Handling an Axioline F station under Startup+

Quick start guide

PHOENIX CONTACT
INSPIRING INNOVATIONS

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Handling an Axioline F station under Startup+

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Designation: UM QS EN STARTUP+
Revision: 03
Order No.: —

This user manual is valid for:

Designation	Revision	Order No.
Startup+	2.70 or higher	2700636

Table of contents

1 For your safety

Read this user manual carefully and keep it for future reference.

1.1 Identification of warning notes

This symbol indicates hazards that could lead to personal injury.

There are three signal words indicating the severity of a potential injury.

DANGER
Indicates a hazard with a high risk level. If this hazardous situation is not avoided, it will result in death or serious injury.

WARNING
Indicates a hazard with a medium risk level. If this hazardous situation is not avoided, it could result in death or serious injury.

CAUTION
Indicates a hazard with a low risk level. If this hazardous situation is not avoided, it could result in minor or moderate injury.

This symbol together with the **NOTE** signal word warns the reader of actions that might cause property damage or a malfunction.

Here you will find additional information or detailed sources of information.

1.2 Qualification of users

The use of products described in this user manual is oriented exclusively to:

– Electrically skilled persons or persons instructed by them. The users must be familiar with the relevant safety concepts of automation technology as well as applicable standards and other regulations.
– Qualified application programmers and software engineers. The users must be familiar with the relevant safety concepts of automation technology as well as applicable standards and other regulations.

2 Basics and example project

2.1 Information about this document

This document describes the functions of the Startup+ software with an example project.

2.2 Startup+ software

Startup+ is a software for easy wiring checks.

It offers the following functions:

– Parameterization of Axioline F modules and Axioline Smart Elements of a station
– I/O check
– Diagnostics

Startup+ allows you to quickly and easily establish a connection to an Axioline F station in order to check the wiring of this station. In addition to the basic functions mentioned above, it is also possible with the Startup+ software to assign a device name and an IP address to a bus coupler, as well as to record the writing and reading of process data in a file during the I/O check to improve the documentation.

Installing the software

The software can be downloaded free of charge at phoenixcontact.net/products.

- Install the software. To do so, run the **StartupPlusSetup.exe** file.
  Then follow the installation instructions.

Interactions with PC Worx

Parallel operation of programs from the AUTOMATIONWORX Software Suite and Startup+ is in principle possible. However, when you remove a program it is necessary to do a repair installation for the product that is to remain on the PC.

2.3 Requirements

Knowledge

It is assumed the user has knowledge and experience in the operation of PCs and Windows operating systems.

Hardware

To start up the example system, the following hardware is required:

- PC
  - PC with at least 1.6 GHz, 1 Gbyte RAM and 600 Mbyte free hard disk space, Ethernet port, XGA (1024 x 768) monitor resolution, keyboard, mouse
  - MS Windows 7 SP1, MS Windows 10
  - Microsoft.net Framework 3.5 SP1
    Microsoft.net Framework 3.5 SP1 can be downloaded free of charge from the Microsoft homepage.
- Axioline F station
- Ethernet or USB connection from the Axioline F station to the PC

2.4 Hardware used

The Axioline F station used in the example project consists of the following components:

Table 2-1 Hardware used

Type	Order No.	Hardware	Firmware
AXL F BK ETH	2688459	03	1.11
AXL F DO64/1 2F	2702053	03	1.00
AXL F AI4 I 1H	2688491	02	1.11
AXL F BP SE6	1088136	00	--
AXL SE DO16/1	1088129	00	1.00
AXL SE DI16/1	1088127	00	1.00
AXL SE AO4 U 0-10	1088126	00	1.00
AXL SE DI16/1	1088127	00	1.00
AXL SE AI4 U 0-10	1088104	00	1.00
AXL SE SC-A	1088134	00	1.00

2.5 Wiring the hardware, applying voltage

Please refer to the following documentation when creating the station:
– Packing slips for the modules used
– UM EN AXL F SYS INST user manual
– UM EN AXL SE SYS INST user manual
– Data sheets for the modules used

- Create the Axioline F station, consisting of a bus coupler or controller, the I/O modules, and their periphery.
- Establish an Ethernet or USB connection from the bus coupler or controller to the PC.
- Supply the system with voltage.

3 Startup+: User interface and function calls

3.1 The Startup+ user interface

The interface is divided into the following areas:

1 Menu bar
2 Tool bar
3 Status bar
4 Project tree
5 Workspace
6 DTM catalog
7 Message window

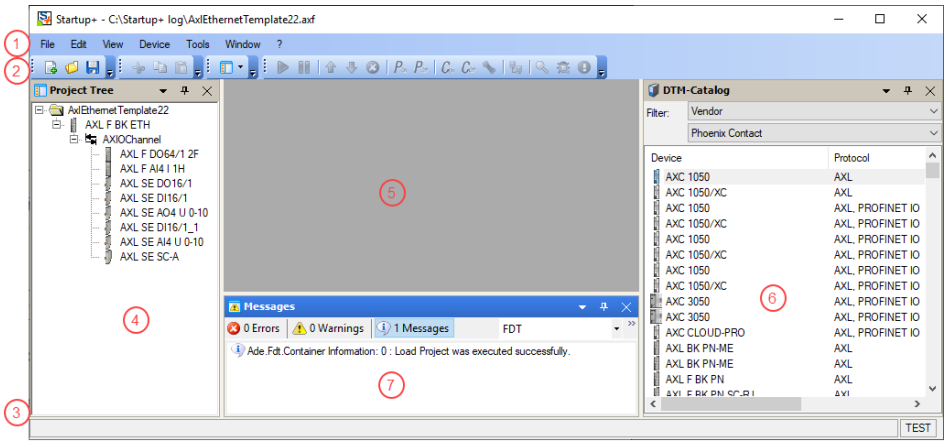


Table 3-1 User interface

Menu bar

Appearance and functioning of the menu correspond to the Windows standard.

Additional commands can be found in the various context menus, for example in the context menu of a DTM in the project tree, in the context menu of a window, or in the context menu of a message window.

You can also access the menu commands via the toolbar or by means of shortcuts.

Tool bar

Frequently used functions can be accessed quickly via the toolbar.

The meaning of a symbol is shown when you place the mouse pointer over the icon.

The following applies for both the menu bar and the tool bar: which menu items are available depend on the currently marked object that you are working on.

The color of the icon shows whether the menu item is available or not. If the icon is grayed out, the menu item is disabled — otherwise it is colored.

Status bar

The status bar shows a progress bar, status information in the form of text messages, and the name of the user currently logged in.

Project tree

The project tree shows the structure of communication connections of the field devices.

Green background:	The module is connected. It has already been actively worked on.
White background:	– The module is not yet connected when the “Connect with device” icon is shown in green. – If the “Connect with device” icon is grayed out, the module is connected. But the module has not yet been worked on online.

Workspace

The workspace is used to display the “Properties” window and the device-specific screen masks provided by the respective DTM.

DTM catalog

The current DTM catalog is displayed.

Message window

The message window displays information on the internal program execution. This information may be helpful when troubleshooting.

3.2 Function calls with Startup+

There are often several ways of calling up a function.

For example, to call the online parameters, you may proceed as follows:

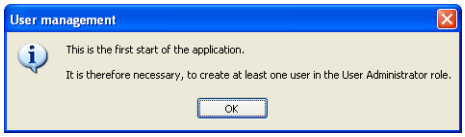
1. Context menu of the module (right-click on the module in the project tree): “Parameters, Online Parameter”
2. Icon in the command line: 
3. Menu bar of the program: “Device, Online Parameter”
4. Double-click on the entry of the module in the project tree. This opens offline parameters. When there is a connection to the module, you can send the offline parameters to the module just like the online parameters.

4 Starting the software and creating a project

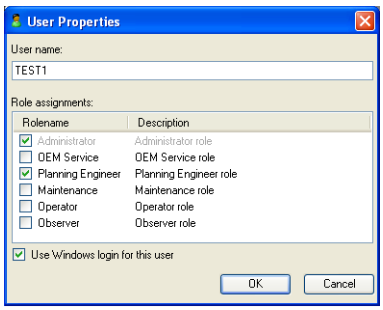
4.1 Starting the software for the first time

- Start the software. To do so, select “Phoenix Contact, Startup+” in the start menu.

Select the desired language. If you want to change the language, first follow the initial steps below. Change the language when you are requested to do so in the documentation.



