Pepperl+Fuchs Discovery and Configuration Tool

Brief Instructions

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With regard to the supply of products, the current issue of the following document is applicable: The General Terms of Delivery for Products and Services of the Electrical Industry, published by the Central Association of the Electrical Industry (Zentralverband Elektrotechnik und Elektroindustrie (ZVEI) e.V.) in its most recent version as well as the supplementary clause: "Expanded reservation of proprietorship"

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1 Introduction

This document describes the principle of the Pepperl+Fuchs Discovery and Configuration Tool and lead you through the installation procedure and the TCP/IP settings.

Downloading software components from the Pepperl+Fuchs website

To retrieve and download software components from the Pepperl+Fuchs website, proceed as follows:

1. Go to www.pepperl-fuchs.com.

2. Use the website **Search** function and enter the name of the component you are looking for. Alternatively, go to the Product Selector, and from the navigation tree choose **Software**.

Tip

Administrator Rights in Microsoft® Windows®

To install software on your Microsoft® operating system you need administrator rights. Ensure that you are logged on with administrator rights.

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2 Product Description

The Pepperl+Fuchs Discovery and Configuration Tool (PFDCT) is used to configure the basic TCP/IP network settings of the supported devices and to update the firmware of the device.

PFDCT can access supported devices, even if the TCP/IP settings are not compatible to the currently used network, as long as the PC running the software is located in the same subnet as the supported devices.
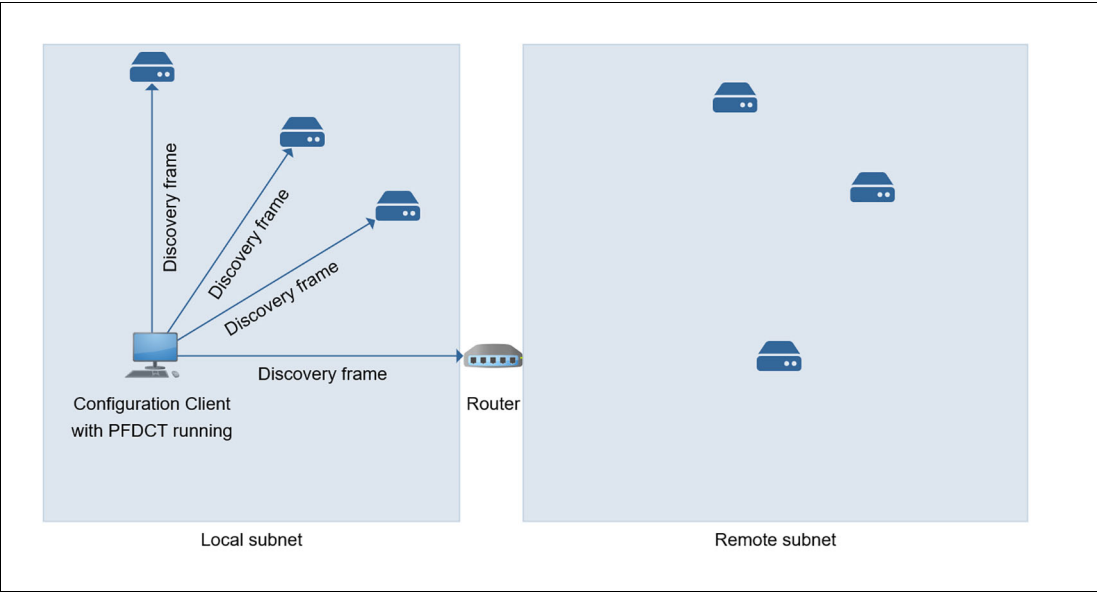
2.1 Function Principle

Figure 2.1

The PFDCT sends out Discovery frames from the PC it is running on.

