

FLOWgate™ Operating Instructions

Software Manual



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1 Preface

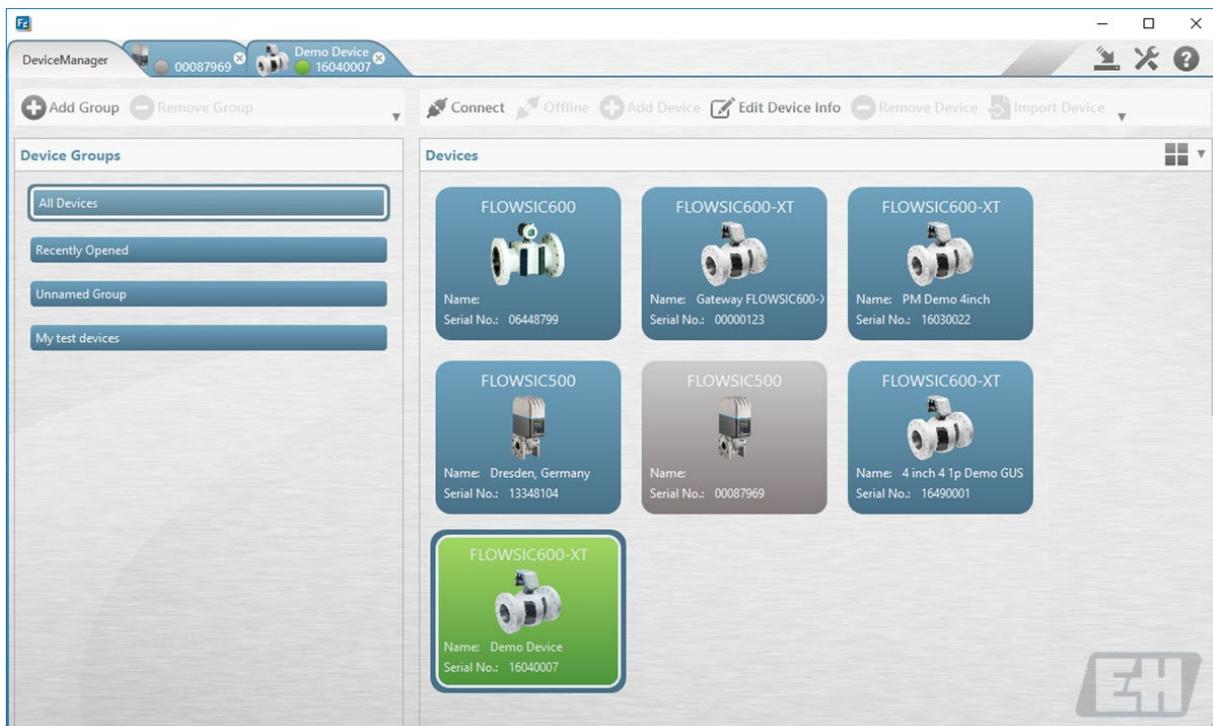
The FLOWgate™ software provides a user friendly access to measurement data, configuration and diagnostic of the flow meter. It is easy to use because of its activity-oriented approach and supports all typical everyday user activities.

2 Device Manager

All registered devices are shown in the device list of the device manager.

Once a device is opened, the status of the device is signaled via the tile color and an indicator in the device tab.

- Green: The device is in status “Operation”.
- Yellow: The device is in status “Warning / Maintenance”.
- Red: The device is in status “Failure”.
- Grey: The device is offline.



2.1 Device groups

Device groups can be used to organize devices. You can create a device group for every meter type or organize devices according to customer name or location of the installation, for example.

2.1.1 Creating a new device group

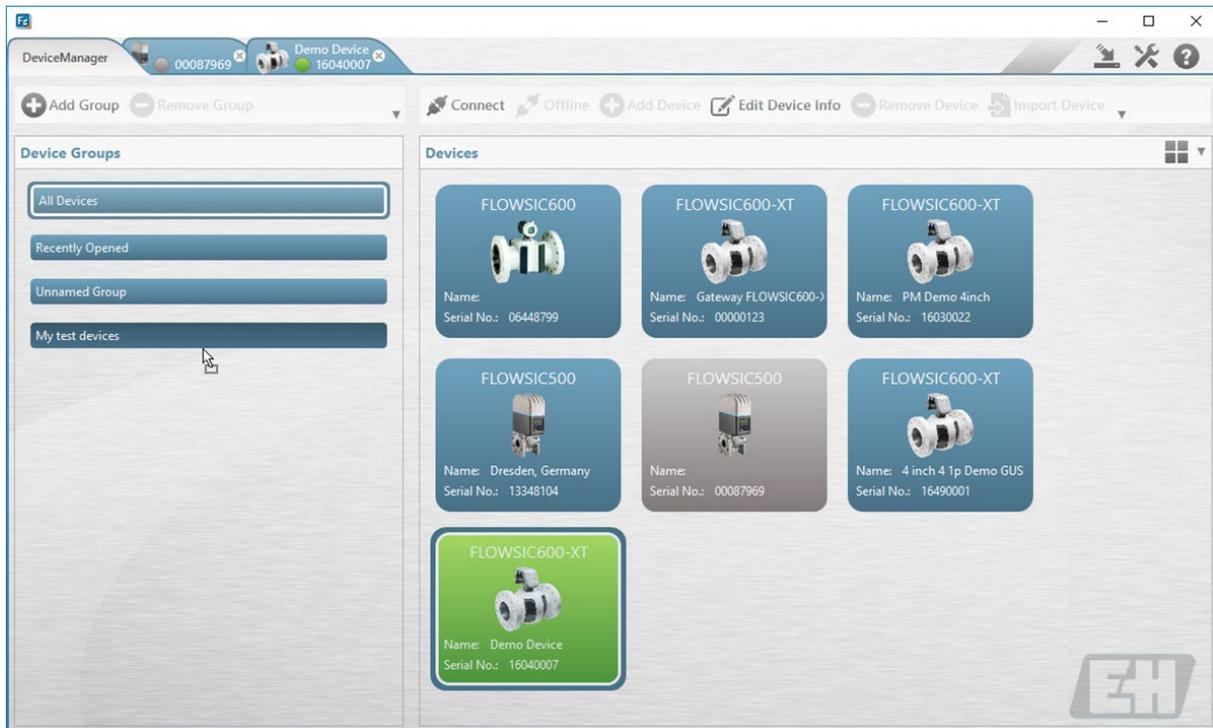
1. Click the "Add group" button on the left-hand side in the "Device Manager".
2. Enter a name for the new device group.



3. Click "Ok".

2.1.2 Adding a device to a device group

1. To add a device to a group, select device group "All devices".
2. Select the device in the device list and add it to the desired device group per drag&drop.

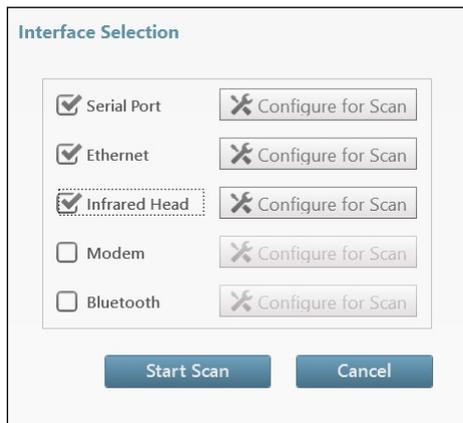


2.2 Registering a new device

1. Click "Scan".

You have the possibility to scan for devices at more than one COM-Port or select several baud rates if you are uncertain about the exact communication settings. FLOWgate™ calculates the estimated time for the device scan depending on your selection.