- Confirm this window with “OK”.



- Define the user roles when you start the software for the first time. Define at least one user as an administrator.
- Confirm your entry with “OK”.

DTM Catalog Management

The DTM catalog of Axioline F modules is installed with the software. In the following, add these DTMs to the software.

- Search for the installed DTMs. To do so, click on the button “Search for installed DTMs” in the “DTM Catalog Management” window that appears.

All DTMs installed on the PC are shown as known DTMs.

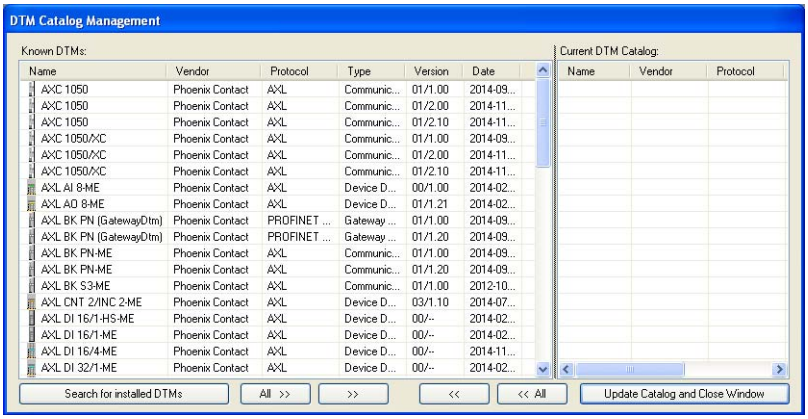


Figure 4-1 Known DTMs

- Add the DTMs to the current catalog by clicking the “All >>” button.
- Confirm the selection by pressing the “Update Catalog and Close Window” button.

Option: Adding further DTMs

You have now added all available DTMs to the software. If additional DTMs are available at a later time, add these as well. To do this, select the “Tools, DTM Catalog Management” menu.

The Axioline assistant opens after you have closed the “DTM Catalog Management” window. If you do not wish to change the language, follow the description from Section “Axioline assistant” on page 14 onwards.

Option: Changing the language

- If you want to change the language, stop the Axioline assistant with “Cancel”.
- Select the “Tools, Options..., International Settings” menu from the menu bar. Select the language.
- Confirm your selection with “OK”.
- To activate the language selection, restart the program.

Startup+ supports the German, English, French, Spanish, Italian, and Chinese languages.

4.2 Starting the software for the second time and every subsequent start

If you start the software for the second time, you are prompted to log in as a user.

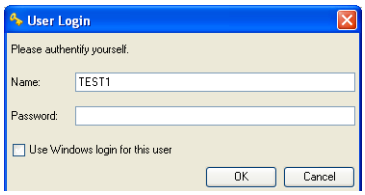


Figure 4-2 User login

- Enter the user name under “Name”.

There are two ways to enter your password:

1. Enter a password. This password will be requested every time the program is started.

Or:

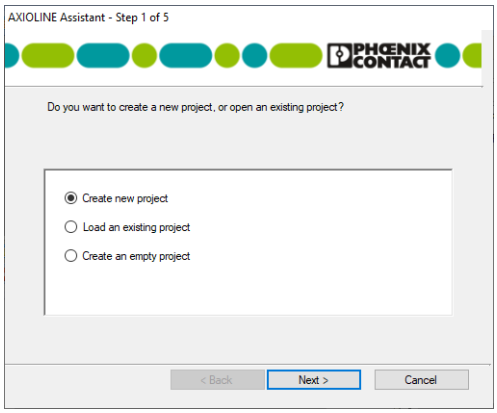
2. Activate the “Use Windows login for this user” checkbox. In this case, the password will not be requested every time the program is started.

The Axioline assistant will start after authentication.

4.3 Axioline assistant

If you start the software or create a new project via “File, new...”, the Axioline assistant opens.

4.3.1 Step 1 of 5: Creating or loading a project



- Load an existing project or create a new project.
- Confirm your selection with “Next”.

Loading an existing project

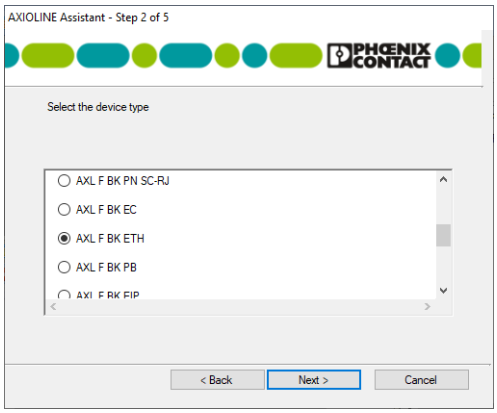
- If a project has already been created, select this project. Confirm your selection with “Finish”.

Creating a new project

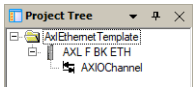
- Select “Create new project” in order to create a new project.

Please note Section “Special features of individual bus couplers and controllers” on page 40.

4.3.2 Step 2 of 5: Device type

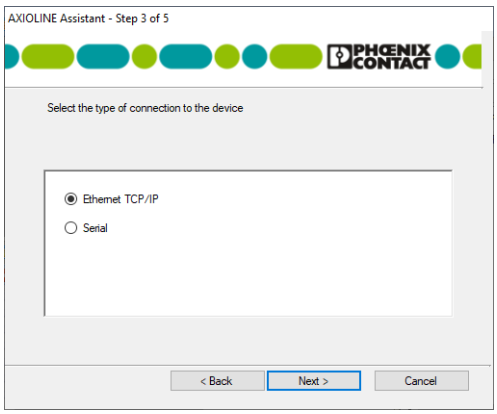


- Select the connected bus coupler (here: AXL F BK ETH).
- Confirm your selection with “Next”.



The structure of the project is created in the project tree.

4.3.3 Step 3 of 5: Connection type



- Select the type of connection between bus coupler and PC.
- An Ethernet connection is used in the example. Therefore, select “Ethernet TCP/IP”.
- Confirm your selection with “Next”.

Connection via serial interface (not selected in our example configuration)

The “Serial interface” option can in principle be used for each bus coupler. In this case, the bus coupler needs to be connected to the PC via USB.

With regard to bus couplers for PROFIBUS and EtherCAT®, the connection via serial interface is the only option available.

If the connection is established via the serial interface, step 4 of 5 is skipped.

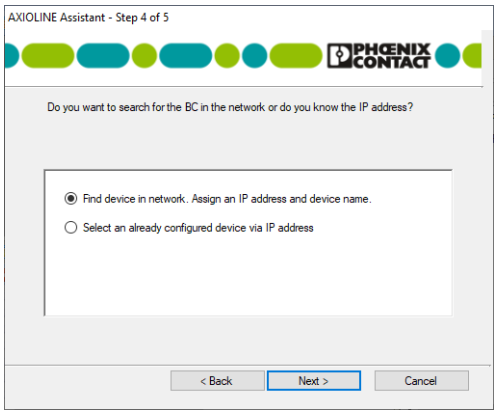
If the USB port is not detected during the first connection via serial interface:

- Select the “Configuration...” menu item from the context menu for the bus coupler (right mouse button) or  .
- Select the COM port for “Serial”. Apply your selection with “Apply”. Close the window with “OK”.
- In the project tree, select the “Scan Topology...” option via the context menu entry AXIOChannel (right mouse button).

The topology scan is started, see Section “Step 5 of 5: Determining the connected bus” on page 19.

4.3.4 Step 4 of 5: Searching for or selecting the bus coupler in the network

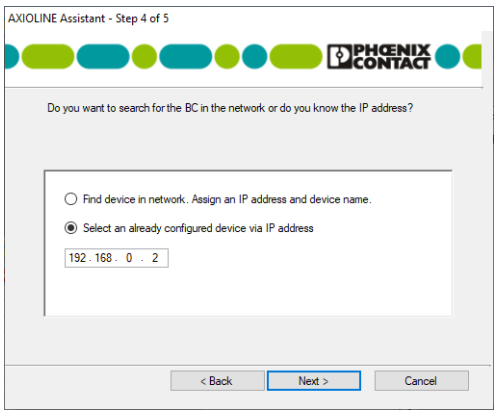
This step is only required for Ethernet connections.