Because Discovery frames do not have a dedicated destination address, Discovery frames are received from all devices in local subnet. Devices that understand the Discovery frames respond regardless of the configuration in terms of TCP/IP communication parameters, IP address, and subnet mask. So the PFDCT can discover and display all devices in local subnet which support the special Discovery frames.
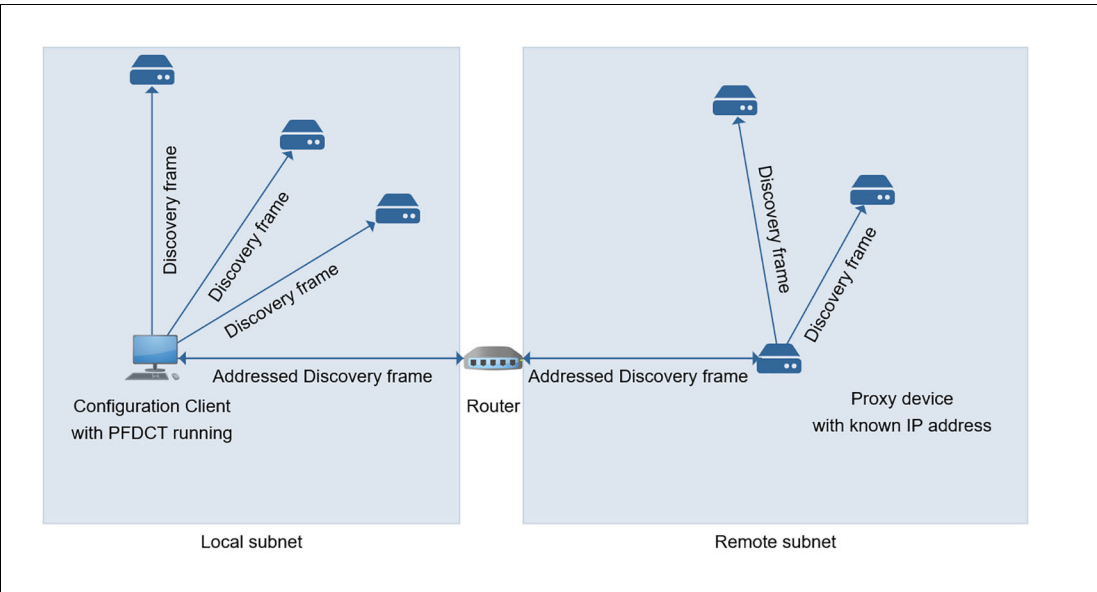

Figure 2.2

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Because Discovery frames do not have a dedicated destination address, Discovery frames are not forwarded to other subnets. As result PFDCT does not display devices being located in a remote subnet.

To get devices in a remote subnet, an IP address of a device which supports the Discovery frames inside this remote subnet is required. The PFDCT can communicate with this device via the specified IP address. The device in the remote subnet then operates as a proxy device. That means, the device sends out the Discovery frames on behalf of PFDCT in the remote subnet. The proxy device receives the responses and sends them to PFDCT. The PFDCT displays all devices in the remote subnet in a separate section of the main view.

Note

Ethernet-APL rail field switches do not serve as proxy device for accessing devices on a remote network. To manage Ethernet-APL rail field switches, the PFDCT must be directly connected to a subnet. Alternatively, a Pepperl+Fuchs device that provides PFDCT proxy capabilities must be present in the subnet.

Note

The PFDCT supports standards discovery methods for HART-IP and EtherNet/IP^{TM} in addition to the Pepperl+Fuchs proprietary discovery protocol.

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3   Installation

Installing Pepperl+Fuchs Discovery and Configuration Tool (PFDCT)