2. Select the interface(s) to be used for the device scan.



3. Click "Configure for Scan" to configure the connection settings for each interface.

4. Click "Start scan" to search for the device.

Infrared Head:

Select the COM port to which the Infrared Head is connected: "USB Serial Port".

Serial connection:

Configure the scan settings according to the device you would like to connect to.

Configure Serial Connection

<p>ComPorts</p> <p><input type="checkbox"/> COM1 Communications Port</p> <p><input checked="" type="checkbox"/> COM3 USB Serial Port</p>	<p>Baudrates</p> <p><input type="checkbox"/> 1200</p> <p><input type="checkbox"/> 2400</p> <p><input type="checkbox"/> 4800</p> <p><input type="checkbox"/> 9600</p> <p><input type="checkbox"/> 19200</p> <p><input checked="" type="checkbox"/> 38400</p> <p><input checked="" type="checkbox"/> 57600</p> <p><input type="checkbox"/> 115200</p>	<p>Parity</p> <p><input checked="" type="checkbox"/> None</p> <p><input type="checkbox"/> Odd</p> <p><input type="checkbox"/> Even</p>
<p>Protocols</p> <p><input checked="" type="checkbox"/> MODBUS RTU</p> <p><input checked="" type="checkbox"/> MODBUS ASCII</p> <p><input type="checkbox"/> SICK MODBUS RTU</p> <p><input type="checkbox"/> SICK MODBUS ASCII</p>	<p>DataBits</p> <p><input type="checkbox"/> 7</p> <p><input checked="" type="checkbox"/> 8</p>	<p>StopBits</p> <p><input checked="" type="checkbox"/> 1</p> <p><input type="checkbox"/> 2</p>
<p>Info</p> <p>Scan will take approx. 17 minutes 0 seconds.</p>	<p>Address</p> <p><input checked="" type="checkbox"/> All (1-254) <input type="checkbox"/> 1-32</p>	<p>Timeout</p> <p><input type="text" value="1000"/> [ms]</p>

OK
Set to Default
Select All
Cancel

Ethernet:

Enter the IP address of the device you would like to connect to.

Select port and addresses where the device shall be searched.

Use the “RTU over TCP” protocol setting for remote access to FLOWSIC500 connected to a DATCOM gateway.

Configure Ethernet Connection

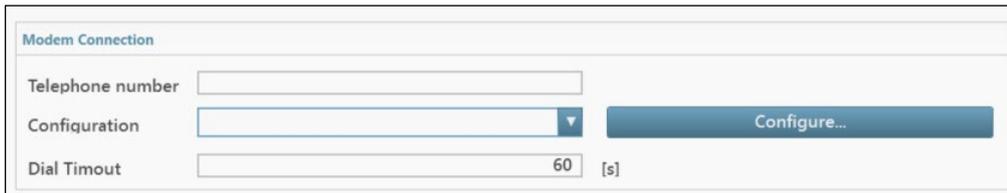
<p>Device IP Address</p> <p><input type="checkbox"/> 127.0.0.1 </p> <p><input checked="" type="checkbox"/> 10.133.87.267 </p> <p style="text-align: right;"></p>	<p>Port</p> <p><input checked="" type="checkbox"/> 502 </p> <p style="text-align: right;"></p>	<p>Address</p> <p><input checked="" type="checkbox"/> 1</p> <p><input type="checkbox"/> 1-32</p> <p><input type="checkbox"/> All (1-254)</p>
<p>Protocol</p> <p><input type="checkbox"/> RTU over TCP</p>		<p>Timeout</p> <p><input type="text" value="1000"/> [ms]</p>
<p>Info</p> <p>Scan will take approx. 1 seconds.</p>		

OK
Set to Default
Select All
Cancel

Modem

Configure the serial settings according to your connected modem.

Enter the telephone number with which the connection is to be established and select the configuration of your modem.



The screenshot shows a window titled "Modem Connection". It contains three input fields: "Telephone number" (an empty text box), "Configuration" (a dropdown menu with a downward arrow), and "Dial Timeout" (a text box containing "60" followed by "[s]"). To the right of the "Configuration" dropdown is a blue button labeled "Configure...".

To add a new configuration, click on "Configure" and enter the settings. The configuration profile can be saved under a new name.

Bluetooth

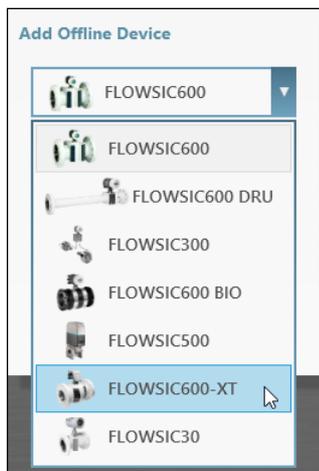
No additional settings are necessary for the connection via Bluetooth. Just select the Bluetooth interface and start the scan.

2.2.1 Create Offline device

For demonstration purposes, you can create an offline device and access most of the software features.

To create an offline device, proceed as follows:

1. Click "Create Offline Device".
2. In the drop-down menu select the desired device type.



3. Enter a random serial number.



4. Click "Finish".
5. Enter additional information on the device.

Edit Device Information for FLOWSIC600-XT

00012345
Serial Number

Dresden
Device name

Germany
Station / Description

Company

Address

ZIP/Postal code City

Country

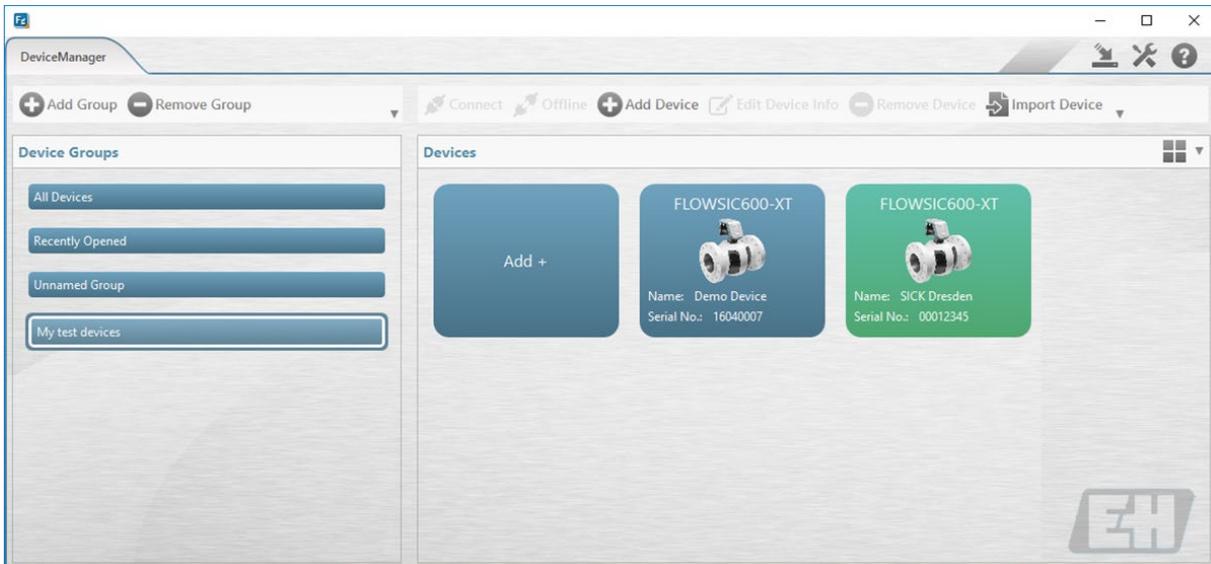
0 0
Latitude Longitude

Undo Changes

OK Cancel

6. Click "OK".

→ The new device is being created and is highlighted in green in the device manager:



2.2.2 Import device file

To import an existing device file or session file, click "Import device file" and browse for the file on your computer.



