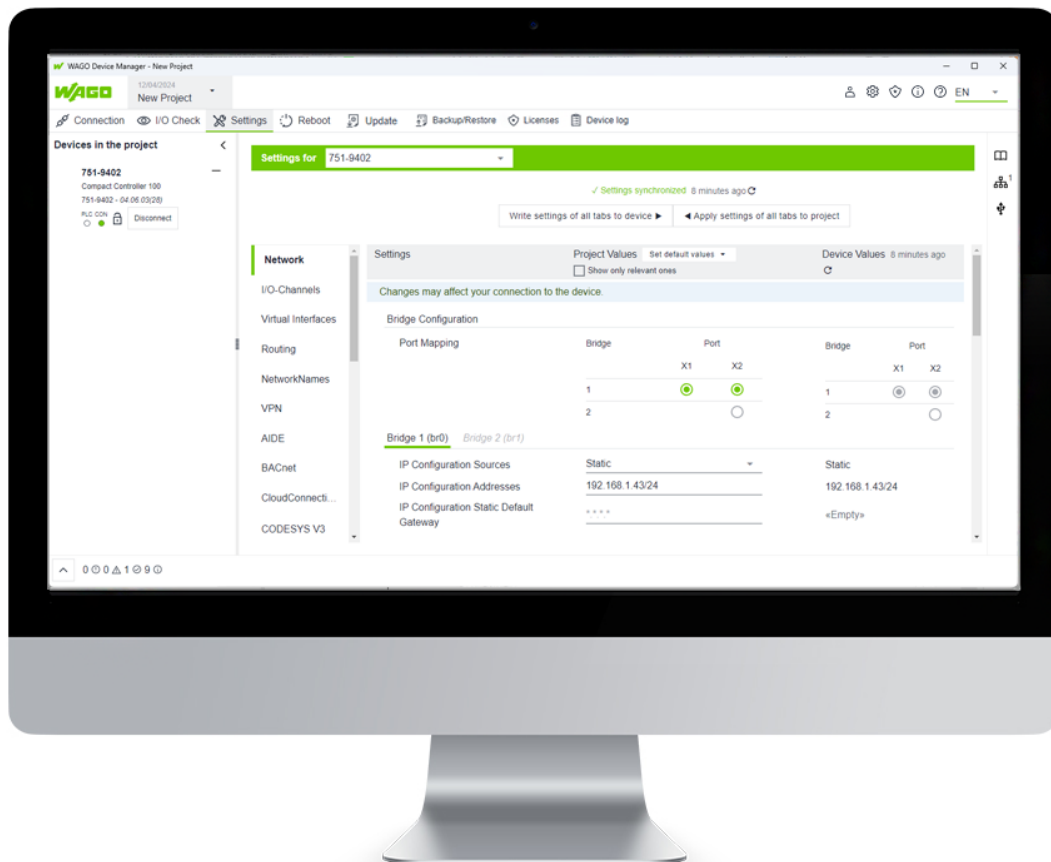


WAGO Device Manager

Configuration and Parameterization of WAGO Products



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Every conceivable measure has been taken to ensure the accuracy and completeness of this documentation. However, as errors can never be fully excluded, we always appreciate any information or suggestions for improving the documentation.

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We wish to point out that the software and hardware terms as well as the trademarks of companies used and/or mentioned in the present documentation are generally protected by trademark or patent.

WAGO is a registered trademark of WAGO Verwaltungsgesellschaft mbH.

Table of Contents

1 Provisions	5
1.1 Intended Use	5
1.2 Typographical Conventions	6
1.3 Legal Information	8
2 Security	9
2.1 General Safety Regulations	9
2.2 Indirect Safety	9
3 Overview	10
4 Requirements	11
4.1 System Requirements	11
4.2 WAGO Device Manager License	11
4.3 Hardening Measures	12
4.3.1 Secure Operating Environment	12
4.3.2 Secure Operation	13
5 Installing	15
5.1 Storage Locations	15
6 Starting	16
6.1 Launch WAGO Device Manager	16
6.2 Create New Project	16
6.3 Opening an Existing Project	16
7 Graphical User Interface	18
7.1 General Controls	19
7.1.1 Settings	19
7.1.1.1 Certificate Exceptions	19
7.1.2 License Repository	21
7.1.3 WAGO Download Center Log In	23
7.2 Ribbon (Device Actions)	23
7.3 Devices in the Project	24
7.4 Workspace	26
7.4.1 Connection	26
7.4.2 I/O Check	27
7.4.3 Settings	31
7.4.4 Reboot	37
7.4.5 Update	38
7.4.6 Backup/Restore	39
7.4.7 Licenses	41
7.4.8 Device Log	42
7.5 Message Window	43
7.6 Product Selection	45
8 Operating	51
8.1 Working with the User Interface	51
8.1.1 Customize Display	51
8.2 Work with Projects	52
8.3 Add Devices in the Project	52

8.3.1	Information about Adding Devices	54
8.3.2	Handling Certificates	55
8.4	Connect to Device	56
8.5	Configure Device	57
8.6	Configure Other Firmware.....	59
8.7	Creating Backup	60
8.8	Perform Restore.....	61
8.9	Perform Update.....	62
8.10	Manage Licenses for Devices	65
8.11	Performing Device Diagnostics	68
8.11.1	Wiring Test via the "I/O Check" View.....	68
8.12	View Device Log.....	69
9	Uninstall.....	71
9.1	Cleaning the Data	72
10	Appendix	73
10.1	Protected Rights	73

1 Provisions

This documentation applies to the WAGO Device Manager software, version 1.3.

The software must only be installed and operated in accordance with the operating instructions. Knowledge of the operating instructions is required for proper use.

Please find all documents and information at:

🔗 www.wago.com

In addition to this documentation / online help, the following supplementary documents are available:

- Manuals of used products (e.g., WAGO Compact Controller 100)
- Release notes

You can open the context-sensitive online help within WAGO Device Manager by pressing **[F1]** on your keyboard or by clicking the help button.

1.1 Intended Use

The WAGO Device Manager is a software solution for engineering, configuring, parameterizing, and diagnosing WAGO products.

Software operation is only permitted if the system requirements and license conditions are met.

Improper Use

Improper use of the software is prohibited.

Improper use occurs in particular in the following cases:

- Non-observance of the intended use
- Implementation of a Known Misuse
- Use of the software in areas with special risk that require continuous fault-free operation and in which failure of or operation of the software can result in an imminent risk to life, limb or health or cause serious damage to property or the environment (such as the operation of nuclear power plants, weapons systems, aircraft and motor vehicles)

Warranty and Liability

The provisions of the latest WAGO General Terms and Conditions of Deliveries and Services (GTC) apply as well as the Software License Terms for Standard Software (SW-License) applicable to software products and software embedded in WAGO hardware products, both available at: 🔗 www.wago.com.

In particular, the warranty is void when:

- The software is improperly used.
- The defect is based on (customer-)specific specifications (hardware and software configurations).
- Modifications of the hardware or software by the user or third parties were made that are not described in this documentation and are at least responsible for the occurrence of the defect.

Individual agreements always take precedence.

Obligations of the installer/operator

The responsibility for the safety of an installation or system assembled with the software lies with the installer/operator.

The installer/operator is responsible for the proper installation and the safety of the system. It must comply with the laws, standards, guidelines, local regulations, the state and the rules of technology applicable at the time of installation and must observe the guidelines and instructions described in the operating instructions. The installation requirements of the approvals must also be met.

In the event of non-compliance, the software may not be operated within the scope of the approval.

1.2 Typographical Conventions





Number Notation

100	Decimals: Normal notation
0x64	Hexadecimals: C-notation
'100'	Binary: In single quotation marks
'0110.0100'	Nibbles separated by a period

Text Markups

<i>italic</i>	Names of paths or files
bold	Menu items, entry or selection fields, emphasis
Code	Excerpts from program code
>	Selection of a menu point from a menu
"Value"	Value entries
[F5]	Identification of buttons or keys

Links

	Link to a topic in a document
	Link to a separate document
	Link to a website
	Link to an email address
Glossary	Link to a glossary entry

Sequence of Action

- ✓ This symbol identifies a precondition.
- 1. Action step
- 2. Action step
 - ⇒ This symbol identifies an intermediate result.
- ➔ This symbol identifies the result of an action.
- Individual action step

Lists

- Lists, first level
 - Lists, second level

Figures

Figures in this documentation are for better understanding and may differ from the actual product design.

Warning Messages

 **DANGER**

Type and source of hazard

Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.

- Action step to reduce risk
-

 **WARNING**

Type and source of hazard

Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

- Action step to reduce risk
-

 **CAUTION**

Type and source of hazard

Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.

- Action step to reduce risk
-

 **NOTICE**

Type and source of malfunction (property damage only)

Indicates a potentially hazardous situation which, if not avoided, may result in damage to property.

- Action step to reduce risk
-

Information Notices

 **Note**

Information

Indicates information, clarifications, recommendations, referrals, etc.

1.3 Legal Information

Intellectual property

The intellectual property of this document belongs to WAGO GmbH & Co. KG. The reproduction and distribution of its content (in whole or in part) is prohibited, unless otherwise provided by statutory provisions, written agreements or this document. In case of doubt, the written consent of WAGO GmbH & Co. KG must be obtained in advance.

Third-party products are always mentioned without any reference to patent rights. WAGO GmbH & Co. KG, or the manufacturer of third-party products, retains all rights regarding patent, utility model or design registration.

Third-party trademarks are referred to in the product documentation. The "®" and "™" symbols are omitted hereinafter. The trademarks are listed in the Appendix: [🔗 Protected Rights \[▶ 73\]](#).

Subject to Change

The instructions, guidelines, standards, etc., in this manual correspond to state of the art at the time the documentation was created and are not subject to updating service. The installer and operator bear sole responsibility to ensure they are complied with in their currently applicable form. WAGO GmbH & Co. KG retains the right to carry out technical changes and improvements of the products and the data, specifications and illustrations of this manual. All claims for change or improvement of products that have already been delivered – excepting change or improvement performed under guarantee agreement – are excluded.

Licenses

The software is protected by license mechanisms. You can find more information at: [🔗 WAGO Device Manager License \[▶ 11\]](#).

The software includes license management for device functions. These device functions may be subject to third-party licensing: [🔗 Manage Licenses for Devices \[▶ 65\]](#).

2 Security

2.1 General Safety Regulations

- This documentation is part of the software. Therefore, keep the documentation for the entire service life of the software. Pass on the documentation to the next user of the software. In addition, ensure that any supplement to this documentation is included, if necessary.
- Any actions related to the use of WAGO software may only be performed by qualified staff with sufficient knowledge to use the respective PC system.
Steps in which files are created or changed on a PC system may only be performed by qualified employees with sufficient knowledge in the administration of the PC system used in addition to file creation or modification.
Steps that change the PC system's behavior within a network may only be performed by qualified employees with sufficient knowledge of administration of the responsible network.
- Set up permissions management for authorized persons.
 - Digital access may only be made by authorized persons.
- Comply with the laws, standards, guidelines, local regulations and accepted technology standards and practices applicable at the time of installation.

2.2 Indirect Safety

- If automation solutions are implemented that can lead to personal injury or significant property damage in the event of failure, you must take appropriate measures to ensure that the system remains in a safe operating state even in the event of failure.
- Give all products in a network different IP addresses.
- Never connect a PC on which a DHCP server is installed to a global network. Larger networks usually already have a DHCP server, which can cause collisions that lead to network breakdown.
- Use only the latest security software.
- Uninstall or disable all software components or programs on your PC that are not required for the intended use.

3 Overview

WAGO Device Manager is a software for configuring and parameterizing WAGO products^{*)}. It provides support during commissioning and throughout the entire product life cycle of the devices used.

The software is installed locally on an engineering PC or laptop.

The following functions are supported ^{*)}:

- **Device Settings, Configuration and Parameterization**

WAGO Device Manager is primarily used to configure hardware components.

- **Parameter Upload/Download**

Parameters can be received by uploading from a device and transferred by downloading to a device.

- **Online & Offline Parameterization**

Parameterization can be done offline and transferred to a device at a later time.

- **Changing the Firmware**

The device firmware can be changed using an update file. For many devices, it is already possible to directly download the firmware update from the WAGO Download Center.

- **Backup/Restore**

Device data can be backed up and restored.

- **License Management**

Some device functions may be protected by license mechanisms. You can activate and manage licenses in WAGO Device Manager.

- **Device Diagnostics**

You can use device diagnostics to run a wiring test as well as display LED signals and current device data for diagnostic purposes.

- **Logging**

You can retrieve and display logged device data. Various filter functions can be used for this purpose.

^{*)} Newer-generation WAGO devices are supported. Please refer to your product's manual to see whether your product is supported. The functions described may also differ depending on the device. Your device may not support all functions. Devices with limited functionality are identified by the "Limited" label.

4 Requirements

4.1 System Requirements

The WAGO Device Manager is installed as a local desktop application on an engineering PC. The engineering PC must meet at least the following system requirements:

Table 1: Minimum System Requirements

Components	Requirements
Operating System	Windows 11
Memory	4 GB
Free hard disk storage	1 GB
Processor	Dualcore CPU
Screen resolution	1,366 x 768 Pixel

Permissions

Note

Add permissions via "Account Management"!

If one of the tabs indicates that permissions are lacking, open the message window for more information. The message window shows the name of the permission that is currently lacking. Then open the "Settings" tab and add the corresponding permission in "Account Management."

See your product's function manual for an overview of roles and associated permissions.

4.2 WAGO Device Manager License

The software is protected by licensing mechanisms. For productive, unlimited software usage, a license is required.

The software can also be used fully without a license key for 30 days. This trial period¹⁾ only includes the days of actual use.

After the trial period ends, WAGO Device Manager can no longer be used productively. You are prompted to enter a license.

Item Number	License Items	Obtain License
2759-0104/0111-1000	WAGO Device Manager; Single License	see WAGO Download Center


Purchase a License

You can purchase the license in the WAGO eShop. The WAGO Download Center provides you with a direct link to the corresponding licensed product page in the eShop:

1. Open the [WAGO Download Center](#) (Detail page "WAGO Device Manager").
2. Follow the link provided to order the license.
3. Purchase the license.

- ➔ After purchase, you will receive an email with the license certificate. The certificate contains the license keys that you need for further activation.

Activate a License

- ✓ The license has been purchased.
 - ✓ The license certificate is available.
 - ✓ An Internet connection has been established (required for activation).
1. Open the WAGO Device Manager.
 2. Open the license repository. To do this, click the license icon  in the upper-right corner of the WAGO Device Manager.
 3. Click the **[New License]** button.
 4. Enter the license key from the license certificate.
 5. Confirm that you will use the software exclusively for business purposes and accept the WAGO Software License Agreement.
 6. Click **[Add]**.
- ➔ The license has been added. You can use the WAGO Device Manager indefinitely.

^{*)} Please note that the trial period is tied to the engineering device and the 30 days are shared by all WAGO engineering tools. If necessary, you can obtain a license to extend the trial period by a further 30 days (License Item 2759-801/807-1000) from Support or your sales representative.

4.3 Hardening Measures

The hardening measures described are not alternatives to one another. To ensure good protection, the various hardening measures must be implemented in addition to each other.

4.3.1 Secure Operating Environment

Operation of the software is only permitted in a secure operating environment.

A secure operating environment helps prevent various attacks. A secure operating environment meets the following requirements at a minimum:

- Secure identification and authentication
- Protected access
- Protected network segment
- Logged Access
- Monitoring for suspicious events or processes

Secure Identification and Authentication

Secure authentication is necessary in order to protect data, systems and processes against unauthorized access, to verify identities and to manage permissions.

The software does not have its own identification and authentication measures.

The following must be ensured by the operating system or higher-level IT structures:

- Authorization management
- User management
- Password quality or secure handling of certificates and key files

- Certificate and key management

The engineering device must be able to display notices before login concerning secure system use. The operator must specify legally compliant notice content.

Example of notice content:

- Only authorized persons are permitted to use this device.
- Unauthorized use of the system is prohibited and will be subject to criminal and/or civil legal penalties.
- System usage is monitored, recorded and reviewed.
- Use of the system constitutes acceptance of the above conditions.

Protected Access

The software manages unprotected device certificates.

The software creates project files. These project files can be unencrypted.

Its use is only permitted on a protected engineering device that meets at least the following requirements:

- Access requires authorization and a uniquely identifiable user account.
- The session lock on the engineering device is set up.

Protected Network Segment

The software can change the state of a device.