1.   Download the PFDCT to your PC.

2.   If necessary: Unzip the package to a temporary folder of your choice.

3.   Run the PFDCTSetup.exe.
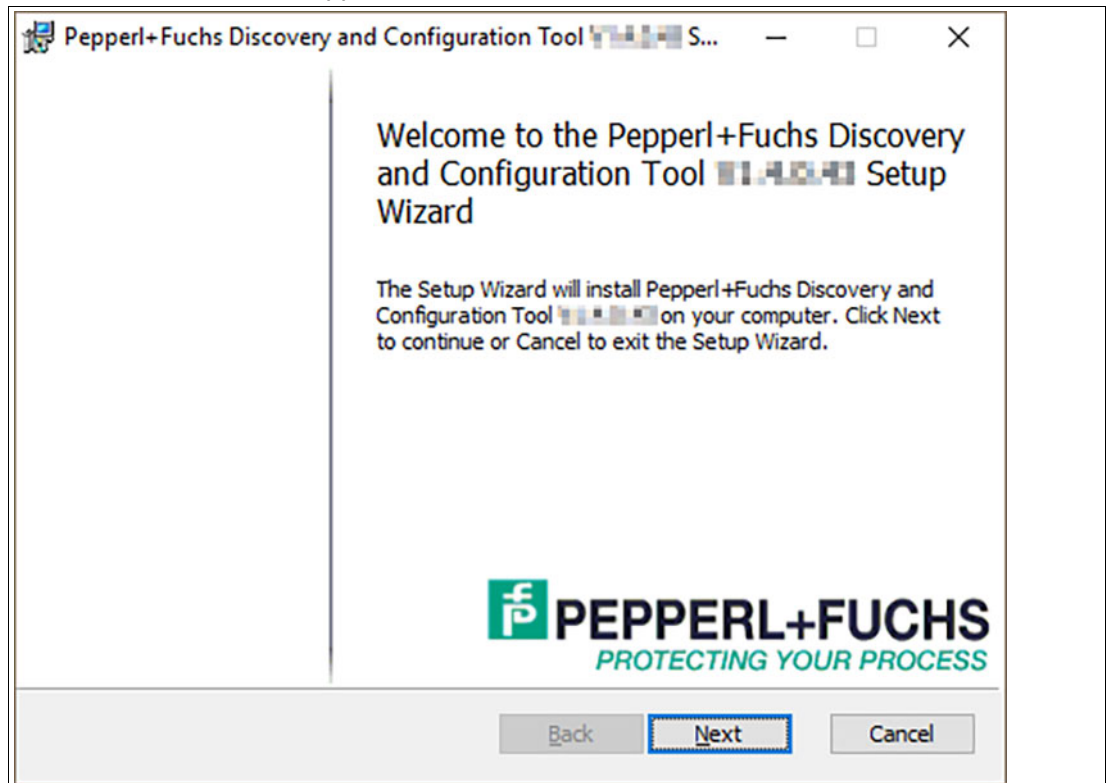
↳ The installation wizard appears.

Figure 3.1   Installation wizard

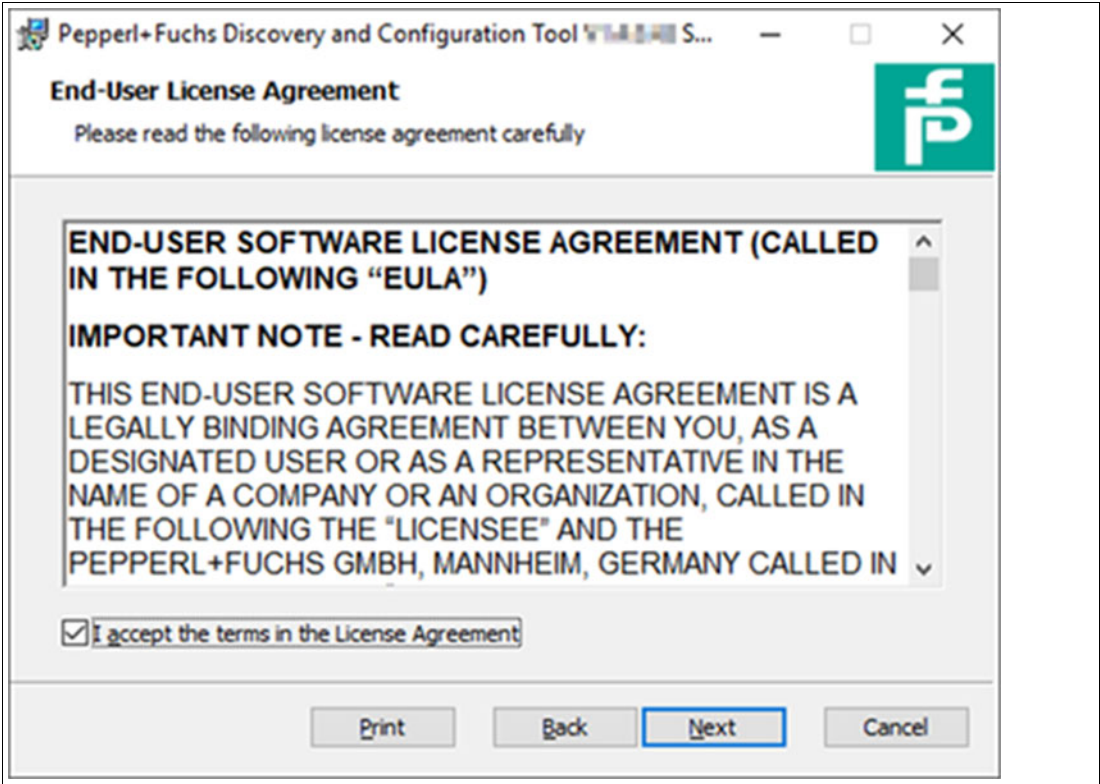4.   To continue to License Agreement window, press **Next**.

