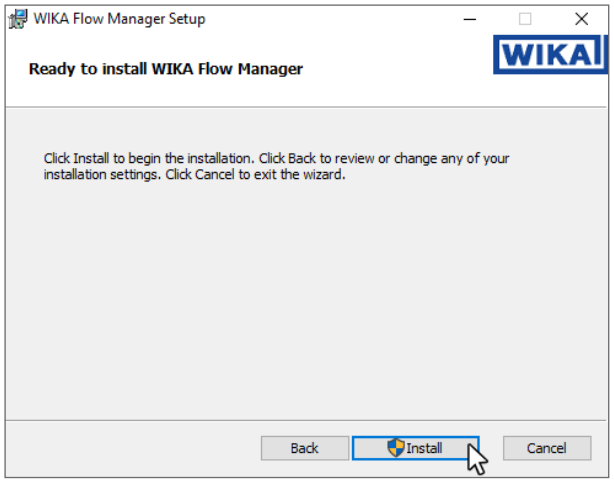
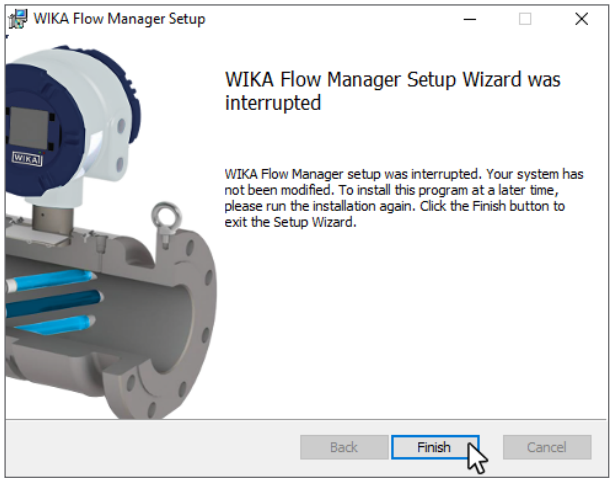
3 - Click next to accept the default installation folder or press **Change** to change the destination folder.



4 - Click **Install** to begin the installation. When Windows asks you to confirm the installation, click **Yes** to proceed with the installation.



5 - The following screen shows when the installation completed successfully. Press **Finish** to complete the installation.



2.3 Running WIKA Flow Manager

A shortcut is created in the windows start menu. Click on the windows button and search for WIKA Flow Manager.
For easy access it is recommended to create a shortcut on the desktop or pin it to the taskbar.

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3. General information

3.1 User interface

After WFM starts up the OVERVIEW screen will appear. This is the main screen for viewing live data and allows to easily observe the device status. The screen is divided in four main sections.

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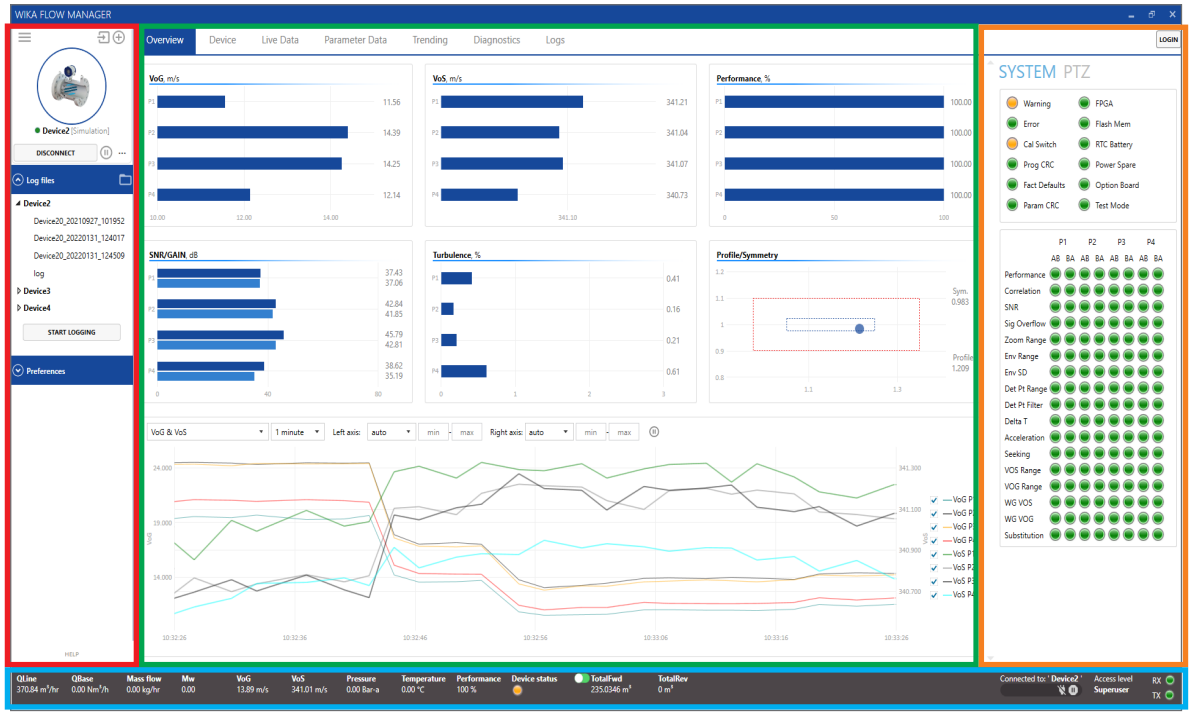
1. Navigation pane (left side)
This section of the screen contains the devices list, logfile list and preferences options.

2. Main information section (middle part)
This section contains bar graphs and charts of the main diagnostics.

3. Diagnostic status section (right hand side)
This section shows real time device status information.

4. Status bar
It shows general information from the device as well as connection information.



3.2 WFM Preferences

Preferences and general information about WFM can be accessed under Preferences in the left navigation pane.

- GENERAL
  Preferences and settings for device connection and properties settings can be set here;
- FILE LOCATIONS
  Default file location folder settings can be found here;
- EMAIL
  Default email address settings can be found here;
- ABOUT
  Information about WIKA Flow Manager

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3.3 User levels

There are three user levels in WIKA Flow Manager.

- User: this is the entry level and requires no password;
- Service: this is the user level for general commissioning, service and troubleshooting activities;
- Superuser: this level allows to edit all parameters of the FLC-UFL Series flowmeter.

ATTENTION!
Regardless of the user level, the parameter access in the FLC-UFL Series flow meter is controlled by the calibration switch on the device. When it is closed, only parameters that do not affect the metrological performance can be changed.

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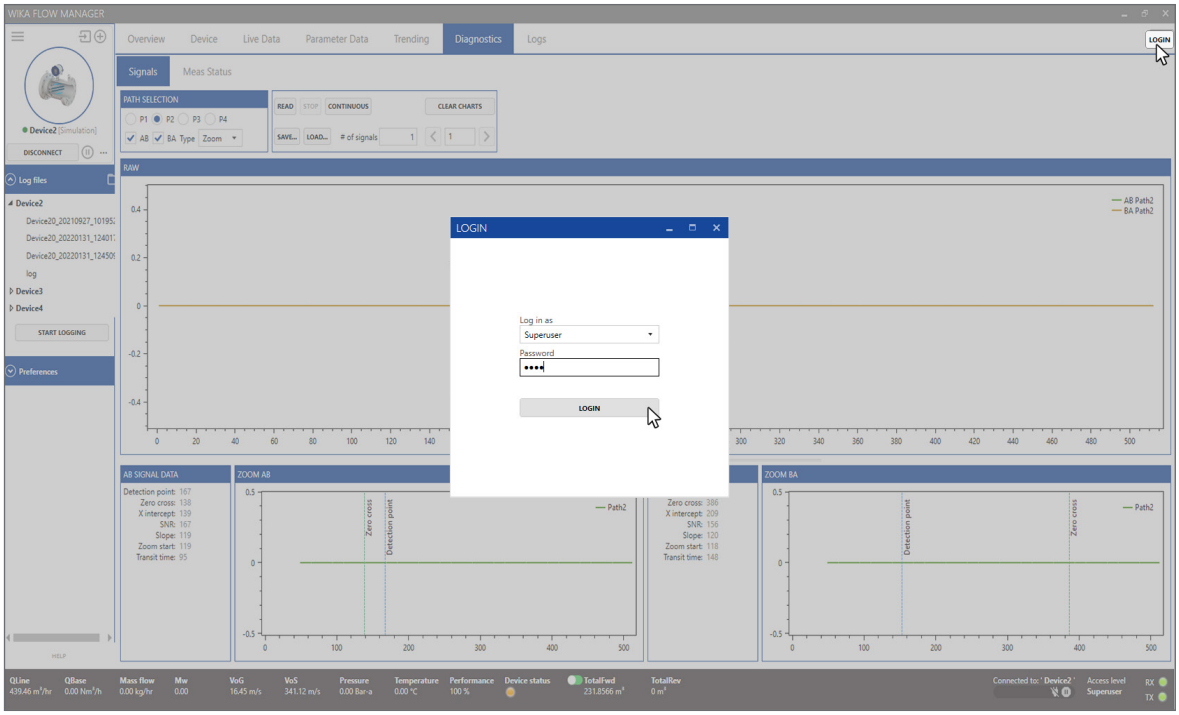
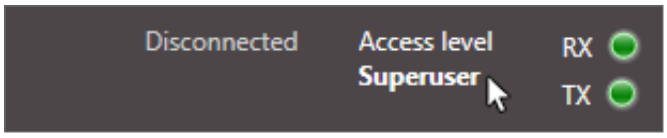
WIKA Flow Manager starts up at the **User** user level. No login is required for this level. To change the user level click on the **Login** button in the upper right corner of the window. The login pop-up window appears. Select the desired user level, enter the password and click **Login** to change to that user level.



The active user level is shown in the status bar on the right.



Depending on the user level several menu items or tabs are available.

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4. Devices

4.1 Adding a device

To add a device press the **+** button to open the device settings dialog pop-up window.
Enter a device name for the device you are connecting to. Configure the COM port settings. Factory default settings for the FLC-UFL Series flow meters are:

- USB Port 115200, No parity, 1 stopbit, Device ID = 1
- RS485 port 38400, No parity, 1 stopbit, Device ID = 1

Choose the version of the parameter file you want to use.

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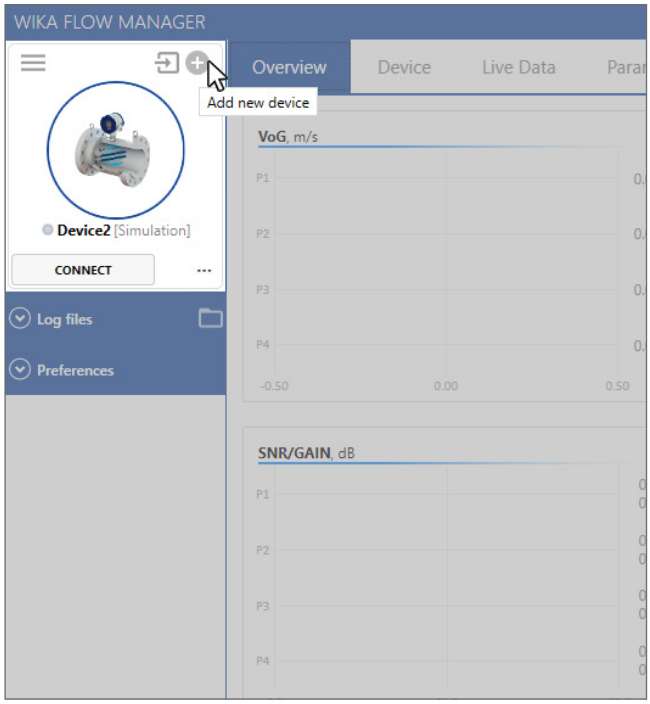

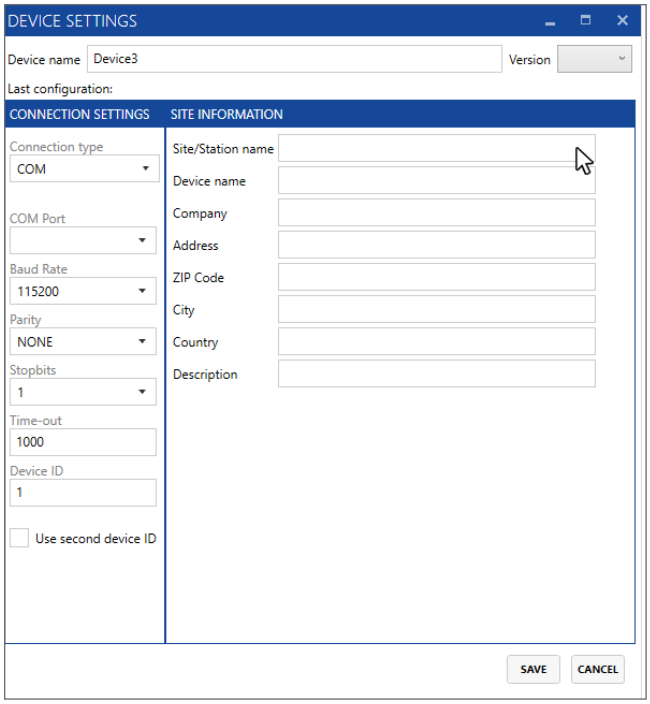

ATTENTION!
When unsure what parameter version to use, check on the device, system info.

Optionally provide site information. This information is used in reports such as a parameter report. Press **Save** to complete the process and add the device to the devices list.

ATTENTION!
All properties entered for a device and data collected with WIKA Flow Manager is stored locally on the PC, not on the device itself.

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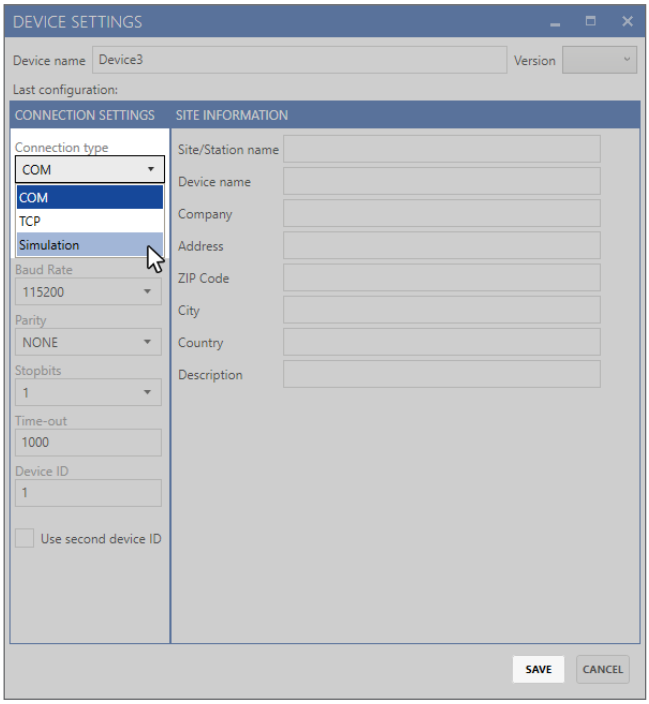
4.2 Adding a device for demo mode (simulation mode)

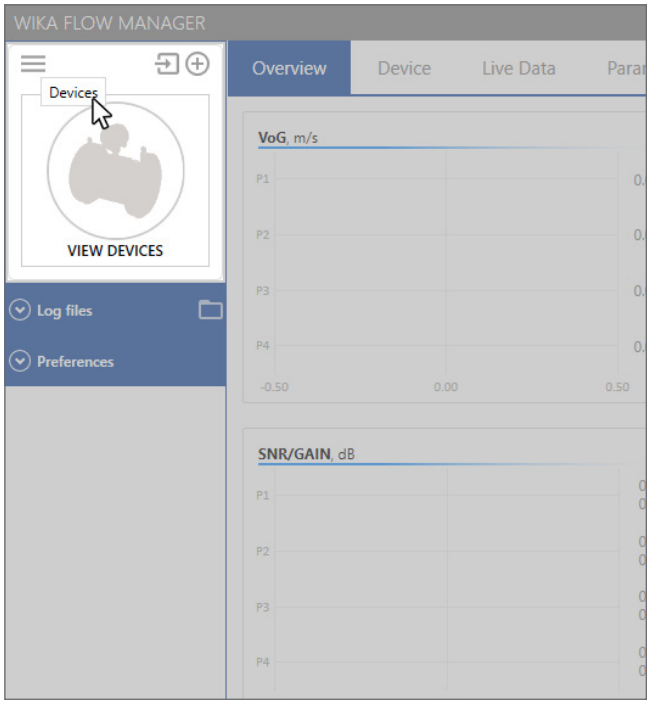
To add a device press the **+** button to bring up the device settings dialog, then select the simulation mode and save the device.