It may only be used in a protected network segment that meets the following requirements at a minimum:

- There is no unprotected connection to the Internet.
- There is no unprotected connection to other network segments.
- Access authorization is performed in accordance with authorization management.
- All network devices are located in a protected network segment.

Logged Access

At a minimum, logging must capture the following events:

- Failed login attempts
- Security events

Monitoring for suspicious events or processes

Monitoring must cover at least the following events and processes:

- Changed, in particular suspiciously increased network activity

4.3.2 Secure Operation

Secure operation of the software helps to prevent various attacks. Secure operation meets the following requirements at a minimum:

- Action following a security event/incident
- Time-limited access and entry for engineering/service activities or in the event of a fault
- Use of tested and current software/update

After a Security Incident

- Take action following a security event.

The following actions must be taken after a security event, as a minimum:

- Compare software's actual settings and target settings (integrity check).
- Check the integrity of the software itself, e.g., via a signature check.

Access and entry for engineering/service activities or in the event of a fault

Engineering or service activities often require access to data or configuration of a device. Ensure that devices are disconnected after the software is used.

- Only grant access for a limited time.

Tested and Current Software (Updates)

- Only use tested and current software (updates).

The following requirement is a property of tested and current software/updates:

- Checksum was successfully verified (integrity check).

WAGO recommends using up-to-date software.

The up-to-date version of a software solution corresponds to the current state of the art and security. Earlier versions of software may have technical and security vulnerabilities.

For current tested WAGO software (and updates) and information on installation, see:

🔗 <https://downloadcenter.wago.com>

🔗 [WAGO Navigator](#)

For more information, please contact:

🔗 [Technical Support](#)

5 Installing

Note

Download Software Securely

Download the software exclusively from the WAGO Download Center or via WAGO Navigator to ensure that you receive safe software in the latest version. The installation file is signed by WAGO.

WAGO Device Manager is installed from a setup file.

1. Open the WAGO Device Manager detail page in the [WAGO Download Center](#).
2. Click **[Download]** in the left area and follow the further instructions.
3. Start the installation process by double-clicking the setup file and follow the steps described in the Installation Wizard:
 - ⇒ If a newer version is installed, you are prompted to first uninstall it.
4. Click the "WAGO Software License Terms" link. Read the information on the terms of use for WAGO software.
5. Agree to the license terms.
6. Optional: To change the default target directory used for installation or for creating links, click **[Options]**. Make your changes and click **[OK]**.
7. Click **[Install]** to start the installation.
 - ⇒ If an older version is already installed, the new version overwrites it.
8. Click **[Close]** to complete the installation.

5.1 Storage Locations

User settings are saved in the following directory:

```
C:\Users\[User]\AppData\Roaming\wdmanager
```

6 Starting

The initial steps for using WAGO Device Manager are described below.

6.1 Launch WAGO Device Manager

- Launch the software via **Start > Programs > "WAGO Software" > "WAGO Device Manager"** or via the link on your desktop.
 - ⇒ After loading, the homepage is displayed first, showing you the initial steps to get started.

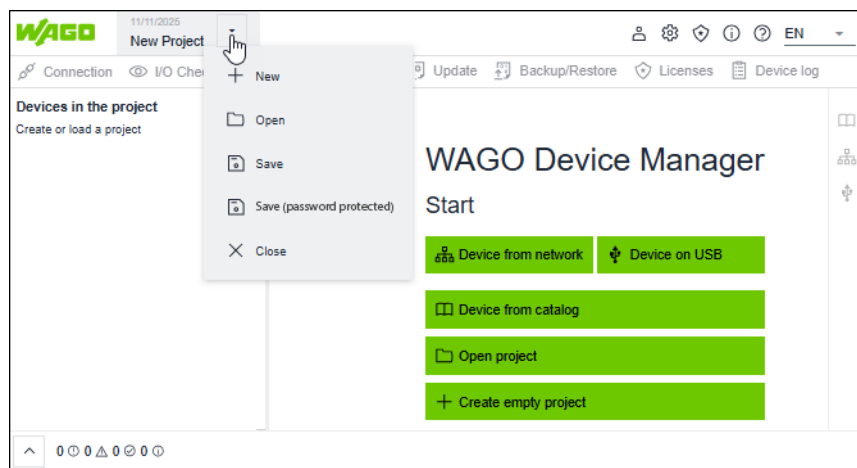





Figure 1: WAGO Device Manager Homepage

6.2 Create New Project

1. To create a new project, select
 - **[Device from catalog]** on the homepage to first configure a device from the device catalog, which you will connect at a later time,
 - **[Device from network]** if your device is accessible on the network or
 - **[Device on USB]** if your device is connected via USB.
 - ⇒ On the right-hand side, the product selection with the corresponding area ( network,  USB or  catalog) is then expanded.
2. Select the device and transfer it to the project (see [Add Devices in the Project \[> 52 \]](#)).

Alternatively, start via **[Create empty project]**.

6.3 Opening an Existing Project

1. To open an existing project, click **[Open Project]**.
Alternatively click **Open** in the project menu.
2. Select a WAGO Device Manager project (*.wdmp) in the file explorer.
3. If your project was saved with password protection, please enter the password to open the file.

For information on how to work with the user interface and projects, add devices and perform certain actions, and find additional content, see [🔗 Operating \[▶ 51\]](#).

7 Graphical User Interface

The graphical user interface has the following structure:

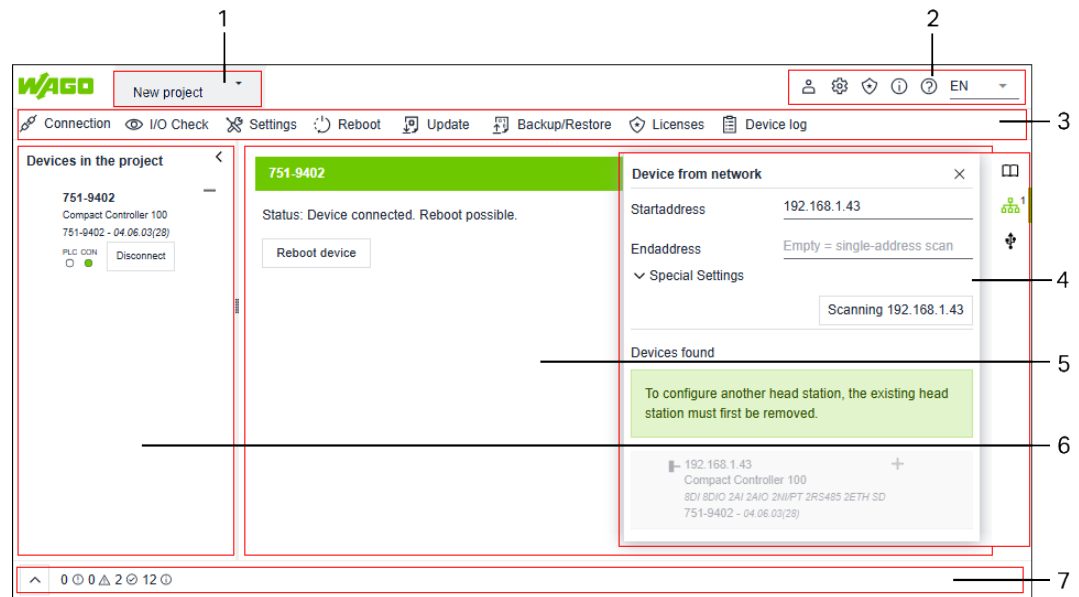








Figure 2: Graphical User Interface

Pos.	Description
1	Project Menu The project menu offers menu items for creating, opening, saving and closing a project (see Work with Projects [> 52]).
2	General Controls These controls offer general settings and information about the WAGO Device Manager interface (see General Controls [> 19]).
3	Menu Ribbon (Device Actions) Buttons in the menu ribbon open pages in the workspace where various actions can be performed (see Ribbon (Device Actions) [> 23]).
4	Product Selection (Catalog, Network, USB) You can select devices for the project (see Product Selection [> 45]).
5	Workspace The project is processed in the workspace. Content depends on the device selection, the selected action and the context (see Workspace [> 26]).
6	Devices in the Project The devices used in the project are displayed (see Devices in the Project [> 24]).
7	Message Bar The message bar displays the number of messages (errors, warnings, successes, information) during configuration. The message bar is used to open the message window, which displays further details (see Message Window [> 43]).

7.1 General Controls

The following controls are used to make general settings and display information about the WAGO Device Manager:

Control	Description
	Opens the login area for the WAGO Download Center (see WAGO Download Center Log In [> 23]).
	Displays the settings for the appearance and behavior of the user interface (see Settings [> 19]).
	Opens the "License Repository" dialog with an overview of all licenses available for device functions. Licenses can be added/removed in the license repository (see License Repository [> 21]).
	Shows the following information: <ul style="list-style-type: none"> Contact: WAGO and Support Contact Information, License terms for open-source software, WAGO software license terms, Imprint, Data Protection, GTC, Legal Information Program Version: Program information and version Licensing: Type of license used for the WAGO Device Manager
	Opens the HTML online help for WAGO Device Manager.
	Switches the user interface language between German, English and French.

7.1.1 Settings

7.1.1.1 Certificate Exceptions

This view displays a table with exceptions for untrusted SSL certificates.

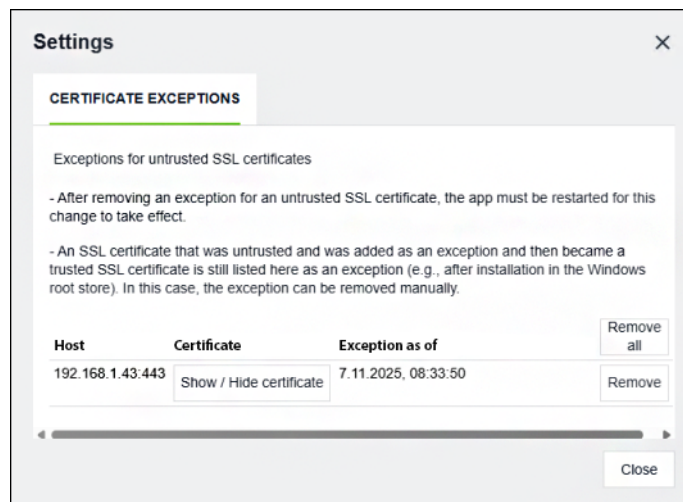


Figure 3: Certificate Exceptions

Column/Button	Description
Host	IP address/host name (optionally with port) via which the certificate exception was added.
Certificate	The [Show/Hide Certificate] button is used to show/hide the certificate under the button.
Exception as of	Timestamp at which the certificate exception was added. "unknown" = The certificate exception comes from an older software version that did not store a timestamp.

Column/Button	Description
[Remove all/Remove]	Deletes one or all certificates. To apply the change, a restart of the WAGO Device Manager is required after deleting certificates.

Note


Remove exceptions for certificates if trusted

If a previously untrusted certificate listed as an exception becomes trusted at a later time, the certificate can be removed manually in this view.

For additional information see:

- Operating > ... >  [Handling Certificates \[▶ 55\]](#)

7.1.2 License Repository

You can use the  icon for the general controls in the top right of the WAGO Device Manager. The license repository shows all licenses available on connected devices or on the engineering PC to meet the license requirements of devices. New licenses can be added to the license repository using the corresponding buttons or (if not assigned/bound/activated) removed from the license repository.

The license for the WAGO Device Manager itself is also entered in the license repository.

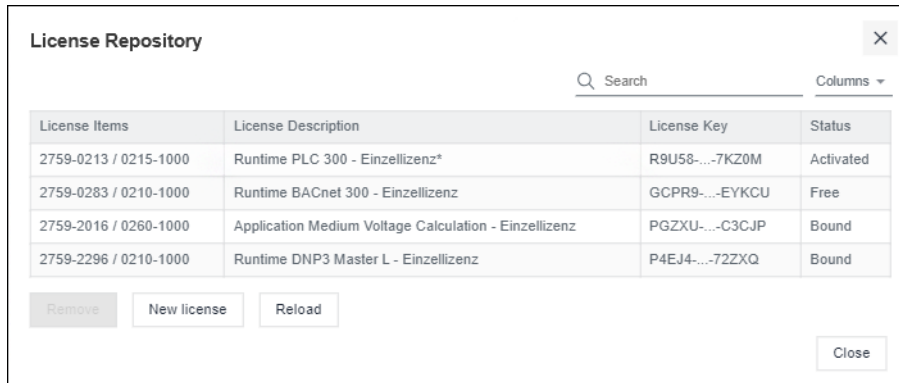


Figure 4: License Repository

Column/Button	Description								
Search _____	Filters the displayed licenses for the entered string.								
Columns	Opens the list of possible columns that can be shown/hidden using a checkbox. The column settings are saved for the following sessions.								
License Items	Item number of the license								
License Description	Description of the license								
License Key	License key according to license certificate (partially masked display)								
Serial Number	Unique identification of the license purchased								
Hardware ID	Serial number of the device on which the license is used								
MAC address	MAC address of the device on which the license is used								
Status	Status of the license agreement: <table border="1"> <tbody> <tr> <td>Free</td> <td>Free The license has been entered in the license repository via [New License] or read via connected devices and saved in the license repository. The license is not currently assigned to any device.</td> </tr> <tr> <td>Assigned</td> <td>Assigned The license has been assigned to the device, i.e., it has been reserved for the device.</td> </tr> <tr> <td>Bound</td> <td>Bound The assigned license has been saved on the connected device.</td> </tr> <tr> <td>Activated</td> <td>Activated The license key has been sent to WAGO for verification and the license activated for the device. Note: An Internet connection is required to synchronize the license key with the WAGO license server and to activate the license.</td> </tr> </tbody> </table>	Free	Free The license has been entered in the license repository via [New License] or read via connected devices and saved in the license repository. The license is not currently assigned to any device.	Assigned	Assigned The license has been assigned to the device, i.e., it has been reserved for the device.	Bound	Bound The assigned license has been saved on the connected device.	Activated	Activated The license key has been sent to WAGO for verification and the license activated for the device. Note: An Internet connection is required to synchronize the license key with the WAGO license server and to activate the license.
Free	Free The license has been entered in the license repository via [New License] or read via connected devices and saved in the license repository. The license is not currently assigned to any device.								
Assigned	Assigned The license has been assigned to the device, i.e., it has been reserved for the device.								
Bound	Bound The assigned license has been saved on the connected device.								
Activated	Activated The license key has been sent to WAGO for verification and the license activated for the device. Note: An Internet connection is required to synchronize the license key with the WAGO license server and to activate the license.								
[Remove]	Removes one or more selected licenses from the license repository. Note: The license status must be "Free" because assigned, bound, or activated licenses cannot be removed. In this case, first unassign the license in the "Licenses" view.								
[New license]	Opens the "License Repository – New License" (see below) dialog to add licenses to the repository.								
[Reload]	Updates the list of license items.								

Column/Button	Description
[Close]	Closes the license repository.

“License Repository – New License” Dialog

The [New License] opens a dialog in which new licenses can be added to the repository.

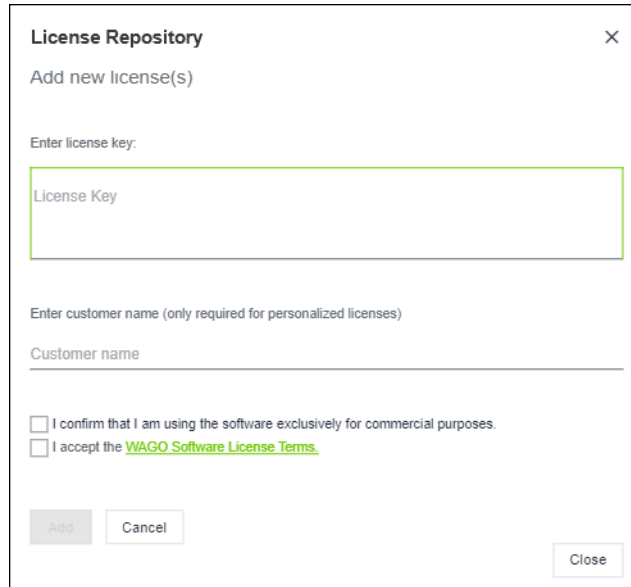


Figure 5: “License Repository – New License” Dialog

Entry	Description
License Key ¹⁾	Enter one or more license keys from the license certificates of the purchased licenses. (input: one license key per line).
Customer Name	Enter the customer name according to the license certificate. Note: Pay attention to exact spelling! Depending on your selected license, an Internet connection may be required for entering and activating the license. Licenses that do not require an Internet connection for activation require the entry of the customer name. Ensure that you enter your customer name exactly as it is written in the email that you received when purchasing the license.
Professional Use ¹⁾	Confirmation of exclusive professional use and acceptance of the WAGO software license conditions are required for adding/using the new license(s).
WAGO Software License Terms ¹⁾	
[Add]	Adds the new license to the license repository.
[Cancel]	Closes the dialog without saving changes and returns to the license repository.
[Close]	Closes the dialog without saving changes.