- Specify how you wish to search for the bus coupler in the network.
- Select “Find device in network...” if you do not know the IP address or if you do not want to enter the address. To do so, observe the following note!
- If you know the IP address, enter it on the following screen.
- Confirm your selection with “Next”.

The “Find device in network ...” option is currently only available for controllers and bus couplers for PROFINET, Sercos, and Ethernet (starting with FW 1.30). Please observe the information in Section “Special features of individual bus couplers and controllers” on page 40.

4.3.4.1 Selection: Select a pre-configured device via IP address (used in our example configuration)



- In the example, the IP address of the bus coupler is 192.168.0.2. Therefore, activate the “Select an already configured device via IP address” option. Enter the IP address on the following screen.
- Confirm your selection with “Next”.

The next step is step 5 of 5, see Section “Step 5 of 5: Determining the connected bus” on page 19.

4.3.4.2 Selection: Find device in network. Assign an IP address and device name.

If you have selected this option, the software displays a window that enables you to search for devices in the network.

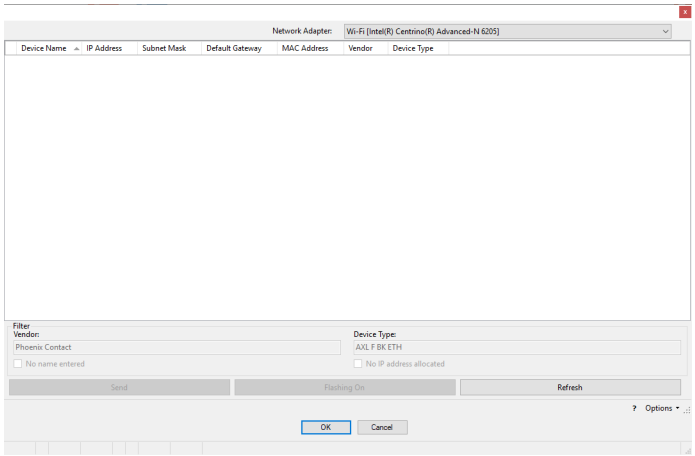


Figure 4-3 Window used to search for devices in the network

The appearance of this window depends on the bus coupler or controller used.

- Select the network card of your connection under “Network Adapter”.
- Click the “Update” button.

⇒ The current settings of the bus coupler will be displayed.

Device Name	IP Address	Subnet Mask	Default Gateway	MAC Address	Vendor	Device Type
	0.0.0.0	0.0.0.0	0.0.0.0	00:A0:45:8E:A9:50	Phoenix Contact GmbH & Co. KG	AXL F BK PN

Figure 4-4 Bus coupler found with factory settings

- Change the settings if required.

Follow the PROFINET naming conventions when assigning a name. If you assign a name that does not conform to the naming conventions, transmission will not be possible. In this case, the marker bar is highlighted in red, and the “Send” button is grayed out.

- Confirm the settings with “Send”. When the settings have been applied successfully, a green check mark appears to the left of the row.
- Click “Refresh” to update the window.

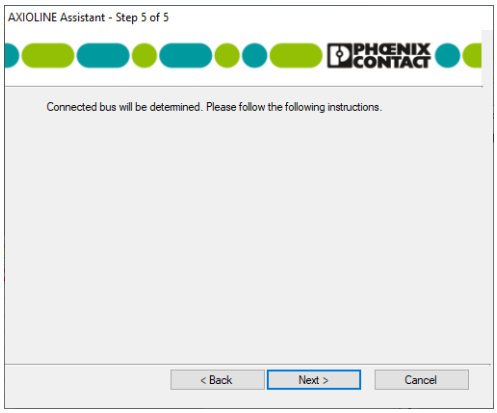
test-pn	192.168.0.2	255.255.255.0	0.0.0.0	00:A0:45:8E:A9:50	Phoenix Contact GmbH & Co. KG	AXL F BK PN

Figure 4-5 IP address of the bus coupler

- Confirm the settings with “OK”.

⇒ This opens step 5 of 5 in the Axioline assistant.

4.3.5 Step 5 of 5: Determining the connected bus

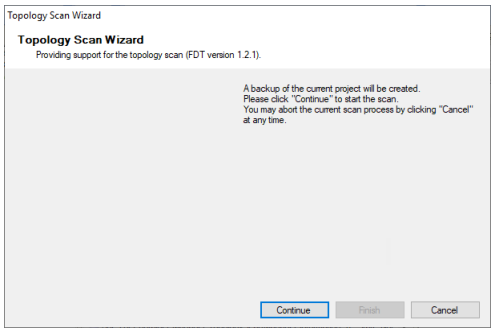


The connected bus is determined.

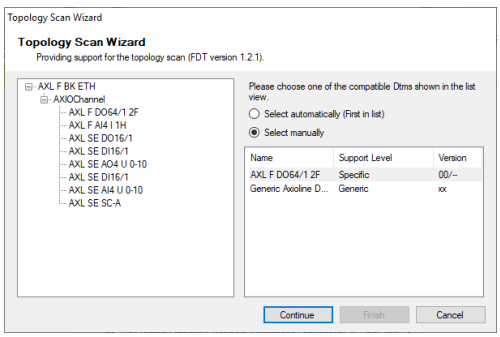
- Confirm the window with “Next”.

When using a controller, please observe the following:

The configuration frame for the connected bus must be saved on the controller. Create this configuration frame if it does not already exist. To do this, proceed as described in Section “Controllers (AXC 1050...)” on page 42.

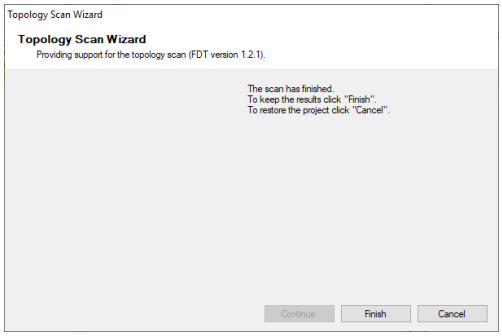


- Confirm the window with “Next”.



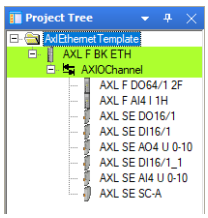
The connected bus will be displayed.

- Select the compatible DTMs either automatically or manually.
- Confirm the window with “Next”.



The topology has been scanned.

- Accept the topology with “Finish”.
- The following window shows all steps that have been carried out. Exit this window with “Finish”.



The Axioline F station is displayed in the project tree.

5 Parameterization, diagnostics, and I/O check

There are often several ways to call up a function (see Section “Function calls with Startup+” on page 10). Information about where you can find the corresponding command in the menu bar and how to call it using the toolbar is given in the following explanations. In most cases, the same command is also available in the context menu for the device. You can call the context menu by right-clicking on the device in the project tree.

Example: Connecting the device

- Menu bar: “Device, Connect”
- Context menu: “Connect”
- Tool bar:

5.1 Parameterization

You can read the parameterization and change it online or offline.

- Establish the connection to the device. For example, select “Device, Connect” or .
- Upload the parameters from the device. For example, select “Device, parameter upload” or .

Since you are now working actively on the device, it is shown with a green background in the project tree.

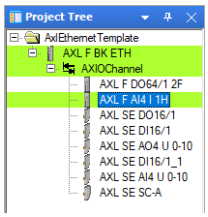


Figure 5-1 Active communication with the device

- Now you can parameterize the device. For example, select “Device, Online Parameter” or .

The window with the parameters opens. Different information may be displayed depending on the module.

Identification

The device rating plate is shown for each module under “Parameter Menu, ..., Identification”.

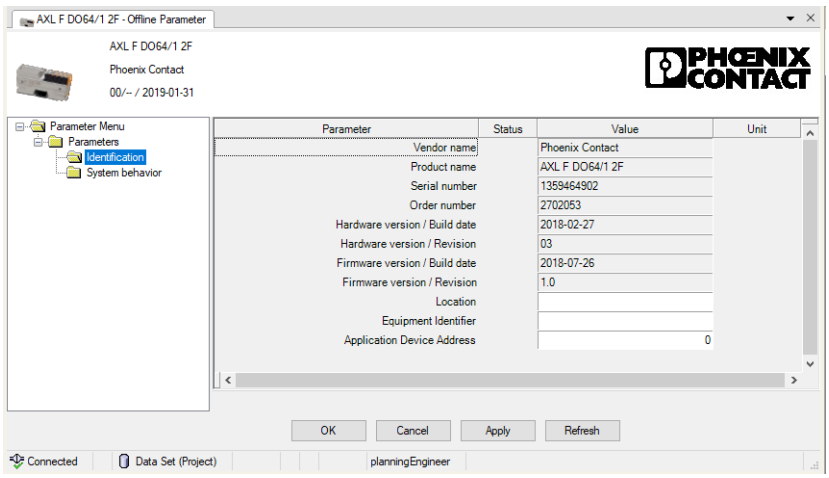


Figure 5-2 Parameters for identification

- Adapt these entries. Confirm your entries with “Apply”. The parameterization will be sent to the module.
- Then confirm with “OK”.
- Answer the following question.