When a device or session file is imported, a device is created in the device manager. If the database for device already exists in the device manager, the database can be replaced or merged with the imported file.



2.2.3 Search device

To search the devices already registered in the FLOWgate™ database for a specific device, use the device search:



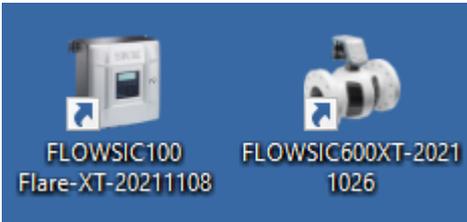
Enter known device information of the device you are looking for, e.g. a part of the serial number, the name of the device or the device type.

All applicable devices in the selected device group will be displayed.

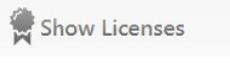
If you do not know in which device group the device you are looking for is located, select "All devices".

2.3 Create Desktop Link

To create a desktop link, select the desired device in the Device Manager and click "Create Desktop Link". The link is added to the desktop.



2.4 Show Licenses

To display the "License States" window, click on  .

The overview shows the available license features and the respective license state.

To purchase a license, follow the steps in §7 "License Manager – Activation of FLOWgate™ Plug-ins".

LICENSE STATES			
	Licensed Feature	Scope	License State
	TR-G18 Report	Global (Runtime)	No valid runtime license found!
	Validation Certificate	Global (Runtime)	License never expires
	Meter verification	Global (Runtime)	No valid runtime license found!

3 FLOWgate™ overview

3.1 Connecting to a device

1. Double-click on the device panel.
2. Per default, the connection settings of the last session are used.
3. To display the connection settings dialogue each time, open the application settings (see §5 "Application settings"): On the "Misc." tab set the slide control to "Show dialog to select interface before connecting to device".
4. Select the desired user level and enter the password.



5. Click "Login".
 - ✓ Please refer to the device-specific manual in order to obtain device default passwords prior and post commissioning.

Troubleshooting

If no connection can be established, an error message is displayed:



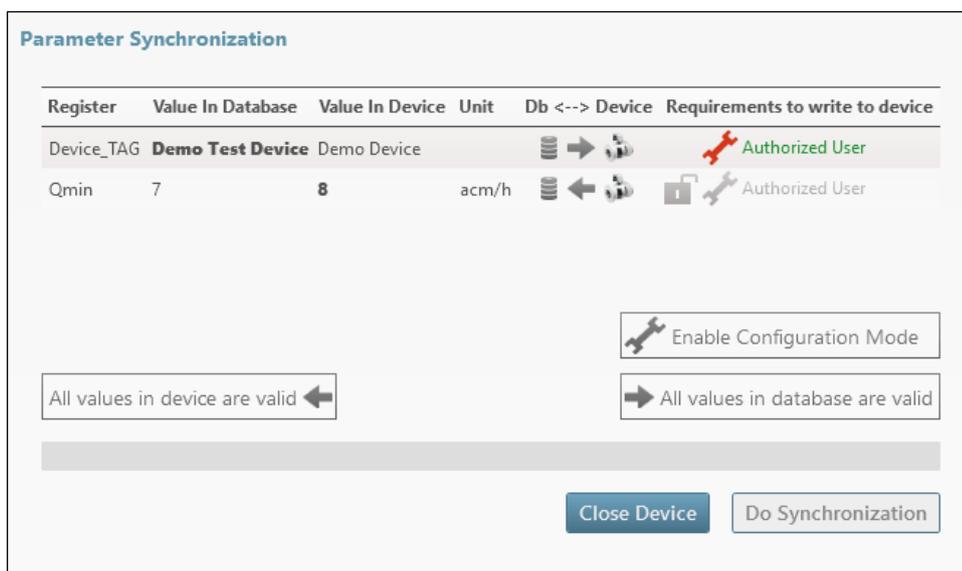
You have the following options:

- **Retry:** Try again to connect to the selected device.
- **Scan:** Revise connection settings, see § 2.2 "Registering a new device".
- **Offline:** Connect to the device in offline mode; parameter edits can only be saved to the database.
- **Cancel:** Close the dialog.

3.2 Synchronization philosophy

Once opening a device, which has already been registered and initialized with its database in FLOWgate™, the device is recognized and FLOWgate™ checks for differences between the device and the database.

If a difference has been detected, you have the option to update the parameters in the database and keep the parameter values in the device or vice versa: Per default, all values are updated in the database.



The direction of synchronization can be edited for every parameter or for all parameters at once:

	Direction of synchronization: From device to database
	Direction of synchronization: From database to device

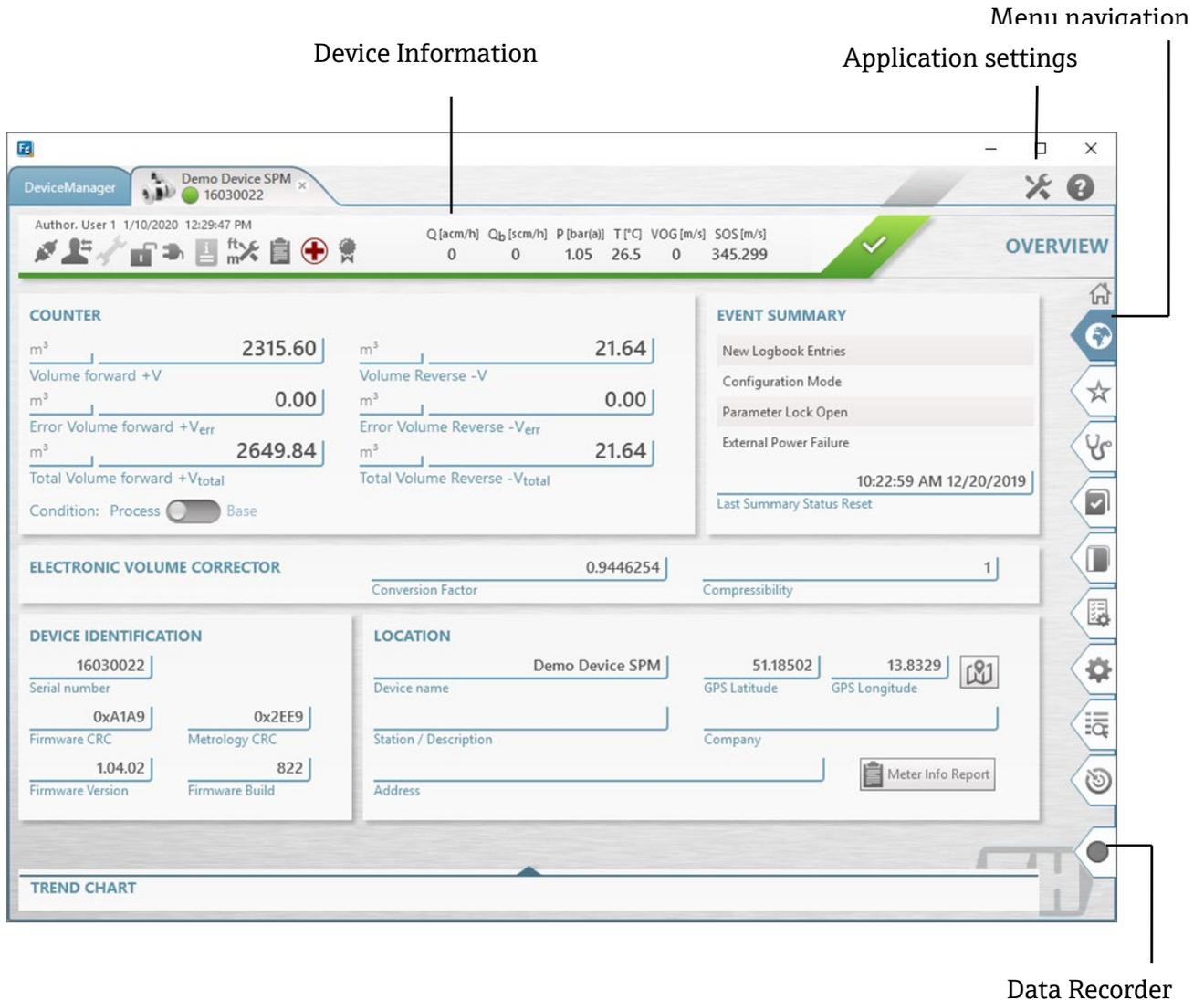
- Write all values to database: Edits the direction of synchronization for all parameters, all values are written from the device to the database.
- Write all values to device: Edits the direction of synchronization for all parameters, all values are written from the database to the device.
- Enable configuration mode: The configuration mode must be enabled to write values from the database to the device.