¹⁾ Mandatory field. Prerequisite for adding the license.

A license is assigned to a device in the [🔗 Licenses \[▶ 41\]](#) view.

At [🔗 Manage Licenses for Devices \[▶ 65\]](#) you can find more information about how to:

- purchase licenses,
- add new licenses to the license repository,
- transfer/assign licenses to a device and
- remove licenses from a device.

The description of license handling for the WAGO Device Manager software itself is detailed under [🔗 WAGO Device Manager License \[▶ 11\]](#).

7.1.3 WAGO Download Center Log In

In general, you do not have to log in to use the WAGO Device Manager.

Only the convenient function of automatically downloading firmware files from the WAGO Download Center (see [Perform Update \[> 62\]](#)) requires logging in via a WAGO account (minimum authorization level "Premium"). Registration is free.

New registration:

<https://account.wago.com/en-US/registration/premium>

Upgrade from "Basic" to "Premium" permission level:

<https://account.wago.com/upgrade/upgrade-to-premium>



Figure 6: Log In and Log Out via the WAGO Account

Menu Item	Description
Login	Opens a dialog to log in with the WAGO account. This is the general WAGO account, which is also used in the WAGO eShop, for example.
Register	Leads to a WAGO website where you can register for a WAGO Premium account.
Log out	Logs out the active user.
Change password	Opens a WAGO website to change the password.

7.2 Ribbon (Device Actions)

The following device actions are performed from the ribbon:

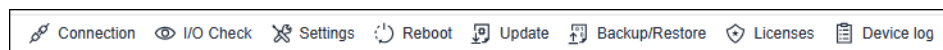







Figure 7: Ribbon (Device Actions)

Icon	Function	Description
	Connection	Opens the "Connection" view in the workspace. In this view, the connection parameters are defined under which the WAGO Device Manager can address the selected device. → View description: Connection [> 26] → Operation description: Connect to Device [> 56]
	I/O Check	Opens the "I/O Check" view in the workspace and displays the selected device graphically. The status of the device and connected channels is displayed by LED indicators. A wiring test can be carried out in control mode. → View description: I/O Check [> 27] → Operation description: Performing Device Diagnostics [> 68]
	Settings	Opens the "Settings" view in the workspace. This view is used to parameterize and configure the selected device. → View description: Settings [> 31] → Operation description: Configure Device [> 57]

Icon	Function	Description
	Reboot	Opens the "Reboot" view in the workspace. In this view, selected devices can be restarted. → View description: 🔗 Reboot [▶ 37]
	Update	Opens the "Update" view in the workspace. In this view, the firmware can be updated for the online connected device. → View description: 🔗 Update [▶ 38] → Operation description: 🔗 Perform Update [▶ 62] .
	Backup/Restore	Opens the "Backup/Restore" view in the workspace. In this view, device data is saved as a file (backup) or saved backup files are loaded into a device (restore). → View description: 🔗 Backup/Restore [▶ 39] → Operation description: 🔗 Creating Backup [▶ 60] , 🔗 Perform Restore [▶ 61]
	Licenses	Opens the "Licenses" view in the workspace. This view is used to manage licenses for devices. → View description: 🔗 Licenses [▶ 41] → Operation description: 🔗 Manage Licenses for Devices [▶ 65]
	Device log	Opens the "Device log" view in the workspace. In this view, you can retrieve and display the log entries that the device has recorded. → View description: 🔗 Device Log [▶ 42] → Operation description: 🔗 View Device Log [▶ 69]

7.3 Devices in the Project

The "Devices in the Project" area shows the device to which the configuration in the workspace refers. In a project, exactly one device is configured.

Device information, connection and status information, as well as a button for establishing or disconnecting the connection related to the respective device are displayed. The information displayed for devices that are connected online may be more extensive than for devices that are offline.

Devices can be renamed, deleted or reconfigured with a different firmware from the context menu.

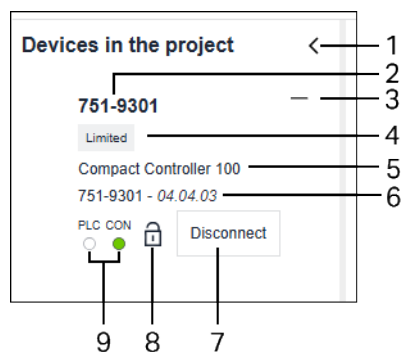

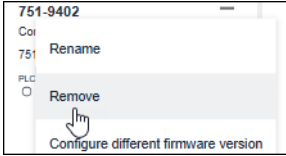
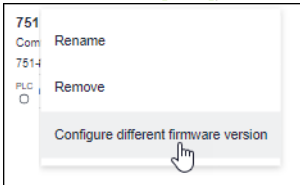


















Figure 8: Devices in the Project

Pos.	Description
1	Expand/collapse the view

Pos.	Description				
2	<p>Device Name</p> <p>Initially, the item number is used as the device name after the device has been added. The device name can be changed from the context menu and [Rename].</p> 				
3	<p>Removes the device from the project.</p> <p>This function is also available via the context menu.</p> 				
4	<p>Markings for additional device information:</p> <table border="1"> <tr> <td>Limited</td> <td>Not all functions of this device are available in the WAGO Device Manager. Restrictions may apply to configurations or the support of I/O modules, for example.</td> </tr> <tr> <td>IEC 62443-4-2</td> <td>Conformity with IEC 62443-4-2 is no longer guaranteed due to modifications to the software (disclaimer from WAGO).</td> </tr> </table> <p>For more information, see tooltip.</p>	Limited	Not all functions of this device are available in the WAGO Device Manager. Restrictions may apply to configurations or the support of I/O modules, for example.	IEC 62443-4-2	Conformity with IEC 62443-4-2 is no longer guaranteed due to modifications to the software (disclaimer from WAGO).
Limited	Not all functions of this device are available in the WAGO Device Manager. Restrictions may apply to configurations or the support of I/O modules, for example.				
IEC 62443-4-2	Conformity with IEC 62443-4-2 is no longer guaranteed due to modifications to the software (disclaimer from WAGO).				
5	Item description of the device				
6	<p>Item number and firmware version of the device</p> <p>The firmware version can be changed from the context menu and [Configure different firmware version]. All firmware versions available for the device in WAGO Device Manager can be selected (see Configure Other Firmware [▶ 59]).</p> 				
7	<p>[Connect] / [Disconnect]</p> <p>If the device is offline, a button for connecting the device is displayed (see also Connect to Device [▶ 56]).</p> <p>If the device is online, a button for disconnecting the device is displayed.</p> <p>Note: Disconnect the device after completing the configuration to close the session on the device.</p>				
8	<p>The icon  indicates when the SSL certificate is not trusted (for more information, see Handling Certificates [▶ 55]).</p>				
9	<p>The status of a device connected online is displayed by an LED indicator.</p> <p>Note:</p> <ul style="list-style-type: none"> When the device is offline, the LED indicator is grayed out. Detailed LED indicators, see I/O Check [▶ 27] or Settings [▶ 31] "LEDs" tab. Explanations of LED indicators and flash codes can be found in the relevant product manual. <table border="1"> <tr> <td>PLC</td> <td> <p>PLC</p> <ul style="list-style-type: none">  No application available  Application running or application in debug  Application stopped, not configured, in error state or in unknown state </td> </tr> <tr> <td>CON</td> <td> <p>Connection</p> <ul style="list-style-type: none">  Device not connected  Device connected </td> </tr> </table>	PLC	<p>PLC</p> <ul style="list-style-type: none">  No application available  Application running or application in debug  Application stopped, not configured, in error state or in unknown state 	CON	<p>Connection</p> <ul style="list-style-type: none">  Device not connected  Device connected
PLC	<p>PLC</p> <ul style="list-style-type: none">  No application available  Application running or application in debug  Application stopped, not configured, in error state or in unknown state 				
CON	<p>Connection</p> <ul style="list-style-type: none">  Device not connected  Device connected 				

7.4 Workspace

The workspace consists of the middle window area under the menu ribbon. Depending on the selections made in the ribbon and the project structure, the corresponding content is opened for editing. Conversely, a selection in the workspace has no effect on the selection in the menu ribbon or on the product selection.

The different views of the workspace depending on the activity are described below.

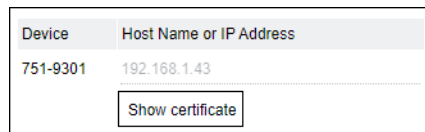
7.4.1 Connection

This view displays and edits connection settings for the device used. The connection to the respective device is established via the address that has been determined or entered.

When a device is connected directly via IP address (via a scan) or via USB, the connection data determined is automatically entered. For devices selected from the product catalog, the connection parameters must be entered manually at this point.

By default, the communication is established via port 443. In this case, only the IP address or the host name is displayed/entered. If another port is used, it can be specified after a colon after the IP address (e.g., 192.168.1.22:1000) or after the host name. If another port is already in use when the device is scanned, this port is added to the connection settings (see [🔗 Product Selection \[▶ 45\]](#)).

For online connected devices, you can click the **[Show Certificate]** button to view the SSL certificate of the device, regardless of whether it is trusted or not.



Device	Host Name or IP Address
751-9301	192.168.1.43

Figure 9: Connection" View

For additional information see:

- Operation > [🔗 Connect to Device \[▶ 56\]](#)

7.4.2 I/O Check

Based on the device view, wiring tests can be carried out for conventional, analog and digital inputs/outputs of a device, for example by setting output signals for test purposes (see also [Performing Device Diagnostics \[p. 68\]](#)).

Note

Not all devices support testing of inputs and outputs

Please note that not all devices support testing of inputs and outputs. Only the device view with the status indicators is available for these devices.

The device hardware used is visually displayed in the upper area of the "I/O Check" view. The LED indicators on the left show the status of the device and the LED indicators on the right show the status of the channels.

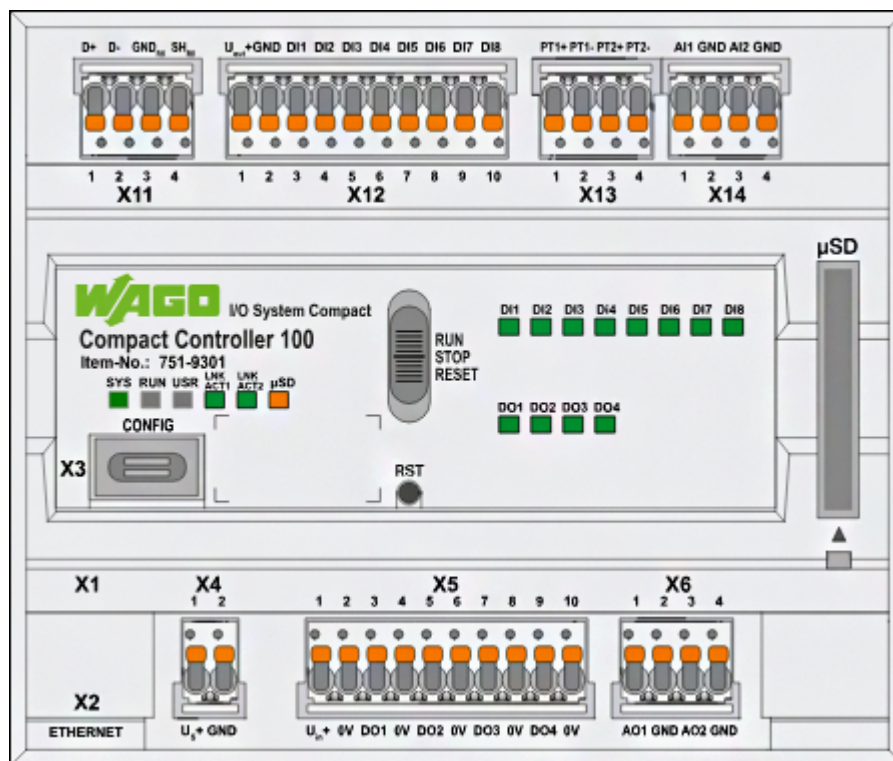


Figure 10: "I/O Check" View (Example)

Device Status Indicators

The device status indicators are always enabled. The LED indicators in the graphic are not clickable, but they do show the current status message of the device on mouseover.

Note

Flash codes are not displayed in real frequency

Note that the flash codes are not displayed in real frequency.

Detailed descriptions of the diagnostic messages and flash codes can be found in the manual for the respective product.



Figure 11: Device Status Indicators (Example)

Tip:

You can also access an overview of the LED indicators/status messages via the “Settings” > “LEDs” view.

In addition, each page has a “Device Status/Actions” section via [Settings \[p. 31\]](#).

Channel Status Indicators

The status indicators for the connected channels do not show the current status (read-only) of the digital inputs and outputs in permanent fashion, but only in monitor mode. Monitor mode is enabled if there is an online connection to the device.

Note

LED status refers to on/off status values related to digital I/O channels






For diagnostic channels, the physical LED indicators may consist of several status values. The LED status displayed here only refers to on/off status values directly related to digital I/O channels.






Figure 12: Channel Status Indicators (Example)

Clicking on the eye icon below the respective device displays tables with status values for the channels of the inputs and outputs used. The indicator can be switched between control and monitor mode.

Control	Description
	Zoom in Enlarges the device view by one level with each click.
	Zoom out Reduces the device view by one level with each click.
	Original size Shows the device view in its original size.
	Adjusts the size of the displayed areas The area between the device view and the tables with status values can be adjusted by moving the separator.

Control	Description
	Tables with status values hidden When you open the device view, the tables with status values for input/output channels are initially hidden. By clicking on the grayed-out eye icon, the tables below the device graphic are displayed.
	Tables with status values displayed Clicking the eye icon again hides the tables displayed for the status channels.
	Switches directly to the settings of the I/O channels Jumps to the "Settings" view > "I/O-Channels" tab and in the tab to the first configurable channel composition.
 Control mode	Control mode enabled When control mode is enabled, the channels are unlocked for changes. Values can be written.
 Control mode	Monitor mode enabled When control mode is disabled, the current status values are displayed (read access only).

The latency is also displayed, i.e., the update cycle (in s) of the displayed device values depending on the connection, device load or other factors:

Display	Description
 Monitoring active	Low latency, high synchronization rate
 Monitoring active	Higher latency, delayed synchronization rate
 Connection unstable	High latency, unstable connection

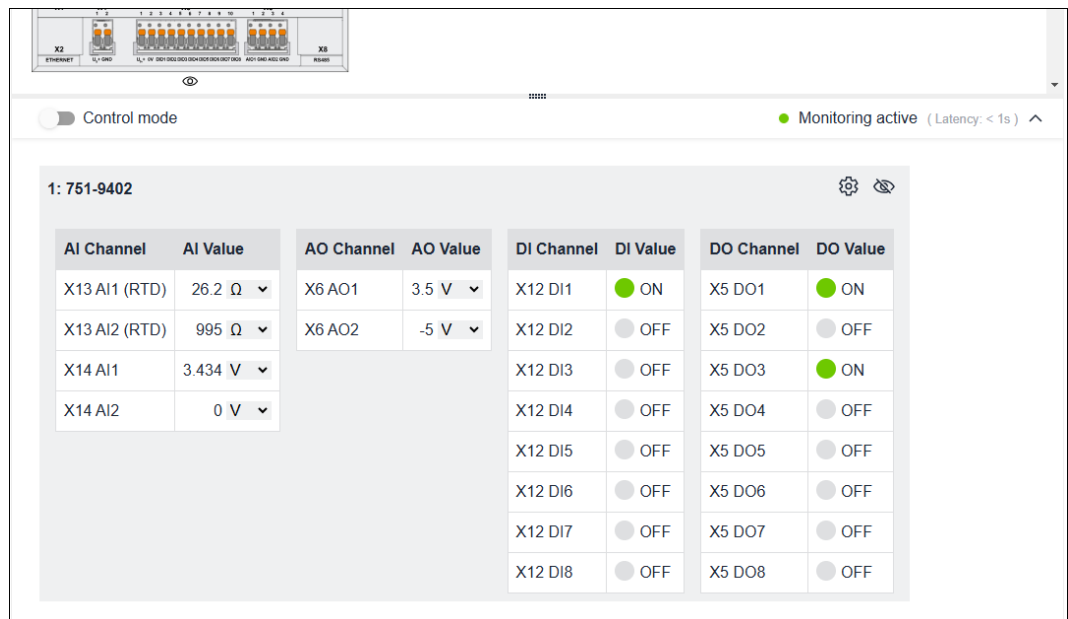


Figure 13: Monitoring active (Example)



Display/setting of status values

Status values can be shown as follows using selection fields:

- as raw values or
- as scaled values with units.