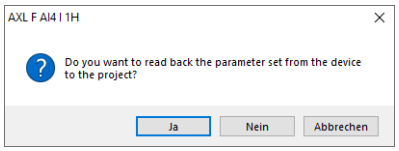


Figure 5-3 Read back parameter record?

If you answer this question with “Yes”, the changes will also be transferred to the offline project data. If you answer this question with “No”, the changes will not be applied in the offline project data. In this case, online and offline project data will be different. The window will be closed after you have answered the question.

Parameters/system behavior

- If a module can be parameterized, the current parameterization is shown in the parameter menu.

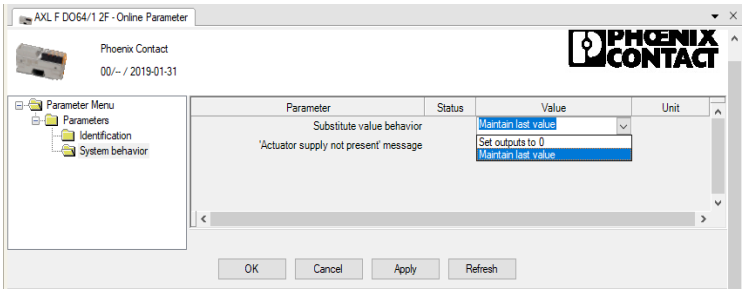


Figure 5-4 Parameterization of AXL F DO64/1 2F

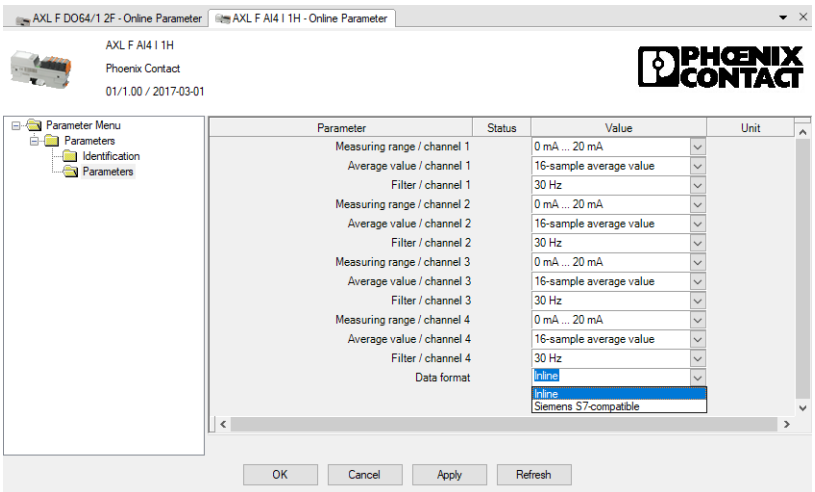


Figure 5-5 Parameterization of AXL F AI4 I 1H

- Adapt the parameterization. Confirm your entries with “Apply”. The parameterization will be sent to the module.
- Then confirm with “OK”.
- Answer the following question.

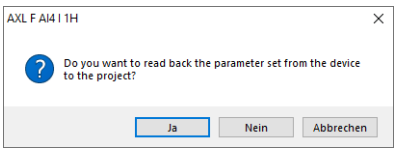


Figure 5-6 Read back parameter record?

If you answer this question with “Yes”, the changes will also be transferred to the offline project data. If you answer this question with “No”, the changes will not be applied in the offline project data. In this case, online and offline project data will be different. The window will be closed after you have answered the question.

Not transmitted changes

Changes that have not yet been transmitted are indicated with a pen icon in the “Status” column as well as in the status bar.

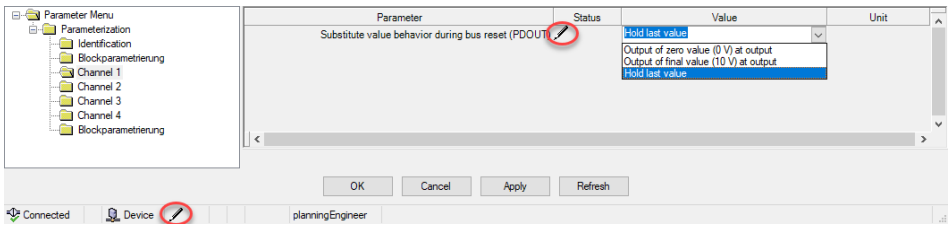
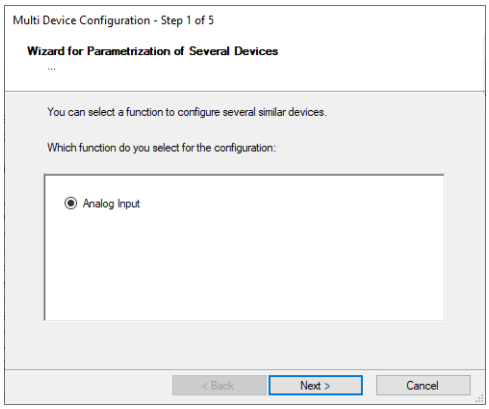


Figure 5-7 Not transmitted changes

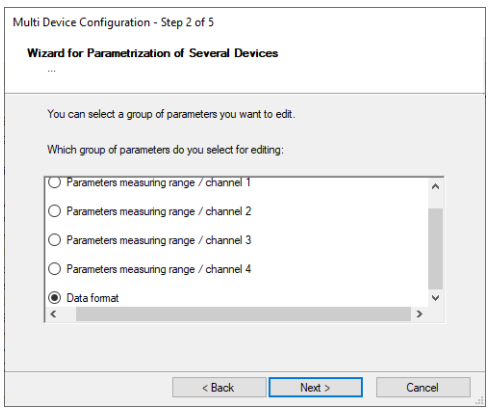
Parameterization of several devices

Specific functions can be parameterized for several devices in only one step.

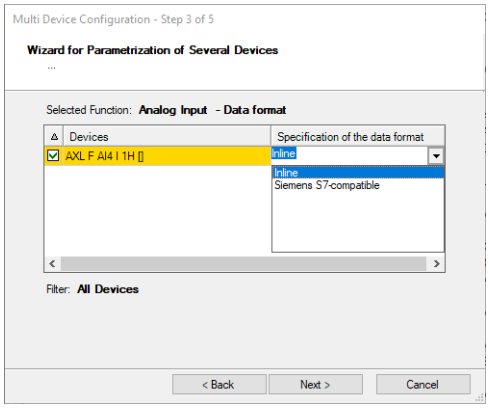
- Select a device in the project tree window whose parameters you want to configure for several devices (e.g., AXL F AI4 I 1H).
- Select “Device, Configuration of Several Devices ...”.



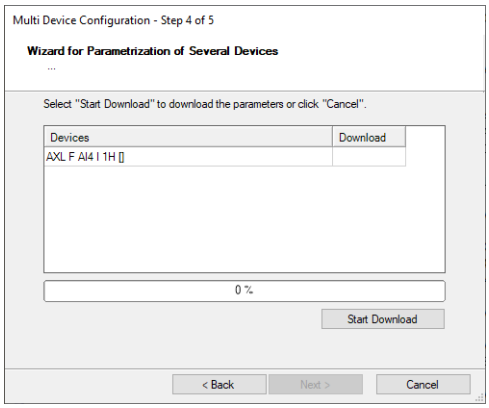
- Select the function to be configured for several devices. Here: “Analog input”
- Confirm your selection with “Next”.