Please be aware, that in order to write to a device, the correct user level has to be used and/or the parameter locking switch of the device has to be open.

	Open parameter locking switch required
	Configuration mode required
< User level	Minimum user level required Please refer to the device-specific manual for user levels and default passwords.

Requirements that have been fulfilled are highlighted in green, requirements that have not been fulfilled yet are highlighted in red color.

3.3 Overview page



The screenshot displays the 'Overview' page in the DeviceManager application. The top header includes the 'DeviceManager' title, a tab for 'Demo Device SPM' with ID '16030022', and a status bar with various process parameters: Q [acm/h], Q_b [scm/h], P [bar(a)], T [°C], VOG [m/s], and SOS [m/s]. The values shown are 0, 0, 1.05, 26.5, 0, and 345.299 respectively. A green checkmark icon is visible on the right side of the status bar.

The main content area is divided into several sections:

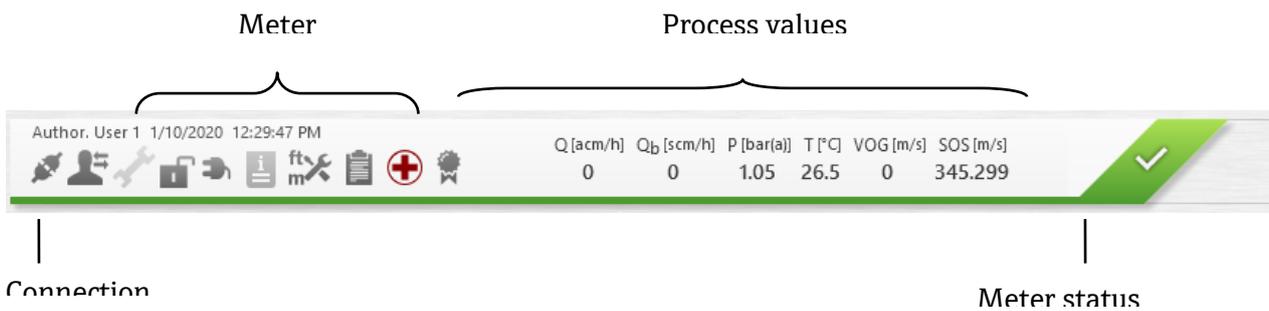
- COUNTER:** Displays volume measurements in m³. Values include 2315.60 (Volume forward +V), 0.00 (Error Volume forward +V_{err}), 2649.84 (Total Volume forward +V_{total}), 21.64 (Volume Reverse -V), 0.00 (Error Volume Reverse -V_{err}), and 21.64 (Total Volume Reverse -V_{total}). A condition toggle is set to 'Process'.
- ELECTRONIC VOLUME CORRECTOR:** Shows a Conversion Factor of 0.9446254 and a Compressibility of 1.
- DEVICE IDENTIFICATION:** Lists serial number (16030022), firmware CRC (0xA1A9), firmware version (1.04.02), metrology CRC (0x2EE9), and firmware build (822).
- LOCATION:** Shows device name (Demo Device SPM), GPS coordinates (51.18502, 13.8329), station/description, company, and address. A 'Meter Info Report' button is present.
- EVENT SUMMARY:** Lists recent events such as 'New Logbook Entries', 'Configuration Mode', 'Parameter Lock Open', and 'External Power Failure'. The last summary status reset occurred on 10:22:59 AM 12/20/2019.
- TREND CHART:** A section at the bottom for visualizing data trends.

Annotations on the screenshot:

- Menu navigation:** Points to the vertical sidebar on the right containing various icons for navigation and settings.
- Device Information:** Points to the top header area containing the device name and ID.
- Application settings:** Points to the top right corner of the application window.
- Data Recorder:** Points to the bottom right corner of the application window.

3.4 Device Information Bar

The Device Information Bar is displayed in every view.



The Device Information Bar is a horizontal strip at the top of the application interface. It is divided into two main sections:

- Meter:** Contains the user information 'Author: User 1 1/10/2020 12:29:47 PM' and a set of icons representing different functions like connection, settings, and help.
- Process values:** Displays the same set of process parameters as the Overview page: Q [acm/h], Q_b [scm/h], P [bar(a)], T [°C], VOG [m/s], and SOS [m/s]. The values are 0, 0, 1.05, 26.5, 0, and 345.299.

Annotations on the bar:

- Connection:** Points to the left side of the bar, specifically the user and icon area.
- Meter status:** Points to the right side of the bar, specifically the green checkmark icon.
- Process values:** Points to the central data fields of the bar.

3.4.1 Connection status

The connection status symbol shows if the computer is connected to a compatible Endress+Hauser device.

<i>Connection Status</i>	
	Connected to the device
	Not connected
	Connection is broken
	Switch user level without disconnecting from the device

► To reconnect, click the connection status symbol.

3.4.2 Meter information

These symbols show important meter information and allow quick access to frequently used functionalities.

<i>Configuration mode</i>	
	Symbol active: Configuration mode is active Symbol not active: Configuration mode is inactive
<i>Position of the parameter locking switch</i>	
	Parameter locking switch open
	Parameter locking switch closed
<i>Power supply</i>	
	Shows the status of the device power supply
<i>Unit settings</i>	
	Opens dialog to define the unit systems and specific unit settings for FLOWgate™.
<i>Register quick access</i>	
	Opens the Register Quick Access. Type the register number or part of name to identify and directly search for a register. Register Quick Access requires a higher user level in order to be accessed.
<i>Maintenance report</i>	
	Creates a maintenance report.
<i>One-click diagnosis</i>	

	Creates a diagnostic session
<i>License Manager</i>	
	Opens the License Manager

3.4.3 Meter status

The meter status is signaled via symbols and colors. Click on the symbol for more information on the meter status:

- Operation: No errors, the meter is working properly.