Scaled representations can only be set on the user interface; raw values are still used for communication.

Sliders can be used to set digital values:

- Switch setting  corresponds to 1 or true
- Switch setting  corresponds to 0 or false

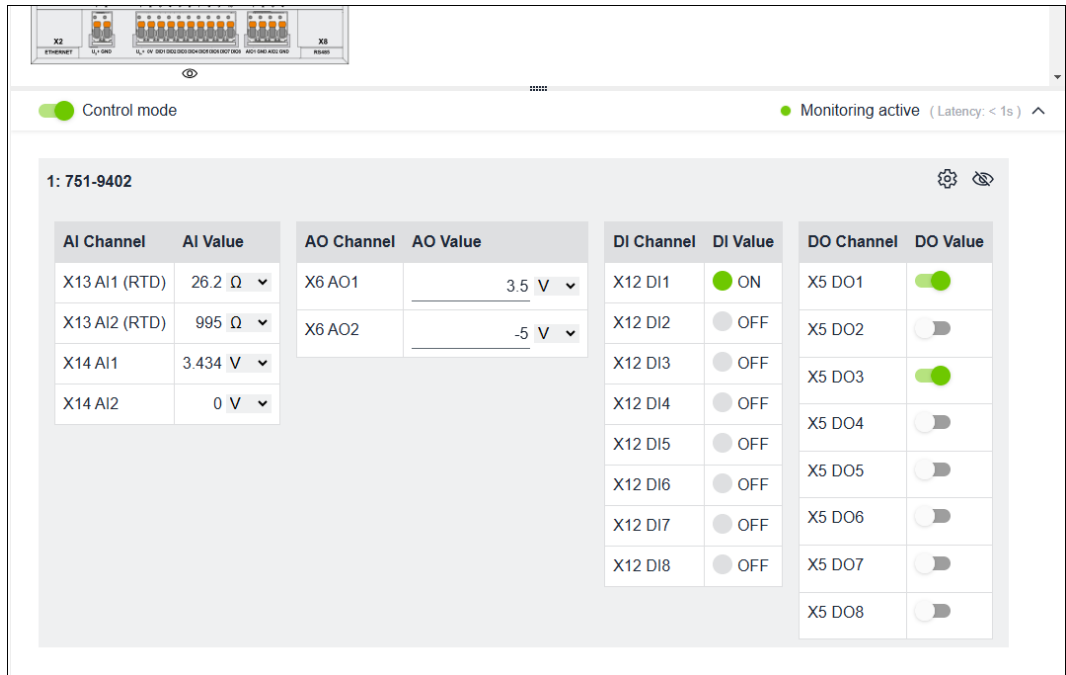


Figure 14: Control Mode Active (Example)

Note

“I/O Check” view may not show original channel configuration

For devices that support variable channel configuration (e.g., WAGO Compact Controller 100, Item no. 751-9402/xxx-xxx), the assignment of the channels can be changed in the “Settings” > “I/O-Channels” view. The “I/O Check” view then shows the modified channels instead of the original ones.

7.4.3 Settings

In the "Settings" view, the parameters and settings of the project and device are compared. Parameters can be adjusted in this view, written to the device or read by the device.

Parameters and settings refer to the device selected for configuration in the project (1).

At the top, certain actions can be executed for the device (2) that relate to the settings and parameters of all tabs displayed. Read/write operations are available when the device is connected online.

The tabs on the left side (8) bundle device parameters according to specific content, e.g., network settings, routing or cloud specifications. Which and how many tabs are displayed differs depending on the device and results from the respective device description file.

Settings and parameter names are displayed in groups in the individual tabs (6). The configured setpoints of the WAGO Device Manager project (5) and the actual values of the device (3) are displayed. If the device is connected online, these values are compared and marked if they differ (4).

Various control elements (e.g., text boxes, selection boxes and sliders) are used to edit configured values. In each tab, buttons for writing to the device or for accepting changes in the project are displayed. These write/read operations only apply to the tab page currently open.

Depending on the context, some parameter values and additional functions are only available online. Online actions are displayed at the bottom of each tab page under "Device Status/Actions", if available (7). Some registers only contain online actions (e.g. "PasswordManagement"). Online actions are always executed immediately and are independent of the read/write function. They are carried out directly on the device (example: changing the system time). No changes are made to the project.

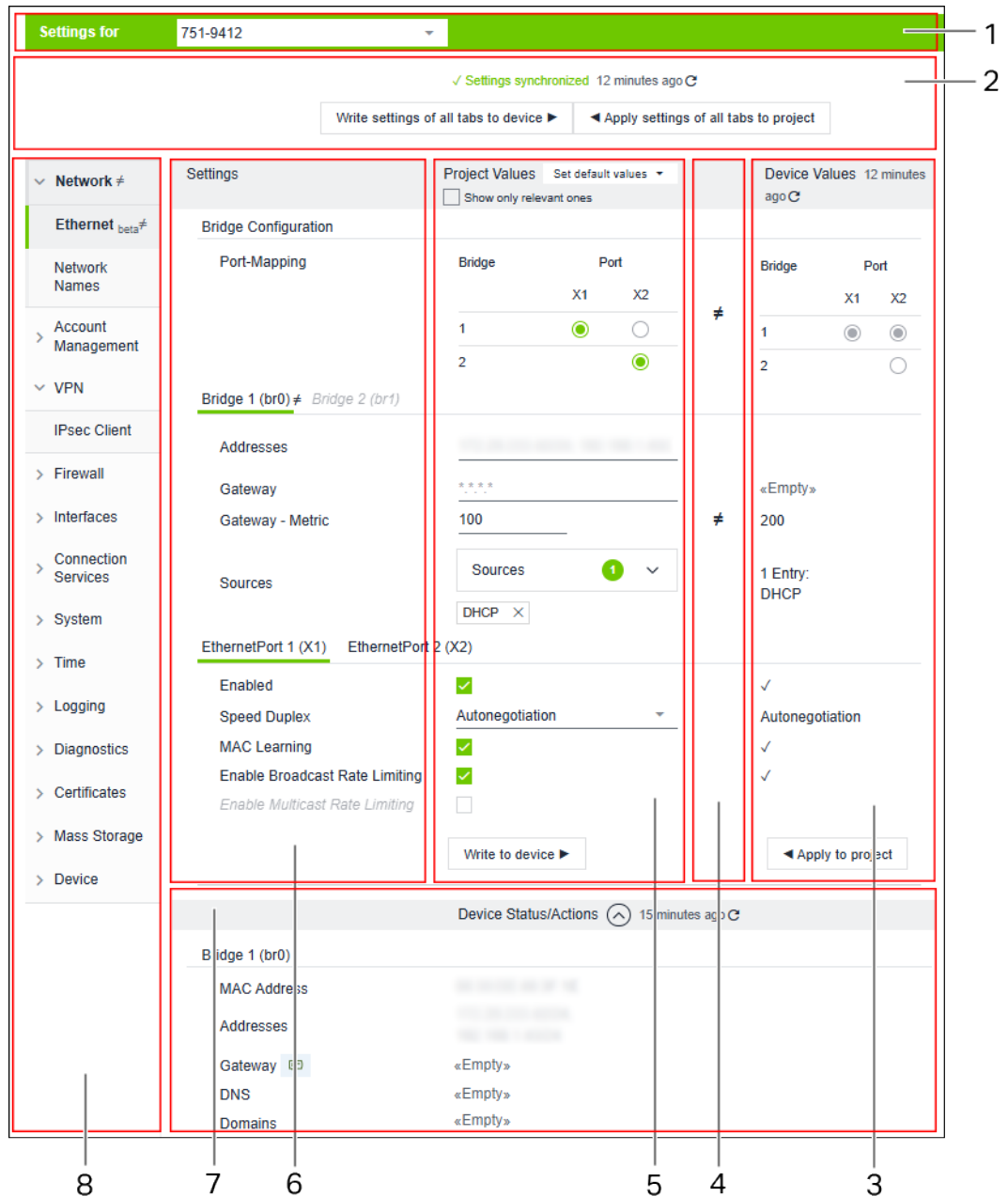
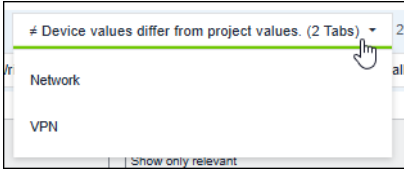



Figure 15: "Settings" View











Pos.	Parameter/Element	Description
1	Settings for 751-9402	Item number of the device If a name has been assigned for the device in the project: Name (item number) The settings shown below refer to this device.
2	Status of device values/project values and indicator of how long the last synchronization was: ✓ Settings synchronized	The device values and project values match.

Pos.	Parameter/Element	Description
	<p>≠ Device values differ from project values. (x tab)</p>	<p>The device values differ from the project values. The number of tabs in which there are differences is displayed. With a single click, you can display the list of tabs and switch directly to the tabs.</p> 
	<p>__ minutes/hours ago 🔄</p>	<p>The time since the last synchronization between the device and the project is displayed. The refresh icon is used to update the values All tabs of the device are read and compared with the project values.</p>
	<p>[Write settings of all tabs to device ▶]</p>	<p>Writes all values of the project to the device and update them in the "Device Values" column.</p>
	<p>[◀ Apply settings of all tabs to project]</p>	<p>Applies all values displayed under "Device values" and last read from the device into the project.</p>
	<p>Note: In this case, reading and writing parameters refers to <u>all</u> values in <u>all</u> tabs, including tabs that are not currently visible/open. If you only want to write/read the values of a single tab, use the [Write to Device ▶] and [◀ Apply to Project] buttons below the settings in the respective tab.</p>	
3	<p>"Device Values" Column</p> <p>__ minutes/hours ago 🔄</p>	<p>Displays the values of a device when it is connected online. The displayed device values are updated when project values are written to the device or when an Refresh icon is clicked. The Refresh icon next to "Device Values" applies here to the currently open tab. The column header also shows how long ago the device values were last synchronized.</p>
4	<p>Comparison between project and device</p> <p>≠</p>	<p>An unequal sign is displayed between the "Project values" and "Device values" columns if the values between the device and the project differ. The unequal sign is added as a marker next to the respective tab name so that discrepancies can be quickly found even in unopened tabs.</p>
5	<p>"Project Values" Column</p> <p>- Set default values</p>	<p>Displays the configured settings and parameters set in the WAGO Device Manager project. "Set default values" sets the project values to default values. The values can be reset either for "This tab" only or for "All tabs" using the selection field.</p>
	<p>Show only relevant ones</p>	<p><input type="checkbox"/> Displays all project values (offline) and device values (online) (default setting). The settings and parameter groups that are irrelevant in the configuration currently selected are grayed out/italicized. They cannot be changed and are not transferred. An irrelevant parameter could be, for example, the specification of a fixed IP address when DHCP is configured. The evaluation of whether project values and device values correspond is only carried out on the basis of the relevant project values.</p> <p><input checked="" type="checkbox"/> Only shows the relevant project and device values in the selected configuration. Relevance determined by the project values.</p>
6	<p>Group/Parameter</p>	<p>Shows device settings and parameters that result from the device description, grouped by topic.</p>

Pos.	Parameter/Element	Description
7	"Device Status/Actions" Area __ minutes/hours ago 	This area is only displayed if the device is connected online. This area displays the current device status. Device actions can be executed directly on the device. No changes are made to the project.
8	Register	The individual tabs summarize settings for related topics. The number and contents of tabs are device-specific.

Explanation of Icons and Controls in the "Settings" View

Table 2: Icons and Controls in the "Settings" View

Icon	Description
	<p>Exclamation point icon</p> <p>The exclamation point icon provides information on validation:</p> <ul style="list-style-type: none"> An exclamation point next to a tab indicates that the tab contains at least one parameter with a warning. An exclamation point next to a parameter generally means that the parameter does not have a suitable value or format (e.g., format of an IP address). The check is carried out in the WAGO Device Manager as an "offline" validation based on the device description. A warning with an exclamation point does not prevent you from typing. An exclamation point next to a parameter that has been written to a device means that the parameter has not been accepted by the device ("online" validation). In this case, the exclamation point is displayed in red . <p>Values are thus validated in the device itself (online). Offline validation is a simple way of checking values based on certain criteria. The exclamation point remains until the next time the parameter is changed.</p>
beta	<p>"Beta" Label</p> <p>The "Beta" label on a tab indicates a set of available settings and parameters that can change for future developments (e.g., for newer firmware versions of the device, changes to the interface, etc.).</p>
	<p>Refresh Icon</p> <p>Device values are not automatically queried and displayed by the device. This is done once when a connection is established and then again by clicking the refresh icon. Next to the icon, the time since the last device value query is displayed.</p>
	<p>Speech Bubble Icon</p> <p>Clicking on a speech bubble icon displays information/notes on certain parameters. If you click in a different area, the information is hidden again.</p>
	<p>Table view icon</p> <p>Lists marked with this icon can also be displayed in a tabular view for improved clarity. Clicking the icon opens the table in a dialog window. The table displays either the project values or the device values. You can switch between them using the corresponding toggle button <code>Project values ≠ Device values</code>.</p> <p>The table can be edited using the following buttons:</p> <ul style="list-style-type: none">  Edit list item  Move list item up one position  Move list item down one position  Delete list item  Add new list item
≠	<p>Unequal Sign</p> <p>An unequal sign is displayed between the "Project values" and "Device values" columns if the values between the device and the project differ.</p> <p>The unequal sign is added as a marker next to the respective tab name so that discrepancies can be quickly found even in unopened tabs.</p>

File Handling

It is possible to upload/download files at various places in the tab. It is also possible to store certain actions for files that are to be executed when a transfer/write to the device occurs.

Table 3: File Handling

Icon	Description
	Downloading the file to the selected location.

Icon	Description
▼	<p>Opens a drop-down menu with the following options:</p> <p>Not set No action is taken when writing the project data to the device. The file on the device (if any) remains unchanged.</p> <p>Select Opens the file explorer to select a file. The content of the selected file is transferred to the corresponding, already existing file on the device when writing to the device.</p> <p>Clear file on device The contents of the file on the device (not the file itself) are deleted when written to the device.</p>

For additional information see:

- Operation >  [Configure Device \[► 57\]](#)

7.4.4 Reboot

This view shows the connection status of the device used. Clicking the **[Reboot Device]** button initiates the restart of the device.

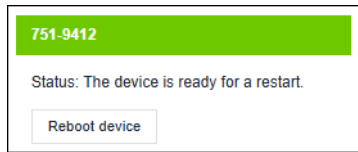


Figure 16: "Reboot" View

7.4.5 Update

In this view, the firmware can be updated for the online connected device.

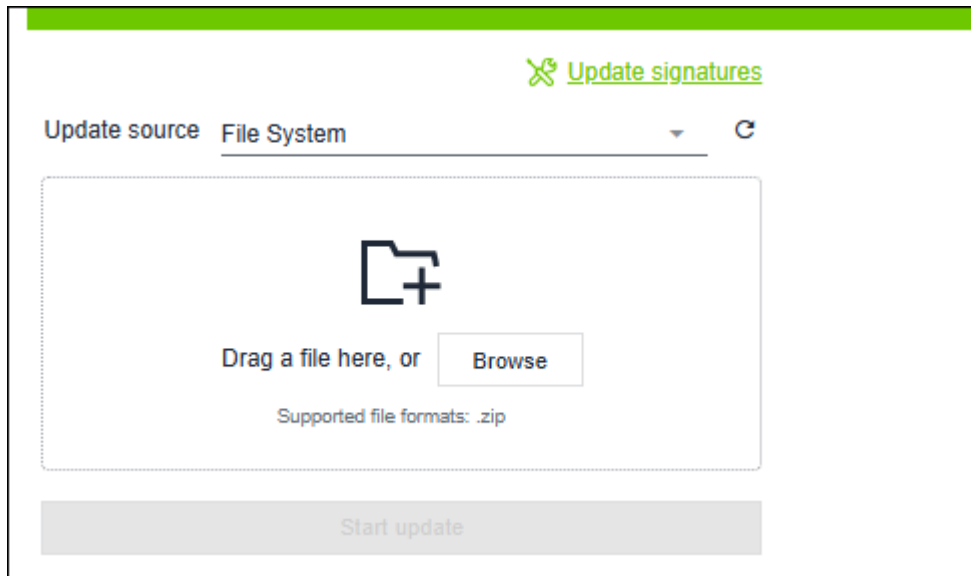


Figure 17: "Update" View

Option/Button	Description
[Update signatures]	Open the "Settings" tab and then the "UpdateSignatures" page. If firmware is loaded with components that are not from WAGO and/or multiple components, the corresponding certificates must be uploaded to the "UpdateSignatures" page so that the signature of the entire firmware update can be verified.
[Update source]	Opens a selection of available sources for firmware updates: Firmware updates can either be selected as a file from the PC or (if supported by the device) downloaded directly from the WAGO Download Center and executed. Note: For many new devices, the firmware update can be downloaded directly from the WAGO Download Center and executed automatically. In addition to device compatibility, registration via the free WAGO Premium Account is also required to use this convenient feature (see WAGO Download Center Log In [> 23]). ↻ Updates the list of storage locations for firmware sources.
📁 or [Browse]	You can drag and drop an update file onto the storage area. Alternatively, select the update via [Browse] in a file browser.
[Choose another file]	Displayed if an update file has already been selected. Click this button to change the update file again.
[Start update]	Updates the firmware with the selected update file.

Depending on the device used, the display in the "Update" view may vary as follows:

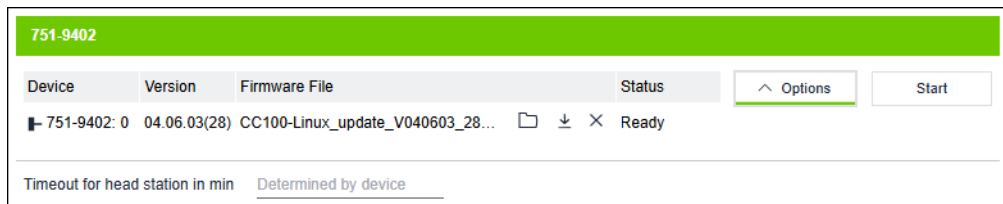





Figure 18: "Update" View

Column	Description
Device	Displays the item number of selected devices that are connected online.
Version	Displays the device firmware currently used.
Firmware File	Displays the name of the selected firmware file.
	 Selects the firmware file from the file system.
	 Opens (if available for the device) the selection of firmware updates available in the WAGO Download Center. In addition to device compatibility, registration via the free WAGO Premium Account (see WAGO Download Center Log In [p. 23]) is also required to use this convenient feature.
	 Deletes the firmware file.
Status	Displays the current status of the firmware update process.
[Options]	Displays further options below the table, e.g., the timeout for the device in minutes: If the device does not respond during this time, the firmware update is canceled.
[Start]	Starts the update operation and uploads the selected firmware file to the device.

For additional information see:

- Operation > [Perform Update \[p. 62\]](#)

7.4.6 Backup/Restore

The **Backup function** can be used to back up device data. The backup file is stored in a network/PC folder or on a removable medium (SD card or USB memory stick) connected to the device. The backup is stored encrypted by entering a password and contains settings, user data and the CODESYS application.

The **Restore function** can be used to restore device data from a backup file. To do this, the password that was used when creating the backup must be entered again.

Note

Note the firmware version!

The Restore function is only possible if the firmware versions are the same at the time of backup and restoration.

Note

Backup/restore can take several minutes!

Creating backup files and restoring data may take several minutes.

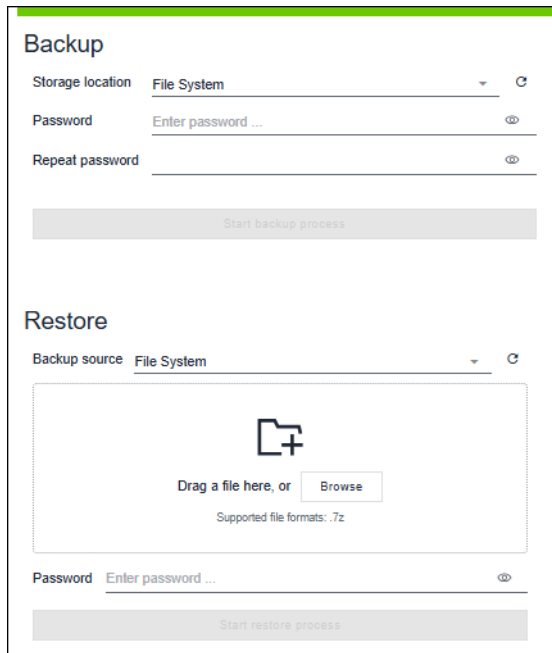


Figure 19: "Backup/Restore" View

Option/Button	Description
Backup	
Storage location	Selecting the storage location for the backup file 🔄 Updates the list of possible storage locations.
Password / Repeat password	Input field for the password with which the backup file is to be saved. You must enter a password to start the backup. ❗ Password input missing. 👁 Display password in plain text.
[Start backup process]	The button is enabled as soon as a password for the backup has been entered and other processes (e.g., restore or firmware update) have been completed. After creating the backup file, it is first downloaded as an archive file (*.7z). If the file is available, a file browser automatically opens to allow you to specify the storage location.
Restore	
Backup source	Selecting the storage location for the backup source 🔄 Updates the list of storage locations for backup sources.
📁 or [Browse]	The storage area 📁 is displayed if the file system has been selected as the backup source. To restore a backup file, drag and drop it onto the storage area. Alternatively, click [Browse] to select the backup file in a file browser.
Password	Input field for the password used to save the backup file. The password is verified by the device itself during the subsequent restore process. ❗ Password input missing. 👁 Display password in plain text.
[Start restore process]	The button is enabled once the password has been entered and a valid backup file has been selected. [Start restore process] starts the restore process.

For additional information see:

- Operating > 📖 [Creating Backup](#) [▶ 60]
- Operating > 📖 [Perform Restore](#) [▶ 61]

7.4.7 Licenses

In this view, licenses for devices/device functions are assigned or removed.

Note

Note prerequisite for license assignment

To assign the license to a device, the required license must first be purchased and added in the [License Repository \[> 21 \]](#).

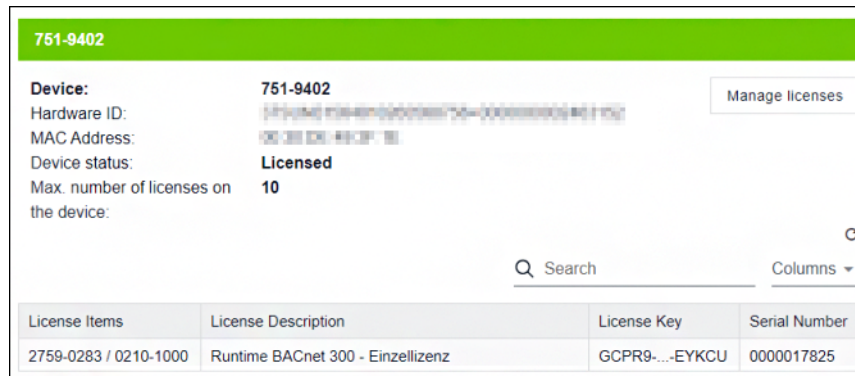


Figure 20: Overview of the licenses on the device

The licenses available on the device are displayed with the following information:

Entry	Description						
Device	Connected device						
Hardware ID	Serial number of the connected device						
MAC address	MAC address of the connected device						
Device status	License status of the device: <table border="1"> <tr> <td>Licensed</td> <td>Licensed The device's license requirement is covered.</td> </tr> <tr> <td>Not licensed</td> <td>Not licensed The device's license requirement is not covered.</td> </tr> <tr> <td>In evaluation mode</td> <td>In evaluation mode Initially, licensed device functions can be used without a license for 30 days. Only the days of actual use of the licensed function count. Once the 30 days have expired, the status is set to "Not licensed." It is possible to extend the period by means of special evaluation extension licenses.</td> </tr> </table>	Licensed	Licensed The device's license requirement is covered.	Not licensed	Not licensed The device's license requirement is not covered.	In evaluation mode	In evaluation mode Initially, licensed device functions can be used without a license for 30 days. Only the days of actual use of the licensed function count. Once the 30 days have expired, the status is set to "Not licensed." It is possible to extend the period by means of special evaluation extension licenses.
Licensed	Licensed The device's license requirement is covered.						
Not licensed	Not licensed The device's license requirement is not covered.						
In evaluation mode	In evaluation mode Initially, licensed device functions can be used without a license for 30 days. Only the days of actual use of the licensed function count. Once the 30 days have expired, the status is set to "Not licensed." It is possible to extend the period by means of special evaluation extension licenses.						
Maximum number of licenses on the device	Maximum number of licenses on the device.						
[Manage licenses]	Opens the "Manage licenses" dialog (see below) to assign free licenses to the device or to remove the license assignment.						
List of licenses on the device							
	Updates the displayed list of licenses.						
Search_____	Filters the displayed licenses for the entered string.						
Columns	Opens the list of possible columns that can be shown/hidden using a checkbox. The column settings are saved for the following sessions.						
License Items	Item number of the license						
License Description	Description of the license						
License Key	License key according to license certificate (partially masked display)						
Serial number	Unique identification of the license purchased						

“Manage licenses” Dialog

The **[Manage licenses]** button opens a dialog in which all available free licenses from the license repository can be assigned to ⊕ or deleted from ⊖ a device.

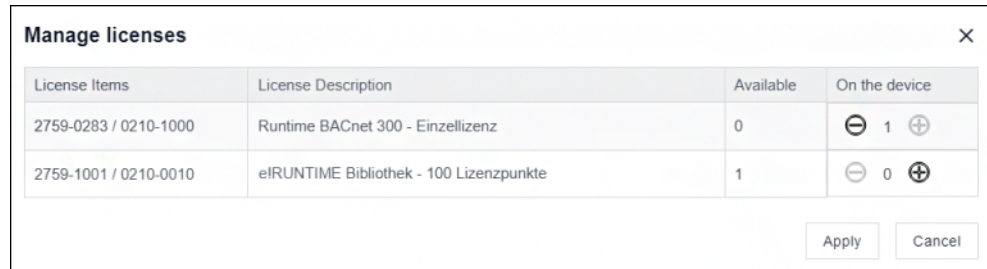


Figure 21: “Manage licenses” Dialog

Entry	Description
License Items	Item number of the license
License Description	Description/name of the license item
Available	Number of available free licenses per item number
On the device	Number of licenses on the device ⊕ Increases the number of licenses on the device by 1. ⊖ Reduces the number of licenses on the device by 1 If a button is grayed out, no license can be assigned or removed, e.g., if the maximum number of possible licenses on a device has been reached.
[Apply]	Collectively performs all amended license assignments with ⊕ and ⊖ for the device. Note: Also note the Message Window [▶ 43]. You are shown whether license operations were successful.
[Cancel]	Closes the dialog without making any license changes in the device.

At [Manage Licenses for Devices](#) [▶ 65] you can find more information about how to:

- purchase licenses,
- add new licenses to the license repository,
- transfer/assign licenses to a device and
- remove licenses from a device.

7.4.8 Device Log

In this view, logged entries for the device can be displayed.

Before retrieving the log entries, display filters can be used to select different log levels (severity of the message) for viewing.

The entries are sorted by timestamp. The latest entry is at the bottom of the list.

Note

Configure device log in the “Settings” tab!

You can configure which device messages are logged in general on the “Settings” tab under “Logging.” The “Device Log” tab only displays the configured device logs and offers additional filter options.

751-9412

Max. number of entries	<input type="text" value="100"/>	Min. log Level	<input type="text" value="Informational"/>
Log sources	<input type="text" value="For example: kernel or sppd.service"/>	Log entries (from time)	<input type="checkbox"/> <input type="text" value="6/27/25, 6:57 AM"/>
File output format	<input type="text" value="TXT"/>		

Number of log entries: 100

Fri Jun 06 2025 14:37:00 GMT+0200 (Mitteleuropäische Sommerzeit) # wcs-rollout.service [354] # Informational(6) Reconfig Trigger: Firewall - Apply ruleset
Fri Jun 06 2025 14:37:00 GMT+0200 (Mitteleuropäische Sommerzeit) # wcs-rollout.service [354] # Informational(6) Reconfig Trigger: Firewall - IP filter
Fri Jun 06 2025 14:37:00 GMT+0200 (Mitteleuropäische Sommerzeit) # wcs-rollout.service [354] # Informational(6) Reconfig Trigger: HostnameDisableDHCP
Fri Jun 06 2025 14:37:00 GMT+0200 (Mitteleuropäische Sommerzeit) # wcs-rollout.service [354] # Informational(6) Reconfig Trigger: PasswordQuality
Fri Jun 06 2025 14:37:00 GMT+0200 (Mitteleuropäische Sommerzeit) # wcs-rollout.service [354] # Informational(6) Reconfig Trigger: Device Certificate AutoRenewal

Option/Button	Description
Max. number of entries	Specifies the maximum number of entries that are read by the device (default: 100). A maximum of 1,000 log entries can be retrieved and displayed in this tab. When saving to a file, the number can be increased to 100,000,000 entries.
Min. log level	Filters the displayed log entries by the log level.
Log sources	Filters the log sources of the log entries by the character string entered and only displays corresponding entries.
Log entries (from time)	If you select this option, you can select the date and time from which the log entries are displayed via a calendar. In this way, the results can be limited to the last 20 minutes, for example.
File output format	If "Retrieve log entries as a file" is selected: Selects the output format for the file in which log entries are stored. The text format "TXT" or the table format "CSV" are available.
[Retrieve log entries]	Displays the log entries based on the configuration and the selected filters.
[Retrieve log entries as a file]	Opens a file explorer to save the log entries based on the configuration and according to the selected filters.
Table content	Displays the following information for each log entry: Timestamp (creation time of the entry), source (service/service that created the log entry), log level (severity of the entry) and, if necessary, other information, depending on source/service Entries are sorted by timestamp from oldest (top) to newest (bottom).

For additional information see:

- Operating > [View Device Log \[▶ 69\]](#)

7.5 Message Window

The message bar or message window of the WAGO Device Manager is located at the bottom of the interface. Errors, warnings, success messages and additional information are continuously displayed here during configuration.

First, the message bar is displayed:

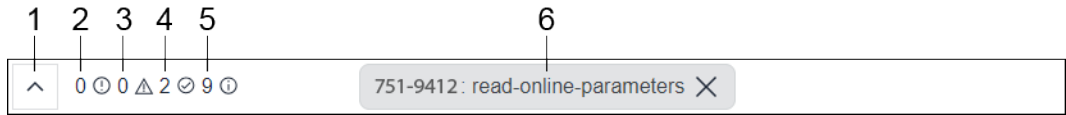


Figure 22: Message bar

Pos.	Description
1	Opens the message window for detailed information.
	Minimizes the message window and displays the message bar.
2	Displays the number of errors. The indicator flashes until the message window is opened.
3	Displays the number of warnings.
4	Displays the number of success messages.
5	Indicates the amount of additional information.
6	Displays the last message for a few seconds. If there is an error message, it is highlighted in red.

The complete list of messages with detailed information is displayed in the message window.

The button opens the message list:

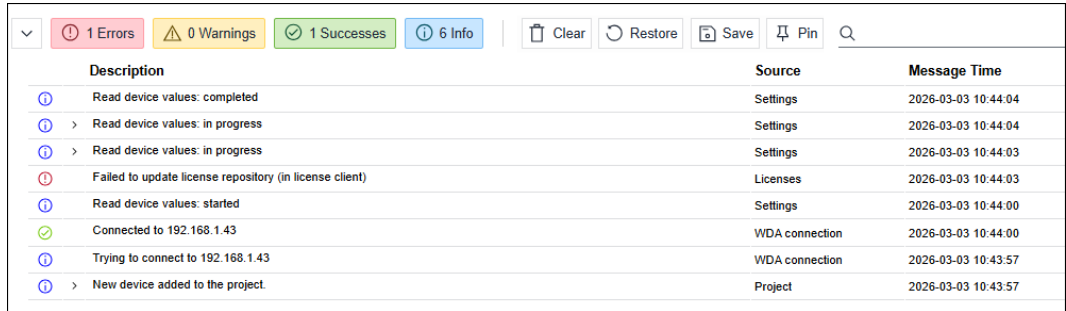





Figure 23: Message window

By default, all messages are displayed when the Messages window opens.

You can filter the messages using the “Errors,” “Warnings,” “Successes” and “Info” buttons. When enabled (button shown in color), only the filtered messages are displayed in the list. Clicking again (button shown in white) hides those messages again.