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Figure 3.2   License Agreement

5. To continue, accept the End-User License Agreement and press **Next**.

↳ The Destination Folder window appears.
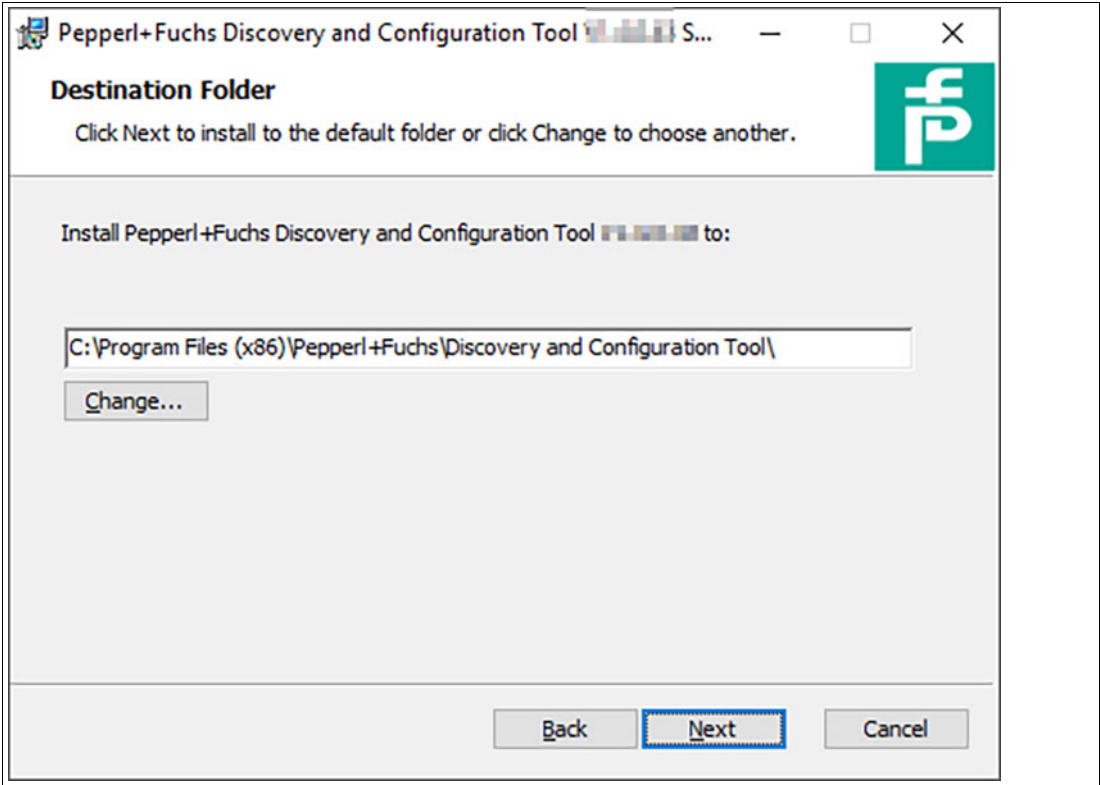

Figure 3.3   Destination Folder

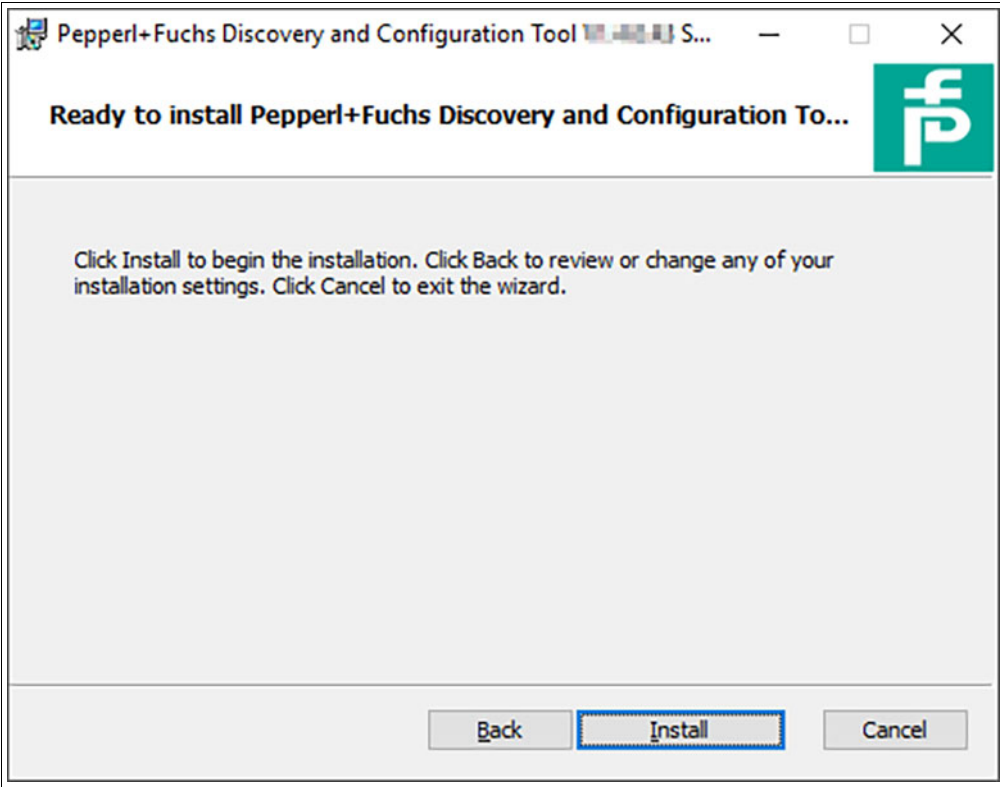**6.** Select the destination folder and press **Next**.

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Figure 3.4   Ready to install

7. For the wizard to complete the installation, press **Install**.
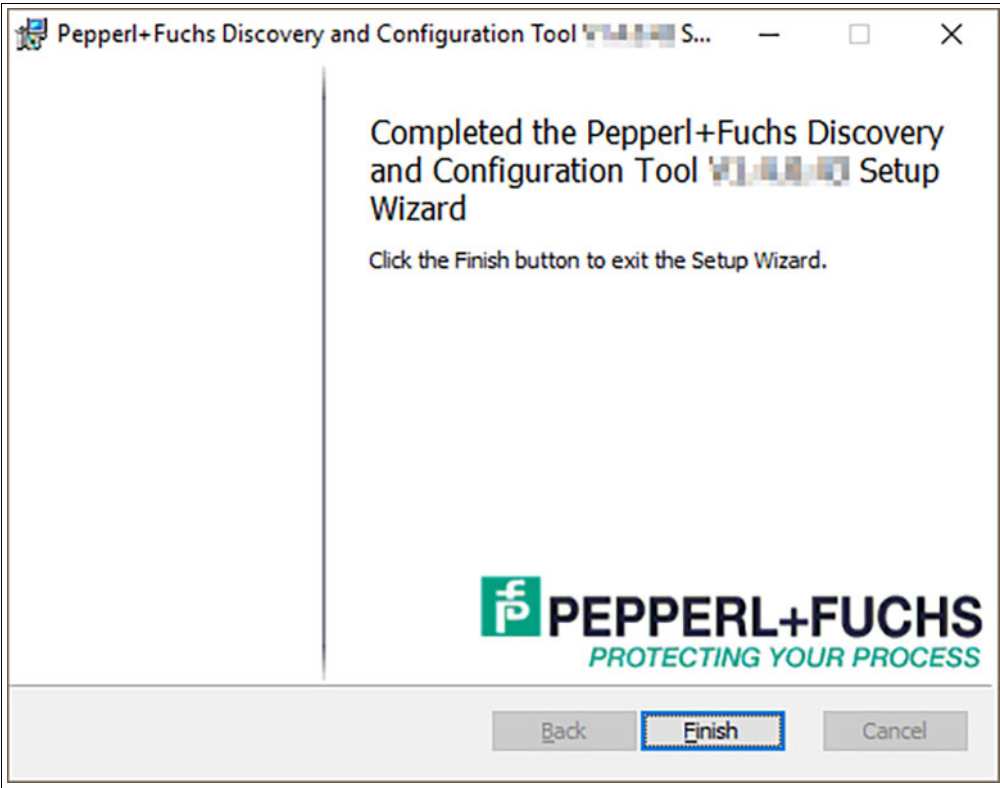

Figure 3.5   Installation completed

8. When installation is completed, press **Finish**.

9. Delete temporary folder created in step 2 and its content.

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4 Settings

After startup, the PFDCT scans the local subnet automatically. If one or more supported devices are located in the same subnet as your PC, the PFDCT displays various information, for example Serial Number, for all available devices. Displayed columns are configurable.
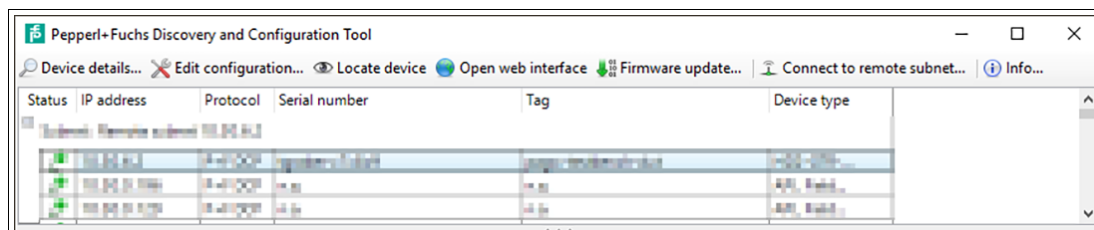

Figure 4.1

Note

Limited information and limited function

Provided information and supported functions depend on the device. If the device does not support the function, e.g., Locate Device, the function will be disabled. Empty data fields indicate that the device does not provide this information and these fields are labeled with *n.a.*.

Reading Device Information

1. Click on the device.

2. Choose device details.

   ↳ Different tabs will display information particular to each device type. Device supporting capabilities are given in the **general** tab.

Configuring the Displayed Columns

1. Right click on column header.

2. Select / Deselect columns as needed.

Identifying a Specific Device

1. To identify a specific device, select the device in the list and click **Locate Device**.

   ↳ LEDs of the corresponding device are flashing.

Changing Communication Settings

1. Open the **Pepperl+Fuchs Discovery and Configuration Tool**.

2. Choose **Edit Configuration...**.

3. Choose the **IP configuration** tab. You can choose between automatic and manual network configuration.
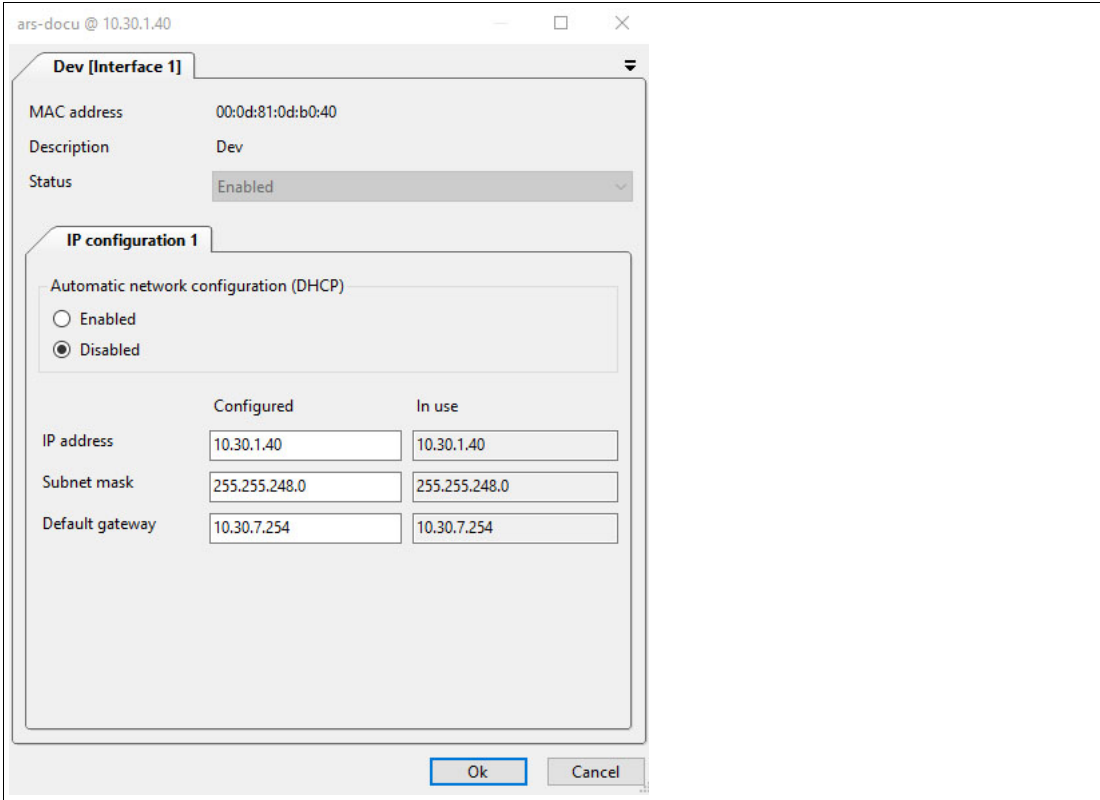
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Figure 4.2   Edit configuration - IP configuration

4. For special configuration, choose **Dev [Interface 1]** tab. In the **Automatic network configuration (DHCP)** area, select **Disabled** and enter the network details in the **IP Address**, **Subnet Mask**, and **Default Gateway** fields.

5. Choose **OK** to confirm changed settings.

Connecting Devices from Remote Subnets

Note

Ethernet-APL rail field switches do not serve as proxy devices for accessing devices on a remote network. To manage Ethernet-APL rail field switches, the PFDCT must be directly connected to a subnet or a Pepperl+Fuchs device providing PFDCT proxy capabilities must be present in the subnet.

If a supported device is located in a remote subnet, e. g., in a remote application structure, the automatic network scan cannot locate this device. In this case, at least one supported device from the remote subnet must be connected manually via its IP address. To connect a device from a remote subnet, proceed as follows:

1. Open the **Pepperl+Fuchs Discovery and Configuration Tool**.

2. Press **Connect to remote subnet...**.
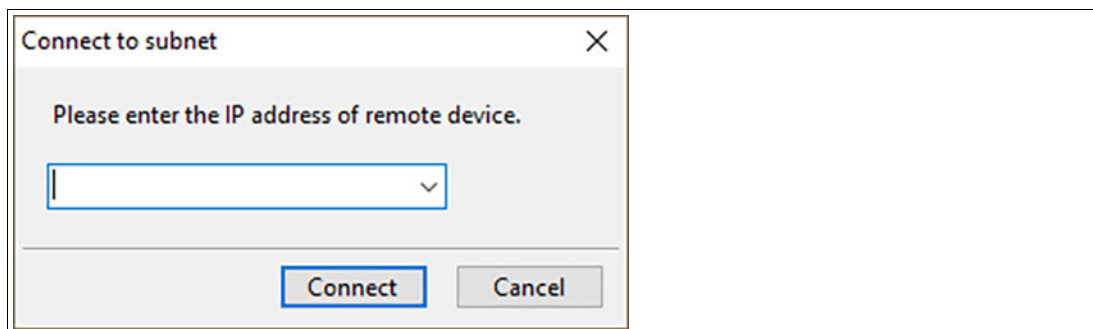
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Figure 4.3   Connect to Subnet - Enter IP address

3. Enter the IP address of a supported device from a remote subnet in the **Connect to Subnet** box.

4. Press **Connect**.

Authenticate / Login

To update firmware or access additional information, some Pepperl+Fuchs devices, such as Ethernet-APL rail field switches, require authentication. Additional information can be NE107 device status or cyclic IO connection status. To gain access to those improved functions/information, use the Autheniticate / Login function with appropriate credentials.

Updating Firmware

> **i** **Note**
>
> Do not remove power from the supported devices as long as the firmware update procedure did not complete.

1. Start the **Pepperl+Fuchs Discovery and Configuration Tool**.

2. If required, authenticate / log in with the appropriate credentials.

3. Select the device(s) you want to update.

4. Press **Firmware Update...**.

5. Press **Select firmware file...**.

6. Select a binary firmware file provided by Pepperl+Fuchs for update and press **Open**.

   ↳ Detailed information or error, if any, of selected firmware update file is displayed in the table.
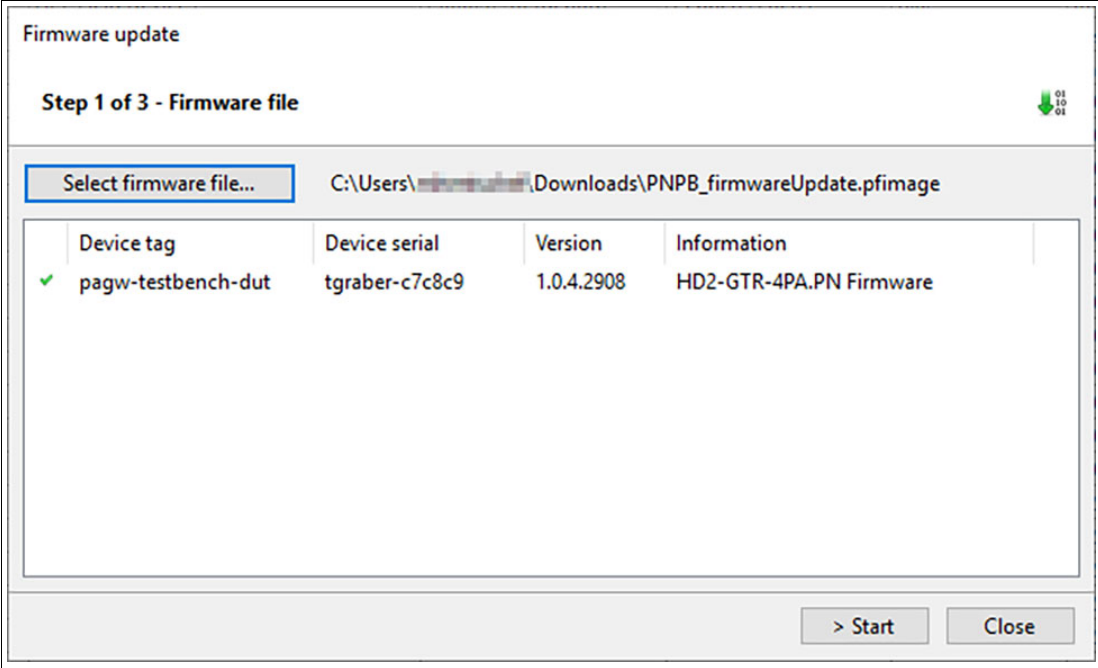
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Figure 4.4   Firmware Update

7.   Press **> Start**.

     ↳ The firmware is being installed.

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Pepperl+Fuchs Quality
Download our latest policy here:

www.pepperl-fuchs.com/quality