- Maintenance: Warnings occurred, but the measuring results are still valid.



- Failure: Errors occurred, the measuring results are no longer valid.



- Offline: The device is offline; parameter edits can only be saved to the database.



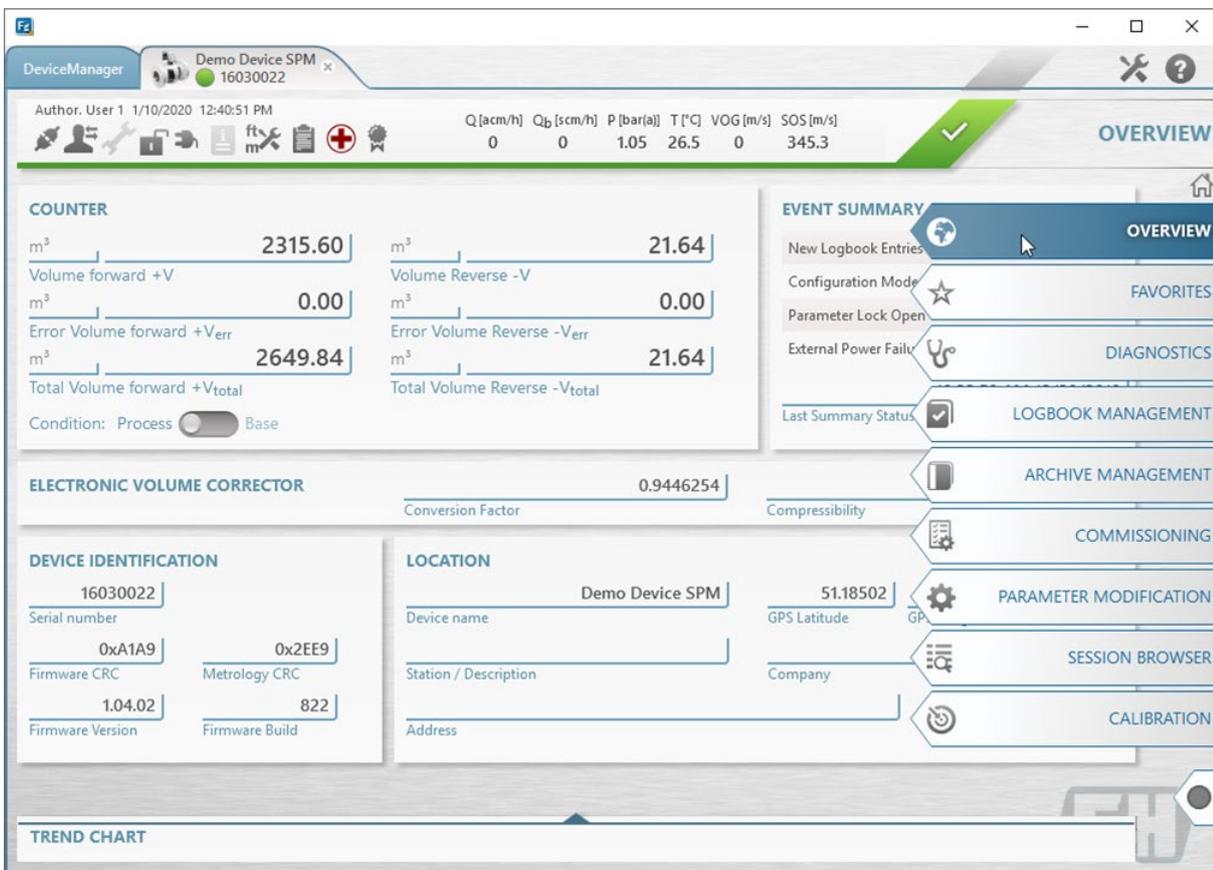
3.5 Application settings

	Opens the “Devices Backup/Restore/Sync” window (see § 6.2 “Automatic device synchronization on a network drive”)
	Opens the “Firmware Update” wizard for the selected device; only available on user level “Service”
	Opens the Application settings dialog to setup FLOWgate™ (see § 5 “Application settings”).
	Opens the About dialog to access manuals and contact details for support.

3.6 Menu navigation

To expand the menu navigation, move the mouse to the right border of the application window:

- The menu navigation is expanded automatically.
- To keep the menu navigation expanded permanently, open the application settings (see §5 "Application settings"): On the "Misc." tab, set the slide control to "Main menu always completely visible".



Short cuts

The following menu short cuts are available:

F1	Help	F9	Signal View
F2	DeviceManager	F10	Archives
F3	Register Tree	F11	Session Browser
F4	Log books	F12	Application Settings
F5	Overview		
F6	Meter Values	Ctrl + M	Config/Operation Mode
F7	Commissioning	Ctrl + Y	Quick Register Access
F8	I/O Check	Ctrl + Q	Exit

Menu short description

	Overview	Shows the most important measured values and information about the device
	Favorites	Frequently used functions can be displayed in this menu. To add a menu as a favorite, click on  in the upper right corner of the desired sub menu; the menu will be added to the favorites.
	Diagnostics	Functions and wizards for device diagnostics: Meter values, signal analysis, SOS calculation, status diagnostics, adjustment of warning limits in the device
	Logbook Management	Display and management of logbooks in the device together with logbook entries already copied to the FLOWgate™ database, possibility of export, event report
	Archive Management	Display and management of archive entries in the device together with archive entries already copied to the FLOWgate database, possibility of export
	Commissioning	Wizard for commissioning FLOWSIC devices, step by step instructions, interactive configuration of interfaces and other device settings, reports at the end of the process
	Parameter Modification	Modification of parameter settings with intuitive menus and customer centric approach
	Service	Only available on “Service” level; service related tasks such as signal analysis and parts exchange
	Session Browser	Available sessions recorded with FLOWgate™, see §4 “Device functions”
	Calibration	Only available on “Service” level; wizard supporting flow and sensor calibration of FLOWSIC devices

Detailed descriptions of the device functions are available in the operating instructions of the devices.

4 Device functions

Depending on the FLOWSIC device connected, different menus are available. Besides these device-specific functions some menus are shared along all device types.

1. Session Browser
2. SOS Calculator
3. Data Recorder

4.1 Session Browser

A "session" includes controlling, monitoring, data collecting and configuration activities of a FLOWSIC device with the help of the FLOWgate™ software. All major operations in the program during a session are automatically logged by the software and are available for later offline reading and analysis.

If you start a new session, a new session will be generated in the Session Browser. All operations performed on a device with the help of FLOWgate™ during a session are stored as a new session entry until disconnection from the device or a closing the application. Switching between Online and Offline mode is also registered by a new session and hence creates a new session in the list.

4.1.1 Navigating the Session browser

The Session browser can be opened from the device navigation menu by selecting "Session Browser". Once opened, the list of sessions available for the connected device is displayed on the left-hand side.

Once a session is selected by clicking on it, details of the selected session are displayed in the list on the right-hand/center side of the screen. Depending on the session entry type several actions are available like playback of data records or creating reports from parameter sets.

4.1.2 Importing a session from a file

In order to import a FLOWgate™ session please follow these steps:

1. Click "Import" on the Session toolbar
2. In the "Import Session" dialog click the Folder icon to select a session file from the filesystem.
3. Click "Ok" to start the import process.
4. In case the session file contains unit system details, a dialog "Replace UnitSettings?" appears.
 - Select, whether the current unit system settings in FLOWgate™ shall be used or if the unit settings in the imported file shall be used for the current device.
 - Confirm import using "Ok" button. Clicking "Cancel" will stop the entire import process.