The buttons can be used to carry out the following functions:

Button / Table Entry	Description
	Displays errors during the configuration.
	Displays warnings during the configuration.
	Displays success messages such as 1 successfully connected devices or successfully transferred data.
	Displays status messages/configuration information.
	Removes the displayed messages from the list.
	Restore removed messages.
	Opens a dialog window for saving all displayed messages as a text file. Depending on the PC configuration, the download may be made directly to the Downloads folder.
	Keeps the window visible and expanded in the foreground.




Button / Table Entry	Description
 Unpin	Unpins the pinned message window. If you click in a different area of the page after releasing the mouse button, the window is minimized to a message bar.
	Searches for and filters any text in the message window. Entering a character enables the search function for the "Device," "Description" and "Source" columns and displays the results in green. Lines without hits are hidden.
Description	Displays the description of the message. For more extensive messages, further information can be opened using the button. 
Source	Shows the source of the messages, e.g., "Settings."
Message Time	Displays the date and time when the message was created. The latest message is at the top.

7.6 Product Selection

The product selection is displayed in the right-hand window. The navigation can be used to select the source via which the device can be accessed. The active source is indicated by a green icon.

Tip: To enlarge the workspace view, close the product selection either by clicking the cross or by clicking again on the source that is already open (green icon).

Table 4: Product Selection

Icon	Product Selection / Source	Description
	Device from Catalog	Displays devices from the catalog. These devices can be used for offline project planning. New devices are automatically added to the catalog when the WAGO Device Manager is updated.
	Device from Network	Displays devices that can be accessed via the network.
	Device on USB	Displays devices that can be accessed via USB.

The devices can be added to the project in the following way to further configure them:

- via the plus symbol + or
- via double-click on the device or
- via drag and drop from the product selection on the right into the "Devices in project" area on the left or
- via click on **[Add to the project]** button in the device's context menu.

Note

Note the instructions for entering the IP address

For directly connected devices via the USB interface or via the network, the already known IP address is used to establish the connection.

To select (offline) devices from the catalog, the IP address must be entered under "Connection" for further online actions.

Catalog 

The “Device from Catalog” product selection displays all devices that support configuration and parameterization in the WAGO Device Manager. The devices are displayed grouped by series and product type in a tree.

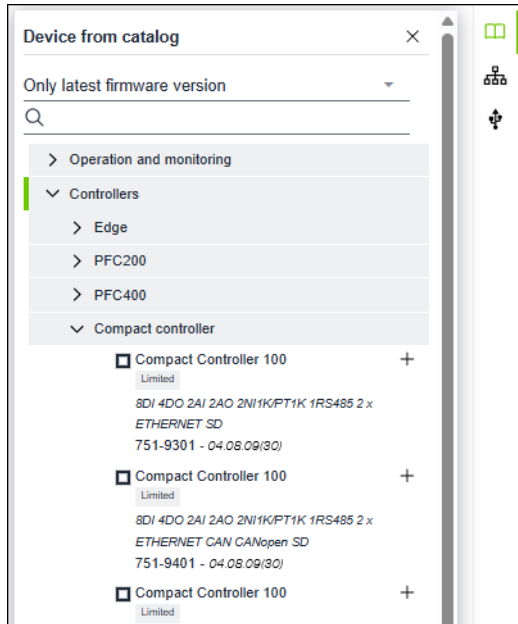
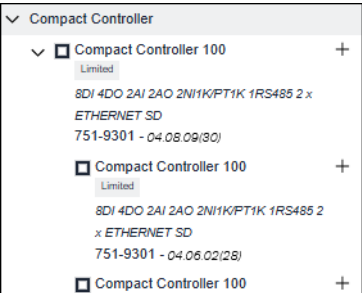
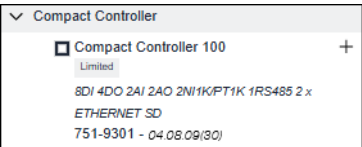

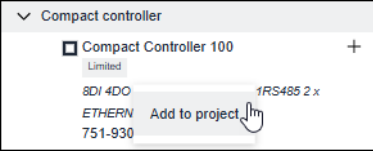


Figure 24: “Device from Catalog” Product Selection

GUI Element	Description
All firmware versions ▼	All other available firmware versions for a device are displayed below a device with the latest firmware version. 
Only latest firmware version ▼	Each device is only displayed with its latest firmware version. 
 _____	The search is used to narrow down the devices displayed. Matches are highlighted in green in the results list.

GUI Element	Description
+	<p>Adds the device to the project. Alternatively, the device can be added by double-clicking, drag & drop or via the context menu.</p> 
<p>Limited (Example)</p>	<p>Marking on the device. Additional device information is displayed via tooltip (see also 🔗 Devices in the Project [> 24]).</p>

For additional information see:

- Operating > Add Devices in the Project > [🔗 Add Devices from Catalog \[> 52 \]](#)

i Note

Head stations only individually configurable

If the message “No matching devices are available in the catalog” appears in the device catalog, make sure that you are configuring a single device. If you have already added a head station to your project, it is not possible to select further head stations from the catalog. If you want to plan another head station, then first remove the existing one (right-click on the device under “Devices in the Project” > **Remove**).

Network

The “Device from Network” product selection can be used to search for devices in the network within a specific address range (start address/end address). The areas can be pre-selected under “Network Adapter” or entered manually.

Click the **[Scanning ...]** button to start the search. The devices found are displayed below. The number of devices found is also shown as a number next to the “network” icon.

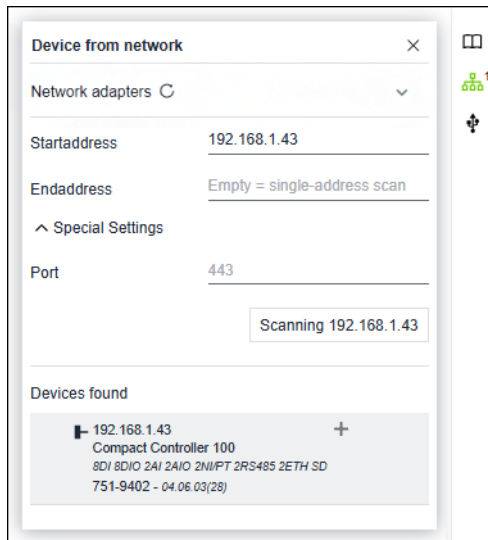







Figure 25: “Device from Network” Product Selection

GUI Element	Description
Network adapter	Displays the network adapters available in the operating system. If an adapter is selected, the start and end addresses are set accordingly.
	Refreshes the network adapter list.
	Collapses/expands the list of network adapters.
Startadresse / Endadresse	Range of IP addresses in which a network scan is performed to search for devices. If no end address is entered, the scan is only carried out for the start address. This is useful if the device’s IP address is known.
Special Settings	By default, the connection is made via port 443. If using an alternative port, the port can be configured at this point. The selected setting is stored permanently and is retained even after the software is restarted.
The label of the [Scanning network] button changes depending on the entry:	
[Scanning [IP address]]	When entering a start address: Scans the IP address entered under “Start address”.
[Scanning [number of addresses]]	When entering a start address and an end address: Scans the IP address range and shows the number of scanned addresses on the button.
Devices Found	Lists the devices found during the scan. The devices can be added to the project via  , double-click, drag and drop or via the context menu.
	Indicates that the certificate is not trusted (see Handling Certificates [p. 55]).
	Adds the device to the project. Alternatively, the device can be added by double-clicking, drag & drop or via the context menu.
Limited (Example)	Marking on the device. Additional device information is displayed via tooltip (see also Devices in the Project [p. 24]).

For additional information see:

- Operating > Add Devices in the Project > [🔗 Add Devices from Network \[▶ 52\]](#)

USB 📶

The "Device on USB" product selection shows a device that is connected via USB. The device can be added to the project as under "Device from catalog" and "Device from network" using the + or the methods mentioned.



Figure 26: "Devices on USB" Product Selection

For additional information see:

- Operating > Add Devices in the Project > 📶 [Add Devices via USB \[> 53 \]](#)

8 Operating

The following describes software operation through its stages and typical workflows.

8.1 Working with the User Interface

First familiarize yourself with the user interface:

The start page when opening the software makes getting started easier. Select a button, e.g., **[Device from Network]**, to start.

Even if the start page is closed, you can select your device at any time using the product selection on the right and add it to the project. You have the choice between three sources: devices from the network (online), devices from the product catalog (offline) or devices connected via USB (see [🔗 Add Devices in the Project \[▶ 52\]](#)).

The added device is displayed in the “Devices in the project.” The actions you select from the menu ribbon are related to this device.

The actual project work is done in the middle area. You can configure devices, perform firmware updates, manage licenses and perform other actions (see corresponding descriptions).

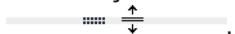
You can find a message bar at the bottom of the user interface. You can expand the message bar to receive detailed messages about actions taken or the status of the device (see [🔗 Message Window \[▶ 43\]](#)).




In the upper right area, you find general operating elements, for example, for changing the language or for opening the online help. The license repository (see [🔗 Manage Licenses for Devices \[▶ 65\]](#)) and settings for certificate exceptions for devices (see [🔗 Handling Certificates \[▶ 55\]](#)) can also be found here.

To create, open or save projects, you can find the project menu in the upper left area.

8.1.1 Customize Display

Use the arrow icons >< ^v to expand and collapse the different areas.

You can also adjust the size of displayed areas. To do so, move the separator between the areas .

To display the product selection, click the icon for the required source ,  or . You can also switch between sources by clicking the respective icon.

Tip: To enlarge the workspace view, close the product selection either by clicking the cross or by clicking again on the source that is already open (green icon).

8.2 Work with Projects

Create New Project

- To create a new project, select
 - **[Device from catalog]** on the homepage to first configure a device from the device catalog, which you will connect at a later time,
 - **[Device from network]** if your device is accessible on the network or
 - **[Device on USB]** if your device is connected via USB.
- Alternatively, select **[Create empty project]**.
You can also create a new project at any time independently of the open start page by using the project menu and **[New]**.

Save Project

1. Click **[Save]** in the project menu to save your project to the engineering PC.
2. To ensure the confidentiality of the project file, we recommend using **[Save (password-protected)]**.
 - ⇒ In this case, a dialog opens in which you can enter a password for storing the project in encrypted form. The password must be re-entered to open the project file; otherwise, access is no longer be possible.

Opening an Existing Project

1. If you are on the start page, select **[Open Project]** from the options displayed. Alternatively, click **[Open]** in the project menu or select one of the projects displayed under "Recently used."
2. If your project was saved with password protection, please enter the password to open the file.

8.3 Add Devices in the Project


To use a device in a project, select it in the  **Product Selection [▶ 45]** and insert it under  **Devices in the Project [▶ 24]** ein.

Add Device from Catalog


1. Open "Device from Catalog" product selection.
 - ⇒ A tree displays all available devices that you can use for project planning.
2. Select a device and insert it into the project structure:
 - by clicking on **+** next to the device or
 - by double-clicking on the device or
 - by drag & drop into the project structure or
 - from the context menu and **[Add to the project]**.

Add Device from Network

1. Open "Device from Network" product selection.

2. If you know the IP address of your device, enter it in the “Start Address” field and click on **[Scanning [IP Address]]**.
Alternatively, enter the start and end address of an IP address range in which the device is to be searched for and click on **[Scanning [x] addresses]**.
3. By default, the communication is made via port 443. If you want to use an alternative port, click the arrow next to “Special Settings” and enter the port. Then scan the network as described above.
 - ⇒ The devices found are displayed.
 - ⇒ **Note:** If an icon  for untrusted SSL certificates appears after the device name, refer to the information and notes at [🔗 Handling Certificates \[► 55\]](#).
4. Select a device and insert it into the project structure:
 - by clicking on **+** next to the device or
 - by double-clicking on the device or
 - by drag & drop into the project structure or
 - from the context menu and **[Add to the project]**.


🔗 Add Device via USB

1. Check whether your device is connected to the engineering PC via USB.
Note: Note that only one device can be connected via USB at a time. This is because the USB interface internally functions as a virtual network connection that can only be accessed via a unique IP address 192.168.42.42.
2. Open the “Device on USB” product selection.
 - ⇒ The device connected via USB is displayed.
 - ⇒ **Note:** If an icon  for untrusted SSL certificates appears after the device name, refer to the information and notes at [🔗 Handling Certificates \[► 55\]](#).
3. Select a device and insert it into the project structure:
 - by clicking on **+** next to the device or
 - by double-clicking on the device or
 - by drag & drop into the project structure or
 - from the context menu and **[Add to the project]**.

8.3.1 Information about Adding Devices


When scanning devices and adding devices to the project, various messages may appear:

Table 5: Information about Adding Devices

Message	Description / Remedy
"No matching device in catalog"	The device or combination of device and firmware is not supported.
"To configure another head station, the existing head station must first be removed."	The message is displayed if a device has already been added to the project. In this case, no further devices can be added, as you only configure one device at a time. To continue, first remove the existing device.
"Untrusted SSL certificate"	The device used does not have a trusted certificate. You can also recognize this by the lock icon next to the device:  . You have the option of either adding a trusted certificate or an exception for the existing certificate (see Handling Certificates [p. 55]).
Login dialog opens automatically or Message "Login required"	<p>If you use other access data than the default data (user name "admin," password "wago" or blank (device-dependent)) for your device, a login dialog opens automatically when adding the device to the project. Log in. If you do not log in, you can only perform offline actions. In the "Settings" view, you can only change values in the project.</p> <p>If the login dialog does not open automatically, but the message "Login required" is displayed, your device could not be identified automatically. In this case, click the displayed [Login required] button and enter the device access data.</p> <p>This can happen, for example, if "ScanDevices" has been removed from the automatically accepted device access in the settings ("Settings" > "WAGODeviceAccess" > "Allowed Unauthenticated Requests" view, "ScanDevices" entry).</p>
"Device not accessible in network"	A network error has occurred, e.g., due to a timeout of the connection during network scanning, or the device cannot be reached on the network. Check the connectivity of your device and try again to access the device on the network.
"Unknown device"	The device is not supported. It may not be a WAGO device.

8.3.2 Handling Certificates

To securely encrypt the data and the data exchange between the device and the software during the connection and configuration and to protect it from third parties, the device should use a trusted SSL certificate.

It may happen that certificates are not trusted. This is the case with new devices, among other things. An icon with an open lock  next to the device name in the user interface indicates that a certificate is not trusted.

The following options are available:

- **Use a trusted SSL certificate**

Generate a trusted SSL certificate and install it on the device and in the web browser/operating system. You can find a description of this in the WAGO [Cyber Security for Controller PFC100/PFC200](#) manual. The certificate handling described there also applies to other Linux-based products such as the WAGO Compact Controller 100 (Item no. 751-9402/xxx-xxx).

Then restart the application so that the new trusted SSL certificate is recognized.

- or -

- **Add exception for the certificate**

At your own risk, add an exception for the untrusted SSL certificate.

Note:

- In this case, it is not technically possible to ensure that communication will take place with the device you expect (man-in-the-middle attack possible).
- Only one exception can be added per device for an untrusted SSL certificate. Therefore, if you add a new exception for an untrusted SSL certificate, the previous certificate exception is overwritten.
- If a certificate exception that has already been added for a device is no longer displayed in WAGO Device Manager, this may be because a new, untrusted certificate has been detected, e.g., as a result of a network scan, connection setup or other HTTPS requests to the device. Even if the device with the new certificate has not yet been updated/added to the project, the outdated certificate is automatically removed as soon as the new one is recognized.

Add Exceptions for Certificates

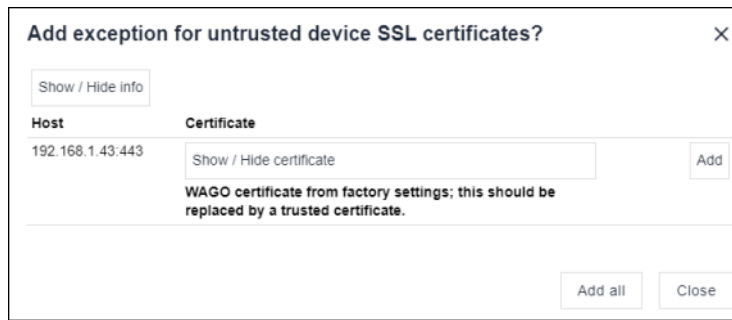
Note

Add certificate or exception to ensure access!

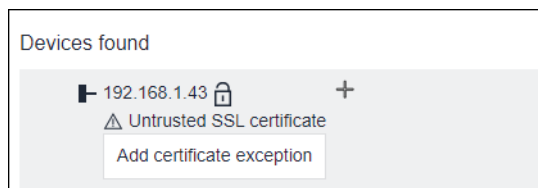
A trusted certificate or one that has been added as an exception is required to establish a connection with the device and for further configuration.

When you perform a network scan or connect to a device in the project, the device is checked to see if it has a trusted certificate. If no trusted certificate is found, a dialog opens automatically in which you can add a certificate exception.


- Click **[Add]** in the dialog.



- If you have closed the dialog box by mistake, you will still find the button for adding exceptions in the list of devices found:



View and Remove Exceptions for Certificates

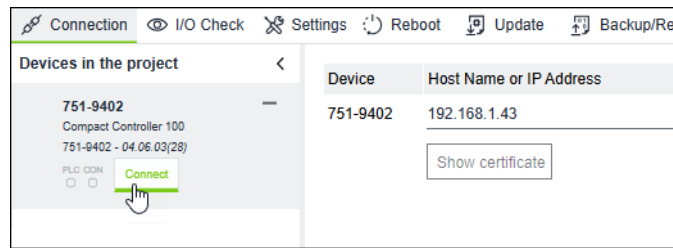
1. Open the options by clicking on the gear icon .
2. Open the "Certificate Exceptions" tab.
3. Select the certificate and click **[Remove]**.

Tip: You can view the contents of a certificate regardless of its trusted status by connecting the device, opening the "Connection" view from the ribbon and clicking on **[Show Certificate]**.

8.4 Connect to Device

- ✓ You have added the device to the project.
1. Open the "Connection" view from the ribbon.
 - ⇒ If the device was added via a network scan or USB, you see the connection data used at this point.
 - ⇒ If the device was added (offline) via the catalog, enter the IP address of the device at this point.
If you want to use a port other than the default port 443, append the port number you want to the IP address or hostname, separated by a colon, for example: 192.168.1.22:1000.

- In the “Devices in Project” area, click the **[Connect]** button.



- The device is connected.
The labeling of the button changes to “Disconnect.”
Information from the device's status LEDs is displayed.

8.5 Configure Device

You have two options for configuring a device – either you change the existing values of a device that is connected **online**, or you first configure a device **offline** from the product catalog. The offline configuration is initially based on default values.

Configure Devices Online


If there is a connection to the device, the configuration is based on the current values that the device has.

- ✓ The device can be accessed via the network or USB.
- Add the device connected via network or USB to your project (see [Add Devices in the Project](#) [▶ 52]).
 - If you use other access data for your device than the standard access data, a login window opens. Enter the required data.
 - ⇒ The device is connected automatically.
 - Open the “Settings” view.
See tips for using the “Settings” view below.
 - ⇒ The device data is queried automatically after the connection is established and initially adopted as project values (left), so that device data and project values initially correspond.
 - Select a tab in which you want to make settings, e.g., “VPN.”
 - Make your changes in the “Project Values” column. For example, set “OpenVPN” to “Enabled.”
 - ⇒ A unequal sign indicates that the project value now differs from the device value.
 - Make any further changes in different tabs as needed.
 - ⇒ You can find an overview of which tab you have made changes in the drop-down menu at the top. From this menu, you can switch directly to the tab in which you have made changes if required. The corresponding tabs themselves are also marked with an unequal sign after changes.


7. Transfer the changes to the device as follows:
If you have changed values in only one tab, click **[Write to device ►]** under the changed values.
If you have changed values in different tabs, click **[Write settings of all tabs to device ►]** in the upper area.
 8. When you have completed your configuration, click **[Disconnect]**. This ends the session on the device and minimizes the risk of unauthorized access.
- ➔ Configurations and parameters have been transferred to the device. The node is ready for use.

Configure Device Offline

If there is no connection to the device, the configuration is initially carried out with the device from the product catalog and on the basis of the default values of this catalog device.

- ✓ The devices **cannot** be accessed via the network or USB.
1. Select the device from the product catalog (see  **Add Devices in the Project [► 52]**).
 2. Open the "Settings" view.
See tips for using the "Settings" view below.
 - ⇒ Since there is no connection to the device, only the default values of the device are initially displayed in the "Project Values" area.
 3. Select a tab in which you want to make settings, e.g., "VPN."
 4. For example, set "OpenVPN" to "Enabled."
 5. Make any further changes in different tabs as needed.
 6. Save the project via the project menu.
 7. If your device is available at a later time, open the "Connection" view.
 8. Enter the IP address of the device and in the "Devices in Project" area, click **[Connect]**.
 9. Switch to the "Settings" view.
 - ⇒ An unequal sign between the "Project Values" and "Device Values" columns indicate which project and device values differ from each other.
 - ⇒ You can find an overview of which tab you have made changes in the drop-down menu at the top. From this menu, you can switch directly to the tab in which you have made changes if required. The corresponding tabs themselves are also marked with an unequal sign after changes.
 10. Transfer the changes to the device as follows:
If you have changed values in only one tab, click **[Write to device ►]** under the changed values.
If you have changed values in different tabs, click **[Write settings of all tabs to device ►]** in the upper area.
 11. When you have completed your configuration, click **[Disconnect]**. This ends the session on the device and minimizes the risk of unauthorized access.
- ➔ Configurations and parameters have been transferred to the device. The node is ready for use.

Tips

- A description of the "Settings" view with explanations of icons, operating elements and file handling can be found under [🔗 Settings \[► 31\]](#).
- Check the "Show only relevant ones" checkbox to display only those settings that are relevant to the configuration used. In this case, grayed out and thus unchangeable, irrelevant settings are hidden.
- Use the update icon  to read and display current values from the device. Otherwise, the values are updated each time a connection is established and write operations are executed.

Execute actions directly

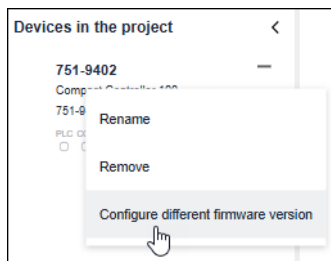
There are changes that you do not have to save as a project value and then transfer, but that are sent directly to the device, such as changing the system time.

You can find such actions in the lower area of the respective tabs under "Device Status/Actions." You can also find device status information in the same area.

8.6 Configure Other Firmware

You can change the firmware set in the project for the configuration of your device, i.e., you can already configure firmware in the project that you would like to use later on the device. You can find the function for changing the firmware in the context menu that appears when you right-click on the device in the "Devices in Project" area.

In this case, "Configure" simply means changing the firmware in the project. No new firmware is transferred to the device here, as is the case with a firmware update (see [🔗 Perform Update \[► 62\]](#)).



1. In the context menu of the device, click **[Configure different firmware version]**.
2. Select the required firmware version.



⇒ You can also find the firmware versions available in the product catalog under the respective device.

3. Click **[Change version]** to change the configured firmware.

4. Open the "Settings" view.
 - ⇒ You can now see all the parameters and settings that the new firmware version supports. Observe the following after changing the firmware:
 - The same parameters/settings are retained.
 - New parameters/settings initially receive default values/settings.
 - Some parameters/settings can be omitted.
5. In the "Devices in Project" area, click [**Connect**].
 - ⇒ A comparison is made between the entries you have made in the project and the device values.
If the mismatch is compatible, a connection is established.
If the mismatch is incompatible, e.g., due to other device firmware restrictions, then the connection is aborted.
In this case, make sure that the selected firmware version and the firmware version of the device match or are compatible. Pay attention to messages/hints to correct the error.

8.7 Creating Backup

Note

Note the firmware version!


The Restore function is only possible if the firmware versions are the same at the time of backup and restoration.

- ✓ You have added a device to your project (see [🔗 Add Devices in the Project \[▶ 52\]](#)).
 - ✓ The device is connected online (see [🔗 Connect Devices \[▶ 56\]](#)).
1. In the ribbon, click [**Backup/Restore**].
 2. In the "Storage location" selection box, choose the network/PC folder or removable media where you want to store the backup.
 3. Under "Backup," enter the password with which you want to save the backup file in encrypted form and repeat the password entry.
 - ⇒ **Note: Keep your password safe!**
The password is required to restore the backup. Without the correct password, access to the secured data is no longer possible.
 - ⇒ **Note: Protect backup file and password from unauthorized access!**
With knowledge of the password and access to the backup file, it is possible to indirectly change the device configuration.

4. Click **[Start backup process]**.
 - ⇒ **Note: Backup can take several minutes!**
Creating a backup file may take several minutes.
 - ⇒ Settings and user data as well as the CODESYS application are compiled as a backup on the device and then downloaded from the device to the engineering PC as a backup file (*.7zip). A percentage indicator shows you when the download is complete.
 - ⇒ If the backup file has been successfully downloaded to your engineering PC, a file browser opens automatically.
5. In the file browser, specify the location where you want to save the backup file. Change the file name if necessary and click **[Save]**.
 - The backup process is complete.

8.8 Perform Restore

Please note the following information when restoring your data:

- Restoration is only possible if the firmware versions are the same at the time of backup and restoration.
 - The restore process may take a few minutes. After the restore process, the device is restarted and is then ready for use again.
 - Please note that device data is overwritten according to the contents of the selected backup. If you change connection-related data (e.g., the IP address) after creating the backup, it may not be possible to establish a connection to the device during an automatic restart during the restore process.
 - Make sure you have the correct login details (username/password) for the device, as they may have changed.
 - Make sure that the device is physically accessible during and after the restore process: A network connection must be established via a suitable medium (e.g., cable, WLAN) for the entire duration of the restore process.
 - Make sure you have any changed IP addresses/device addresses/DHCP server addresses at hand.
 - Data recovery may fail if there is insufficient free memory on the device.
- ✓ You have added a device to your project (see [🔗 Add Devices in the Project \[▶ 52\]](#)).
 - ✓ The device is connected online (see [🔗 Connect Devices \[▶ 56\]](#)).
1. In the ribbon, click **[Backup/Restore]**.
 2. In the "Restore" area, select the source of your backup file.
 - ⇒ If you select the file system as the source, a storage area  is displayed.
 3. Drag the backup file (*.7zip) to the storage area.
Alternatively, click **[Browse]** and select a backup file.
 4. Under "Restore," enter the password with which you have saved the backup file.
 - ⇒ The file name of the selected backup file is displayed. Click **[Choose another file]** to change the backup file as needed.

5. To restore the data from the selected backup file, click **[Start restore process]**.
 - ⇒ The backup file is first loaded onto the device. The connection between the device and the engineering PC is terminated. The restore process, which can take about 20 minutes, then starts on the device. During this process, the WAGO Device Manager is only available in offline mode.
 6. After the restore process, reconnect to the device.
 - Note that the device may be reachable at a different address if the network settings in the backup contains differ.
- The restore process is complete.

8.9 Perform Update

If you want to use one or more devices with another firmware version than the one set, you can change the firmware version via the interface.

Changing the firmware version is not only useful for a regular update; older firmware versions can also be used, for example, to readjust older configurations (compatibility required).

NOTICE

Follow instructions to avoid damage to equipment

Interrupting the update/downgrade process may damage the device. For this reason, observe the following information.

Hardware Notes

- Do not switch devices off.
- Do not interrupt the power supply of the device.
- Do not remove devices from the node group.
- Ensure that communication with the device is not interrupted during the update.
- For updates via the service interface, disconnect the fieldbus cable from the device beforehand.
- Do not exit the software during the operation.

Software Notes

- Stop application on device before performing the update.
- Programs and data on the device can be lost during the update. Make sure you have a recent backup of the data.
- The application and other files in the memory or file system must be transferred to the new controller after updating.
- After replacing the firmware, note the new firmware version (xx) in the box provided on the controller.

Note

Disclaimer for Updates!

Liability claims against WAGO GmbH & Co. KG relating to material or immaterial damage caused by updates (e.g., firmware changes) are excluded. Use is at the risk of the user exclusively.

Note

Additional information from WAGO Support!

Please contact WAGO GmbH & Co. KG Support for more information on updates/firmware changes.

Note

Updates can take a few minutes!

Note that updates, e.g. replacing the firmware, may take several minutes depending on the hardware configuration of the device.

Depending on the firmware your device is using, the appearance and content of the "Update" tab may vary.

The operation for both versions is explained below:

Version 1

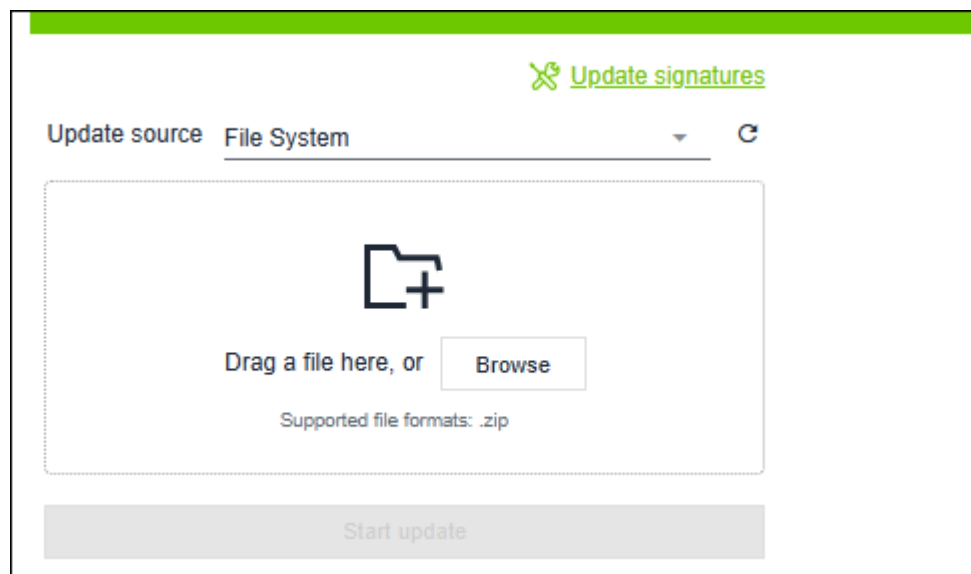


Figure 27: "Update" View

- ✓ You have added a device to your project (see [Add Devices in the Project](#) [► 52]).
- ✓ The device is connected online (see [Connect Devices](#) [► 56]).
- ✓ You have downloaded a new update file for your device via WAGO Navigator or from the [WAGO Download Center](#) (alternatively, select the WAGO Download Center directly as the update source below).

- ✓ **Note: Custom firmware requires corresponding certificates!**
Firmware files must be signed. This is already the case for WAGO firmware downloaded via WAGO Navigator/WAGO Download Center. However, if you are loading firmware with your own or multiple components, click on "Update signatures" and add the appropriate certificates on the page, which is used to verify the signature of the entire firmware update. The firmware cannot be updated without a certificate.

 1. Click the **[Update]** button in the ribbon.
 2. Select the "Update Source" for the firmware update in the selection field:
 3. **Firmware Update via "File System":**
Drag the update file to the storage area.
Alternatively, click **[Browse]** and select the downloaded update file.
 - ⇒ The file name of the selected update file is displayed. Use **[Choose another file]** to change the update file as needed.
 4. **Firmware Update via "WAGO Download Center":**
Select one of the firmware versions displayed under "WAGO Download Center" as the update source.
 - ⇒ A dialog prompts you to log in with your WAGO Premium account, if you have not already done so. This is required to download the firmware file (see [🔗 WAGO Download Center Log In \[▶ 23\]](#)).
 5. Click **[Start update]**.
 - ⇒ The update file is first loaded onto the device. The connection between the device and the engineering PC is terminated. The firmware update process then starts on the device. The update may take approximately 20 minutes. During this process, the WAGO Device Manager is only available in offline mode.
 - ⇒ The device restarts after the update.
 6. After the firmware update, reconnect to the device.
 - ⇒ If errors occurred, they are displayed in the message window and in the "Update" tab.

➔ The device is running with the new firmware.

Version 2

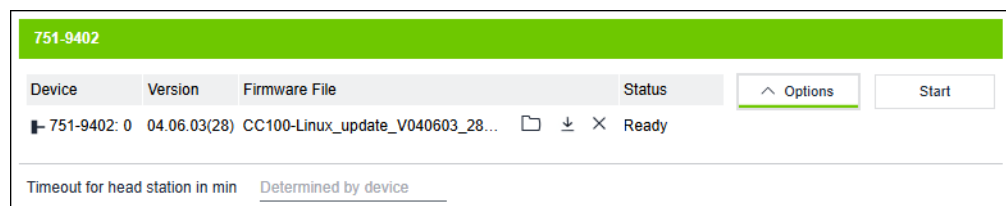





Figure 28: "Update" View

- ✓ You have added a device to your project (see [🔗 Add Devices in the Project \[▶ 52\]](#)).
 - ✓ The device is connected online (see [🔗 Connect Devices \[▶ 56\]](#)).
 - ✓ You have downloaded a new update file for your device in the [🔗 WAGO Download Center](#) or you will download it directly via the WAGO Download Center below.
1. In the WAGO Device Manager, select the device for which you want to change the firmware.

2. Click the **[Update]** button in the ribbon.
 - ⇒ The "Update" view opens and shows the device and the firmware version currently in use.
 3. Click on the folder icon  and select the downloaded update file from your file system. Alternatively, click the download icon  to select the update file directly from the WAGO Download Center.
 4. Optional: Click **[Options]** and enter a timeout for the head station.
 5. Click **[Start]**.
 - ⇒ The steps that are carried out during the replacement process are displayed under "Status."
 6. If you want to cancel the running replacement operation prematurely, click on the Cancel icon  in front of the respective progress bar. In such case, the previous firmware is restored.
- ➔ After the firmware has been successfully replaced, the new firmware version is displayed next to the device name.

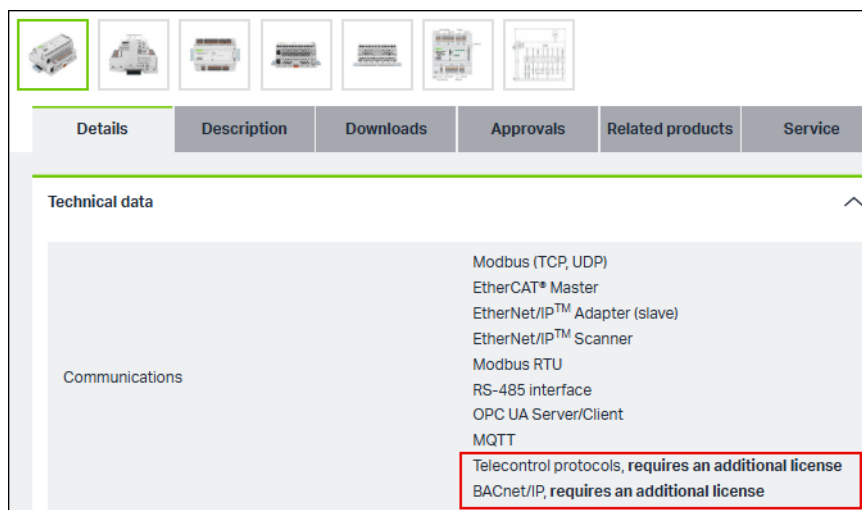
8.10 Manage Licenses for Devices

The use of certain device functions is subject to license. To use device functions that are subject to license, first purchase the appropriate licenses, add the license keys to the WAGO Device Manager license repository and assign the licenses to the devices. The licenses are then stored in the device itself.

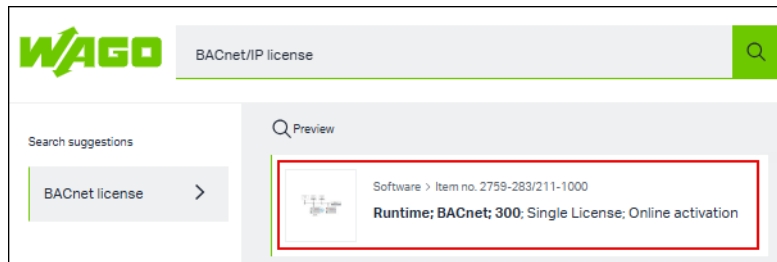
Find Licenses for Your Device

Refer to the technical data of your device for a list of supported functions/communication protocols. Any licenses that may be required are listed there.

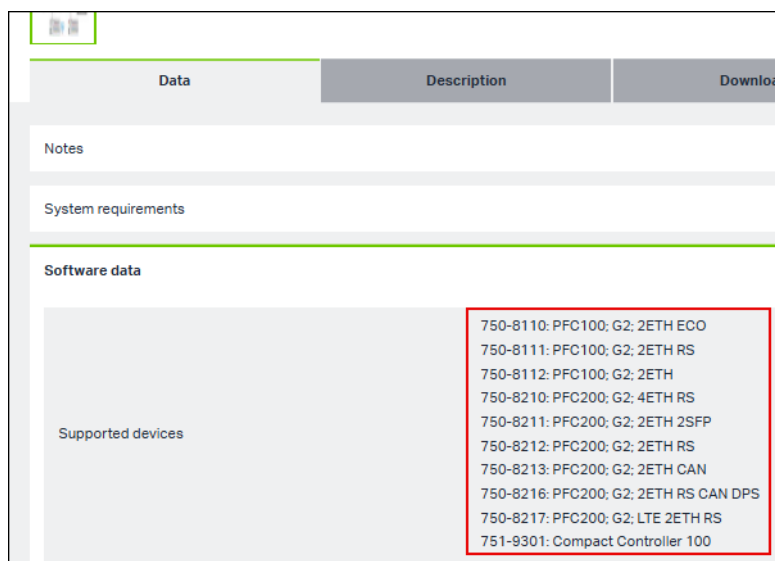
1. Open the WAGO website (www.wago.com).
2. Enter the name of your product in the search, e.g., "CC100."
3. Select your device from the search results.
4. Go to **Details > Technical Data** to see which functions/communication protocols require a license (in this example: Telecontrol and BACnet/IP).



5. You can find the product page for the required license products using the search bar on the WAGO website. For example, search for "BACnet/IP license."




6. On the page for the license product, the compatible devices are displayed under **Data > Software data > Supported devices**. This way, you can be sure that you are choosing the right license product for your device.



Purchase a License



1. Open the page for your license product on the WAGO website. Use the search.
 2. Purchase the license.
- ➔ You will then receive an email with a license certificate.
You will need the license key contained in the license certificate for the following steps.

Add Newly Purchased Licenses



- ✓ The license(s) has/have been purchased.
 - ✓ An online connection may be required; see note "Online activation" in your license certificate.
1. Click on the license icon  at the top right of the WAGO Device Manager (General Controls).
 - ⇒ The license repository opens. You see an overview of all licenses that are stored on the engineering PC and that can be used for device functions, or are already in use.
 2. Click the **[New License]** button.

3. Enter the license key from the license certificate.
 - ⇒ **Tip:** You can enter multiple license keys as long as they use the same customer name or are anonymous licenses. It is also possible to enter customer-specific and anonymous licenses at the same time. Separate the license keys line by line.
 - Note:** If a license is incorrect, the other licenses will not be transferred either.
4. Enter the customer name under which you purchased the license.
The customer name is only required for personalized licenses.
5. Confirm that you will use the software exclusively for business purposes and accept the WAGO Software License Agreement.
6. Click **[Add]**.
 - ➔ The license appears in the license repository as a free license and can be transferred to a device.

Assign Licenses and Transfer to a Device


- ✓ A free license is available in the license repository.
 - ✓ The device is connected online.
1. Open the  **Licenses** [\[> 41\]](#) tab in the WAGO Device Manager.
 2. Click **[Manage Licenses]**.
 - ⇒ A dialog shows you the respective number of free licenses available in the license repository.
 3. Click the  button to select the required number of one or more licenses that you want to load onto the device.
 4. To transfer all license changes to the device at one time, click the **[Apply]** button.
 - ➔ The licenses are transferred to the device based on your selection.
 - ➔ The license status is updated accordingly in the license repository.

Remove Licenses from a Device

- ✓ The device is connected online.
1. Open the  **Licenses** [\[> 41\]](#) tab in the WAGO Device Manager.
 2. Click **[Manage Licenses]**.
 3. Click the  button to select the required number of one or more licenses that you want to delete from the device.
 4. To transfer all license changes to the device at one time, click the **[Apply]** button.
 - ➔ The licenses are removed from the device based on your selection.
 - ➔ The removed licenses appear again in the license repository as available licenses.

Note

Note the message window

Also note the  **Message Window** [\[> 43\]](#). The message window shows you whether license operations were successful.

Note

Release license via support

If a connection is interrupted during a license operation, licenses may be locked. For example, the license is still displayed as "Activated" in the license repository even though the license has already been removed from the device. In this case, contact [WAGO Support](#) to release the locked license.



8.11 Performing Device Diagnostics

You can use various diagnostic functions to determine the status of the device via the WAGO Device Manager.

- Test the wiring of the device (see [Wiring Test via the "I/O Check" View](#) [[> 68](#)]).
- View the status of the device in relation to certain settings. You can find the device status in the lower area "Device Status/Actions" of the various tabs in the "Settings" view.
- View the LED status of the device in the "Settings" view on the "LEDs" tab.
- The status of the application is indicated by the "PLC" LED indicator in the left area "Devices in the Project" (see [Devices in the Project](#) [[> 24](#)]).
- In the "Device Log" view, you can retrieve and display the log entries that the device has recorded (see [Device Log](#) [[> 42](#)]).
- Current (error) messages and information during configuration can be found in the message window (see [Message Window](#) [[> 43](#)]).

8.11.1 Wiring Test via the "I/O Check" View

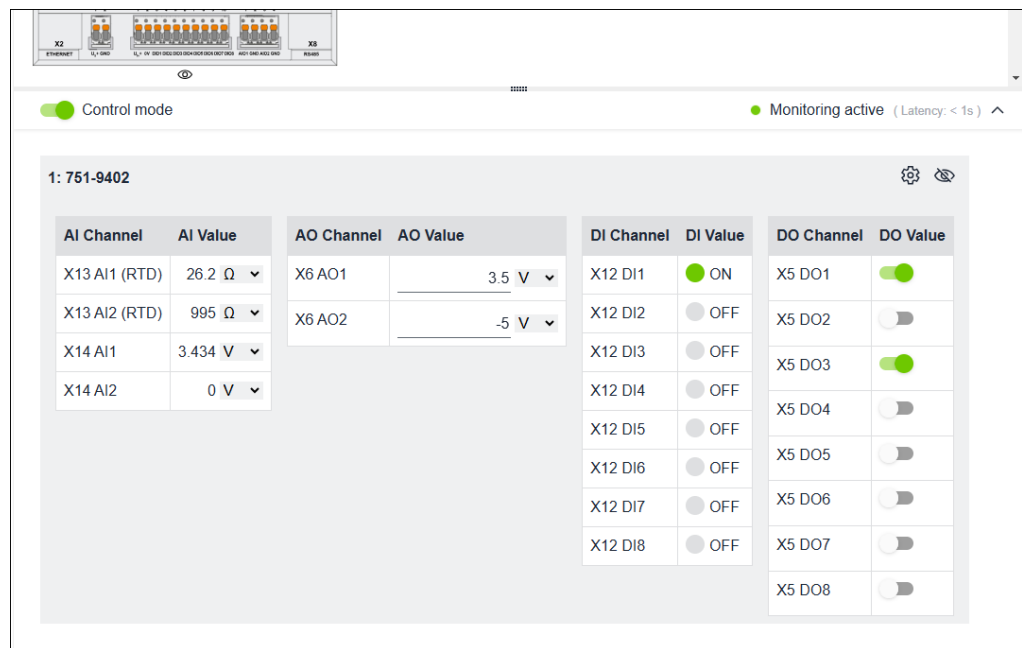
In the [I/O Check](#) [[> 27](#)] view, you can perform a wiring test for conventional analog and digital inputs/outputs of a device. Output signals can be set for test purposes ("control mode") or input states can be read into the corresponding physical unit. If the states are visualized on the device itself, e.g., via an LED, the state is displayed in the form of an LED highlighted in a corresponding color.

1. Connect your device via "Devices in the project" > **[Connect]**.
2. Open the "I/O Check" view.
3. Click the eye icon  below the device graphic.
 - ⇒ Monitoring is enabled , i.e., current status values are displayed in tabular form.
 - ⇒ The latency indicates the update cycle of the displayed device values depending on the connection, device load or other factors.
4. Compare the displayed values with your hardware, e.g., whether the green LED actually lights up on your device.
5. Besides value monitoring, you can also write or read them. Use the slider to switch to control mode.



- Change the individual values. For this purpose, use input fields for analog output modules and slide switches for digital output modules.

Note: Changes are not collected, writing is performed continuously during input.



8.12 View Device Log

- Open the "Device Log" tab.

You have two options to view log entries:

- To display device log entries directly in the "Device Log" tab, click **[Retrieve log entries]**.
- To retrieve device log entries and save them to a file, first select the desired **File output format** ("TXT" or "CSV").

Then click **[Retrieve log entries as a file]**.

- ⇒ By default, the last 100 log entries that have at least the "Informational" log level are displayed or saved.

Filter Log Entries

You have various options for filtering log entries and thus reducing long lists.

- Specify a **Maximum number of entries**:
Up to 1,000 log entries when displayed directly, or up to 100,000,000 log entries when stored in a file.
- Select the **Log Level** that should be displayed at a minimum.
Log levels indicate the severity or urgency of a log entry.
Tip: You can configure which log levels are generally logged via the "Settings" > "Logging" tab.
- Enter a string by which the **Log sources** of the entries should be filtered.
- Under **Log entries** select the point in time from which log entries are displayed. To do this, check the box and select the time and date from the calendar widget.

Configure Logging

The "Device Log" tab is used to display and filter log entries. You can configure which events are logged by the device in a different area of the interface:

1. Open the "Settings" tab.
2. Open the "Logging" page.
3. Here, for example, you can change the setting so that log entries are created starting at "Debug" log level.
4. You can also adjust the memory size reserved for the log entries.
5. You can connect an external logging server if required on the "RemoteLogging" page.

9 Uninstall

Securely uninstalling the app helps prevent various attacks. A secure uninstallation meets at least the following requirements:

- Software is uninstalled
 - Software data is deleted from the environment
 - Deleted user settings
1. Uninstall the software using Windows' built-in feature for removing programs (e.g., via the **Start menu** or via **Settings > Apps**).
 - ⇒ The WAGO Device Manager setup dialog opens.
 2. To remove all saved user settings during uninstallation, the "Remove user settings on uninstall" option is checked by default.
If you uncheck it, the following user settings will be retained by default:
 - Certificate exceptions
 - IP address range set for the network scan
 - Recently opened projects
 - Window view used
 - Language
 3. To remove the software, click [**Uninstall**].
 - ⇒ **Note:** The license repository is not removed during uninstallation because it may be used by other systems on your engineering PC.

9.1 Cleaning the Data

If the checkbox for "Remove user settings on uninstall" is not checked, the user settings are retained even after uninstallation.

User settings are saved in the following directory:

`C:\Users\[User]\AppData\Roaming\wdmanager`

The "AppData" folder is hidden by default.

- In File Explorer, enter `%appdata%\wdmanager` and press the Enter button to go to the folder directly.
- Or:
- Enable the display of hidden files and folders in the folder properties to display the folder in File Explorer.

The folder contains the following data:

Folder/File	Content
logs	Folder with log files of the WAGO Device Manager
trusted-invalid-ssl-certificates.json	Certificate exceptions
user-settings.json	User settings, e.g., IP address range for network scan, last opened projects, language used
window-state.json	Window properties, e.g., size and layout

1. Permanently delete the following files:
 - Files containing user settings (see table above)
 - Project files that you have created yourself and no longer need
2. Then delete the files from the Trash.

10 Appendix

10.1 Protected Rights

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List of Figures

Figure 1	WAGO Device Manager Homepage	16
Figure 2	Graphical User Interface	18
Figure 3	Certificate Exceptions	19
Figure 4	License Repository	21
Figure 5	"License Repository – New License" Dialog	22
Figure 6	Log In and Log Out via the WAGO Account	23
Figure 7	Ribbon (Device Actions)	23
Figure 8	Devices in the Project	24
Figure 9	Connection" View	26
Figure 10	"I/O Check" View (Example)	27
Figure 11	Device Status Indicators (Example)	28
Figure 12	Channel Status Indicators (Example)	28
Figure 13	Monitoring active (Example)	29
Figure 14	Control Mode Active (Example)	30
Figure 15	"Settings" View	32
Figure 16	"Reboot" View	37
Figure 17	"Update" View	38
Figure 18	"Update" View	38
Figure 19	"Backup/Restore" View	40
Figure 20	Overview of the licenses on the device	41
Figure 21	"Manage licenses" Dialog	42
Figure 22	Message bar	44
Figure 23	Message window	44
Figure 24	"Device from Catalog" Product Selection	46
Figure 25	"Device from Network" Product Selection	48
Figure 26	"Devices on USB" Product Selection	50
Figure 27	"Update" View	63
Figure 28	"Update" View	64

List of Tables

Table 1	Minimum System Requirements	11
Table 2	Icons and Controls in the "Settings" View.....	35
Table 3	File Handling.....	35
Table 4	Product Selection	45
Table 5	Information about Adding Devices.....	54

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