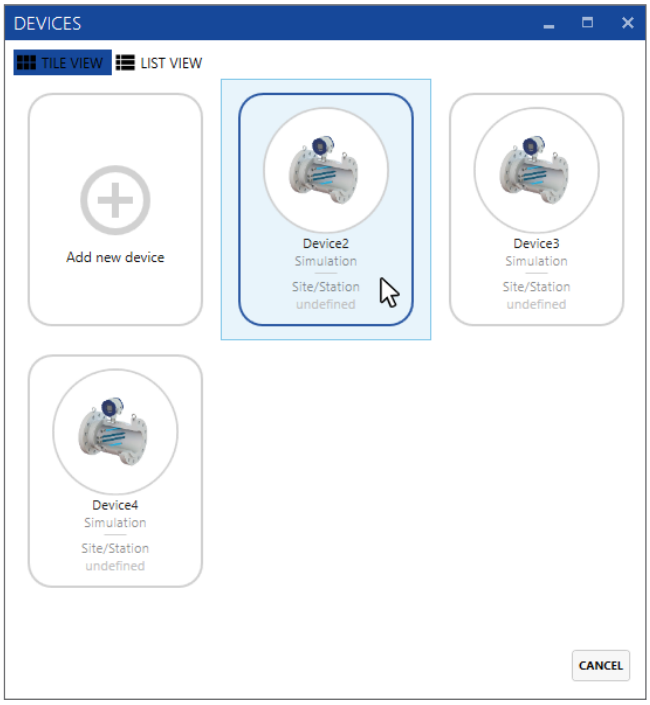


This device can now be used as if connected to a normal device; when connected to the simulation mode device it will play a default log file and simulate a FLC-UFL Series flow meter measuring flow.

4.3 Connecting to a device

In order to connect to a device, double click on the **Menu icon** on the top left of the Navigation pane. Once the device list pop-up window appears, select among the existing devices and then press the **Connect** button below the product pictire on the top left of the screen. WFM will attempt to connect, read the parameters and then start to read real time data.





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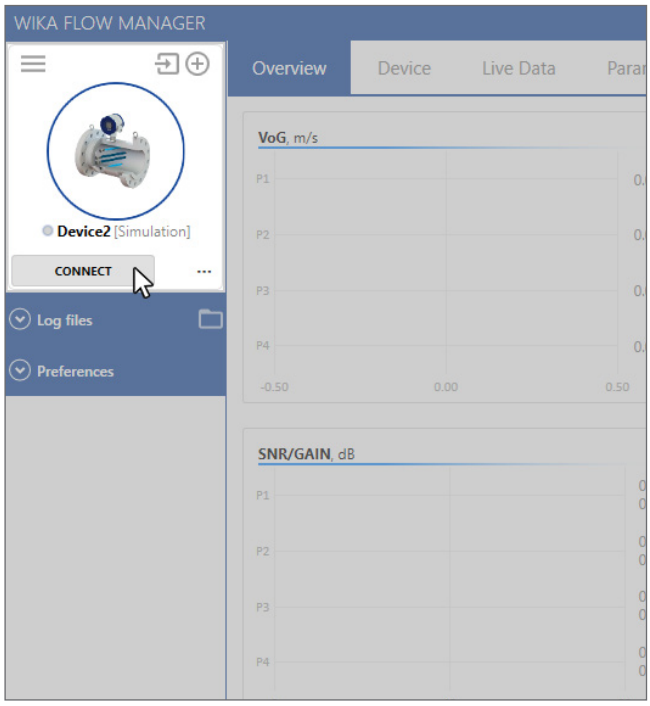
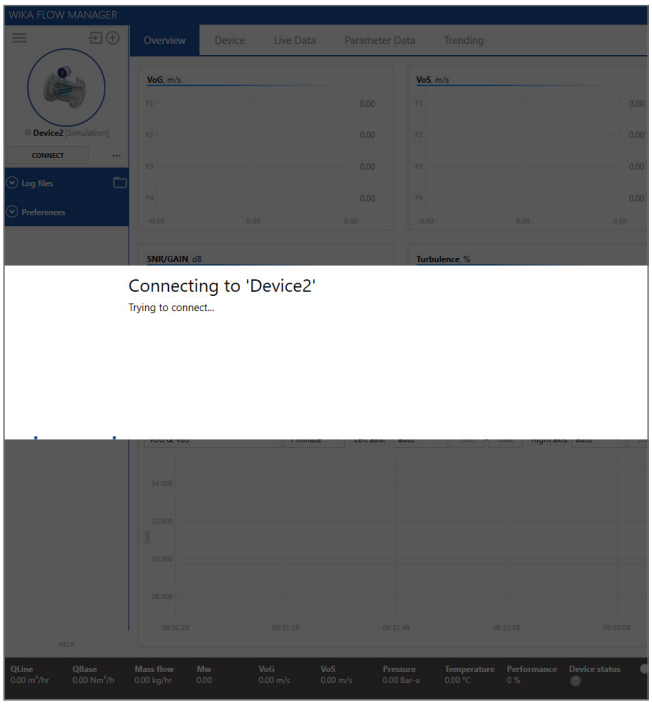


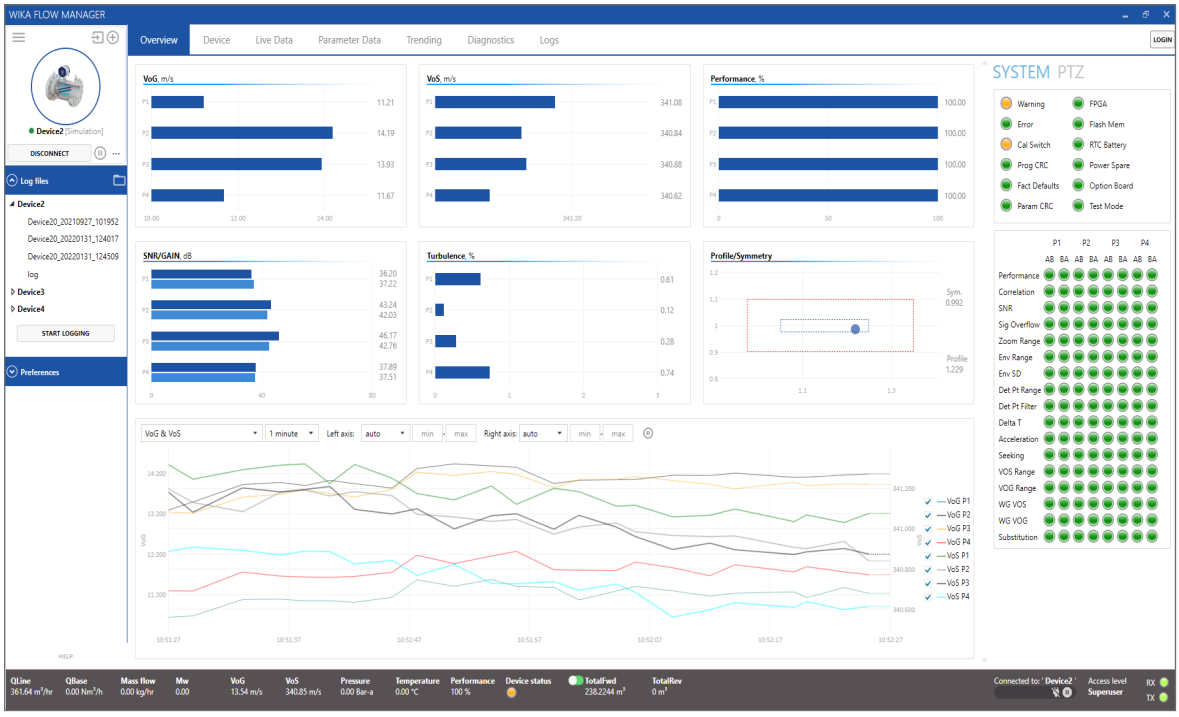


To work offline on a device, single click on that device, WFM then loads the last saved parameters from the computer to allow editing the device parameters without being connected.

ATTENTION!
In order to work with a device in offline mode, WFM needs to be connected to the device at least once.

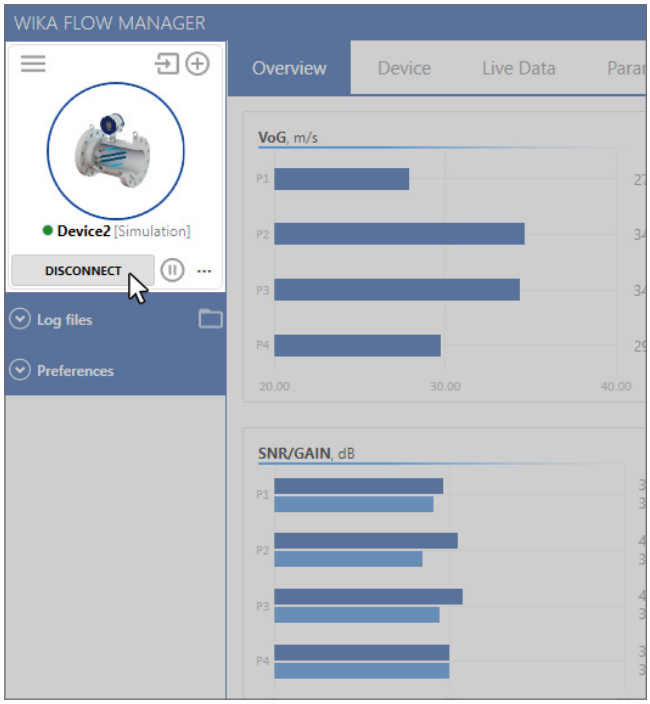
4.4 Entering demo mode

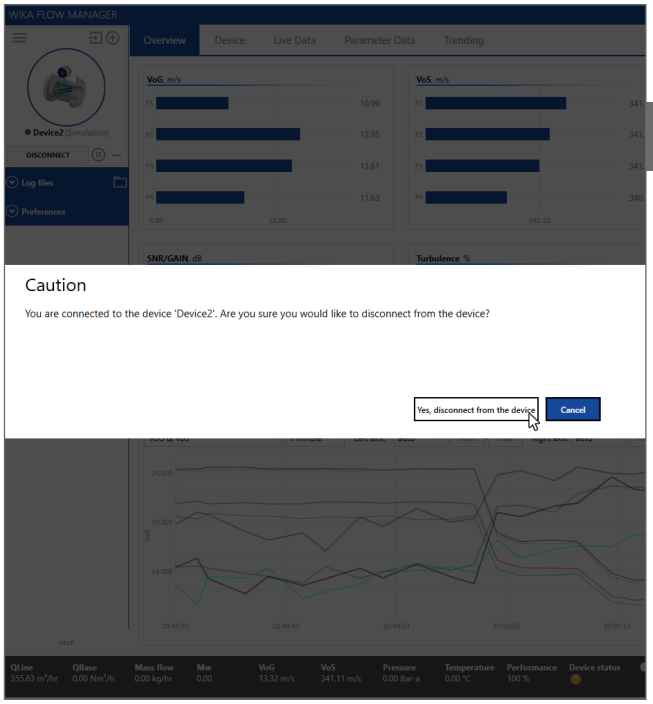
Connecting and editing a simulation device (demo mode) is identical to working with a real device. As soon as WFM connects to the simulation device it will start to play the data.



4.5 Disconnecting from a device

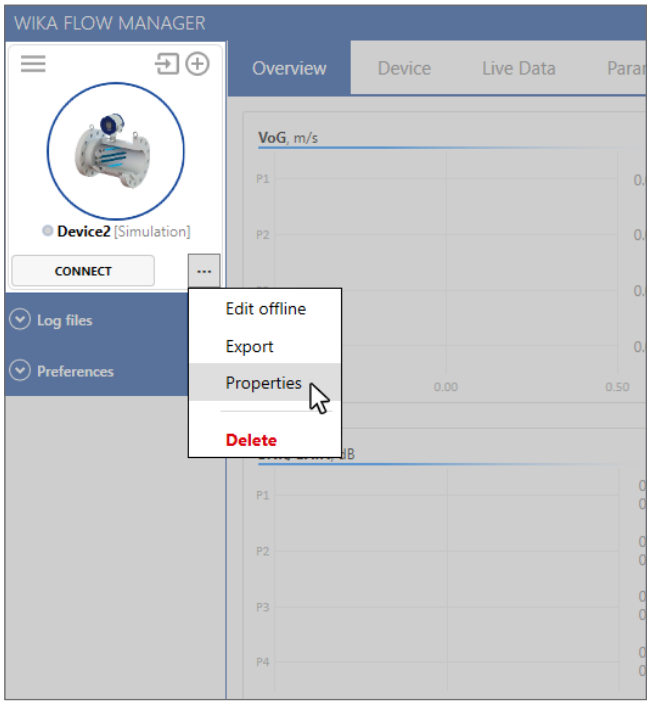
In order to disconnect from a device, click on the **Disconnect** button located below the device picture. WFM will ask to confirm to disconnect. Any logging in progress will also end.

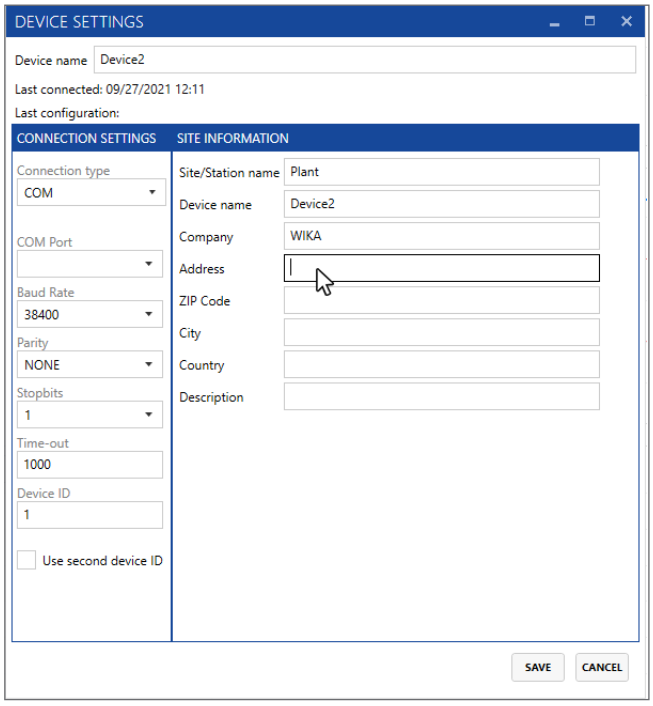




4.6 Changing device properties

In case certain properties or connection settings of a device need to be changed, disconnect it, click on the **More** icon and select **Properties** from the drop-down menu. The device settings popup window appears, then modify the parameter you want to change and click on the **Save** button.





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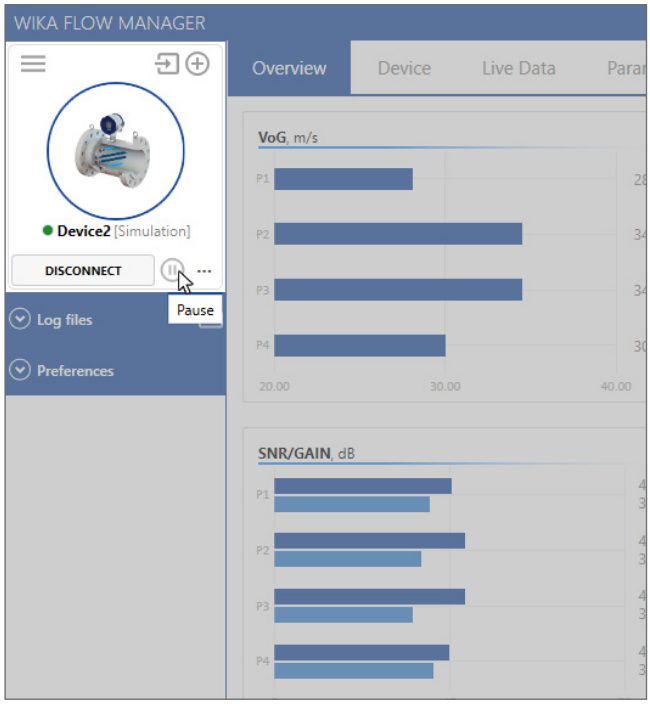
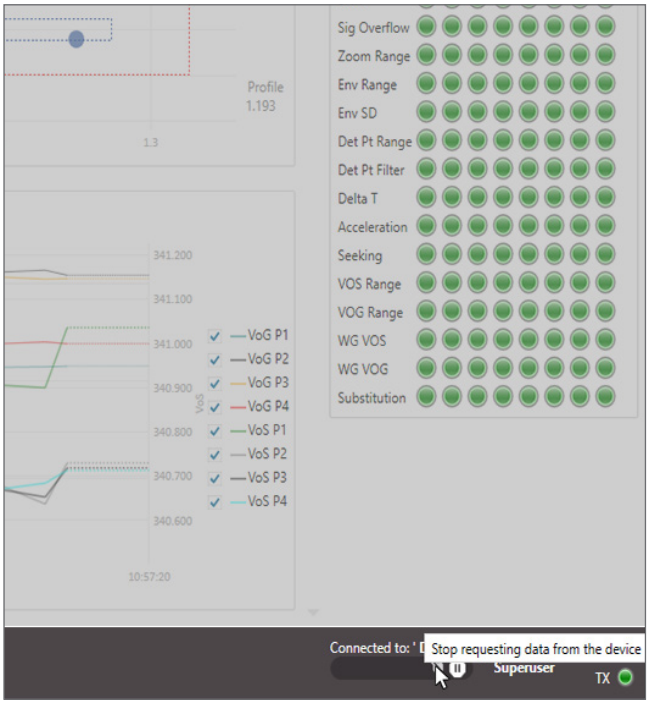
4.7 Pausing a connection

A connection to a device can be paused. Press the **Pause** icon on the right of Disconnect button, or on the bottom status bar in order to temporarily stop polling data from the device until the either one of the two pause icons is pressed again.

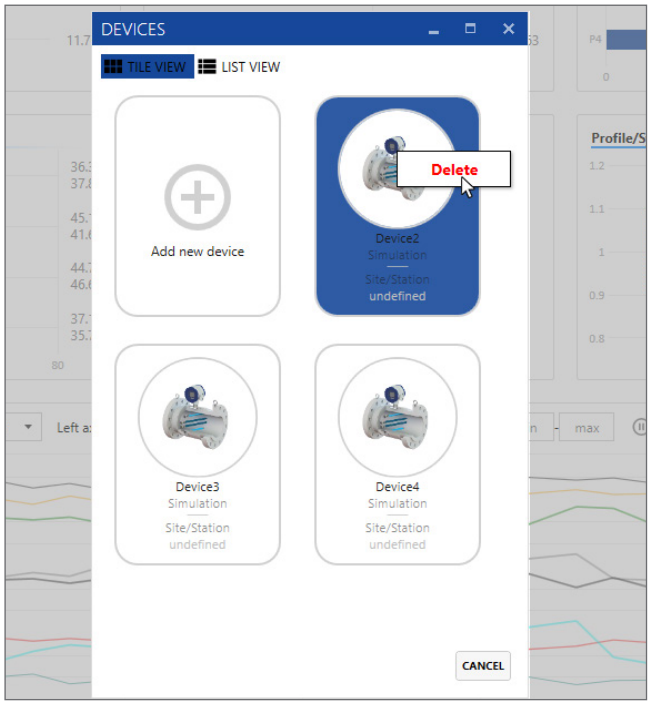


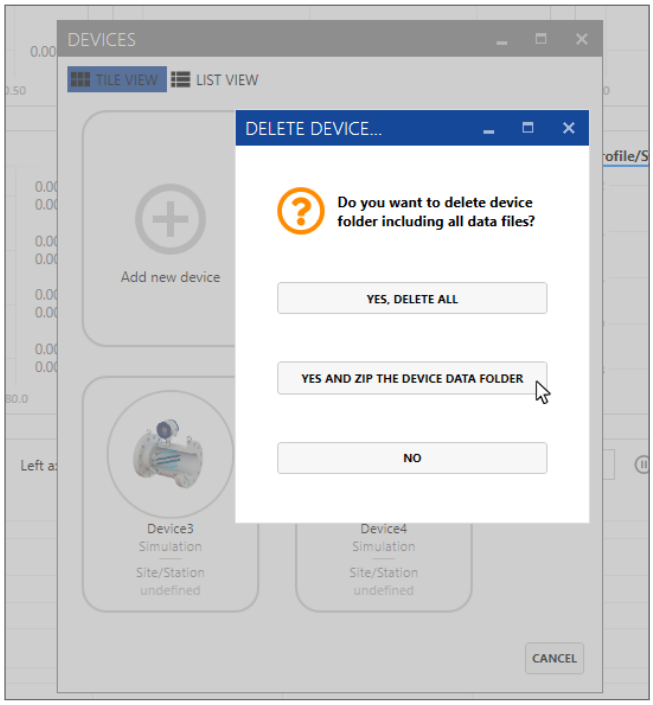


4.8 Deleting a device

Disconnect the device you want to remove, open the device list pop-up window (see par. 4.3), right-click on the icon of the device you want to delete and select **Delete**. A pop-up dialog appears. Select the desired option for the delete action:

- **Yes, delete all** for deleting the device and all data from the PC;
- **Yes and Zip Device Data Folder** for collecting all data from the device and compresses it in a ZIP file. The device and folders will then be deleted;
- **No** for deleting the operation and returning to the previous screen.





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5. Operating WFM

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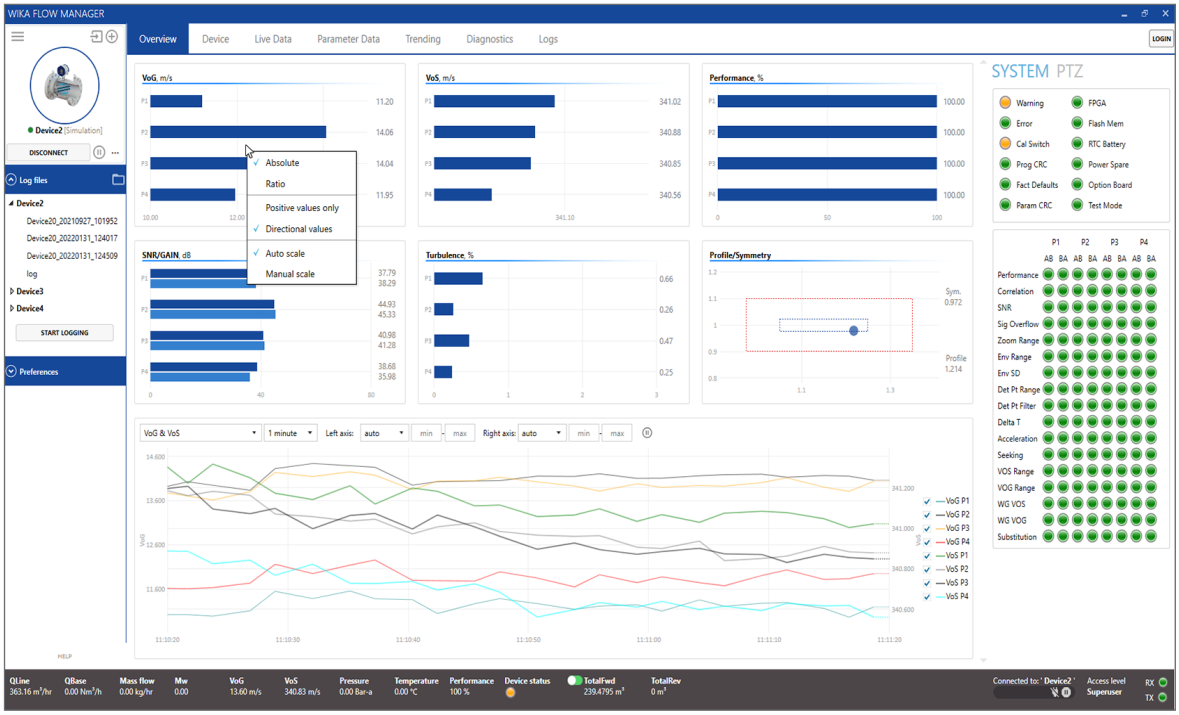
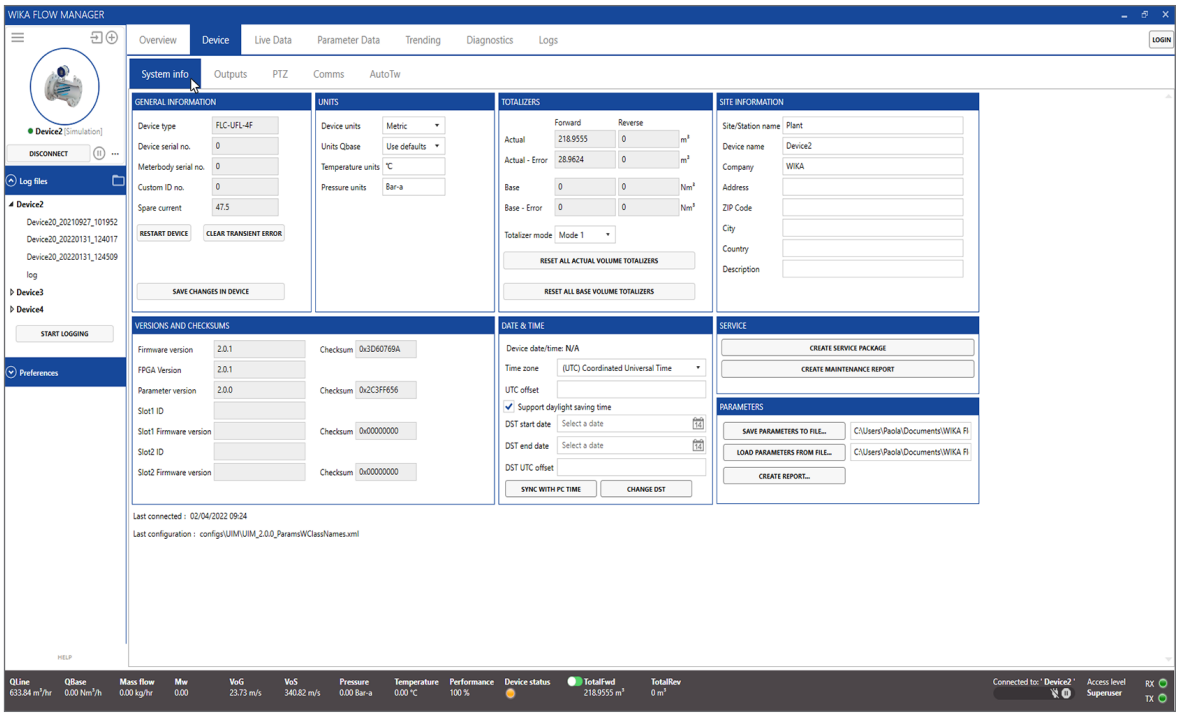
5.1 Overview screen

Starting up WIKA Flow Manager the overview screen appears, showing different bar charts and a trending window available to view diagnostic information about the operating conditions of the device and its application. Several options for each bar chart are available, e.g. scaling and other settings.;Click on each bar chart using the right mouse button to open the options pop up menu and set them as required. The **Trending area** has pre-configured trace sets to easily display combinations of diagnostics over time. Two Y-axes are used, one on the left and one on the right. Both are auto-scale by default but they can be set to a manual range if required.



5.2 Device information screen

The **Device/System Info** screen provides essential information about the device, e.g. serial numbers, software versions and checksums. It also shows the totalizer values (volume counters).



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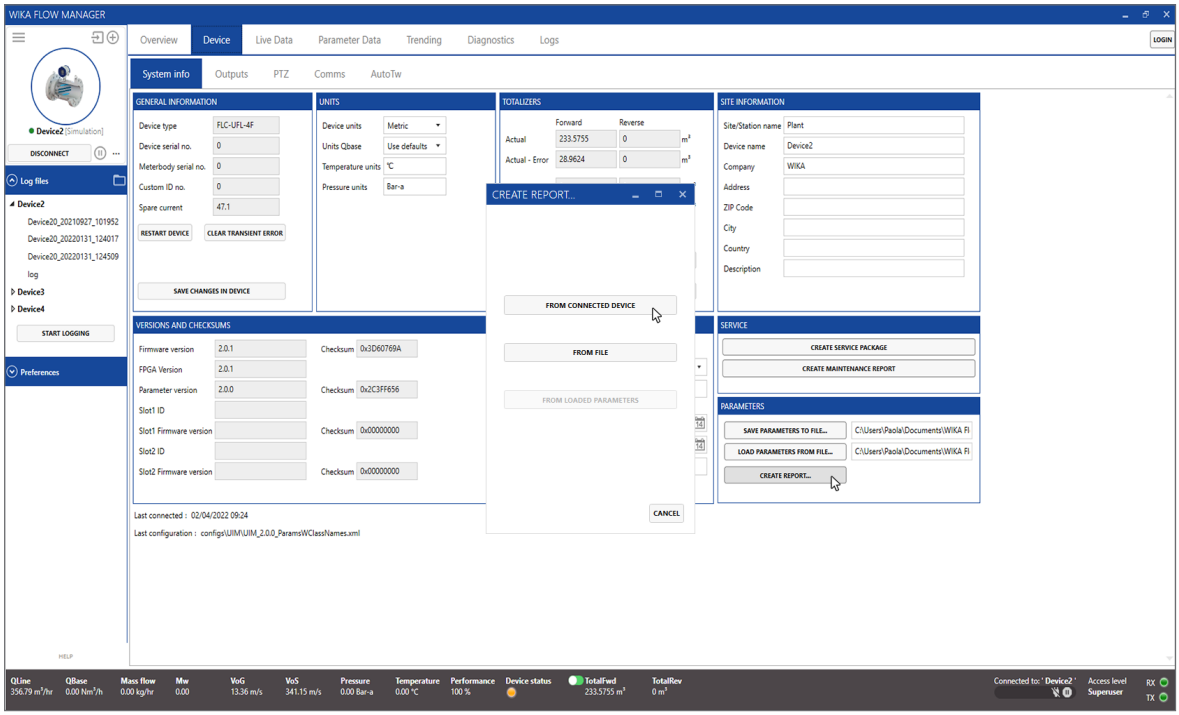
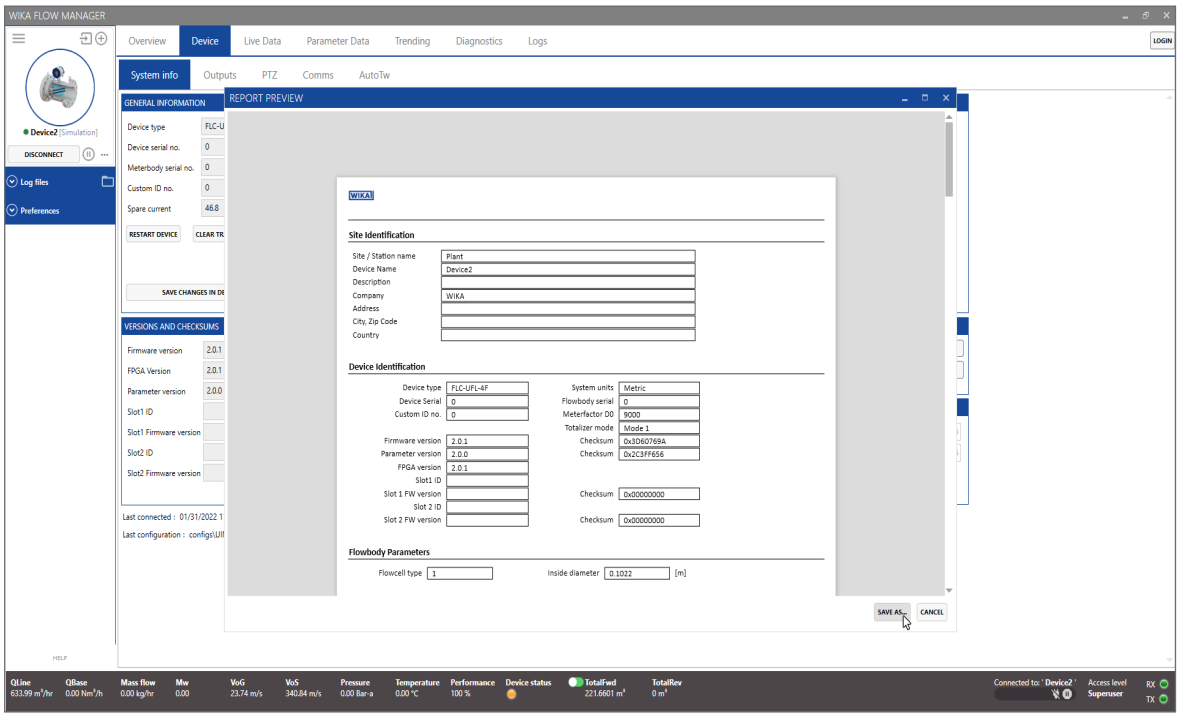
5.2.1 Creating a parameter report

To create a parameter report from a connected device or a saved parameter file of another device click **Create Report** on the **System Info** tab. A pop-up dialog will appear to select from which source to create the report. Select **From Connected Device** to create a report of the connected device's parameters.



Next, a window will open with a preview of the report. Select **Save as...** to save the report as an *.RTF file, that can be opened in Microsoft Word. Click **Cancel** to cancel the operation.



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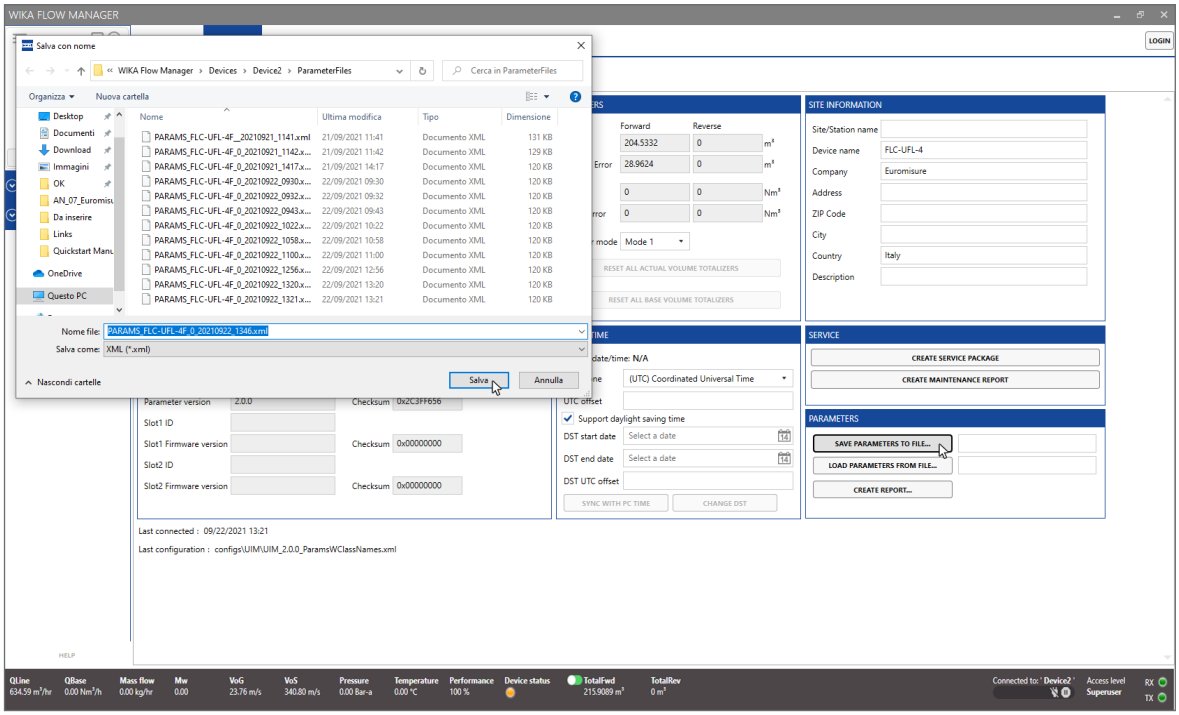
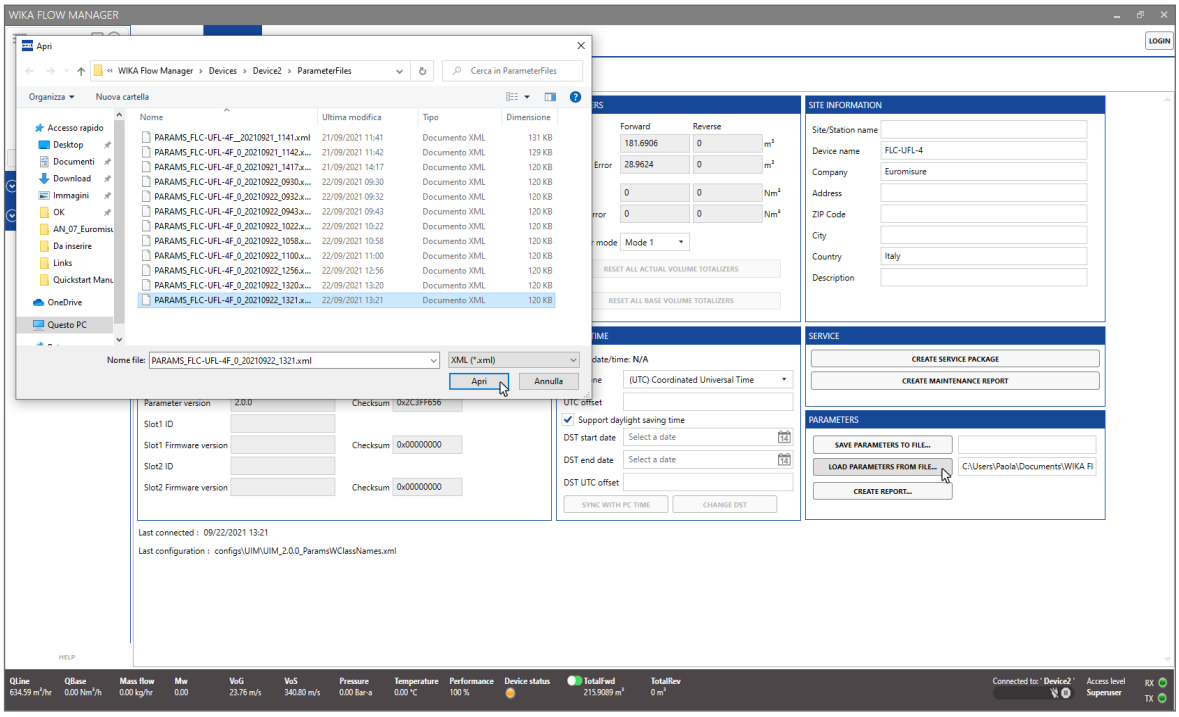
5.2.2 Saving a parameter set to file

The parameters of the device can be written to an *.XML file and saved in a dedicated folder by pressing **Save parameters to file...** button on the **Device/System Info** tab. This file can be used later to easily write the same parameters to a device again.



5.2.3 Writing a parameter set to a device

For reprogramming a device with a previously saved parameter set (for example after swapping out electronics) the parameters can be written to the device by pressing **Load Parameters from File...**. An open file dialog window will open to browse to the desired *.XML parameters file. After opening, an orange popup message will appear on the bottom status bar to select the required operation. Select Write parameters to device to rewrite the parameter set to the device.



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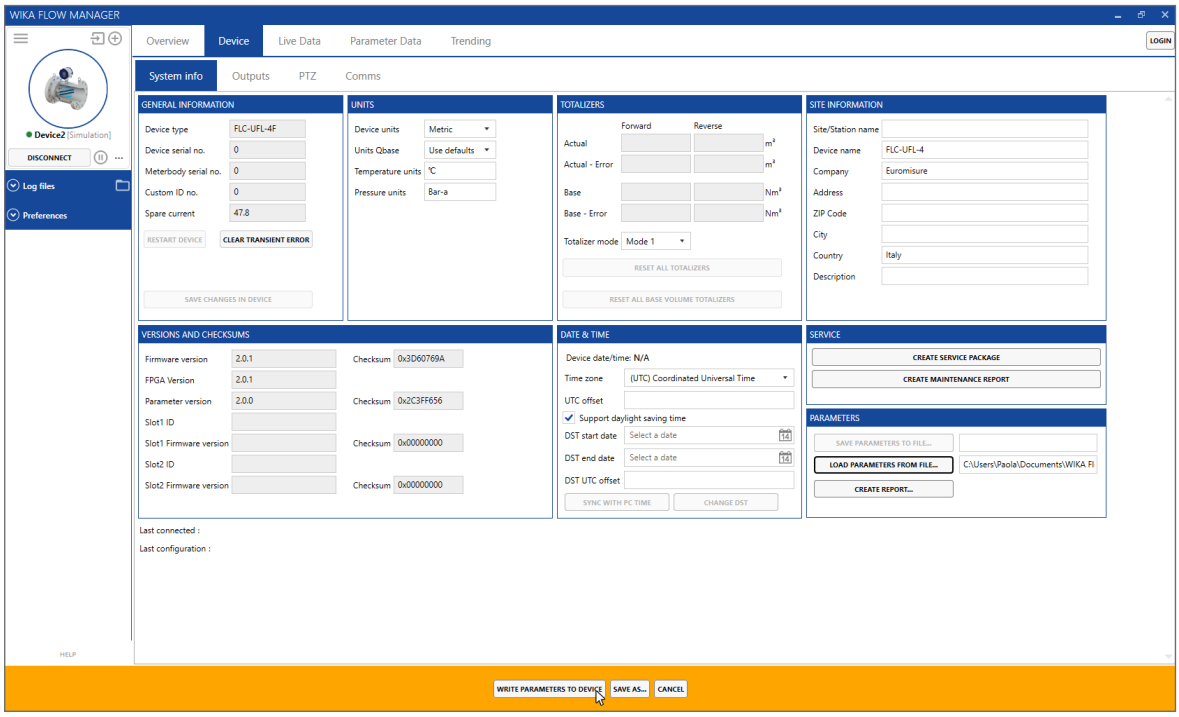

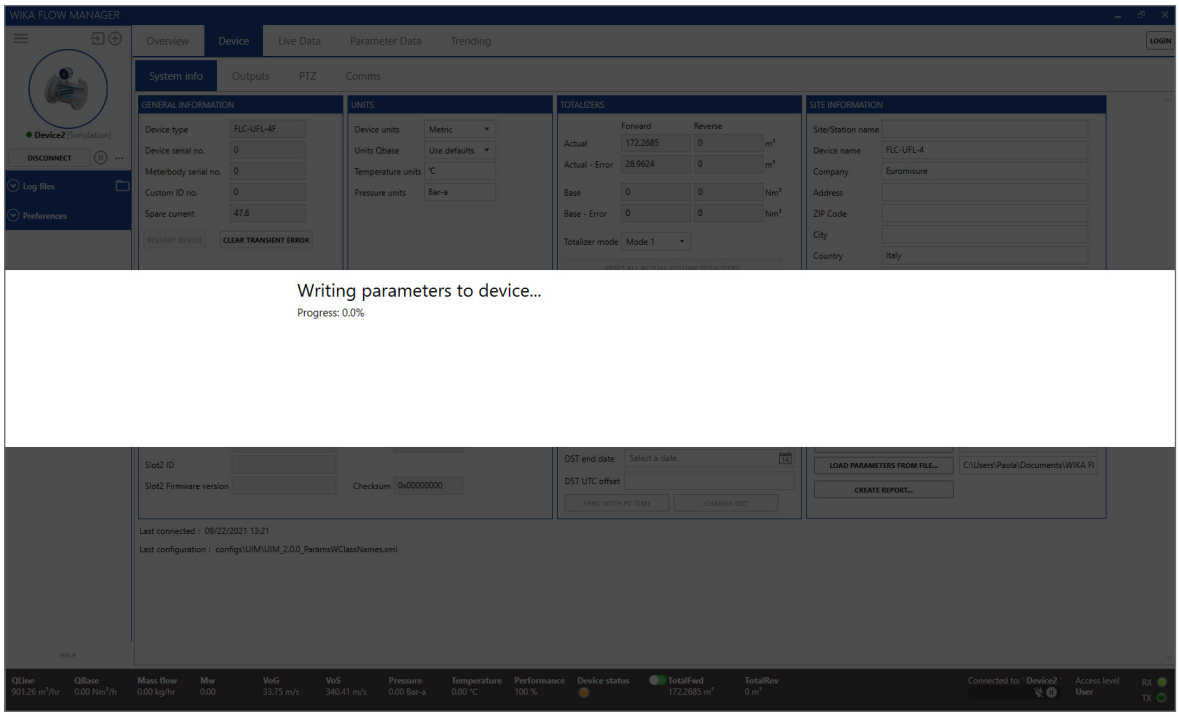

ATTENTION!
WFM verifies if the parameter file version is compatible with the connected device parameter version. When the version is not compatible, it will not write the parameters to the device.

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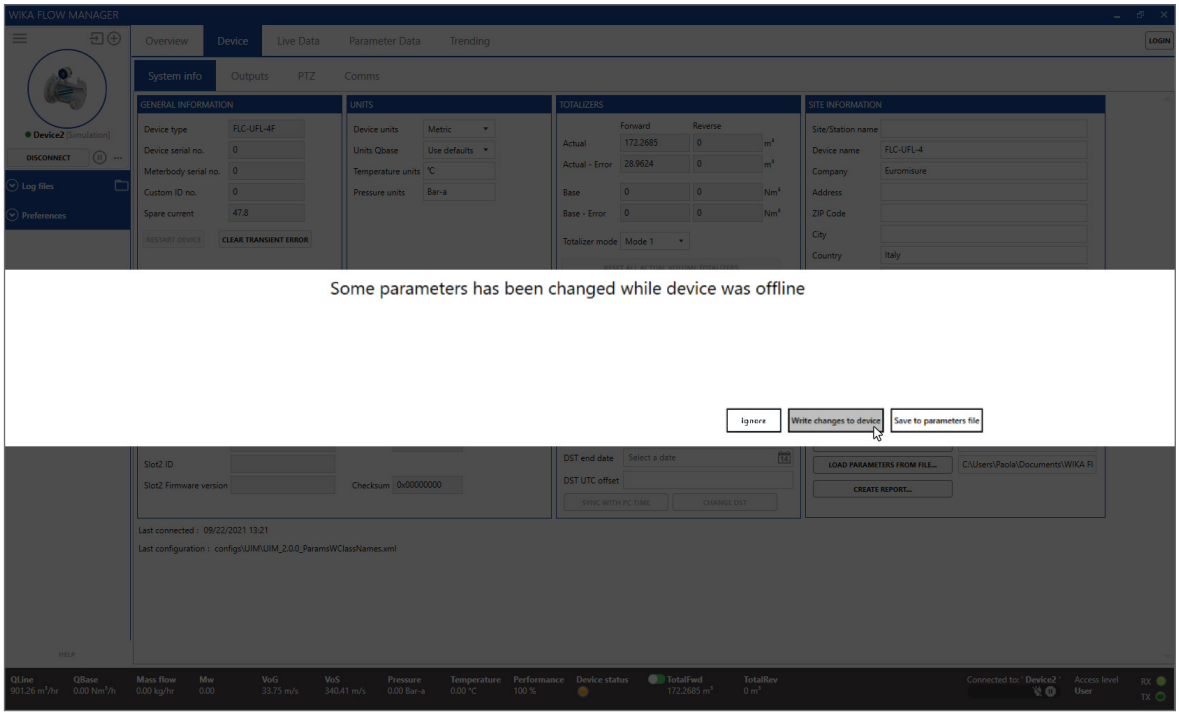
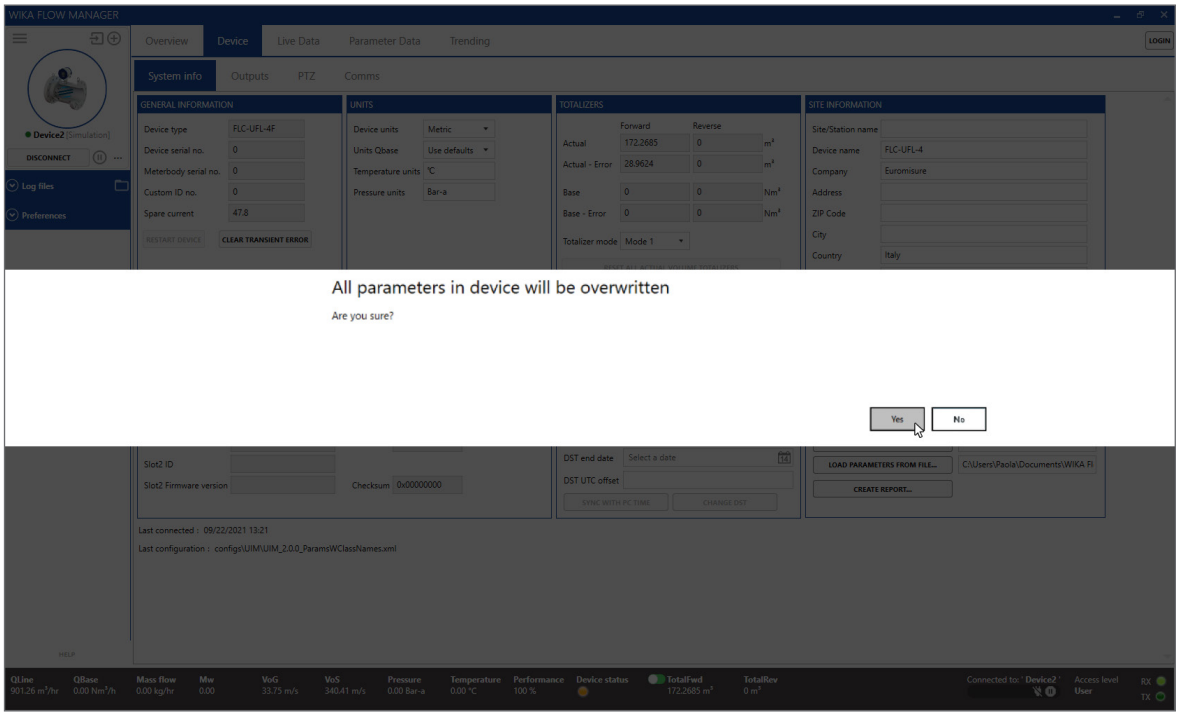
5.2.4 Updating 1.X.X to 2.X.X parameter file

It is possible to load parameter files of an older version into a device. To do so, first load the parameters in offline mode, then connect to the device. WFM alerts the user that some parameters were changed. To use the new ones, choose **Write changes to device**. Another warning message shows up to alert the user that all parameters in the device will be overwritten, choose **Yes** to confirm.





ATTENTION!
Newer parameter files have more parameters; these are not read from the old parameter and their values remain at factory default values. Verify these parameters to ensure they are all set to the required values.

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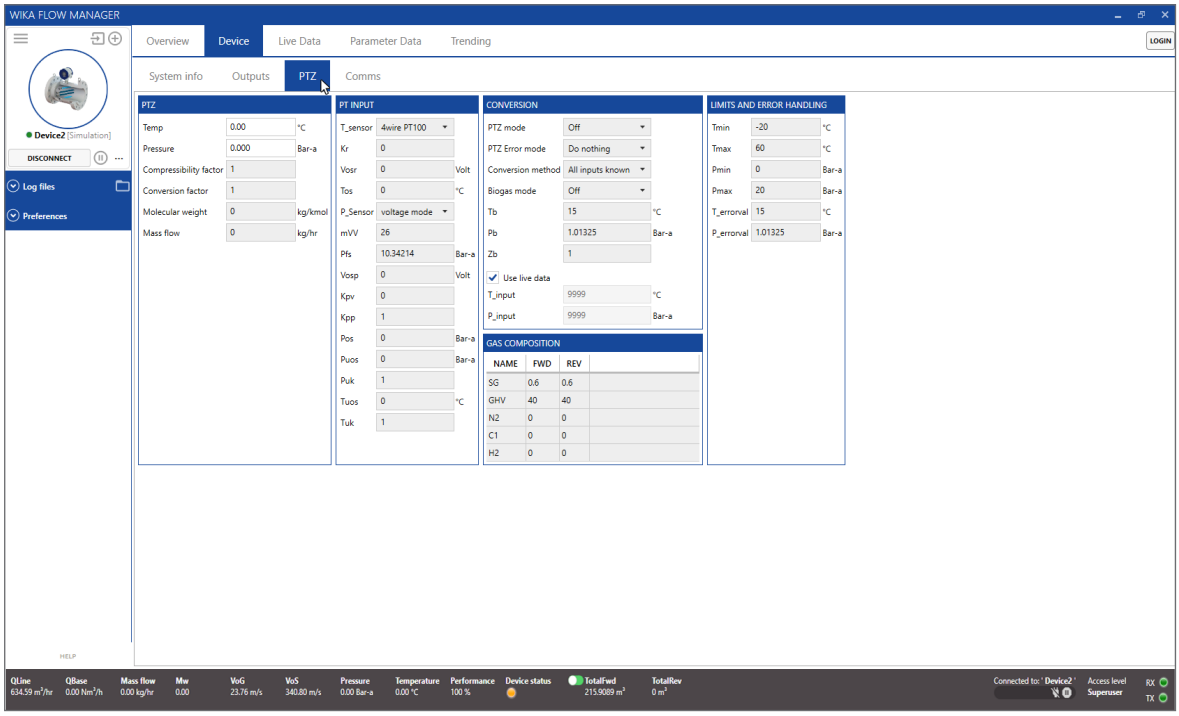
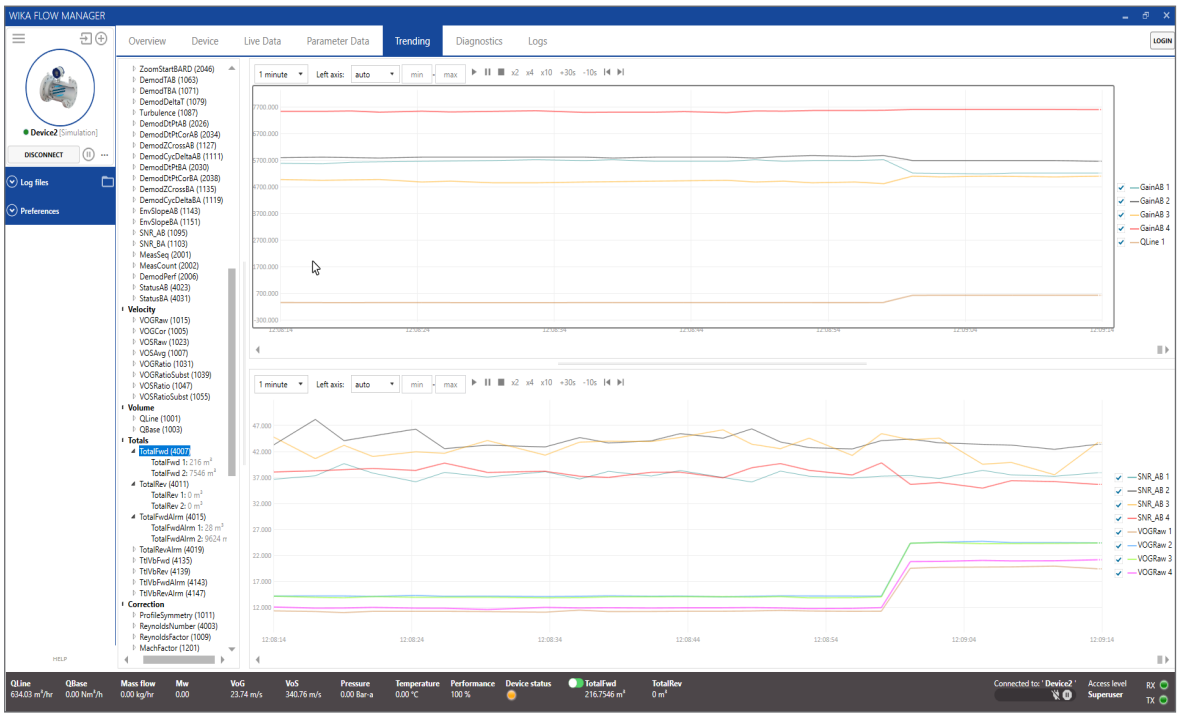
After loading the parameters go to the **PTZ** tab. Parameters that were not loaded from the file are identified in red and can be manually updated. Refer to the examples shown below.



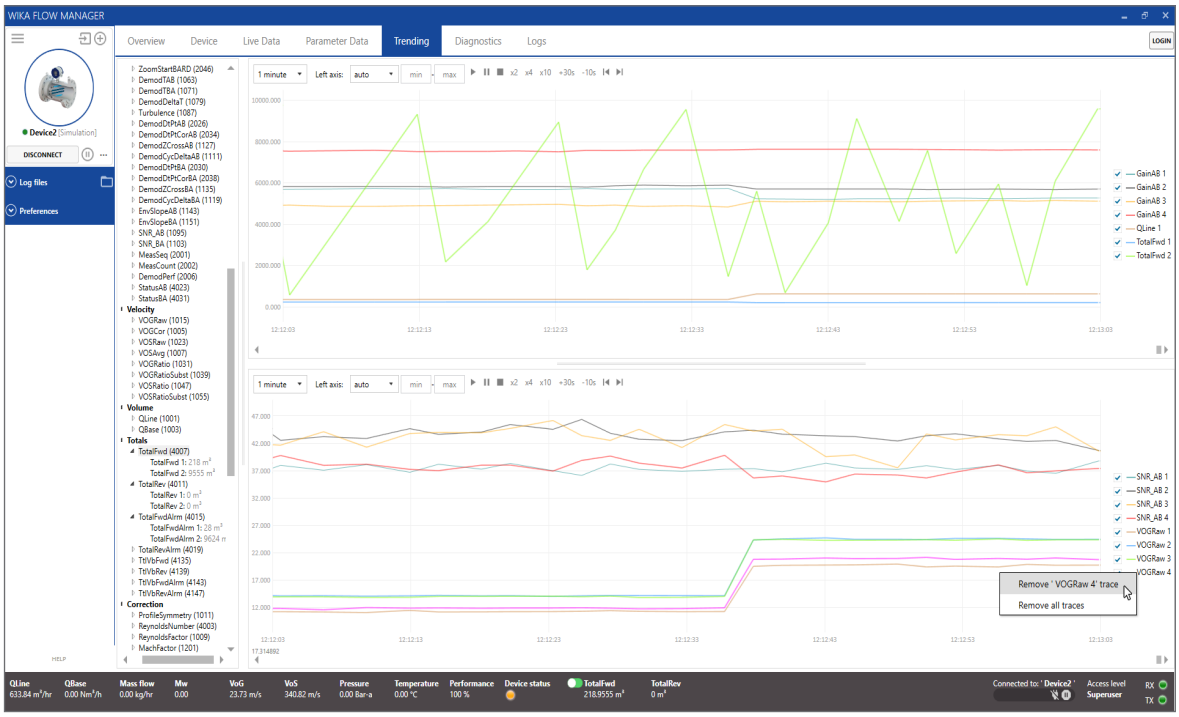
5.3 Trending and logging

5.3.1 Trending live data

When connected to a device, using the **Trending** tab it is possible to display any result parameter over time. The parameters can be selected by the “drag and drop” principle. Drag a parameter from the parameter tree left of the chart areas and drop it in the chart area to plot the values. Up to 8 parameters (traces) can be trended at the same time.

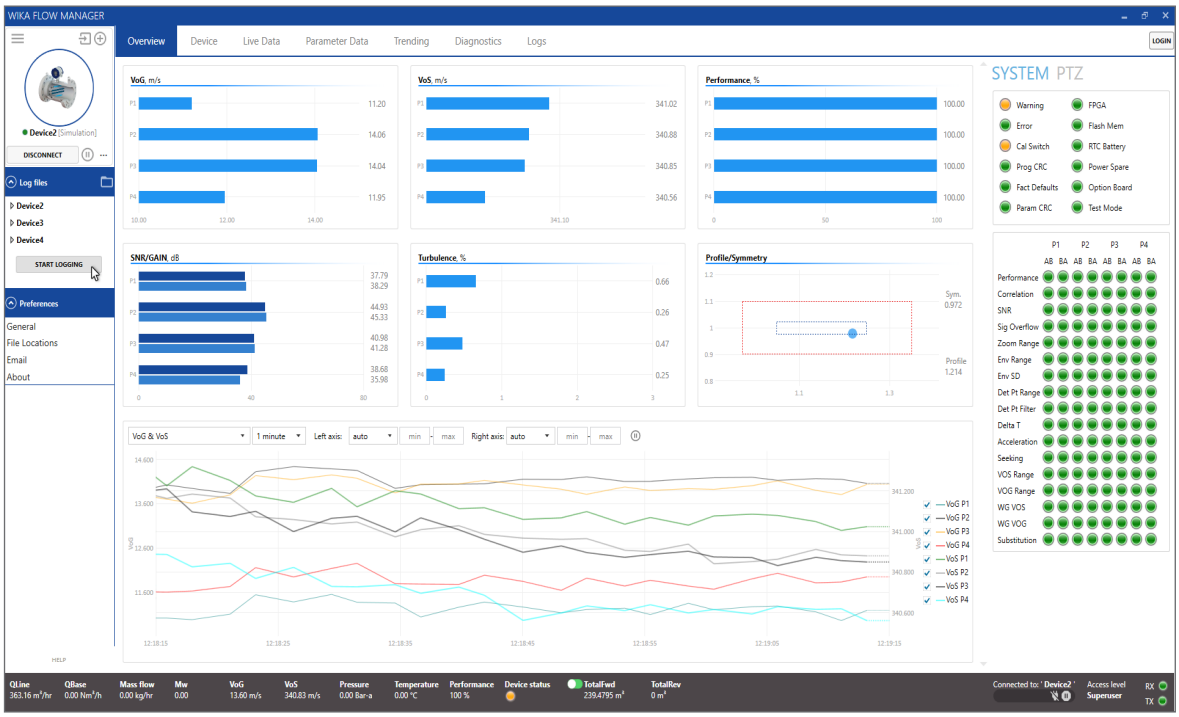


Traces can also be removed again from the trend area. Right click on the trace name in the legend to the right of the trend, a pop up dialog will appear to select the desired option.



5.3.2 Logging data to a file

Logging data on the PC can be started at any time when connected to a device. Press the **Start logging** button on the left navigation pane.



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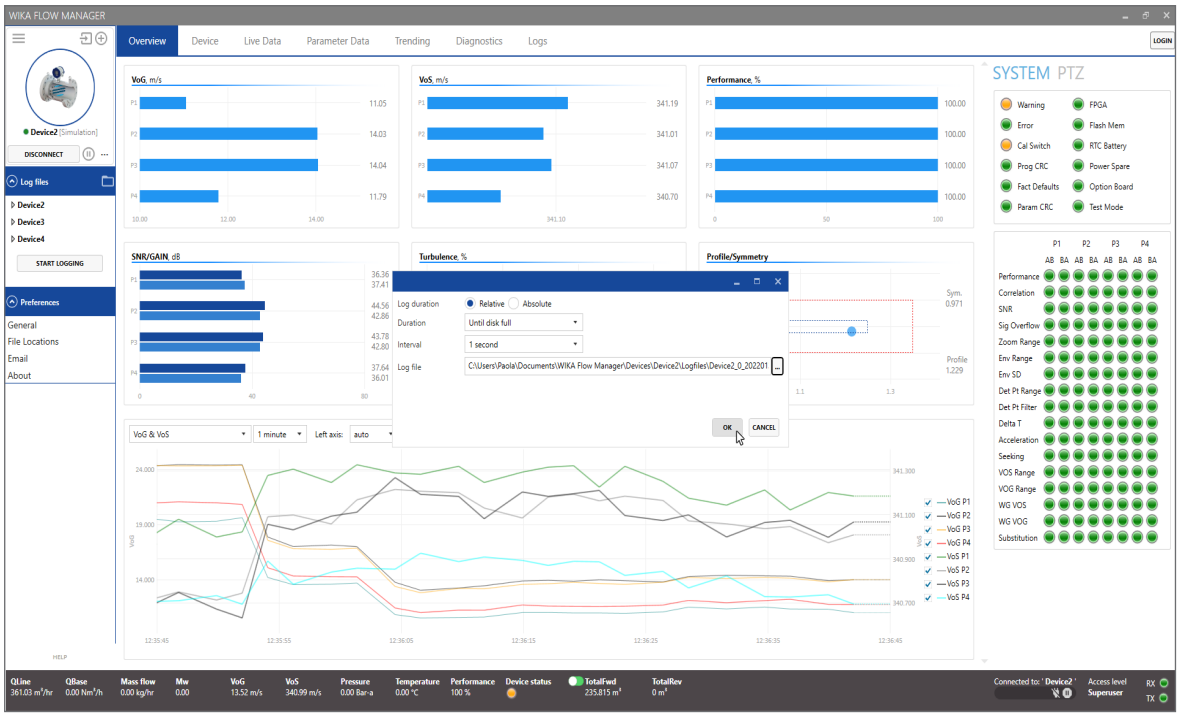
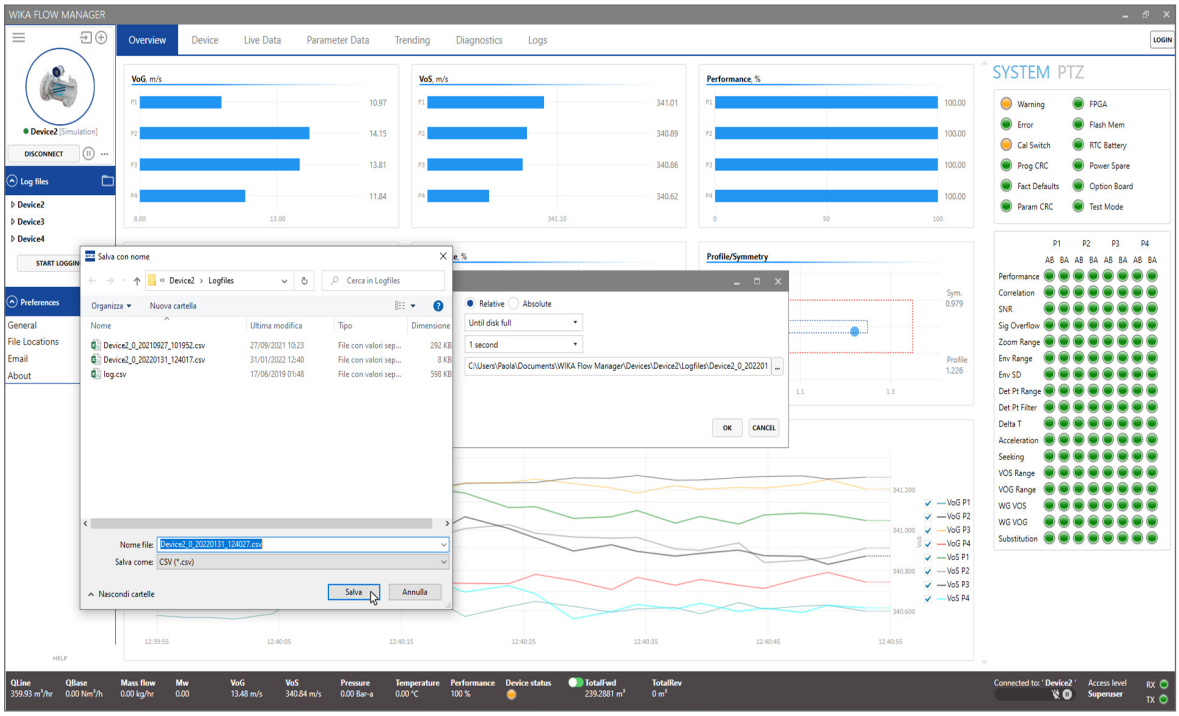
A dialog window will pop up to provide a file name.



Logs are saved in CSV (Comma Separated Values) format. Log files can be easily imported in a spreadsheet editor for further analysis if required.



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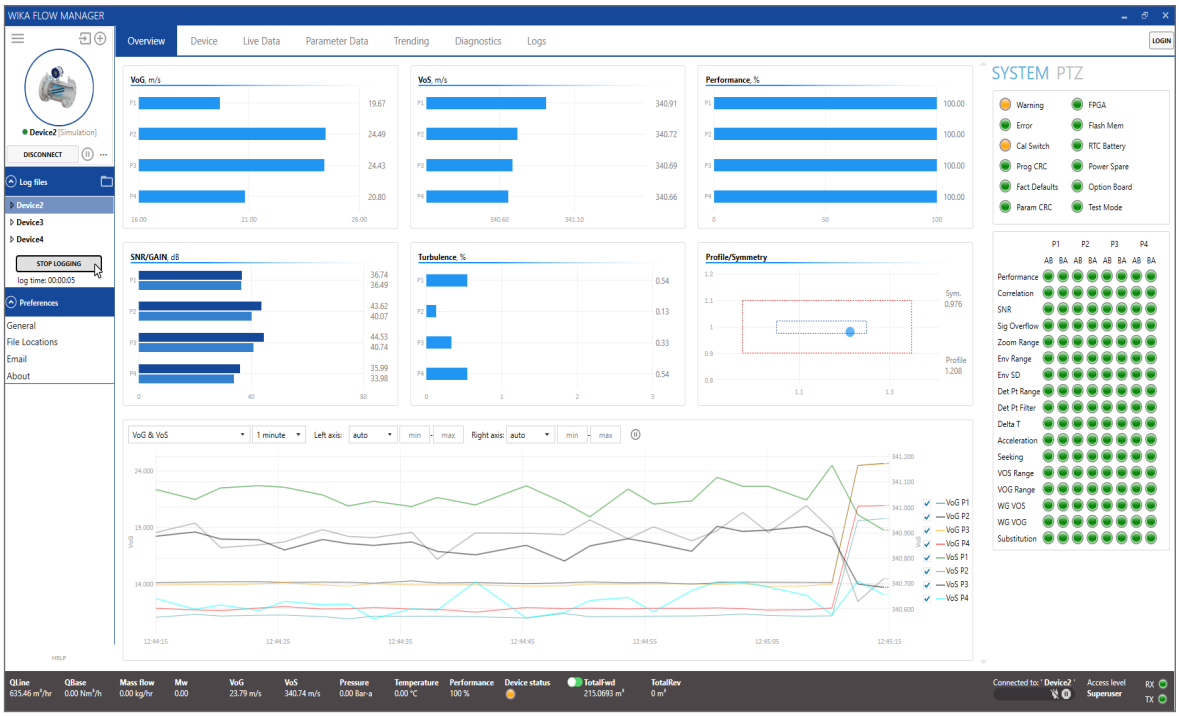
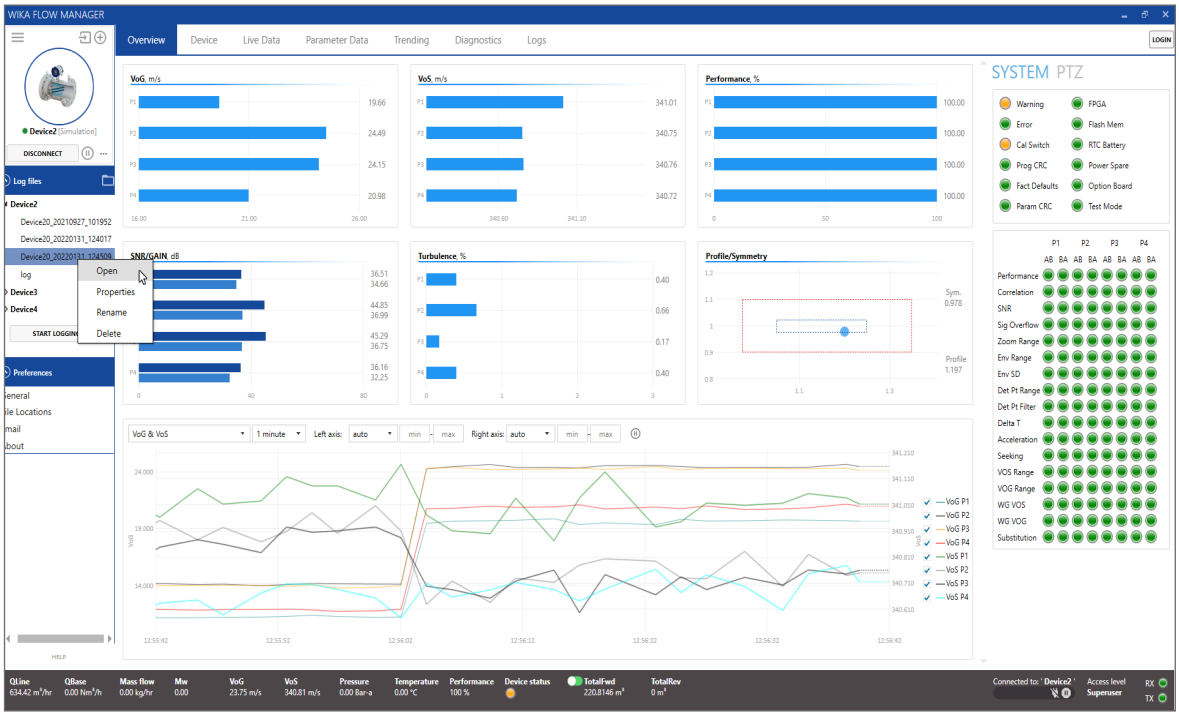
Logs can be paused and started at any time with the pause button located on the bottom of the log files section.



5.3.3 Playback of logged data

WFM can open and play back previously created log files. Log files can be selected from the left hand navigation pane in the Log files tree, or opened using the **Open log file** icon button on the right hand of the Log files title section.



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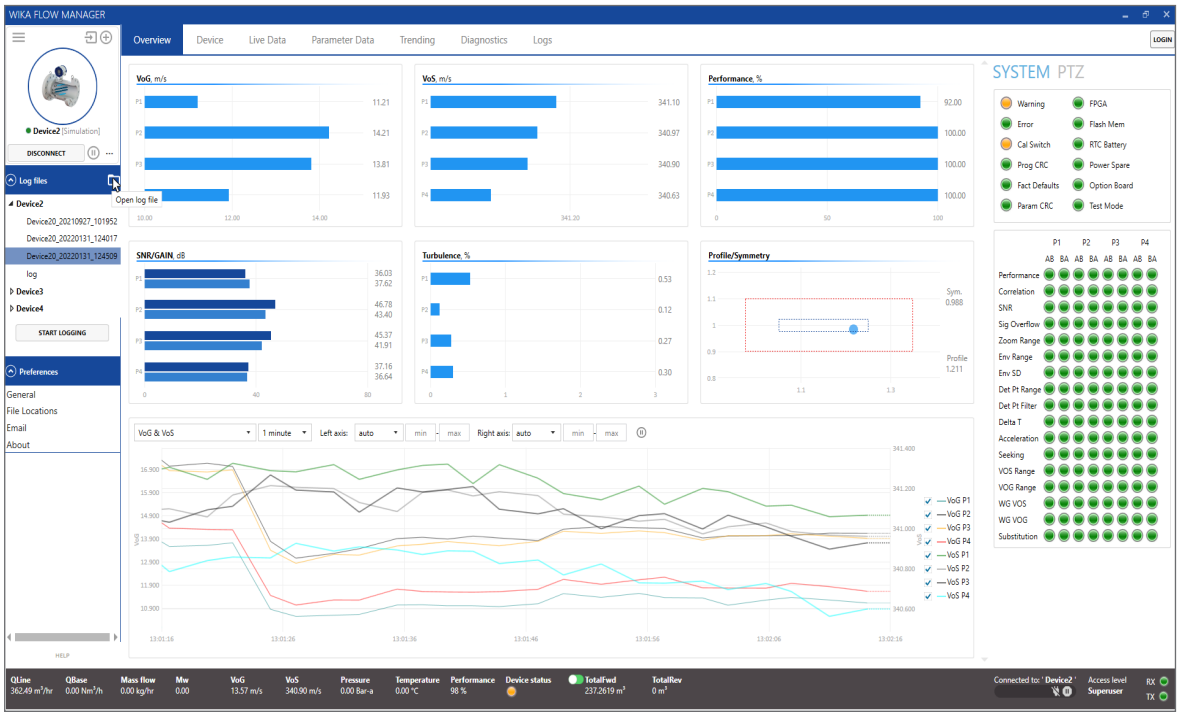
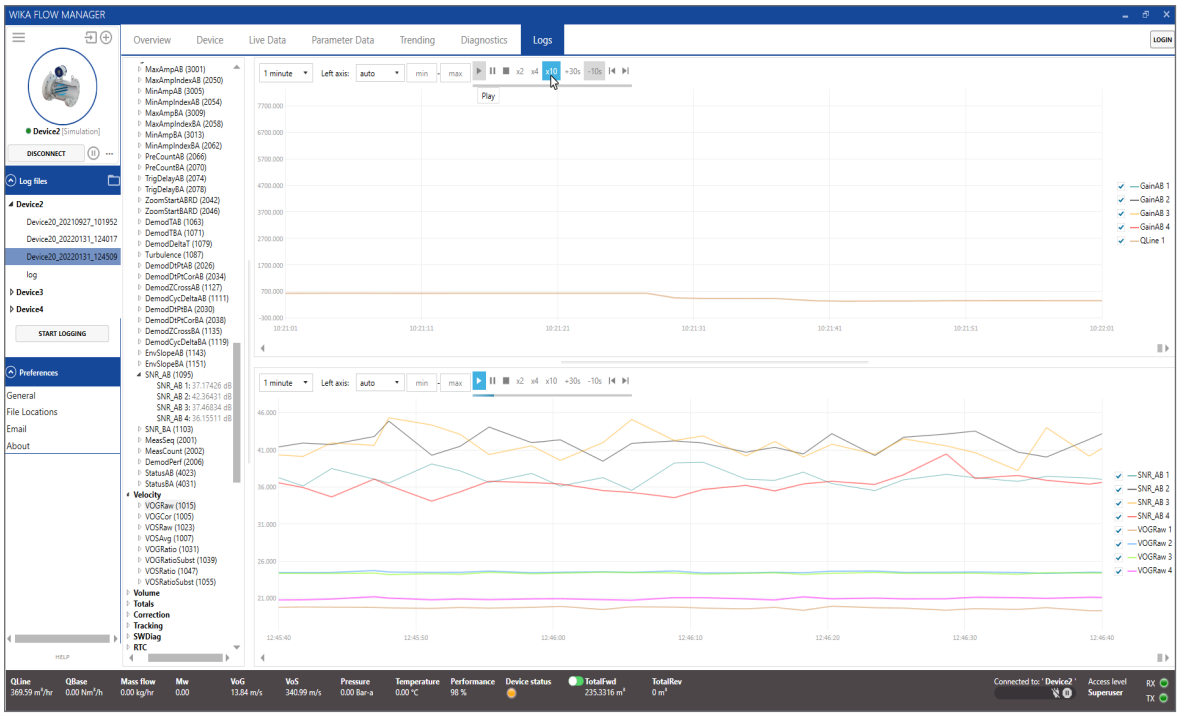
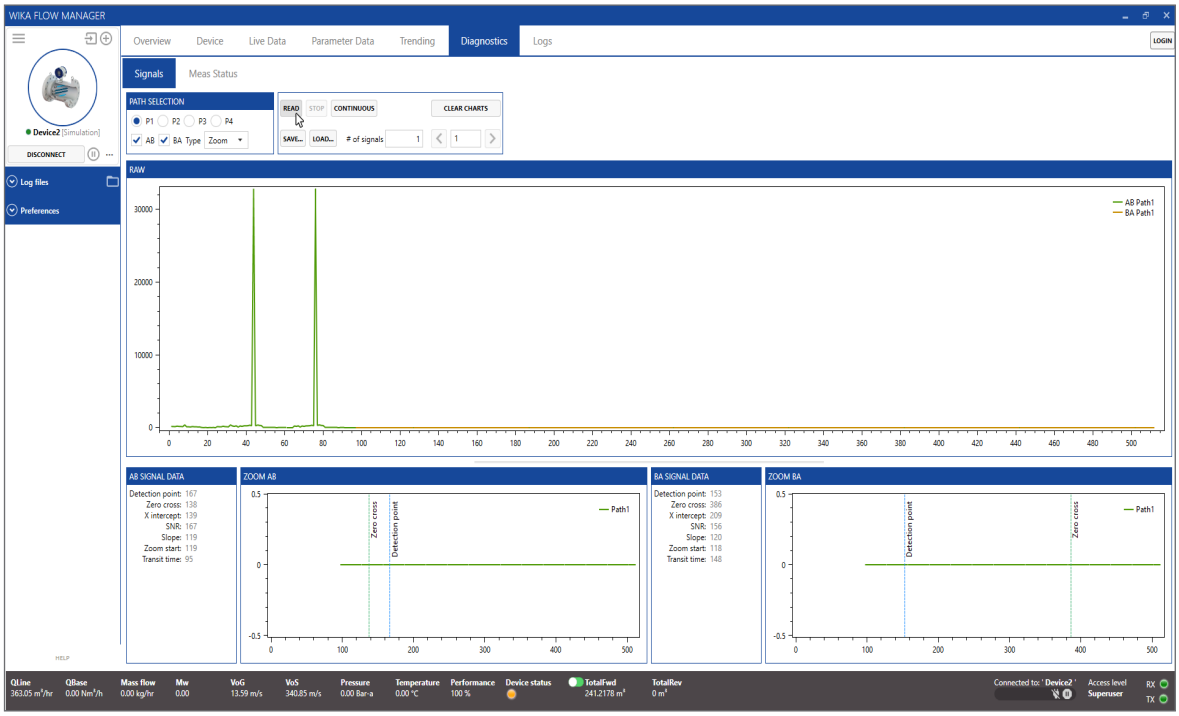


The trend windows work exactly the same as the Trending tab. Furthermore additional controls can be used such as fast forward, faster playback. These buttons are available in the trending window.



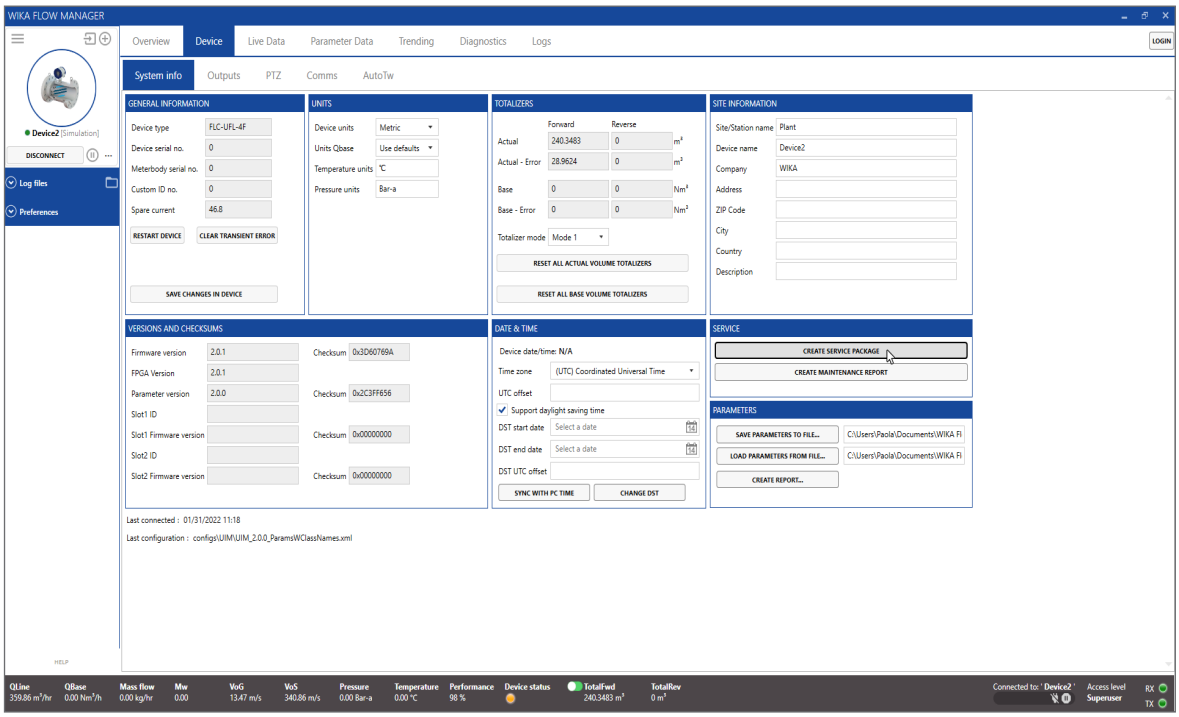
6. Diagnostics

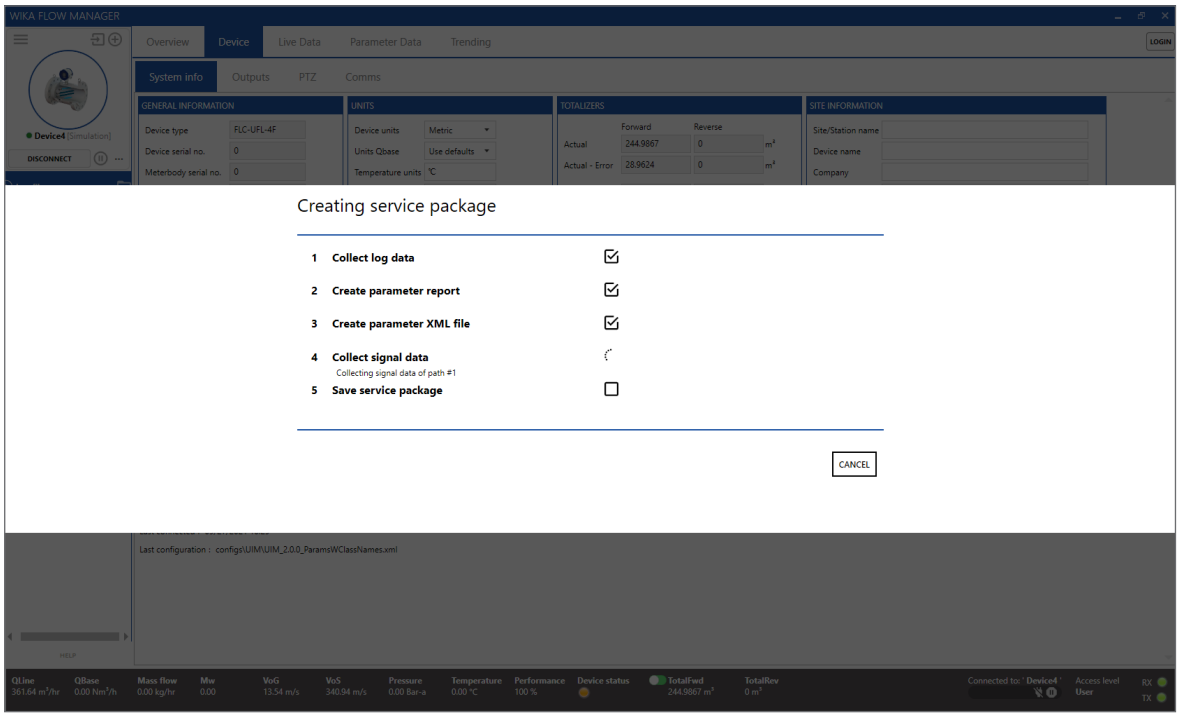
When logged in under Service or Super user level the **Diagnostics** tab is available. This tab allows to view the received signals of the transducers. Signals can be viewed directly from the connected device. Previously saved signal sets can also be loaded in WFM for further analysis when offline from the device.



6.1 Create Service Package

For troubleshooting purposes a dedicated function is available to create a **Service Package**. This feature collects data from the device and compresses it in a ZIP file, that can be sent to an expert at WIKA or your sales representative for further analysis. The package contains a short log file, parameter data and signal data. Press the **Create Service Package** button on System info window to start collecting the data. The following screen appears, wait until WFM has completed all 5 steps. Note that this process takes several minutes to complete.

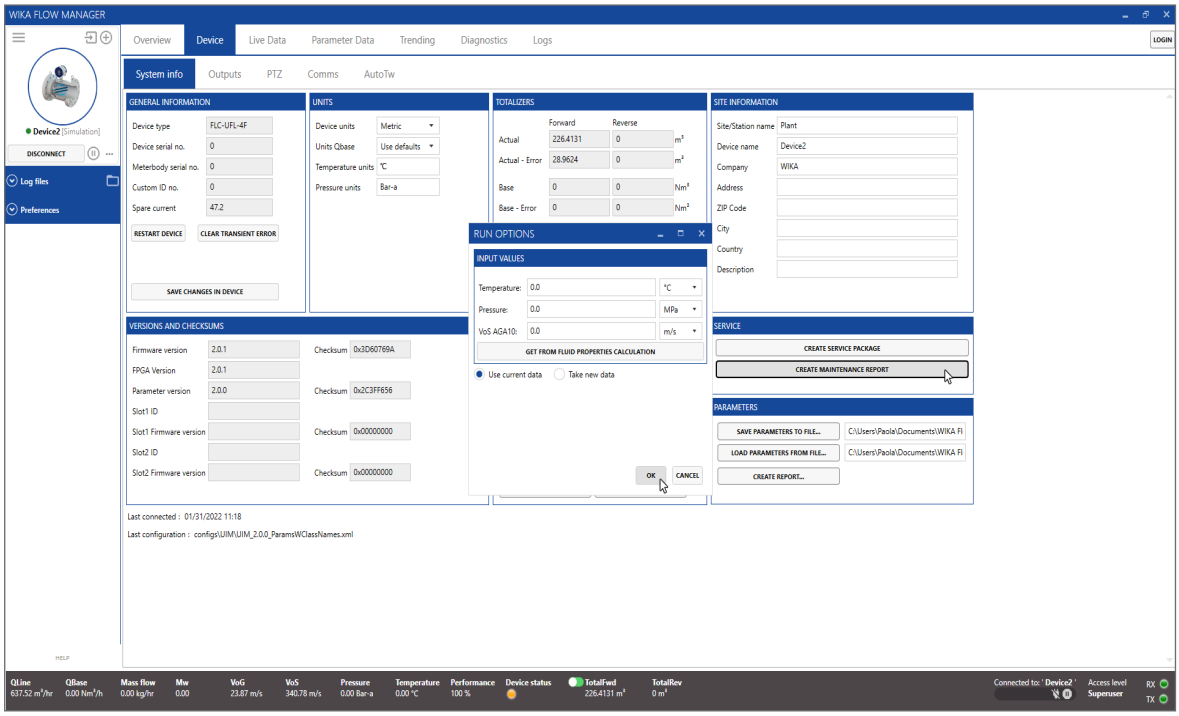


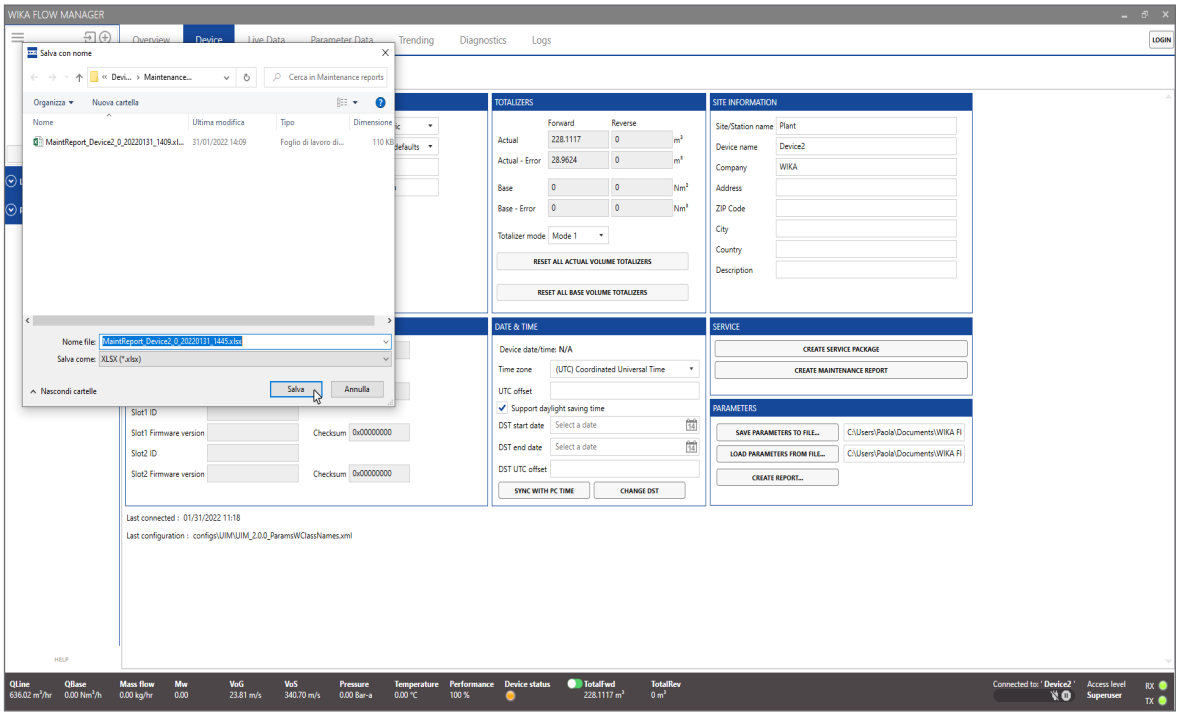


6.2 Create Maintenance Report

WIKA Flow Manager allows to collect as report specific information about mantenaince activities intended to keep smooth operations.

Press the **Create Maintenance Report** button on System info window to start collecting the data.



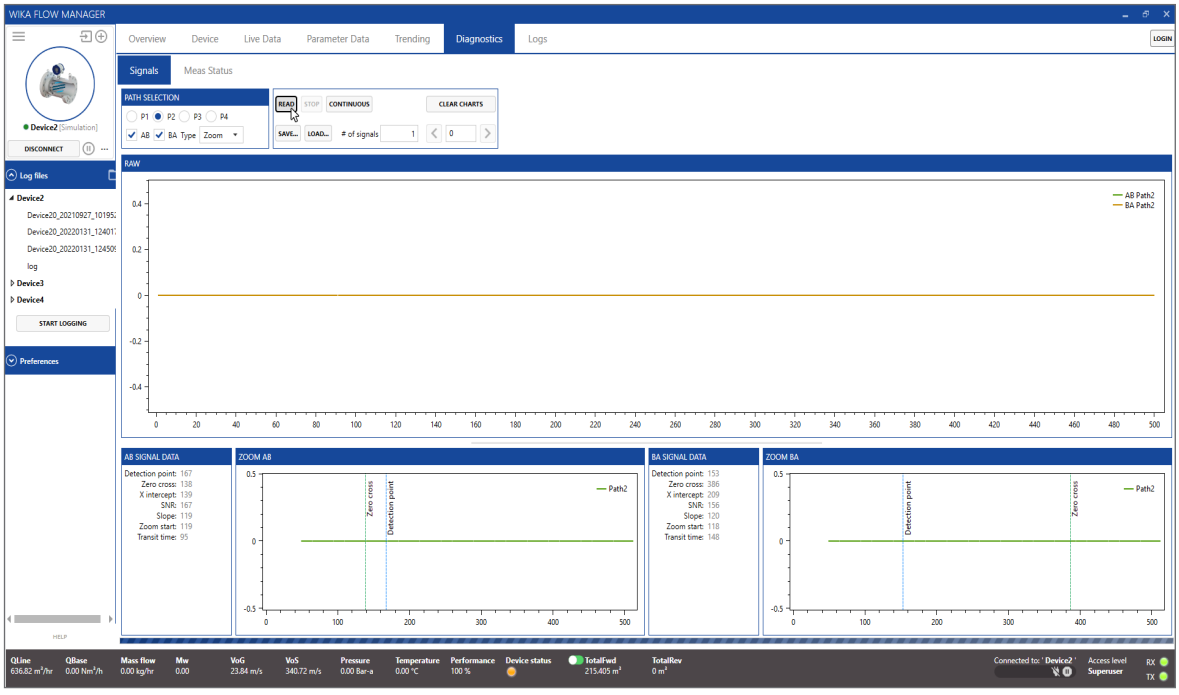


6.3 Reading signals from device

To read signals select the Path to read in the **Channel Selection** area. Enter the number of signals to read (WFM can store several signals in a single file, that may be useful for observing dynamic behaviour of the signal). Default number of signals is one. Press **Read** to read the signals. This process takes several seconds; when completed the signals appear on the chart areas.

- RAW Signal: this chart area shows the raw signal (BCW processed);
- ZOOM AB: this chart area shows a zoom in of the AB direction (signal travelled downstream);
- ZOOM BA: this chart area shows a zoom in of the BA direction (signal travelled upstream).

To save the signal to a file, press **Save**. In case signals are already loaded from the device a pop up dialog appears to select to load new signals or save the signals that were already loaded.



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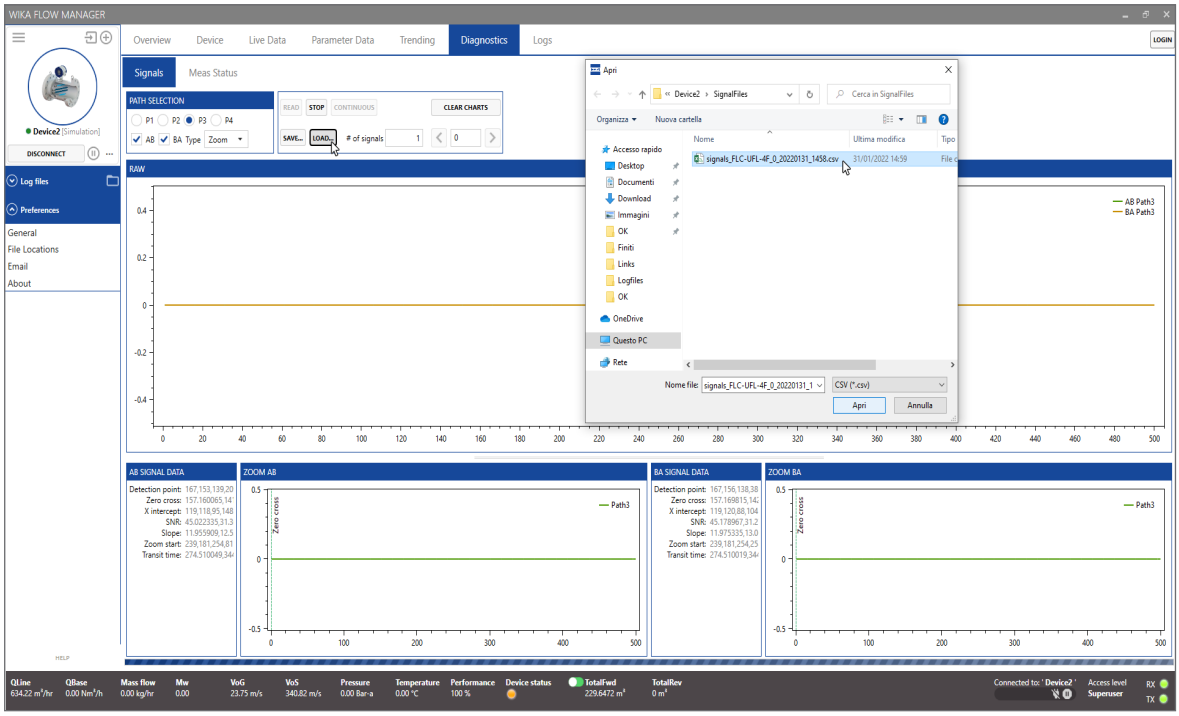
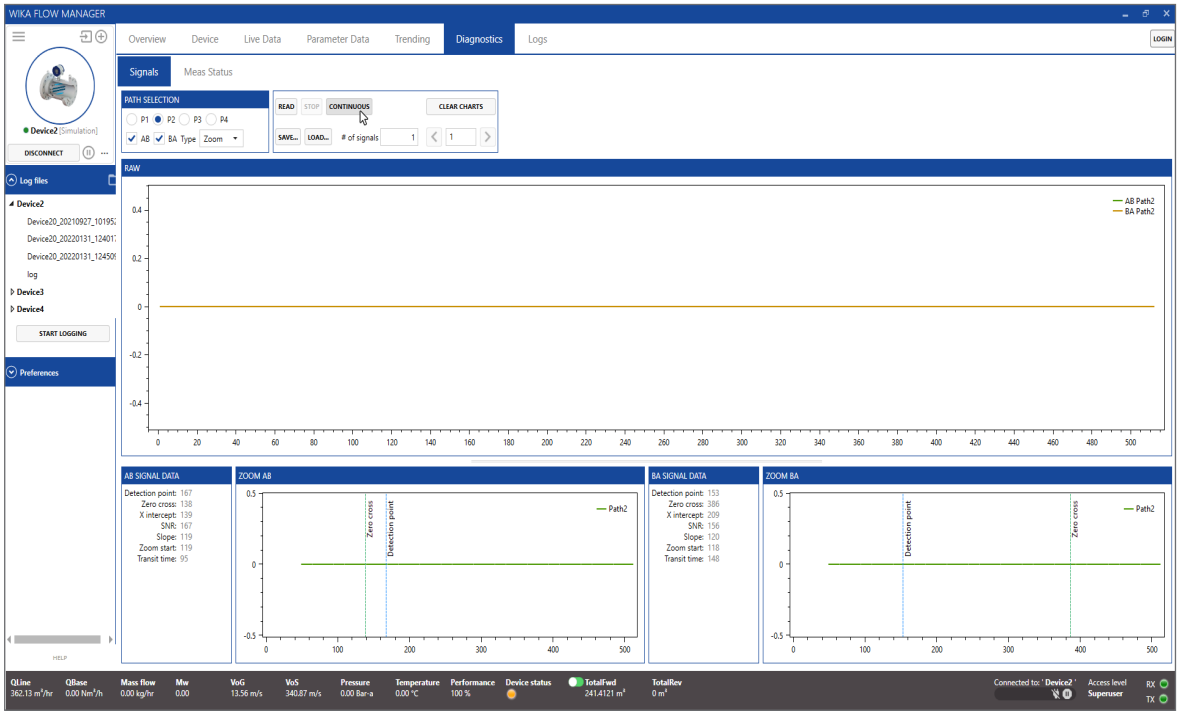
To load a signal from file, press **Load** and select the file to load. The signals will appear in the chart areas.



To continuously request signal information from the device, click **Continuous** to enable WFM to get continuously get signal data from the meter.



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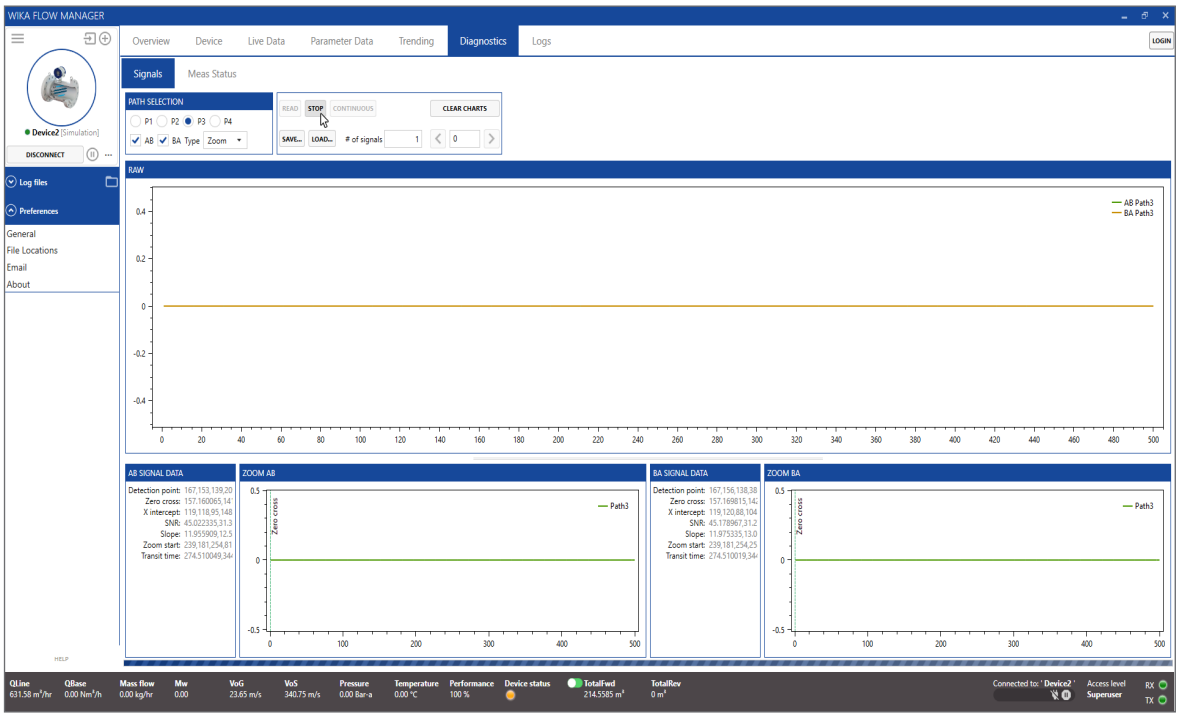
Click **Stop** to stop requesting data. Note that requesting continuous signal data may slow the response of the device down.



ATTENTION!
Instead of saving separate signals it is recommended to use the Create Service Package feature. Using this feature a complete set of data is collected including a short logfile, signal file and parameter data.

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