5. The import process continues and sessions found in the imported file are added to the list of sessions with all their respective entries.

- ✓ The file extension for a session file is .sfgsession.

4.1.3 Exporting a session to a file

To export a complete session:

1. Click the "Export" button in the Sessions toolbar.
2. Select the file to store the exported session file to.
3. Select, if the session file shall contain unit display settings, data records and reports. Unselecting these features can reduce the file size of the session export file.

- ✓ The selected session is highlighted. Exporting the current active session stops the session and starts a new one.

4.1.4 Renaming a session

By default, sessions are named using the timestamp a session has been started. In order to improve readability of the session list and simplify the search for a particular session, session entries can be renamed.

1. Select the session in the "Sessions" list.
2. In the Sessions toolbar click "Rename".
3. In the following dialog enter the new name of the session.
4. Confirm with "Ok".

4.1.5 Remove a session

If a session is not required anymore it can be removed using the "Delete" Button.

1. Select a session in the "Sessions" list
2. Click "Remove"
3. Confirm the removal of the session entry.

- ✓ It is useful to export a session prior to the removal of the session entry. Please revisit section "4.1.3 Exporting a session to a file".

4.1.6 Filter sessions by type

In order to find a particular session entry like e.g. a recording it is useful to filter down the list of sessions in order to only display a sessions with a desired entry type.

This feature is provided by the "Session Entries Filter".

By clicking on a particular session entry type, the list of sessions is filtered depending whether a particular entry type is turned on or off in the "Session Entries Filter".



4.1.7 Playback of recordings

1. Click the "Replay" button  to select a recording for playback.

A dialog with the available sessions for the active device is displayed.

2. Select the desired session.

3. Click "Play" to playback the recording.

4.2 Data recorder

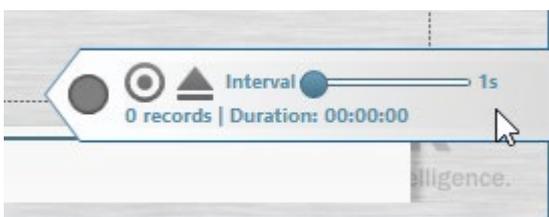
The data recorder provides the functionality to record a sequence of measurement values from a device over a period of time and playback the recorded values later on within the same FLOWgate™ installation or even on another computer.

The data recorder is available within the device window located in the lower right end of the screen. The data recorder panel behaves similar to the Device Navigation toolbar and expands once the mouse cursor hovers over the triangle area of the recorder.

To display the "Licence States" window, click on.



Move the mouse on the  symbol to expand the data recorder.



The data recorder integrates in multiple ways into FLOWgate™.

- Recording of measurement values from within all screens.
- Automated recording of measurement values during calibration mode (some devices).
- Recording of signal values from within the signal view screen.
- Playback of measurement values from Session Browser
- Playback of signal values from Session Browser

4.2.1 Record measurement values

The recording of measurement values can be initiated from all screens within the device view. In order to initiate a recording follow these steps.

1. Hover using the mouse cursor over the data recorder area to display the entire panel.
2. Review or select a different interval of recording using the slider.

The recording interval can also be modified during an active recording.

3. Click the Record button  to start the recording. The grey circle symbol of the data recorder starts to blur in red color to indicate an active recording.
4. The number of recorded measurement value sets and the duration of recording can always be viewed in the data recorder panel.
 - In order to stop the recording, click the Stop button .
5. A dialog to finalize the recording is displayed.
 - Enter a record description to easy identification.
 - "Continue recording" will disregard the record description and will continue the recording of measurement values
 - "Stop and Discard Record" will stop the data recorder without storing the measurement values within the active session.
 - "Stop and Save Record" will finalize the recording by storing the measurement values in the active session with the record description as the name. Once clicked, the recording is available in the Session Browser for playback and export.

4.2.2 Playback measurement values

Once a recording has been executed and finalized, the recording can be played back using the measurement data and timestamp data of the device later on. In order to playback a recording follow these steps:

1. Click the “Replay” button  to select a recording for playback.

A dialog with the available sessions is displayed.

2. Select the desired session.
3. Click “Play” to playback the recording.
4. The data recorder panel displays a "Pause" symbol indicating the playback state of the currently connected device.
5. The playback can be controlled using the "Playback" panel of the data recorder.

Options to control are:

- Pause playback.
- Move stepwise forward and reverse.
- Increase and decrease playback speed.
- Finish the playback.

Alternatively, navigate to the Session Browser and select the session containing the desired recording.

4.3 SOS Calculator

The SOS Calculator provides a mean to calculate the theoretical speed of sound based on information like:

- Gas composition
- Application pressure
- Application temperature

A list of predefined standard gas compositions are available for quick access. Furthermore, it is possible to define a custom application gas composition for calculation.

Furthermore, it is possible to compare the theoretically calculated speed of sound with the current measurement values both in tabular and graphical way.

4.3.1 Starting the SOS Calculator

Once connected to a device either online or offline, the SOS Calculator can be found in the navigation menu underneath the entry “Diagnosis” or “Service”

1. In the Device Manager connect to a device either online or offline.
2. In the Navigation menu select either “Diagnosis” or “Service” (availability of menu items depend on the current user level).
3. Click the tile “SOS Calculator”.
4. The SOS Calculator starts up with an empty configuration.

4.3.2 Handling gas composition

In order to calculate the speed of sound it is required to define the gas composition of the application gas. A set of standard gas compositions is available for quick load. It is also possible to define a custom composition based on the substances available in the list displayed.

To load a standard gas composition follow these steps:

1. In the panel “Gas Composition” please select a composition in the dropdown box “Quickload Samples:”
2. Click the button “Apply”.
3. The list of substances gets filled with the gas composition selected.

4. In order to modify or define a custom gas composition please modify the substance fraction in percent in the column “Fraction [%]“
5. To successfully apply the gas composition to the speed of sound calculation, the fraction sum on the lower end of the list of substances must be between 95% and 105%.
 - ✓ After a gas composition has been entered, it is possible to save the fraction values together with the temperature and pressure values as a file with the extension “.cmp”. Please use the “Load”, “Save” and “Clear” buttons for this purpose.

4.3.3 Calculate theoretical speed of sound

After defining the application gas composition, it is possible to calculate the speed of sound. Further parameters the speed of sound depends on are gas temperature and pressure.

1. In the mid-part panel “Process Conditions” define the temperature using the “Temperature” control. Options are:
 - Retrieve the temperature from a temperature sensor (slider turned to left). Based on the availability of different sensors please select the correct temperature sensor to retrieve the measurement values from.
2. The same approach applies for the pressure sensor.
3. Start the speed of sound calculation by clicking the button “Calculate SOS”.
4. The theoretical speed of sound can be read in the lower-mid panel “Results” along with the values of compressibility and speed of sound deviation measured by the device.

4.3.4 Comparison of theoretical and measured SOS

Once the theoretical speed of sound is calculated, the resulting value can be used for comparison with the current measurement values for each available path of the connected meter. The number and names of the paths along available in the meter with their respective speed of sound values are identified automatically. The deviation for each path from the calculated theoretical speed of sound can be read from the table on the right-hand side panel “Deviation Per Path”.

- ✓ In Offline mode the measured speed of sound cannot be identified and hence the deviation is not calculated.

It is also possible to observe the measured and calculated speed of sound historically.