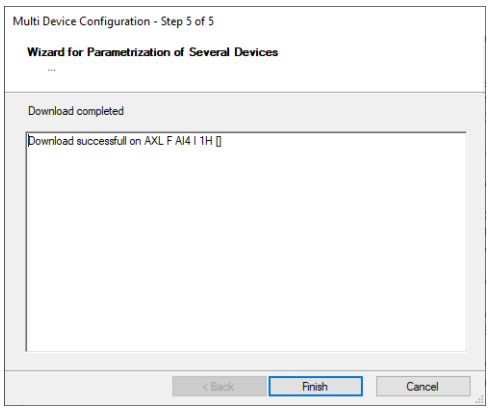
- Select the group of parameters that you want to edit. Here: “Data format”
- Confirm your selection with “Next”.



- Select on the left the check boxes of the devices for which the parameterization should be valid.
- Specify the common parameterization of all selected devices.
- Confirm your selection with “Next”.



- Select “Start Download” in order to download the parameters.
- Once the download has been completed successfully, confirm this step with “Next”.



- Confirm the message informing you about the successful completion of the download with “Finish”.

5.2 Diagnostics

The status of the station and individual devices can best be monitored via the entry of the bus coupler.

- Double-click on the bus coupler entry in the project tree. This opens the diagnostic window.

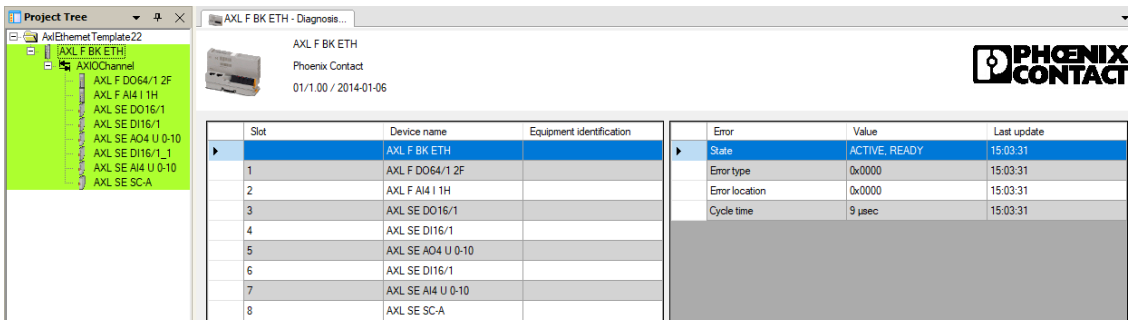


Figure 5-8 Diagnostics: OK

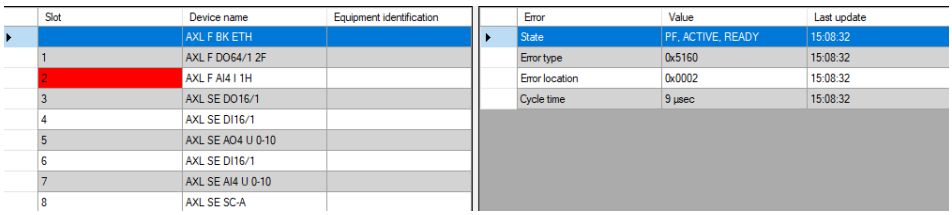


Figure 5-9 Diagnostics: An error has occurred

- The error cause will be displayed when you switch to the module concerned under “Slot”.

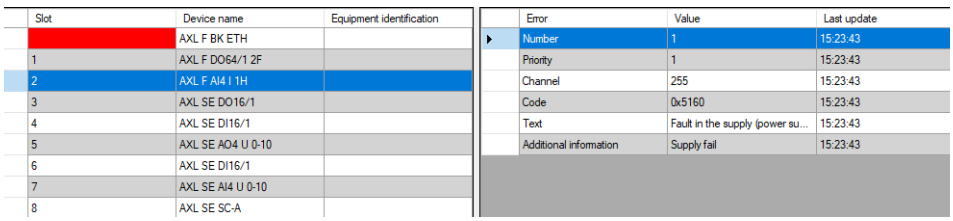


Figure 5-10 Diagnostics: Error cause

- You can also call the diagnostics function on the individual modules. Select the “Device, Diagnostics” entry from the context menu of the module (right mouse button) or .

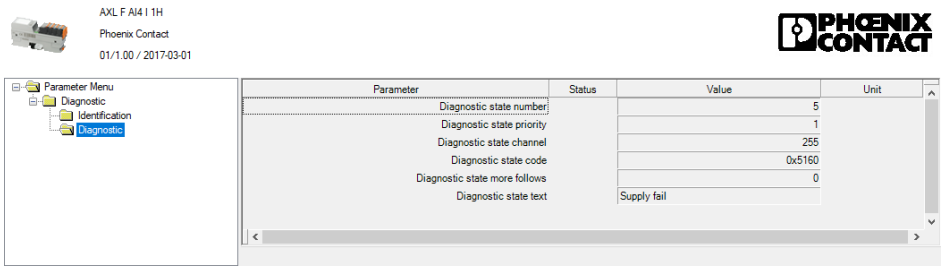


Figure 5-11 AXL F AI4 I 1H diagnostics

5.3 I/O check

- Select the I/O check function on a connected module. To do so, select the “Functions, IO Check” entry from the context menu (right mouse button) of the module.

If an I/O check has not been implemented in a module via the current firmware version, you will receive the “No IoCheck control defined” message.

In this case, close the window with “Close”.

If an I/O check is required, use a module with a higher firmware version or a different module.

If the I/O check can be carried out, a window appears with areas representing the process data of the module.

- Click the “Refresh on” button in this window.

Activities can be logged in this window; see Section “Logging process data” on page 35.

In addition, you can specify the output values for output modules.

5.3.1 Digital output modules

The current status of the digital outputs of the selected module is displayed here.

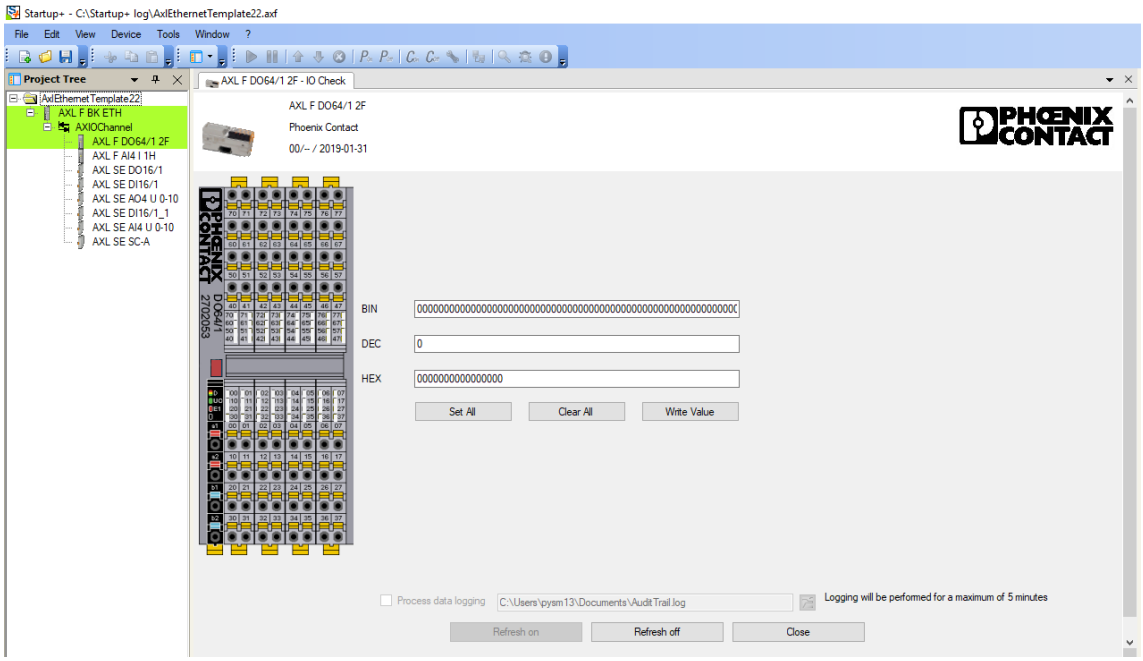


Figure 5-12 IO check for AXL F DO64/1 2F

Activating or deleting outputs

With output modules, you have different options to activate or delete one or several outputs.

1. **Activate or delete each output separately in the graphic**

- Move your mouse pointer over the outputs in the graphic. On a permissible terminal point, the mouse pointer changes into a hand.
- Click on the corresponding output. When you modify an output for the first time, the “Do you want to start writing the process data?” prompt appears.

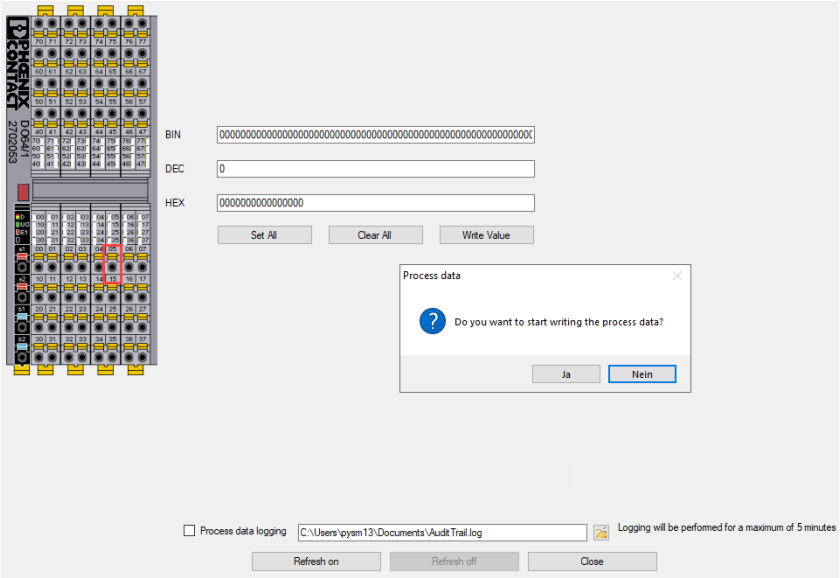


Figure 5-13 Activating the output

- If you confirm this prompt with “Yes”, the following actions take place:
  - The module output is activated or deleted.
  - In the graphic, the color of the LED changes accordingly.
  - The process data value is updated in the display.

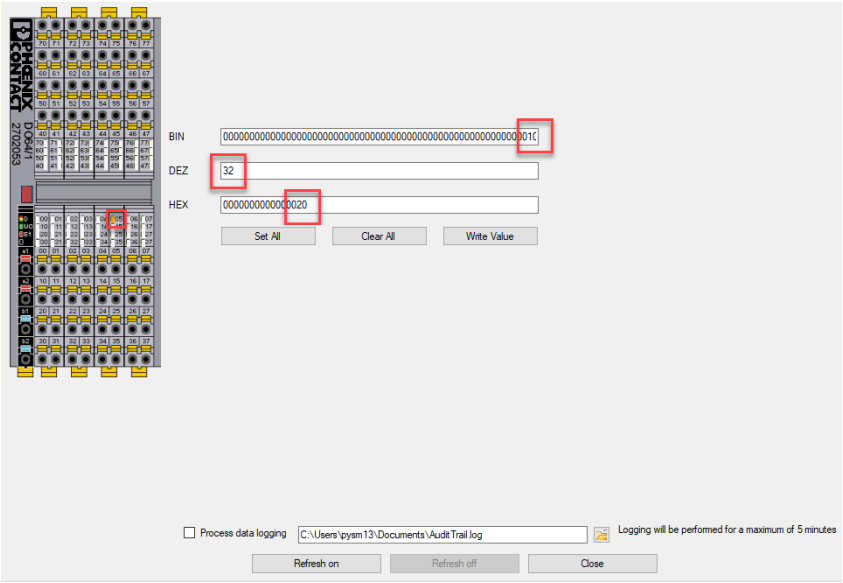


Figure 5-14 Result: Output activated

You can now activate or delete additional outputs. The last status is retained when you switch off the refresh feature or when you close the window.

2. “Set All” or “Clear All” buttons

- In order to activate all outputs, first click on the “Set All” button.

⇒ This causes all outputs to be set to “1” in the interface.

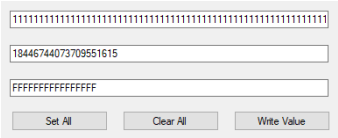


Figure 5-15 Activating all outputs

- Press the “Clear all” button to clear all the outputs.

3. Specifying the process data value

- Specify in the corresponding area the process data value for the outputs as a binary, decimal, **or** hexadecimal value.
- In order to transfer this value to the module, press the Enter key or click the “Write Value” button.

⇒ This causes the module outputs to be set. In the user interface, the values are updated in the different data formats and the LEDs shown in the graphic are adapted accordingly.

5.3.2 Digital input modules

The current status of the digital inputs of the selected module is displayed here.

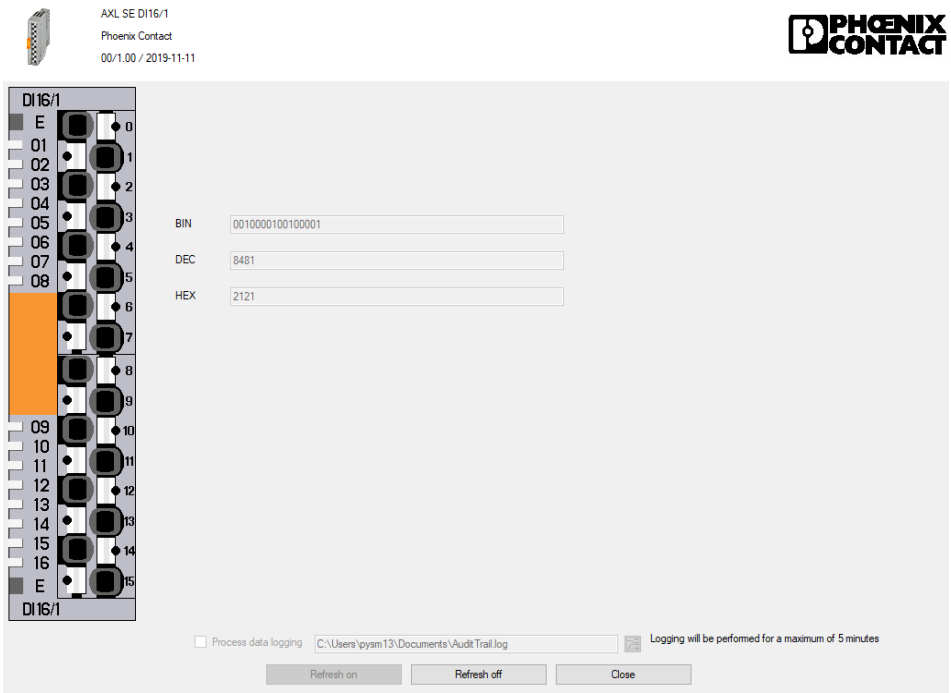


Figure 5-16 I/O check for AXL SE DI16/1

Press the “Update” button to display the status of the inputs. The status LEDs show the status of the inputs. The process data are indicated as binary, decimal, or hexadecimal values.

5.3.3 Analog input and output modules

- Activate the inputs or outputs that you want to monitor in the “Diagram” column.

⇒ This leads to an input or output description under “Signal description”.

The current process data of the module is displayed as follows.

– Under process value as a numerical value and as a slider

– In a diagram as a graph

The process data is shown in the diagram only for the inputs or outputs that have been selected under “Diagram”. The process data is shown in the LOG file on request.

For output modules: You can change the process data for all outputs. It is transferred to the module regardless of whether the output has been selected under “Diagram” or not.

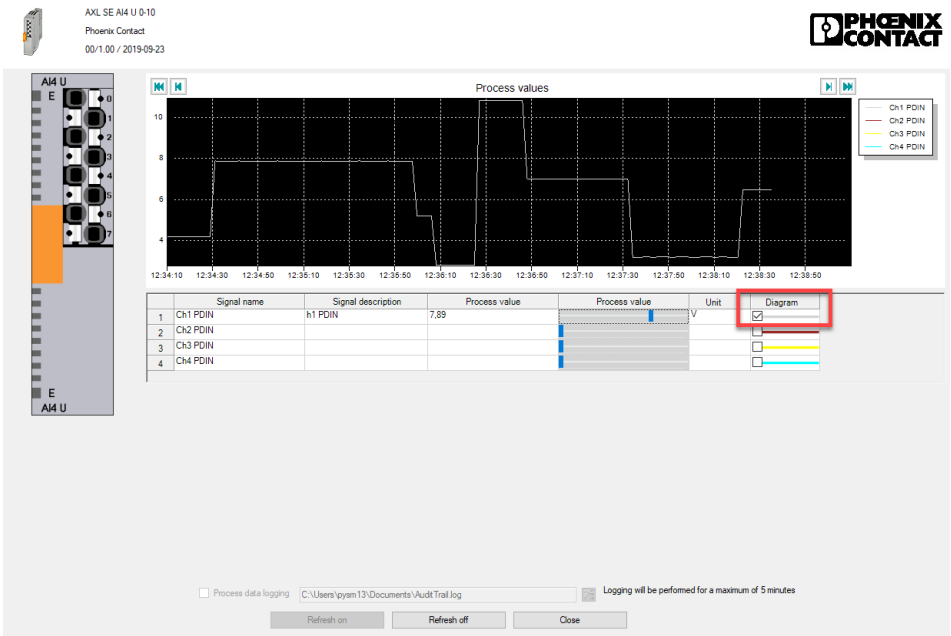


Figure 5-17 I/O check AXL SE AI4 U 0-10

You can change the position in the diagram as follows:

	Back to starting point
	Put back by five minutes
	Put forward by five minutes
	Forward to end point
Mouse	Position the mouse pointer on the diagram. The pointer changes to a hand. Hold down the mouse button to move the diagram.

For output modules, you can change each output by entering a value in the left-hand column “Process value” or modify it in the right-hand column “Process value” by changing the position of the slider.

- Change the process value by specifying the value or changing the position of the slider.
- Complete the action by confirming with <Enter> or by clicking anywhere else. Only then will the new value be accepted.

The output is set accordingly. Now you can specify more output values. The last status is retained when you switch off the refresh feature or when you close the window.

5.3.4 Logging process data

For every module you can log the process data for up to five minutes.

- To do so, activate the “Process data logging” checkbox in the window for the I/O check.

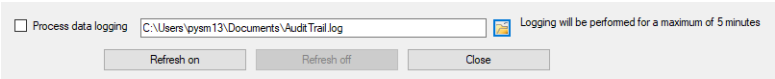


Figure 5-18 Logging process data

- To save the LOG file, select where you would like to save it and the file name. To do so, press the folder symbol .
- To start logging, press the “Refresh on” button.

The data is logged (up to five minutes) until you press the “Refresh off” button.

AuditTrail.log - Editor

Timestamp	Device type	Channel	Value
09.12.2019 14:16:27	AXL SE DI16/1	1	0
09.12.2019 14:16:27	AXL SE DI16/1	2	0
09.12.2019 14:16:27	AXL SE DI16/1	3	1
09.12.2019 14:16:27	AXL SE DI16/1	4	0
09.12.2019 14:16:27	AXL SE DI16/1	5	0
09.12.2019 14:16:27	AXL SE DI16/1	6	0
09.12.2019 14:16:27	AXL SE DI16/1	7	0
09.12.2019 14:16:27	AXL SE DI16/1	8	1
09.12.2019 14:16:27	AXL SE DI16/1	9	0
09.12.2019 14:16:27	AXL SE DI16/1	10	0
09.12.2019 14:16:27	AXL SE DI16/1	11	1
09.12.2019 14:16:27	AXL SE DI16/1	12	0
09.12.2019 14:16:27	AXL SE DI16/1	13	0
09.12.2019 14:16:27	AXL SE DI16/1	14	0
09.12.2019 14:16:27	AXL SE DI16/1	15	0
09.12.2019 14:16:27	AXL SE DI16/1	16	0
09.12.2019 14:16:39	AXL SE DI16/1	1	0
09.12.2019 14:16:39	AXL SE DI16/1	2	0
09.12.2019 14:16:39	AXL SE DI16/1	3	1
09.12.2019 14:16:39	AXL SE DI16/1	4	0
09.12.2019 14:16:39	AXL SE DI16/1	5	0
09.12.2019 14:16:39	AXL SE DI16/1	6	0
09.12.2019 14:16:39	AXL SE DI16/1	7	0
09.12.2019 14:16:39	AXL SE DI16/1	8	1
09.12.2019 14:16:39	AXL SE DI16/1	9	0
09.12.2019 14:16:39	AXL SE DI16/1	10	0
09.12.2019 14:16:39	AXL SE DI16/1	11	1
09.12.2019 14:16:39	AXL SE DI16/1	12	1
09.12.2019 14:16:39	AXL SE DI16/1	13	0
09.12.2019 14:16:39	AXL SE DI16/1	14	0
09.12.2019 14:16:39	AXL SE DI16/1	15	0
09.12.2019 14:16:39	AXL SE DI16/1	16	0

Figure 5-19 Logged process data

6 Functions on the bus coupler

Additional functions are available on the bus coupler.

6.1 Device list

- Open the “Functions, Device List” menu item from the context menu (right mouse button) for the bus coupler.

The connected modules are displayed.

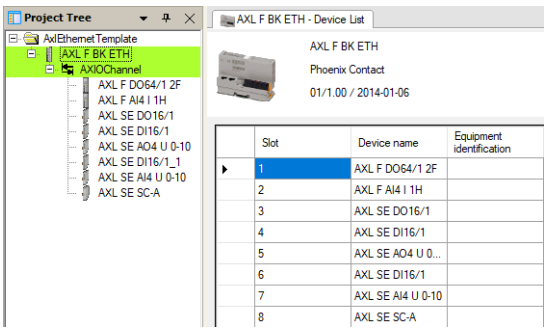


Figure 6-1 Device list

6.2 Parameter view

- Open the “Functions, Parameter View” menu item from the context menu (right mouse button) for the bus coupler.

In the parameter view, the “Parameter View” and “Firmware Update” tabs are available.

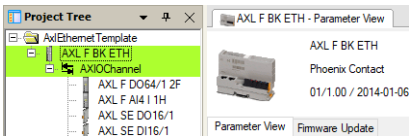


Figure 6-2 Parameter view

6.2.1 Parameter view

Information on the bus coupler is shown under the “Parameter View” tab.

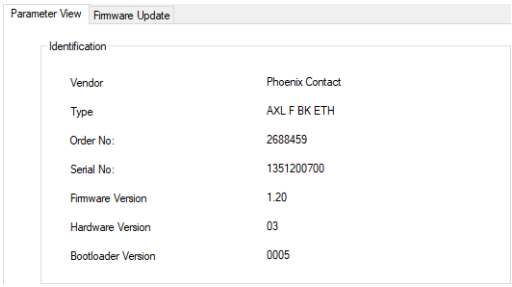


Figure 6-3 Parameter view: Bus coupler identification

6.2.2 Firmware update

A firmware update is only possible via USB. If you wish to update the firmware, connect your PC and the bus coupler via a USB cable.

Using Startup+, you can update the firmware on the bus coupler.

You can find new firmware for your bus coupler on the Internet in the download area for the bus coupler at phoenixcontact.net/products, if available.

Save the update file to your PC.

The file name is cxxxxxxxx.fw (xxxxxxxx = order number). E.g. c2688459.fw for the AXL F BK ETH bus coupler.

- Open the “Functions, Parameter View” menu item from the context menu (right mouse button) for the bus coupler.
- Switch to the “Firmware Update” tab.
- Select the update file via the folder symbol .
- Click the “Update” button.
- Follow the instructions.

6.3 Configuration files

6.3.1 Bus coupler for Ethernet (AXL F BK ETH)

Using Startup+, you can create an SVC file for the AXL F BK ETH startup parameterization for the connected configuration.

- Open the “Functions, Generate Configuration File” menu item from the context menu for the bus coupler (right mouse button).
- Select the path to where you want to save the file using the file selection icon. Assign the file name *config.svc*.
- Close the window with “Save”.

⇒ The file path and file name are shown in the corresponding field.

- Click the “Generate” button.

⇒ This creates the SVC file. You receive the “The configuration file was created in the defined directory.” confirmation message.

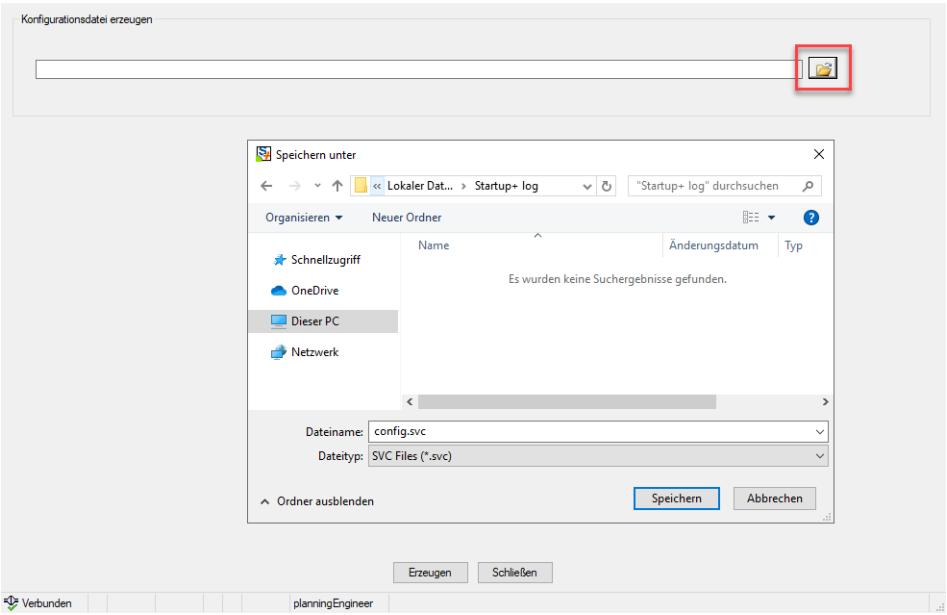


Figure 6-4 Generating the configuration file

The SVC file is saved on your PC.

You can save this file on the bus coupler. This saves the startup parameterization of the connected modules. To do this, proceed as follows:

- Open the FTP area for the bus coupler. Enter the IP address of the bus coupler directly in the address line of Windows Explorer (.e.g., ftp://192.168.0.2).
- If required, rename the *config.svc* file existing on the bus coupler (e.g. to *config_old.svc*) or save it on your PC.
- Copy the created *config.svc* file and paste it onto the bus coupler. Overwrite the *config.svc* file that is already available on the bus coupler if it should not be saved.

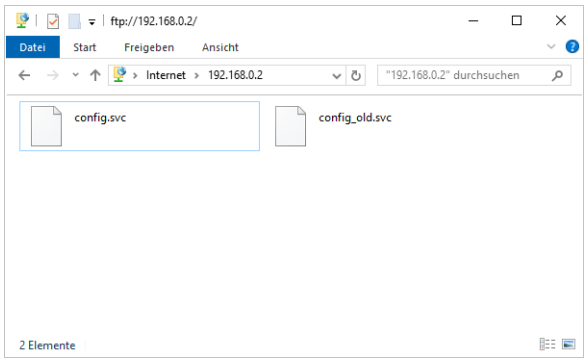


Figure 6-5 FTP area of the bus coupler

When starting up the bus coupler with the connected configuration, the stored parameterization will be transferred to the modules.

6.3.2 Bus coupler for EtherCAT® (AXL F BK EC)

You can create a configuration file in the XML format for the EtherCAT® AXL F BK EC bus coupler. You can import this file directly into the respective engineering system (e.g. TwinCAT®).

- Open the “Functions, Generate Configuration File” menu item from the context menu for the bus coupler (right mouse button).
- Select the path to where you want to save the file using the file selection icon. Assign the file name (e.g. “config.xml”).
- Close the window with “Save”.

⇒ The file path and file name are shown in the corresponding field.

- To create the XML file, click the “Generate” button.

⇒ You receive the “The configuration file was created in the defined directory.” confirmation message.

You can now import the generated XML file into your engineering system in the usual manner.

7 Special features of individual bus couplers and controllers

7.1 Bus couplers for Ethernet (AXL F BK ETH..., AXL F BK SAS)

In order to operate a bus coupler for Ethernet using Startup+, the connected local bus must be known on the bus coupler. In addition, the bus coupler requires a fixed IP address.

To meet these requirements, proceed as follows:

Prerequisite: The station must be created and supplied with power.

In the bus coupler delivery state, the plug and play mode is activated (yellow PP LED is on).

A change of the switch position during operation has no effect. Therefore, restart the bus coupler every time after modifying the switch position. To do this, perform a voltage reset or press the reset button.

• If the bus coupler is not in Plug and Play mode, activate this mode. In plug and play mode, the bus coupler reads in the connected I/O modules and stores the configuration in the bus coupler.	Switch position 1A
• Deactivate the plug and play mode to change to normal mode.	Switch position 1B
• Assign a fixed IP address to the bus coupler (e.g., IP address 192.168.0.x using a rotary coding switch)	Switch position 01...50

You can now operate the bus coupler using Startup+.

7.2 Bus couplers for PROFINET (AXL F BK PN...)

In the delivery state, the bus coupler has no preset device name and IP parameters.

In this case, select “Find bus coupler in network. Assign an IP address and name.” in step 4 of 5. Assign the IP address and the name. See Section “Step 4 of 5: Searching for or selecting the bus coupler in the network” on page 17.

7.3 Bus couplers for PROFIBUS (AXL F BK PB)

Connect this bus coupler to the PC via a USB connection.

7.4 Bus couplers for EtherCAT® (AXL F BK EC)

Connect this bus coupler to the PC via a USB connection.

7.5 Bus couplers for Sercos (AXL F BK S3)

In the delivery state, the IP address 192.168.0.10 and the subnet mask 255.255.255.0 are preset on the bus coupler.

Make sure that your PC has suitable IP settings. If this is the case, you do not have to make any further settings.

7.6 Controllers (AXC 1050...)

In the delivery state, the controller has no preset IP address.

- Follow steps 1 to 4 of the Axioline assistant as described in Section “Axioline assistant” on page 14.
- If a valid configuration frame has not yet been saved on the controller, exit the assistant by clicking the “Cancel” button at the beginning of step 5 of 5.
- Establish a connection to the controller.
- You can open the diagnostics feature on the controller by double-clicking on the AXC 1050 entry, via the “Diagnostics” menu item from the context menu (right mouse button), or in the command line using the icon.
- In the “User” area, enter “Administrator” in the name field. Confirm this by pressing “Login”.

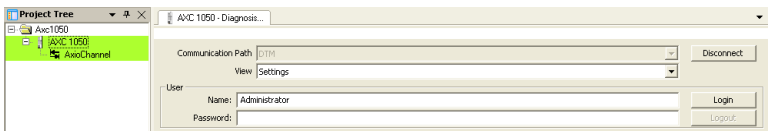


Figure 7-1 Diagnostics: Login

- After you have successfully logged in, switch to the “Axioline Diagnostic” view.

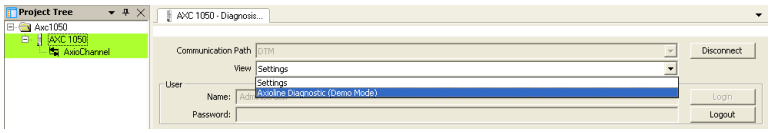


Figure 7-2 View: Axioline Diagnostic

- Select the “Create configuration frame” command from the context menu (right mouse button) for the controller.

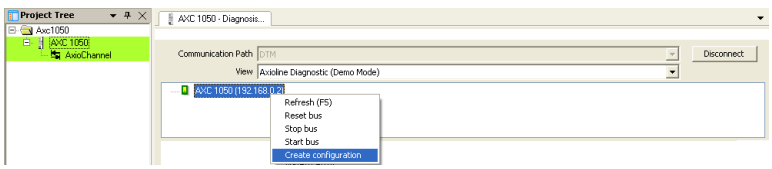


Figure 7-3 Create configuration frame

If a configuration frame has already been saved on the controller that does not correspond to the connected bus configuration, first select “Reset bus”. Then, select “Create configuration frame”.

The configuration frame will be created and saved on the controller.

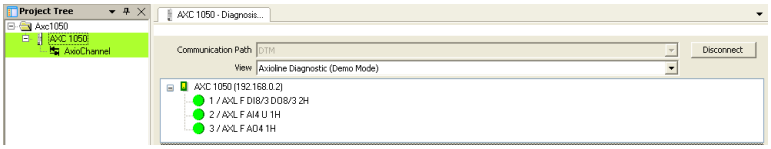


Figure 7-4 Configuration frame

- Disconnect the controller in the diagnostics window. Click the “Disconnect” button.
- Close the window.
- In the project tree, select the “Scan Topology...” command from the context menu entry “AXIOChannel” (right mouse button).

⇒ This opens step 5 of 5 in the Axioline assistant, see Section “Step 5 of 5: Determining the connected bus” on page 19.

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