1. After calculating the theoretical speed of sound, bring up the trend chart by clicking the triangle of the panel “TREND CHART” on the bottom side of the screen.
2. The theoretical speed of sound is visualized as a horizontal red line.
3. The measured speed of sound for each path is plotted along the timeline in different colors.

4.4 Parameter comparison

1. Open the “Parameter modification” menu.

2. Click “Parameter comparison”:



3. To save the current device parameters, click “Backup parameter”.
4. Click “Import Parameter file” or select a session from the previous sessions list.
5. To compare current and imported parameter settings, select “Show differences only”.
6. To write deviating values to the device, click “Synchronize parameters”.

4.5 Creating a parameter report

1. Open the “Parameter modification” menu.

2. To create a parameter report, click



3. Select the type of parameter report you would like to create.
4. To generate the report, confirm with “Ok”.
5. The parameter report is created.

6. Save the parameter report or send it via e-mail by clicking on



or click on “Print” to directly print the report.

5 Application settings

Click the  symbol to open the "Application Settings".

Within the application setting dialog it is possible to modify the global behaviour of FLOWgate™ irrespective of the device-specific settings.

- Language:
 - Select the FLOWgate™ user interface language.
 - Date/Time format: Select “Default of selected language” or “ISO 8601”
- Import/Export:
 - Define the export CSV Value separator.
- Data cache: Define the cache size by selecting a recording time from the drop-down list or deactivate the cache. The cache will automatically overwrite the oldest data records when the cache has been filled up to the configured size (time).
- Paths:
 - o Path to databases: Path for device synchronization on a network drive, see §6.2 “Automatic device synchronization on a network drive”
 - o Path to export folders: Select the default folders for device or session imports/exports. If another folder is selected manually during a session, FLOWgate™ remembers this folder till the end of the session. After restart of FLOWgate™, the default folder setting is used again.
- Misc.
 - o To display the connection settings dialogue each time when connecting to a device, set the slide control to “Show dialog to select interface before connecting to device”. Per default, the connection settings are used from the previous connection to this device.
 - o To keep the menu navigation expanded permanently, set the slide control to “Main menu always completely visible”. Per default, the slide control is set to “Main menu slides in and out”
 - o Always ask for session name
 - If the slide control is set to “Always ask for the session name”; FLOWgate™ asks for the session name when closing a device. Otherwise set the slide control to "Use default session name" and the session name will be generated automatically.
 - o Maps provider
 - Select the maps provider “Google” or “Bing”. The selected maps provider is used to show the location of the device on the “Overview” page, if configured.
- Backup/Restore: See §6 "Backup/Restore"

6 Backup/Restore

6.1 Creating a manual backup

Click the  symbol to open the "Application Settings".

The application settings and the devices saved in your local database can be saved when logged in to FLOWgate™.

This function is useful if you would like to use your FLOWgate™ database and settings on another computer or to create a backup of the device database/settings in case of computer problems.

The "Restore" function overwrites the current application settings or devices in your local database. If this function is used several times one after another, the application settings or the devices database of the currently logged in windows user will be overwritten each time the function is executed.

6.2 Automatic device synchronization on a network drive

The DeviceSync feature is an optional feature which makes it possible to share a central storage location on a network drive with multiple users. The feature can be activated via an additional license, see §7 “License Manager – Activation of FLOWgate™ Plug-ins”.

FLOWgate™ automatically checks if there is data stored on the network drive that is not yet present in the local FLOWgate™ database, or if there is new data in the local database that has not yet been stored on the network drive.

To define a network drive for device synchronization, proceed as follows:

1. Define a “Path to databases” in the Application settings, see §5 “Application settings”.
2. Click  in the upper right corner to open the “Devices backup/restore/sync” window.

FLOWgate™ shows the synchronization state of your devices:

- Backup pending: New data in the local database that have not yet been synchronized. Click “Backup” to synchronize.
- Import pending: New data on the network drive that have not yet been synchronized. Click “Import” to synchronize.

DEVICES BACKUP/RESTORE/SYNC

<input type="checkbox"/>	Device Type	Serial number	Sync State	Sync Action
<input type="checkbox"/>	FLAWSIC100 Flare-XT	20200819	Backup pending	 Backup
<input type="checkbox"/>	FLAWSIC100 Flare-XT	20200909	Backup pending	 Backup
<input type="checkbox"/>	FLAWSIC100 Flare-XT	20200902	In sync	
<input type="checkbox"/>	FLAWSIC100 Flare-XT	00007777	Backup pending	 Backup
<input type="checkbox"/>	FLAWSIC100 Flare-XT	00997654	Backup pending	 Backup
<input type="checkbox"/>	FLAWSIC100 Flare-XT	20200914	Backup pending	 Backup
<input type="checkbox"/>	FLAWSIC100 Flare-XT	20200917	In sync	
<input type="checkbox"/>	FLAWSIC100 Flare-XT	20200928	In sync	
<input type="checkbox"/>	FLAWSIC600-XT	20201001	Backup pending	 Backup
<input type="checkbox"/>	FLAWSIC100 Flare-XT	20201001	Backup pending	 Backup
<input type="checkbox"/>	FLAWSIC100 Flare-XT	02020101	In sync	

Selected devices: 

7 License Manager – Activation of FLOWgate™ Plug-ins

This chapter describes how to activate features that are not included in the basic FLOWgate™ software.

7.1 Installing licensing service

A licensing service needs to be installed in order to use features of FLOWgate™ that need a valid license. The licensing service is provided by [Wibu](https://www.wibu.com) and called CodeMeter. Please execute the provided CodeMeterRuntime.exe to install it. The newest version can always be downloaded from Wibu's website: <https://www.wibu.com/support/user/user-software.html>.

7.2 Creating a license file (CMContainer)

1. Connect to a device for which a function in FLOWgate™ is to be used that requires a license.

The connection to the device can be “online”  or “offline” .

2. Open the license manager in FLOWgate™ in the active device module by clicking on .

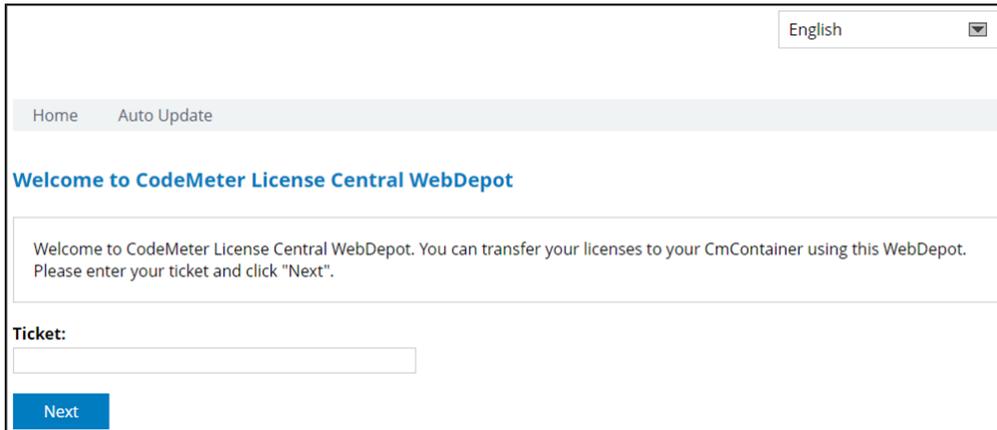
When the license manager is opened, a license file (CMContainer) is created in the program module CodeMeter, which is required for the activation of a license in FLOWgate™.

3. Confirm the "License container" message.



7.3 Installing a license on your computer

1. After your order for a license feature, Endress+Hauser has sent an e-mail to you which contains the order details and your ticket ID.
2. Open the license server in the web browser: licenseticket.endress.com/



English

Home Auto Update

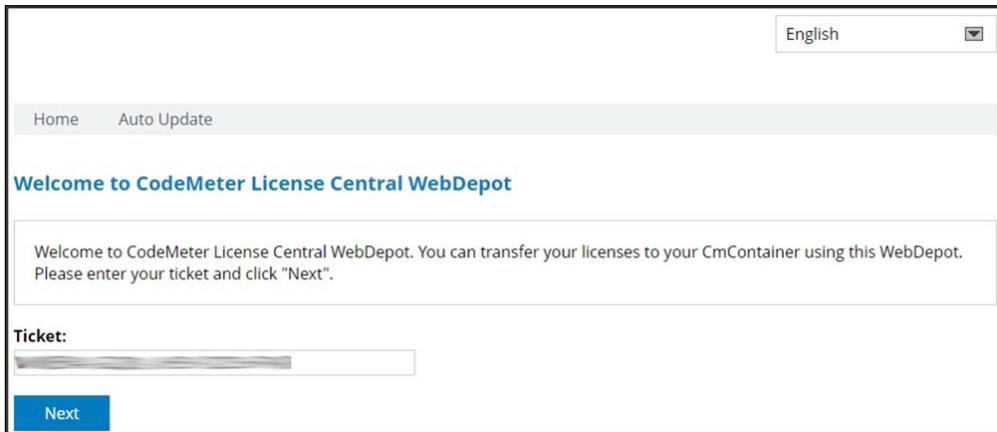
Welcome to CodeMeter License Central WebDepot

Welcome to CodeMeter License Central WebDepot. You can transfer your licenses to your CmContainer using this WebDepot. Please enter your ticket and click "Next".

Ticket:

Next

3. Enter the ticket number of the license in the "Ticket" field.



English

Home Auto Update

Welcome to CodeMeter License Central WebDepot

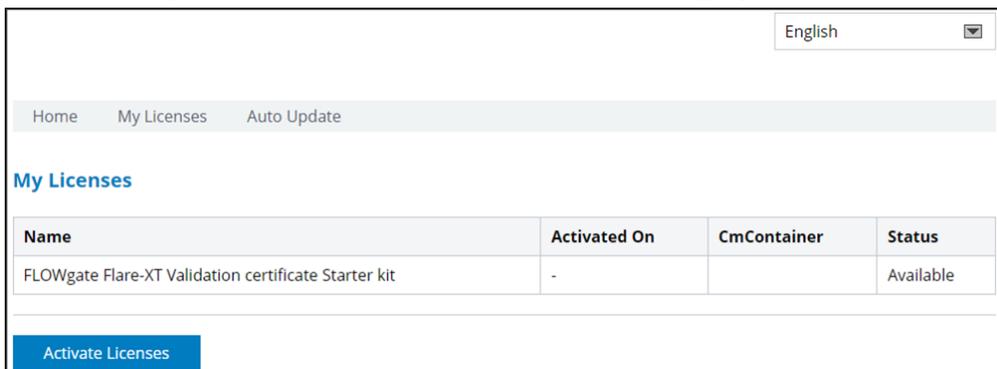
Welcome to CodeMeter License Central WebDepot. You can transfer your licenses to your CmContainer using this WebDepot. Please enter your ticket and click "Next".

Ticket:

Next

4. Click "Next".

The license options available with the ticket will be displayed.



English

Home My Licenses Auto Update

My Licenses

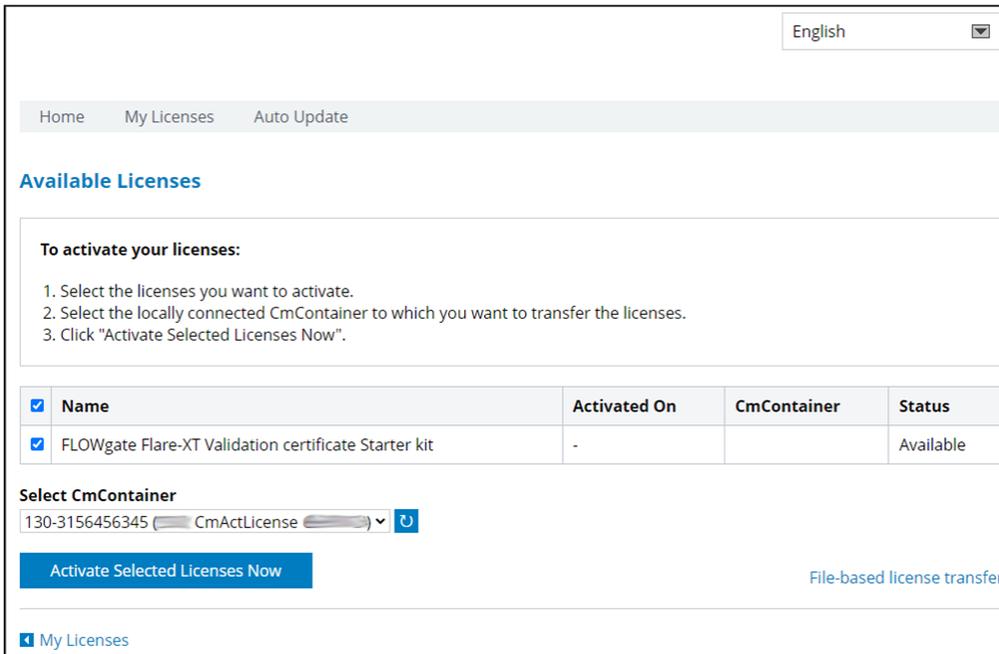
Name	Activated On	CmContainer	Status
FLOWgate Flare-XT Validation certificate Starter kit	-		Available

Activate Licenses

5. Click "Activate license".

6. In the list of options, select (activate checkbox) those that are to be activated on your computer.

For the activation of the TR-G18 and Flare-XT verification certificate plug-ins, one license for the PC and one license for one device registration per device are required.



English

Home My Licenses Auto Update

Available Licenses

To activate your licenses:

1. Select the licenses you want to activate.
2. Select the locally connected CmContainer to which you want to transfer the licenses.
3. Click "Activate Selected Licenses Now".

<input checked="" type="checkbox"/>	Name	Activated On	CmContainer	Status
<input checked="" type="checkbox"/>	FLOWgate Flare-XT Validation certificate Starter kit	-		Available

Select CmContainer

130-3156456345 (CmActLicense) 

[Activate Selected Licenses Now](#) [File-based license transfer](#)

[My Licenses](#)

The available CmContainer of the PC is displayed in the "Select CmContainer" field. Normally, only one CMContainer is listed.

7. To activate the licenses on the PC, click "Activate Selected Licenses Now".

8. After the transfer is completed, click "Ok".

9. Start FLOWgate™.

10. Connect online or offline to the device which should be registered for the license feature.

11. Open the license manager in FLOWgate™ in the active device module by clicking on  .

Note: Once a license has been activated on a device, the license cannot be returned.

The activated device license is stored in the device database.

The database with the device license can be transferred to another PC.

12. Click "Activate licensed feature" to add the license information to the device database.



13. Confirm by clicking on "Ok".



→ The license is being activated.



→ After activating the license, the status is displayed in the license manager.

If the license is time-limited, the expiration date is displayed in the License Manager as follows:

