MANUAL

Installation and Configuration
Device Type Manager (DTM)

PACT*ware*™

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PROTECTING YOUR PROCESS

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1 Introduction

1.1 Manufacturer

Pepperl+Fuchs GmbH Lilienthalstraße 200, 68307 Mannheim, Germany
Internet: www.pepperl-fuchs.com

1.2 Content of this Document

This document guides you through the installation steps necessary to install the software components of a device type manager (DTM).

Note!

The installation steps are described in the manual using the device type manager "DTM Interface Technology" as an example.

The following software components must be installed:

- Microsoft$^{®}$ .Net Framework 3.5 or higher
- FDT framework program PACTware^{TM} 5.X
- Device type manager (DTM)

Note!

If one of the software components is already installed on your system, you do not need to reinstall it.

1.3 Target Group, Personnel

Responsibility for planning, assembly, commissioning, operation, maintenance, and dismounting lies with the plant operator.

Only appropriately trained and qualified personnel may carry out mounting, installation, commissioning, operation, maintenance, and dismounting of the product. The personnel must have read and understood the instruction manual and the further documentation.

Prior to using the product make yourself familiar with it. Read the document carefully.

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Symbols Used

This document contains information that you must read to avoid property damage.

Warning Messages

Caution!

This symbol indicates a possible fault.

Non-observance could interrupt the device and any connected systems and plants, or result in their complete failure.

Informative Symbols

Note!

This symbol brings important information to your attention.

Action

This symbol indicates a paragraph with instructions. You are prompted to perform an action or a sequence of actions.

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2 Product Description

FDT Concept

The FDT concept (FDT – **F**ield **D**evice **T**ool) created a standard that can be used to integrate devices in various user interfaces (framework applications such as **PACTware**.
The FDT concept enables open and continuous device operation from the control level to the field, regardless of the bus systems used. The FDT concept specifies the data exchange between the device-specific driver and the framework application. Every communicating device has a device-specific driver (DTM) that is integrated in the framework application.

PACTware^{TM} Operating Software

PACTware (**PACTware** – **P**rocess **A**utomation **C**onfiguration **T**ool) is a manufacturer-independent operating software for devices. In the past, it was often necessary to use multiple manufacturer-specific programs in order to be able to operate different devices. **PACTware** enables you to operate any number of devices with just this software. To operate devices, **PACTware** uses a standardized interface between the framework program and the individual software modules. This interface is called FDT. The software modules for device operation are called DTMs.

Device and Communication DTM

The DTM (DTM – **D**evice **T**ype **M**anager) contains all the data and functions of a device. Every DTM contains its own user interface optimized for the device. The device and communication DTMs can be integrated in any FDT framework program, such as **PACTware**.

The DTM offers almost no restriction with regard to display and user guidance. This means that all available device functions can be operated according to the user's needs. Operation is supported by graphics. The DTM technology enables consistent operation of a device in all FDT systems.

Essentially, there are two different types of DTM:

- Device DTMs
  Device DTMs are DTMs for configuring devices such as transmitter power supplies, signal converters, and trip amplifiers.

- Communication DTMs
  Communication DTMs are required for communication with a device via a point to point connection or via any network structures. The communication DTMs are available for various interfaces, such as an RS 232 interface or USB interface. **PACTware** contains a communication DTM.

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3 Prerequisites

The following prerequisites must be fulfilled for the installation and configuration of the DTM:

Hardware Prerequisites

- IBM® PC or compatible PC
- Intel/AMD processor min. 500 MHz
- Working memory: min. 256 MB
- Hard disk space: min. 200 MB
- Graphic resolution 1024 x 768

Software Prerequisites

- Operating system: Microsoft® Windows XP, Windows Vista, Windows 7, Windows 8 or Windows 10
- Internet Browser: Microsoft® Internet Explorer 4.0 or higher
- Software components for installation
    - Microsoft® .Net Framework 3.5 or higher
    - FDT framework program **PACTware 5.X**
    - the application-specific device type manager

Note!

For installation with Windows, administrator rights are required.

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Where to find the required software components:

▶ Checking the Microsoft® .Net Framework Version

Normally, it is not necessary to install the Microsoft® .Net Framework software, because the software is integrated in the operating system. Check which Microsoft® .Net Framework version is installed on your PC.

1. Open the system control on your PC.
2. Open the overview of installed programs by double-clicking **Software**.
   ↪ The overview of installed programs is displayed.
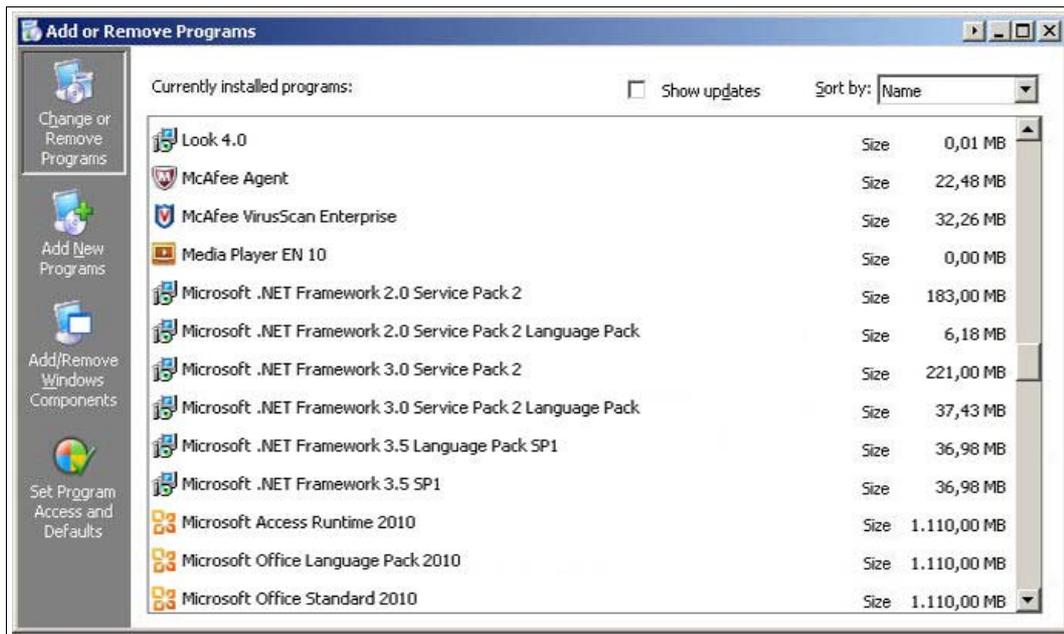
○
⌷ **Note!**

The Microsoft ® .NET framework software is available for download from www.microsoft.com/download.

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▶ Downloading the FDT framework program PACTware 5.X from the Internet

1. In the Internet browser, enter **www.pepperl-fuchs.de**.
2. In the search field, enter the product name of the software component: **PACTware**.
    ↪ The results list is displayed.
3. In the results list, find the **PACTware 5.x** entry and click the **Software** button.
    ↪ The zip file containing the **PACTware 5.x** software is saved.
4. Unzip the zip file.
5. Save the data to a temporary folder of your choice on your PC.

▶ Downloading the Device Type Manager from the Internet

Note!
The steps are described using the device type manager "DTM Interface Technology" as an example.

1. In the Internet browser, enter **www.pepperl-fuchs.de**.
2. In the search field, enter the product name of the software component: **DTM**.
    ↪ The results list is displayed.
3. In the **Products** section, click the **DTM Interface Technology** link.
    ↪ The Internet browser displays the product page.
4. In the **Software** section, click the **DTM Collection Interface Technology 2** link.
5. Load the software to your PC.
6. Unzip the ZIP file.
7. Save the data to a temporary folder of your choice on your PC.

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4   Installation

4.1   FDT Framework Program PACTware

Note!

You do not have to uninstall older **PACTware** versions. Additional information on the **PACTware** versions can be found at the end of the manual. See chapter 6.

To work, the DTM **always** requires an FDT framework program such as **PACTware**. The installation sequence of the DTM and the respective FDT framework program is not defined. We recommend the following installation sequence:

1. Installation of the FDT framework program **PACTware**

2. Installation of the DTM

Note!

If you select the reverse order, you must update the DTM device catalog before you edit a project. See chapter 5.1.

Installing the FDT Framework Program PACTware

1. Load the FDT framework program **PACTware** to your PC. See chapter 3.

2. Unzip the ZIP file.

3. Save the data to a temporary folder of your choice on your PC.

4. Start the installation by double-clicking the **setup.exe** file.

   ↳ The Select Language window is displayed.
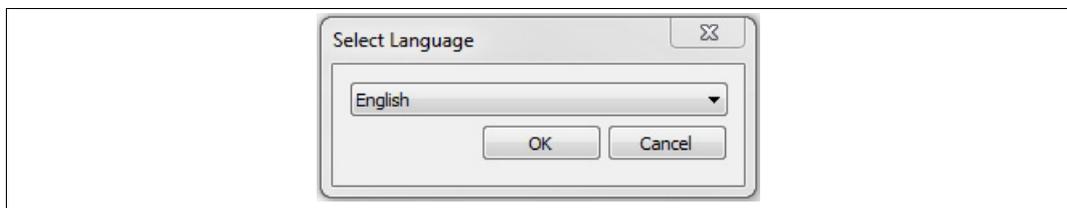
5. In the drop-down list, select the installation language and confirm your selection with **OK**.

   ↳ The list of available software is displayed.

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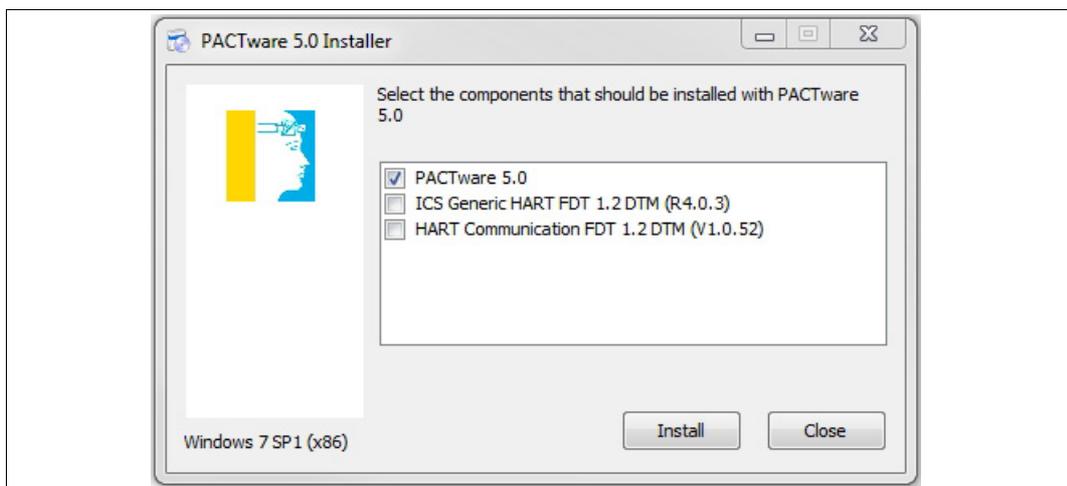
6. Select PACTware 5.X and confirm your selection with **Install**.

    ↳ The installation wizard is displayed.
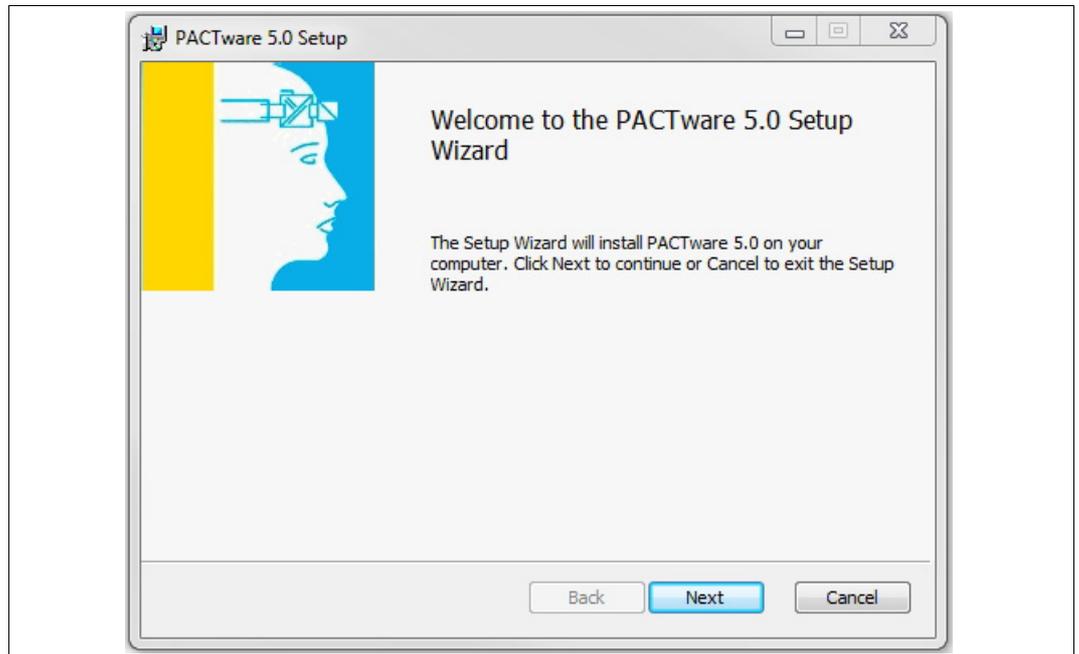
7. Follow the installation instructions and confirm the installation steps.

    ↳ The window with the license terms is displayed.

8. Agree to the End User License Agreement and confirm your entry with **Next**.

9. Follow the installation instructions and confirm the installation steps.

    ↳ The installation completion window is displayed.
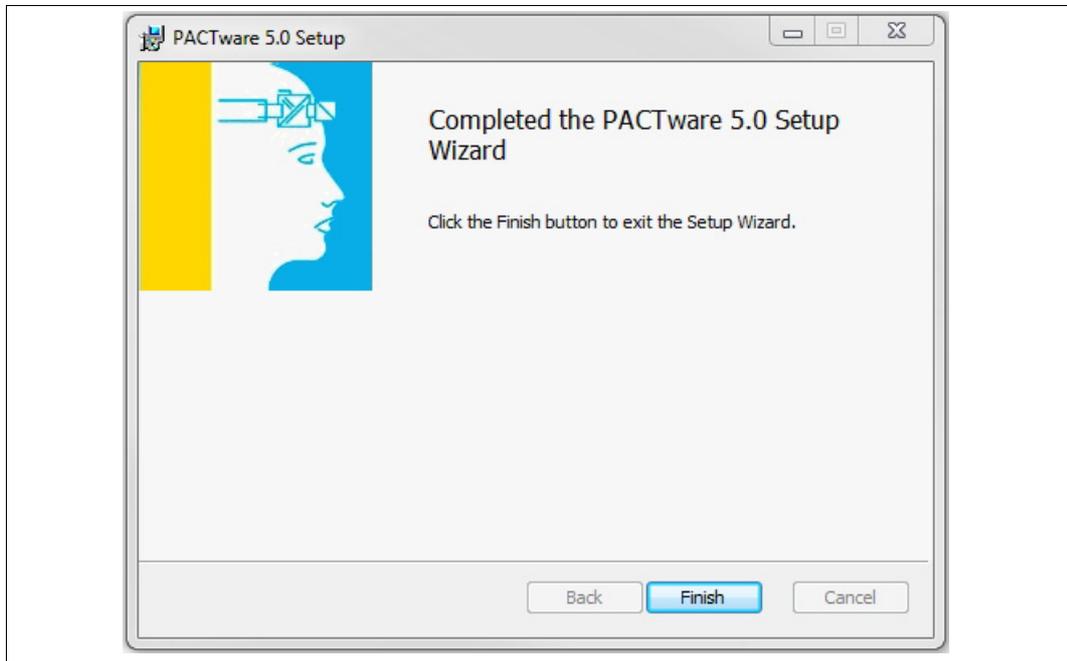
10. Confirm the end of the installation with **Finish**.

    ↳ The FDT framework program **PACTware** software is installed.

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4.2 Device Type Manager

To work, the DTM **always** requires an FDT framework program such as **PACTware**.
The installation sequence of the DTM and the respective FDT framework program is not defined. We recommend the following installation sequence:

1. Installation of the FDT framework program **PACTware**

2. Installation of the DTM

Note!

If you select the reverse order, you must update the DTM device catalog before you edit a project. See chapter 5.1.

Installing the Device Type Manager

Note!

The steps are described using the device type manager "DTM Interface Technology" as an example.

1. Load the DTM Interface Technology to your PC. See chapter 3.

2. Unzip the ZIP file.

3. Save the data to a temporary folder of your choice on your PC.

4. Start the installation by double-clicking the **setup.exe** file.

   ↳ The list of available software is displayed.

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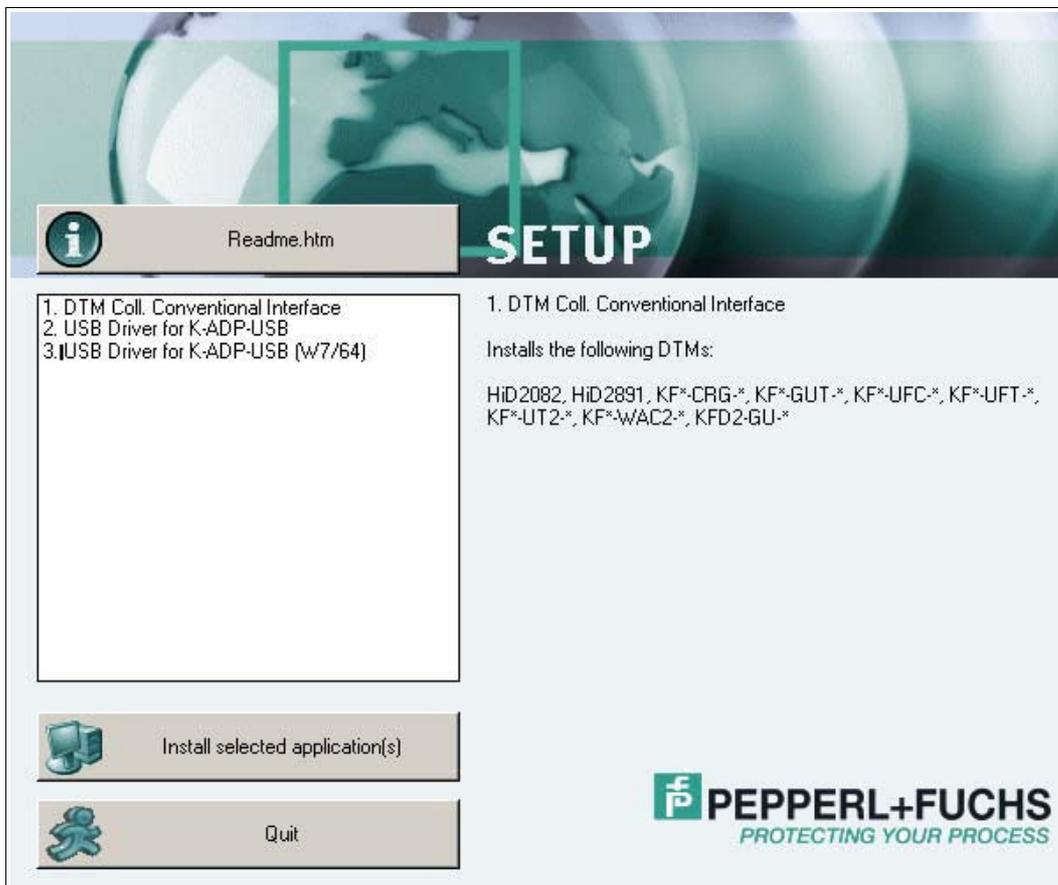
4.2.1 Device DTMs

Installing Device DTMs

1. Select **DTM Coll. Conventional Interface** and confirm your selection with **Install selected application(s)**.
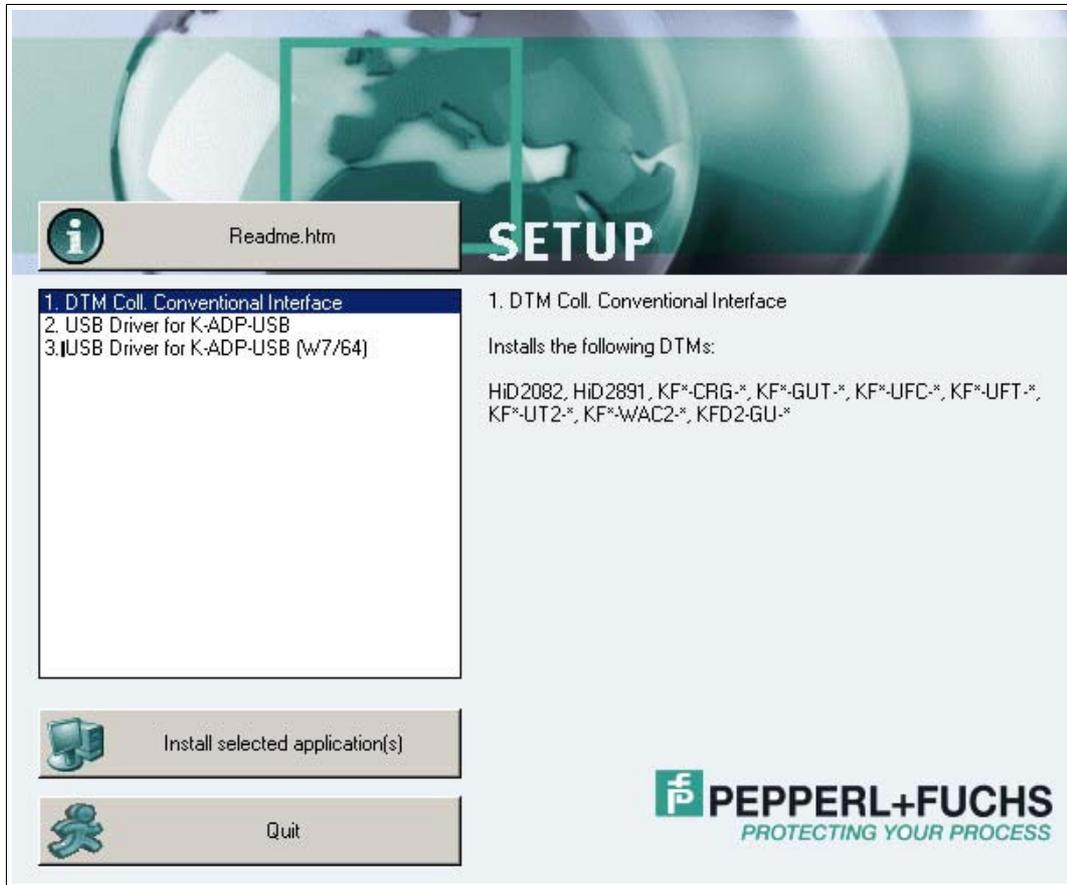
↳ The Language Selection window is displayed.

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2. In the drop-down list, select the installation language and confirm your selection with **OK**.

↳ The Install window is displayed.

3. Click **Yes** to confirm the installation start.

↳ The installation wizard is displayed.

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4. Follow the installation instructions and confirm the installation steps.
   ↳ The window with the license terms is displayed.

5. Agree to the End User License Agreement and confirm your entry with **Next**.
   ↳ The Customer Information window is displayed.

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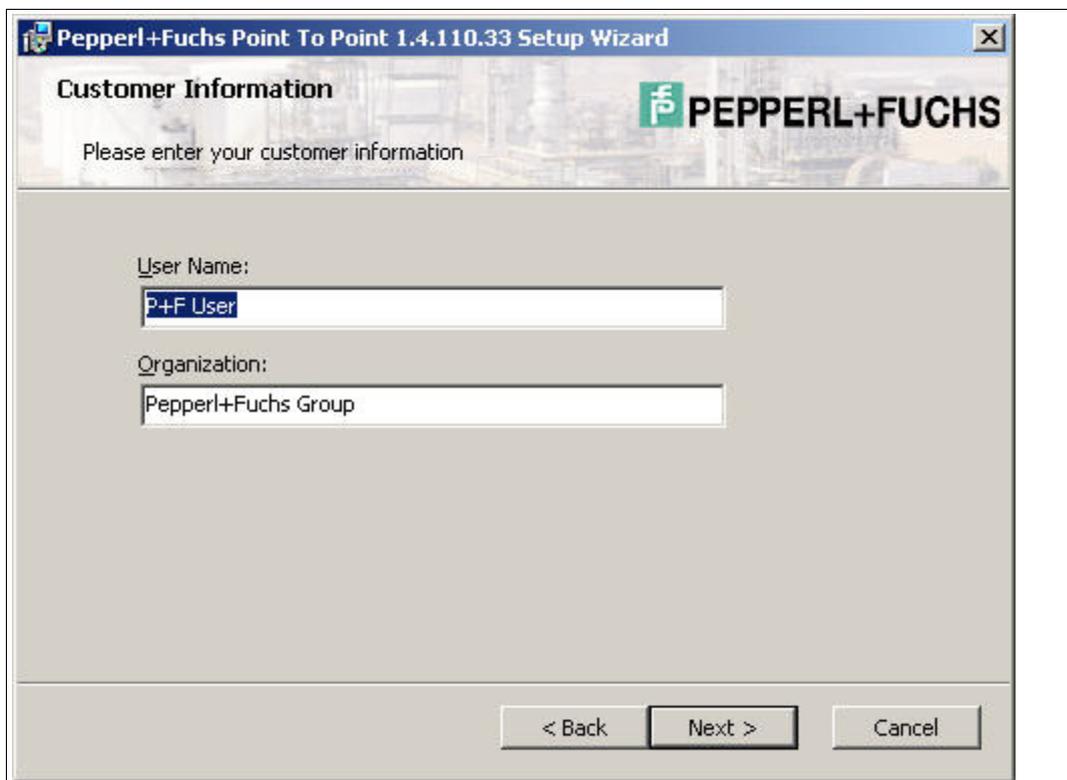
6. Enter the required texts in the **User Name** and **Organization** fields.

7. Confirm your entry with **Next**.

↳ The window for selecting the type of setup is displayed.
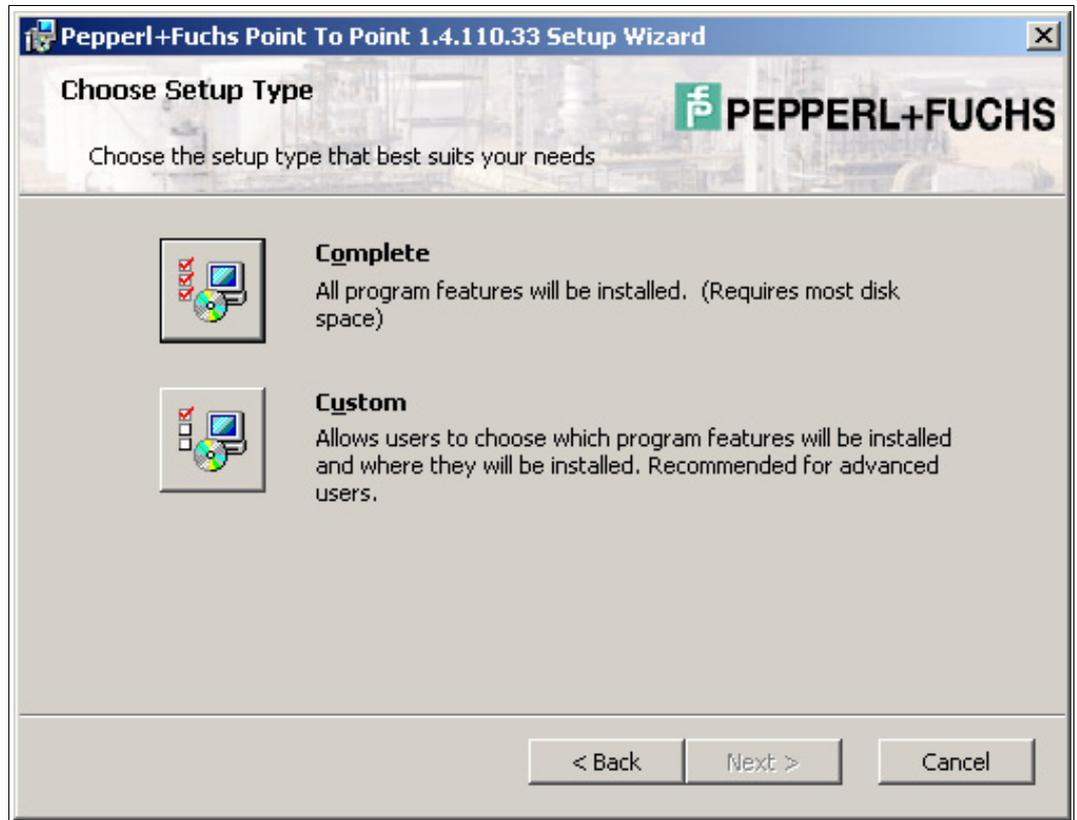
8. Select the required setup type.
    The **Complete** option installs all DTMs available in the package.
    The **Custom** option allows individual DTMs to be selected.
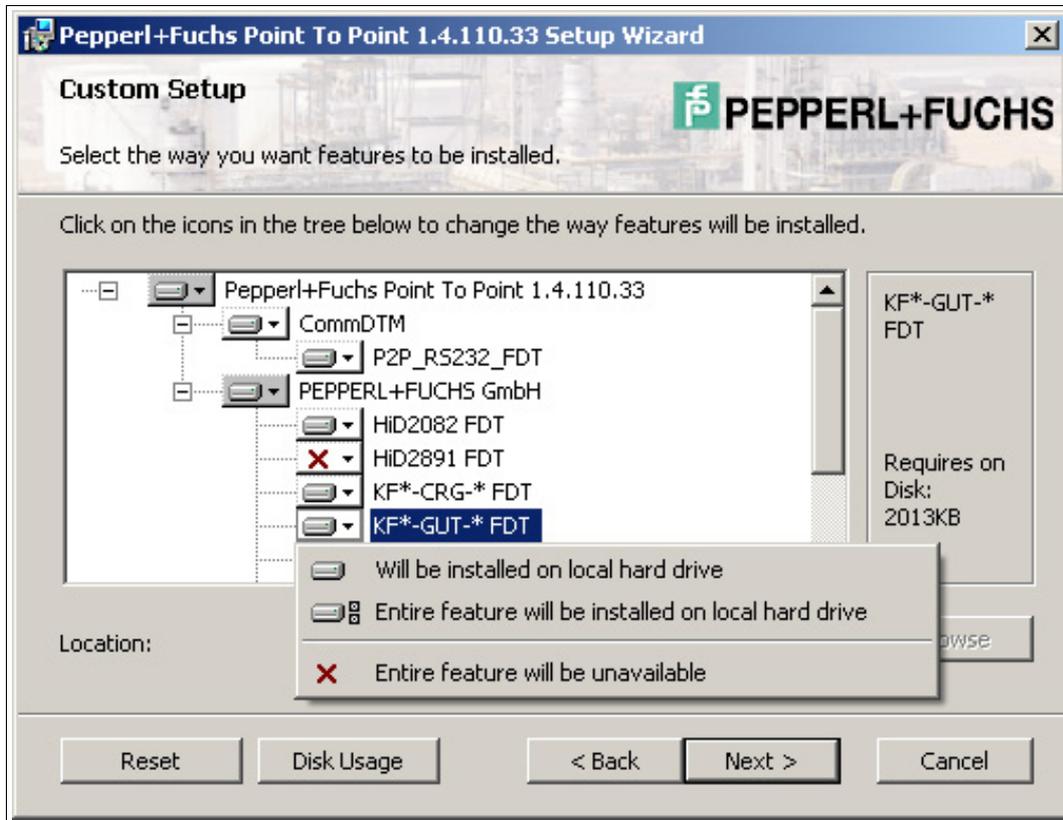
9. Confirm your selection with **Next**.

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10. Follow the installation instructions and confirm the installation steps.

↳ The installation completion window is displayed.
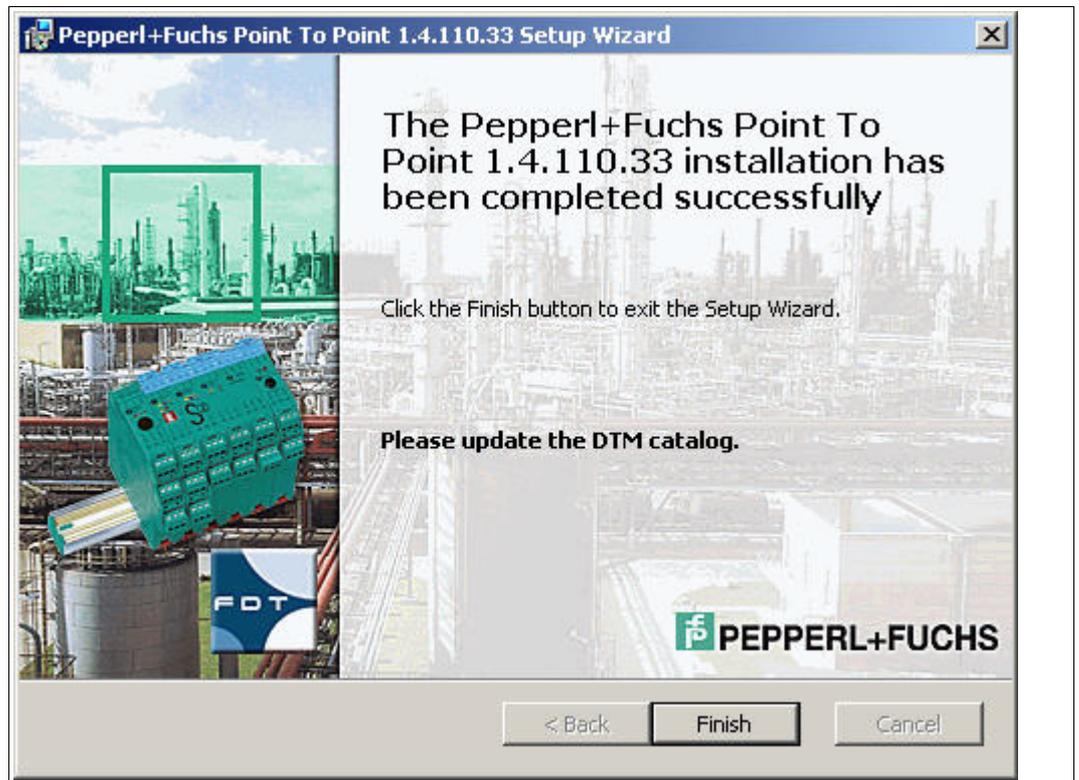
11. Confirm the end of the installation with **Finish**.

↳ The device DTMs are installed.

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4.2.2 Communication DTMs

Two communication DTMs are available, depending on the Windows operating system:

- Microsoft® Windows XP, Windows Vista, and Windows 7/32 Bit operating systems:
  USB Driver for K-ADP-USB

- Microsoft® Windows 7/64 Bit operating system:
  USB Driver for K-ADP-USB (W7/64)

Installing Communication DTMs

1. Select the appropriate communication DTM for your operating system.

2. Select **USB Driver for K-ADP-USB** and confirm your selection with
   Install selected application(s).
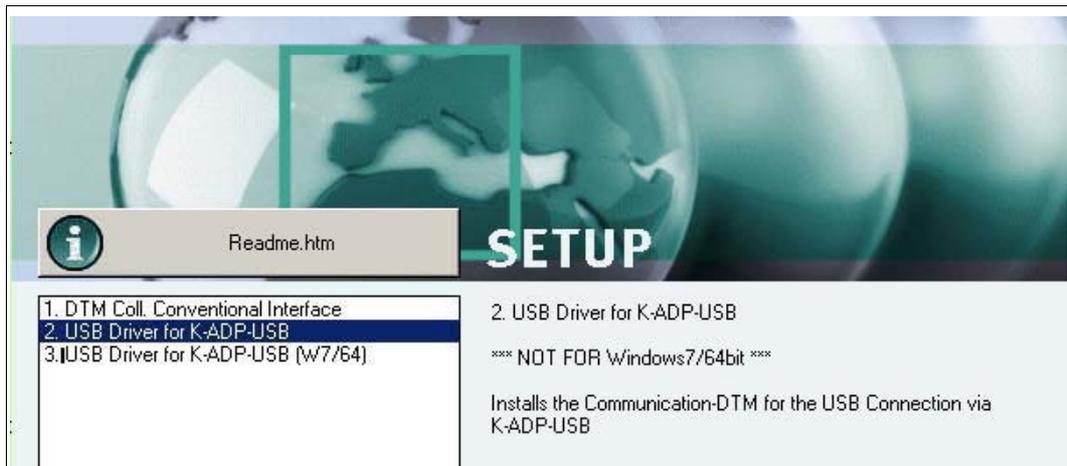
or

Select **USB Driver for K-ADP-USB (W7/64)** and confirm your selection with
Install selected application(s).

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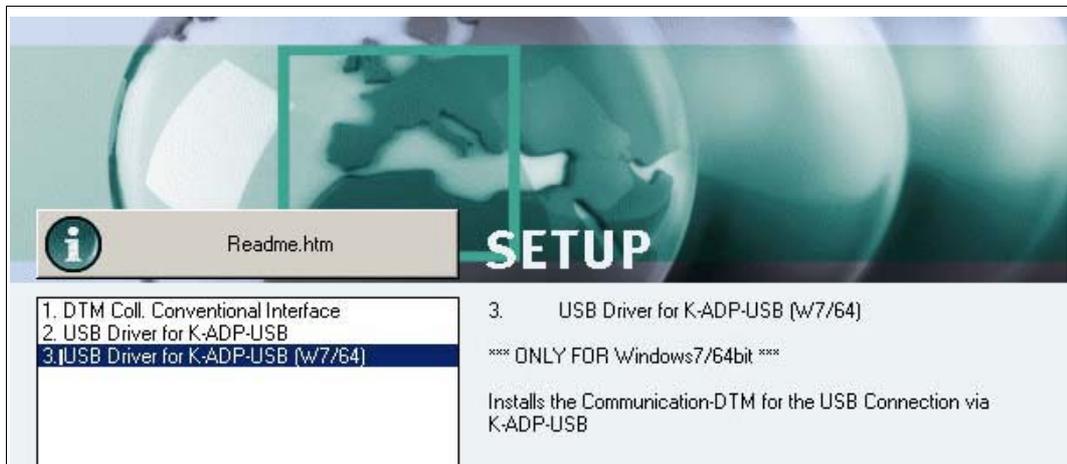
↳ The installation wizard is displayed.
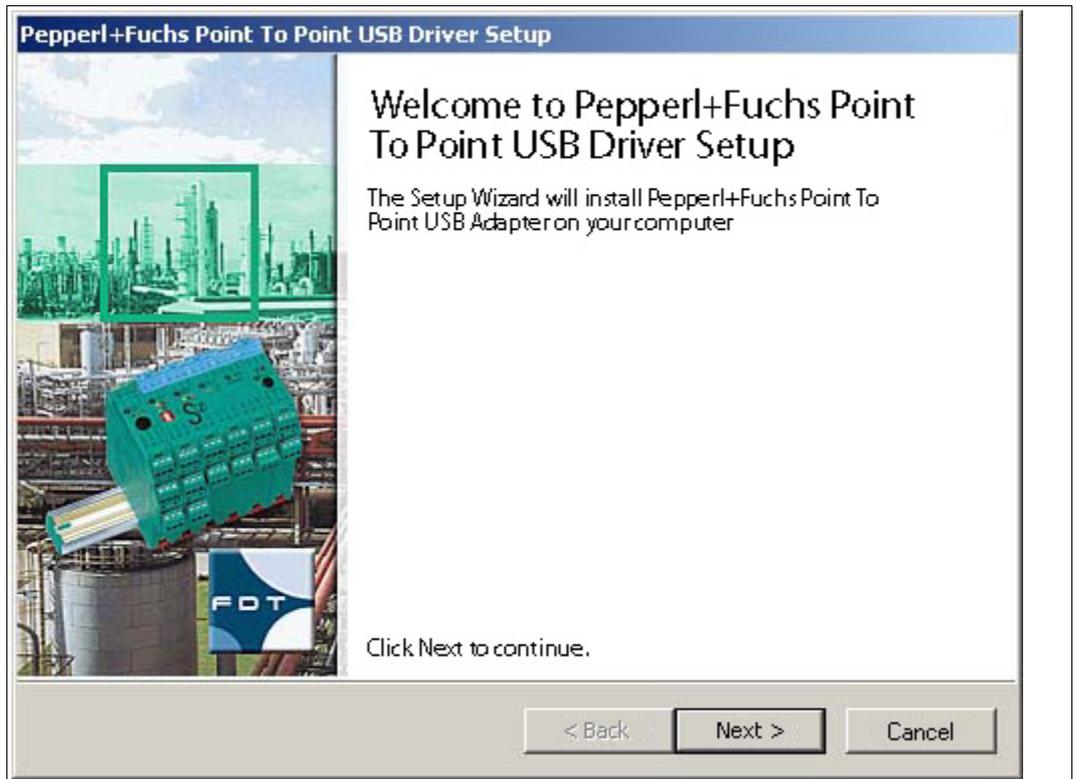
3. Follow the installation instructions and confirm the installation steps.

↳ The window with the license terms is displayed.

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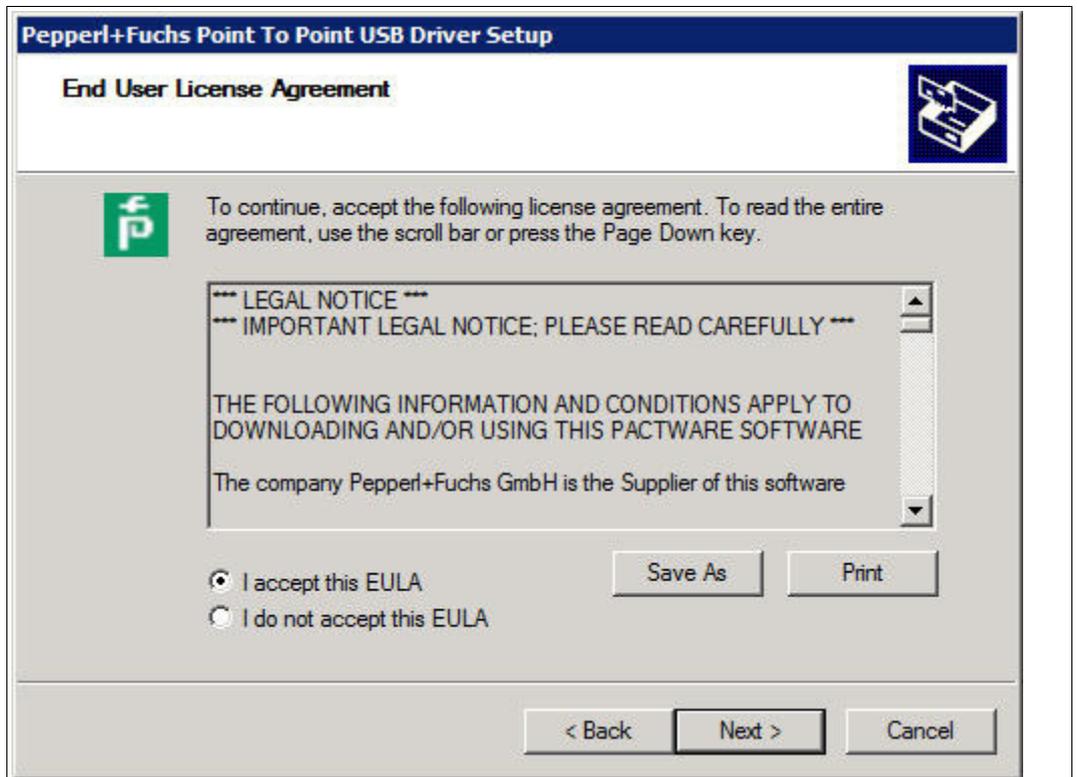
4. Agree to the End User License Agreement and confirm your entry with **Next**.

5. Follow the installation instructions and confirm the installation steps.

    ↳ The installation completion window is displayed.
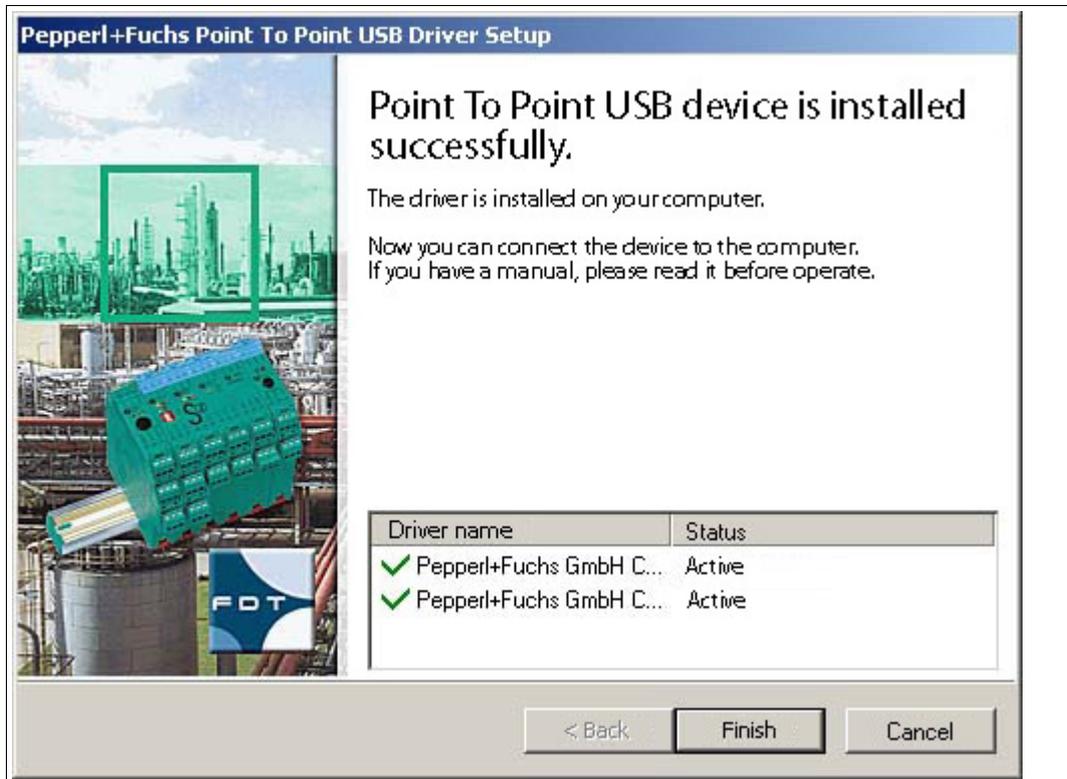
6. Confirm the end of the installation with **Finish**.

    ↳ The communication DTM is installed.

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4.3 Connection between Device and PC

Before you connect the device to the PC, please note the following:

Note!

In the past, the device programming sockets and the K-ADP1 adapter plugs were 3.55 mm x 18.3 mm. There was no additional adapter cable for the adapter.

- Use this adapter for devices with programming sockets that are 3.55 mm x 18.3 mm.
- If you use this adapter with devices with programming sockets that are 3.5 mm x 14 mm, the plug protrudes by approximately 3 mm. The function is not impaired.

The newer devices and the K-ADP1 and K-ADP-USB adapters have programming sockets and plugs that are 3.5 mm x 14 mm. The adapters have an additional adapter cable with plug dimensions 3.55 mm x 18.3 mm.

- Use these adapters for devices with programming sockets that are 3.5 mm x 14 mm.
- If you are using these adapters with devices with programming sockets that are 3.55 mm x 18.3 mm, insert the additional adapter cable.

Connecting the Device to the PC via the 9-Pin Serial Interface

1. Mount the device as described in the system description.

2. Connect the device to the power supply as described in the system description.

3. Connect the device to the PC via the adapter with serial interface K-ADP1.
   - Connection on the device: front programming socket
   - Connection on the PC: 9-pin serial interface

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Connecting the Device to the PC via the USB Interface

1. Mount the device as described in the system description.

2. Connect the device to the power supply as described in the system description.

3. Connect the device to the PC via the adapter with USB interface K-ADP-USB.
   - Connection on the device: front programming socket
   - Connection on the PC: USB interface

   ↪ The hardware wizard is displayed. Read the note.
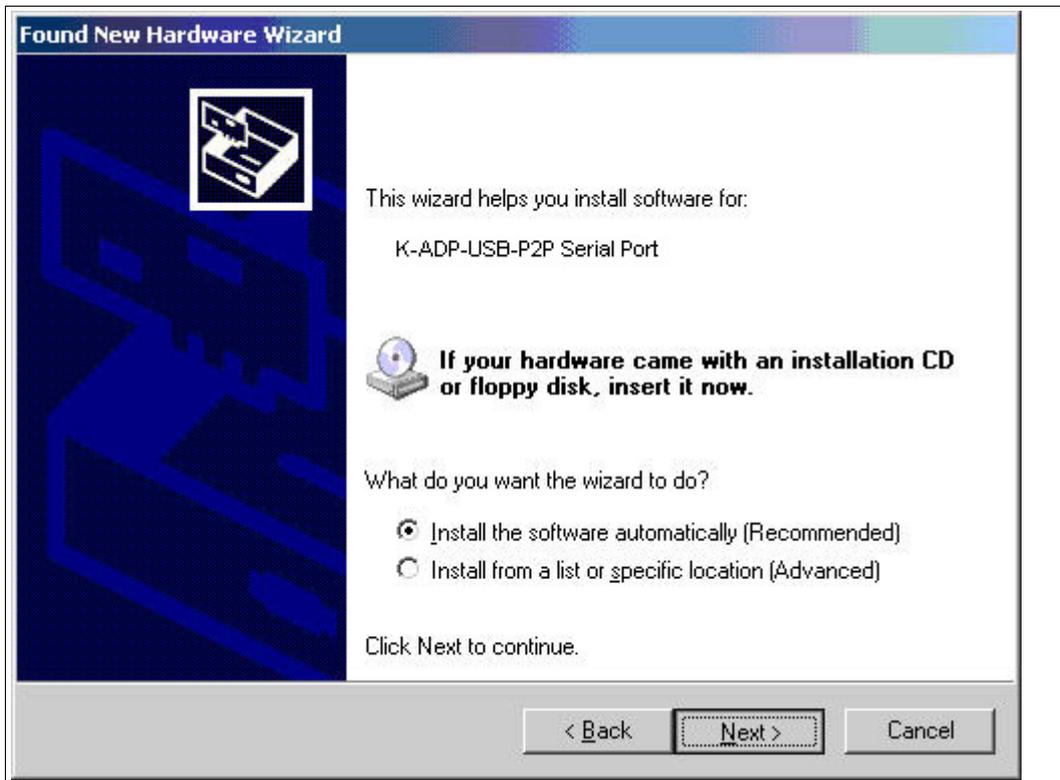
4. Follow the installation instructions and confirm the installation steps.

   ↪ The installation completion window is displayed.

5. Confirm the end of the installation with **Finish**.

   ↪ The interface driver is installed.

Note!

The hardware wizard is displayed only on initial installation or for an update.

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5 Configuration

Note!

The steps are described using the device type manager "DTM Interface Technology" as an example.

5.1 Updating the Device Catalog

Starting the Program

Start **PACTware** by double-clicking the icon [icon].

↳ The **PACTware** main window is displayed.
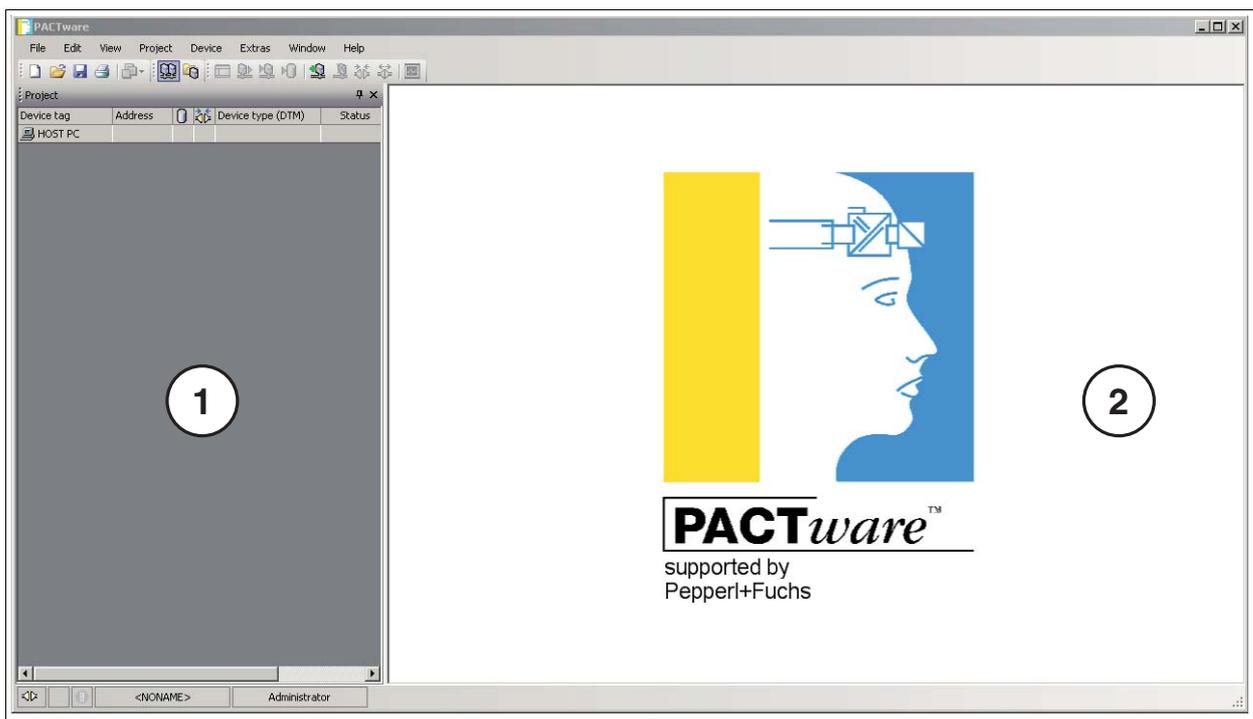
1 Project range
2 Operating range

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Changing the Language

1. Change the language using the menu **Extras > Options**.
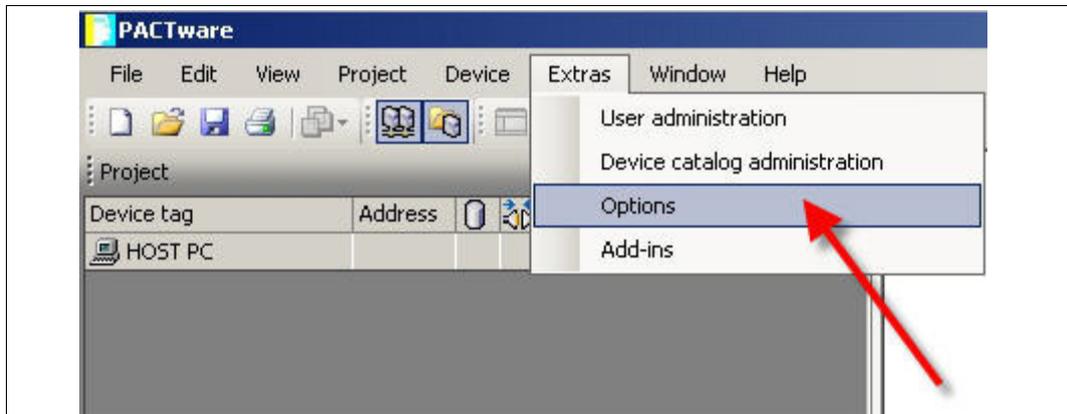
↳ The Options window is displayed.

2. Open the Language drop-down list.

3. Select the required language in the drop-down list.

4. Confirm your selection with **OK**.

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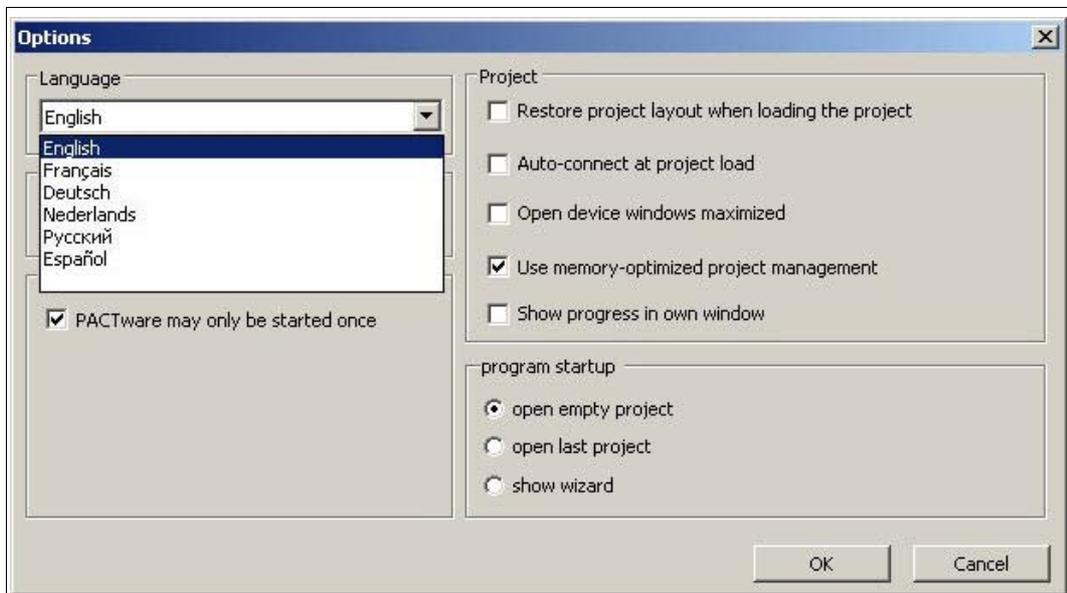
▶ Updating the device catalog

1. Close all open projects using the menu **File > Close**.
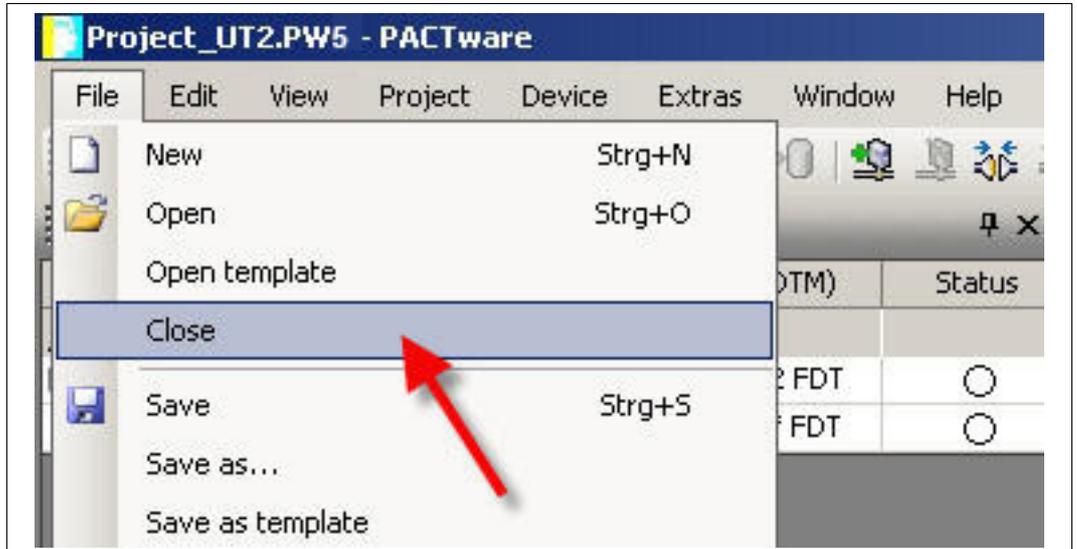
2. Open the device catalog using the menu **View > Device catalog**.

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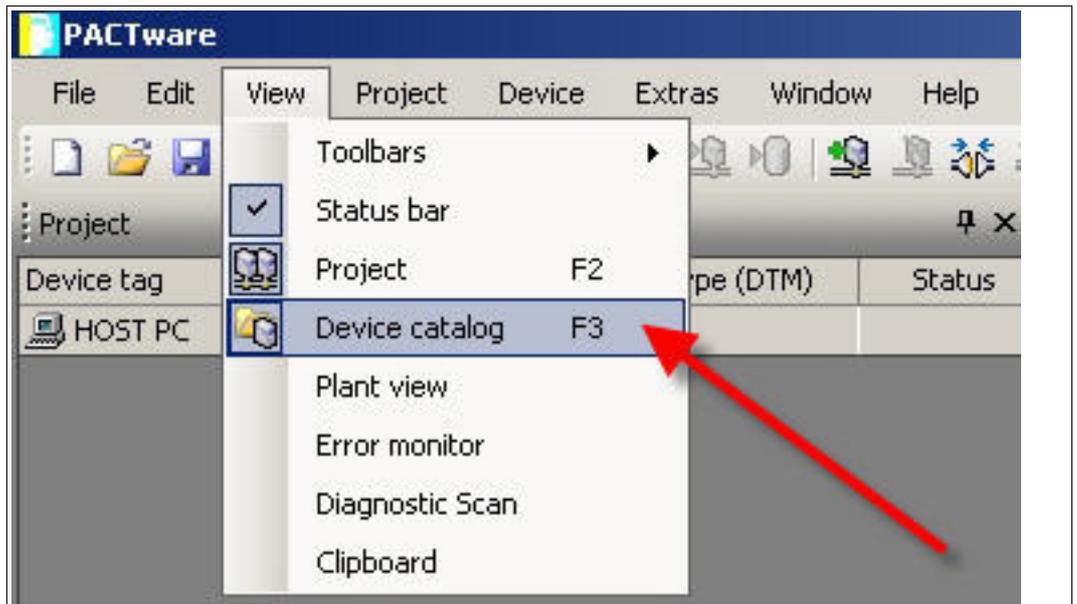
↳ The device catalog is displayed.
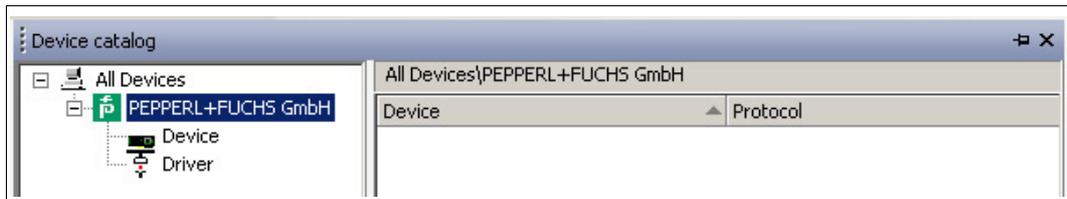
3. Update the device catalog using the **Update device catalog** button.

↳ The query window is displayed.
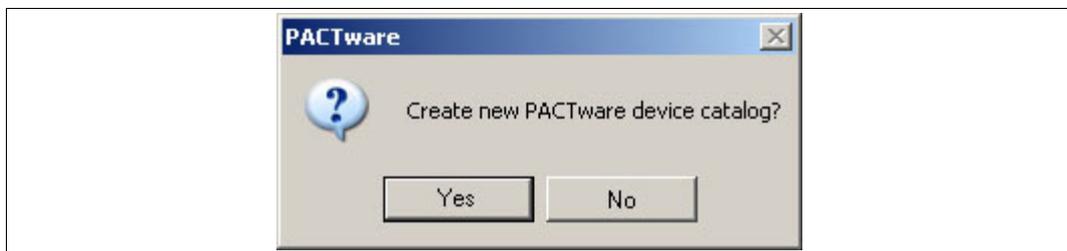
4. Click **Yes** to confirm the prompt.

↳ The updated device catalog is displayed.

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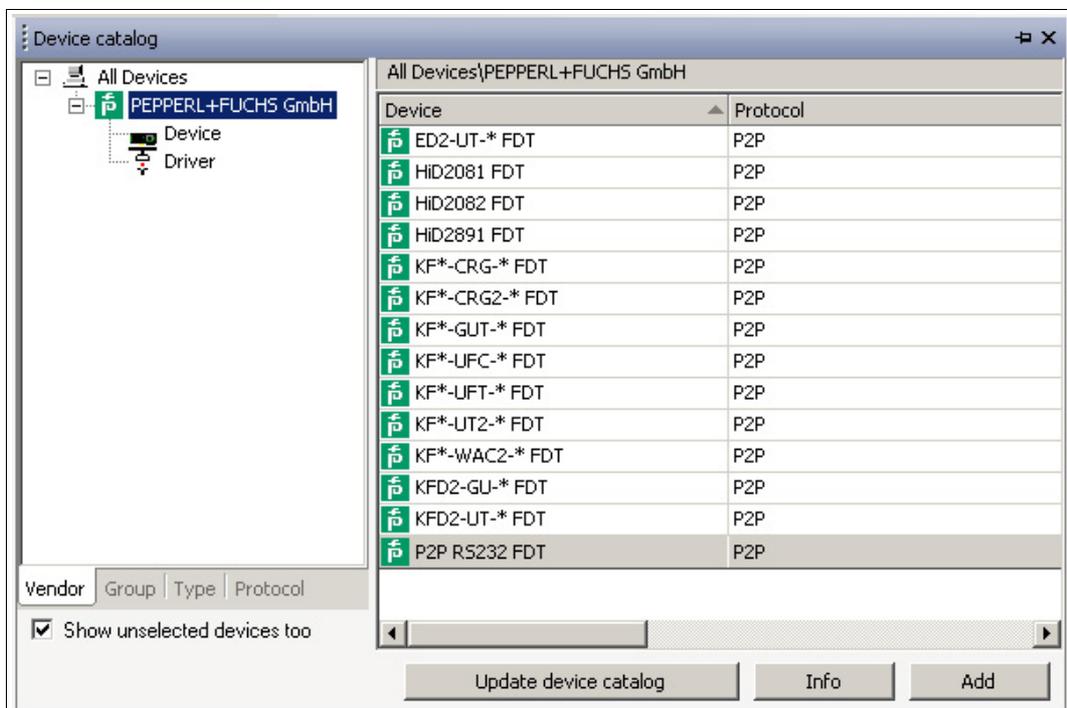
Note!

For more information on operating **PACTware**, see the online help.

5.2 Starting and Saving a Project

Starting a Project

1. Start **PACTware** by double-clicking the icon [icon].

   ↳ The **PACTware** main window is displayed.

2. Start a new project via **Create new project**.

Saving a Project

1. Save the project using the menu **File > Save as**.

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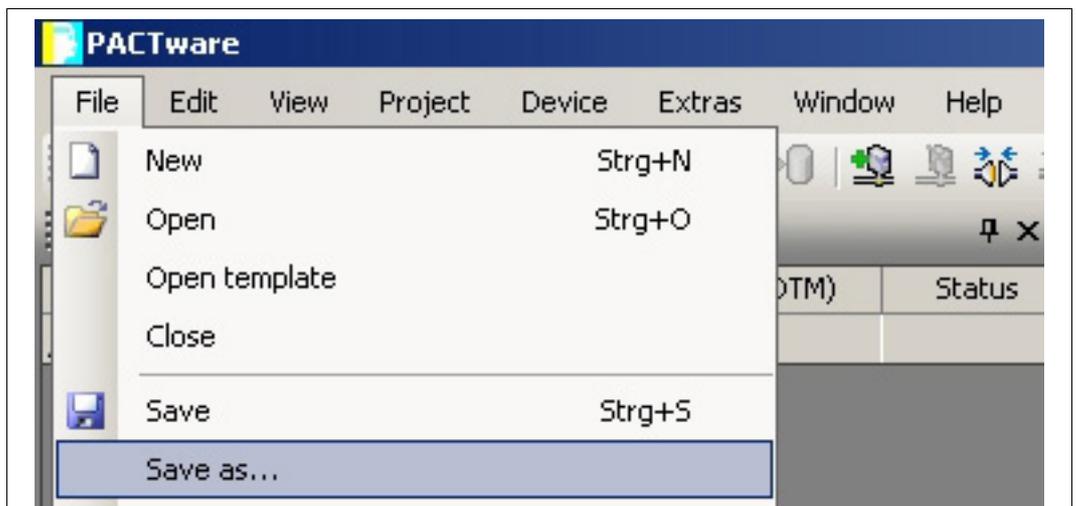
2. Enter a project name and confirm the entry with **Save**.
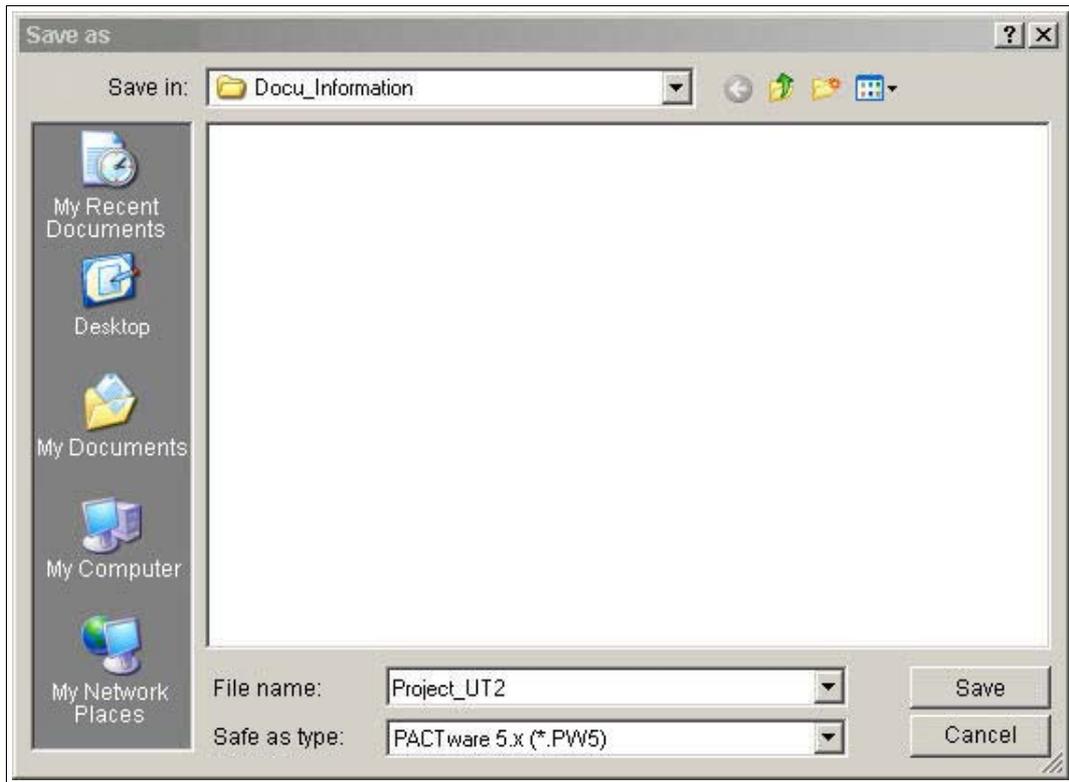
↳ The project name is displayed.

Note!

For more information on operating **PACTware**, see the online help.

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5.3 Configuring the Communication DTM

The device is connected to the PC via the 9-pin serial interface or the USB interface.

Note!

The communication DTM P2P RS232 FDT is required for both connection versions via the 9-pin serial interface and the USB interface. You cannot configure the device DTMs until you have configured the communication DTM.

Starting a Project

1. Start **PACTware** by double-clicking the icon   .

   ↳ The **PACTware** main window is displayed.

2. Start a new project via **Create new project**.

or

Opening a Project

1. Start **PACTware** by double-clicking the icon   .

   ↳ The **PACTware** main window is displayed.

2. Open an existing project with **Open project**.

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Adding a Communication DTM to the Project

1. In the project window, select **HOST PC** and then use the right mouse button to open the context menu.

2. Select **Add device**.
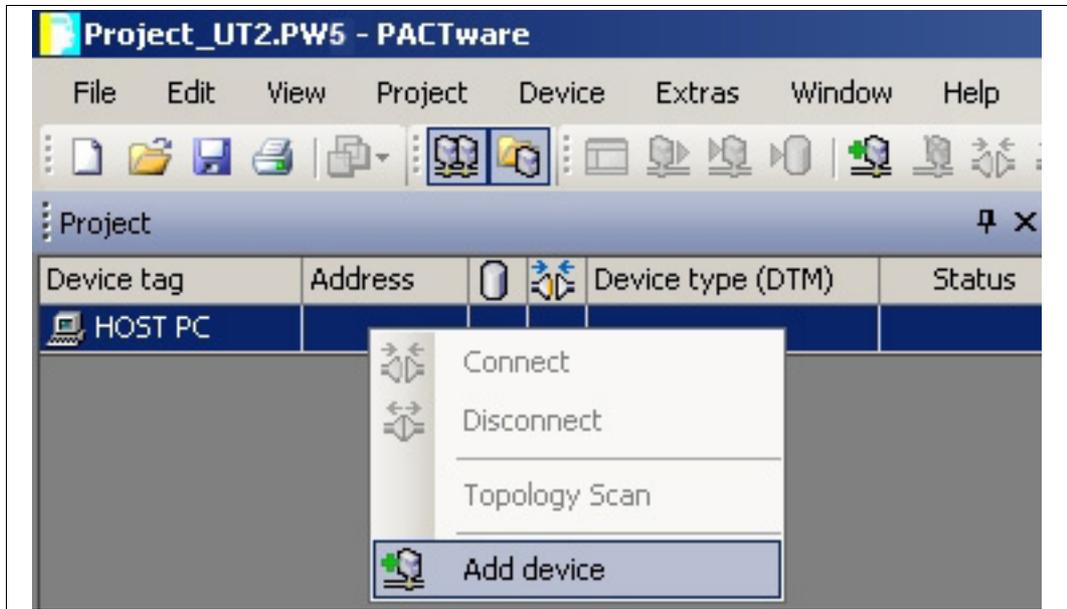
↳ The list of communication DTMs is displayed.

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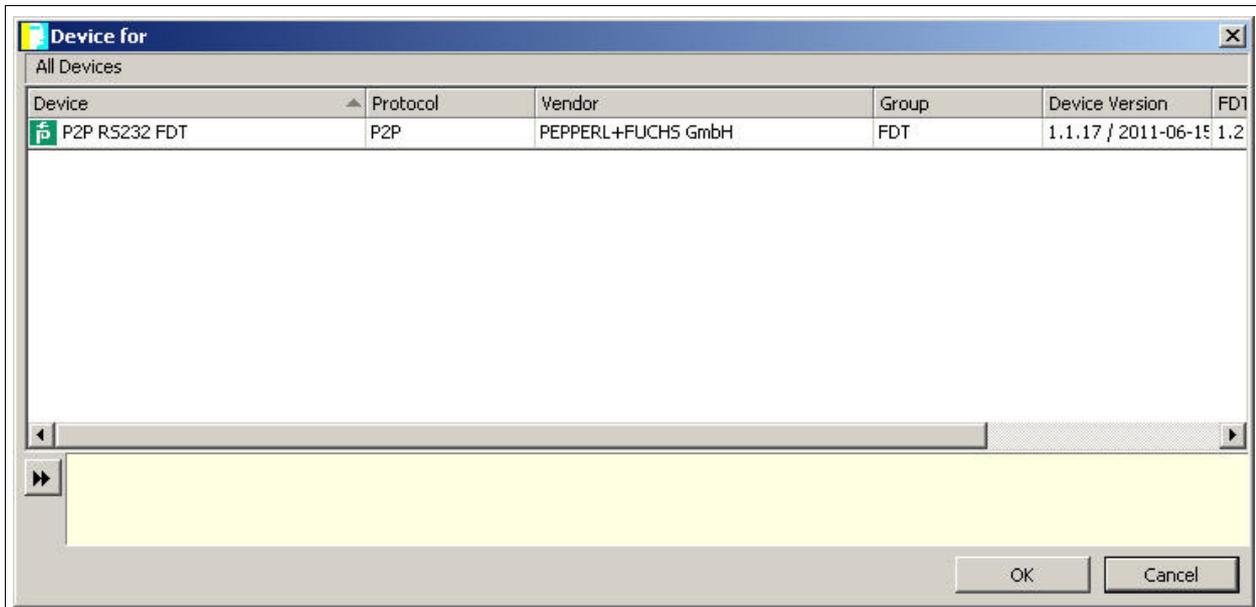
3. Select the communication DTM P2P RS232 FDT and confirm your selection with **OK**.
    The communication DTM P2P RS232 FDT is required for both connection
    versions — via the 9-pin serial interface and the USB interface.

    ↳ The communication DTM is included in the project tree.
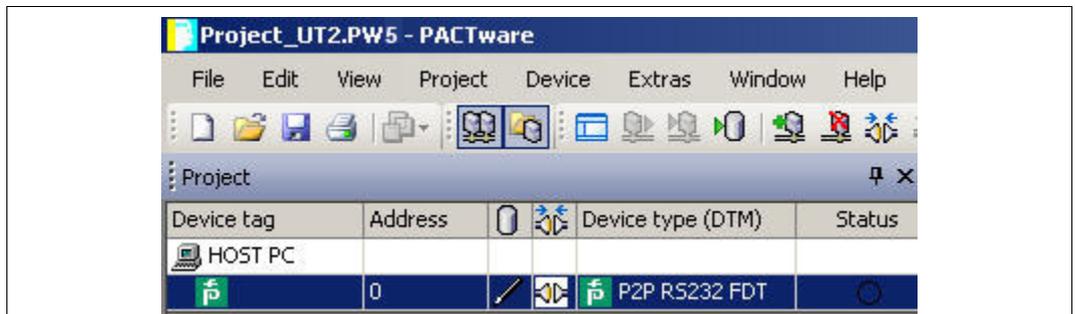
▶ Configuring the Communication DTM

1. Where necessary, disconnect the PC from the communication DTM. See the
    "Disconnecting the Communication DTM and PC" section in this chapter.

2. In the project window, select **P2P RS232 FDT** and then use the right mouse button to open
    the context menu.

3. Choose **Parameter**.

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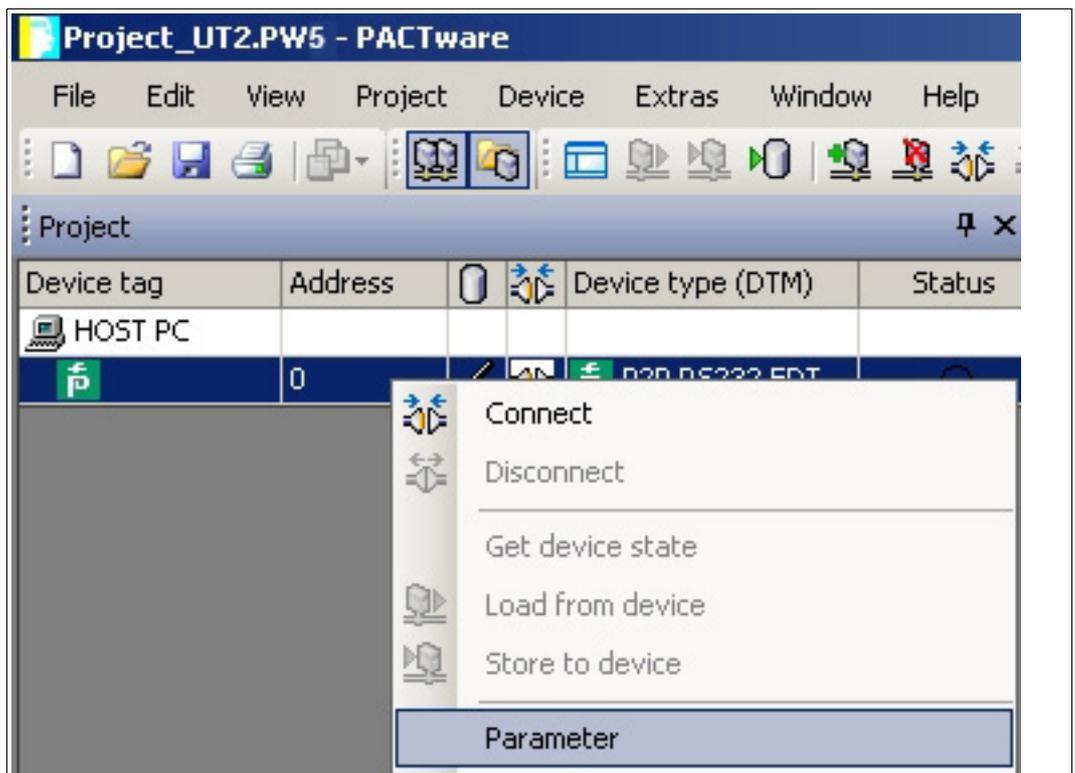
↪ The Parameter window is displayed.
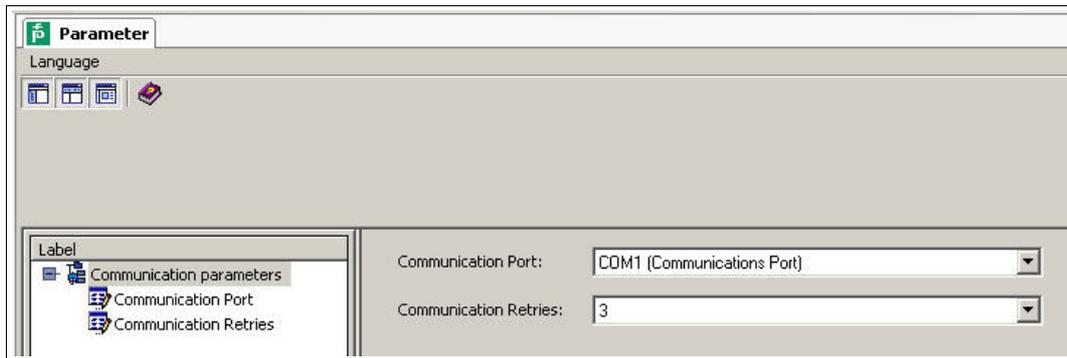
4. From the **Communication Port** drop-down list, select the desired parameter. You can select communication port USB 1 (K-ADP-USB) only if the K-ADP-USB adapter was connected **before** you started to configure the communication DTM. See chapter 4.3.
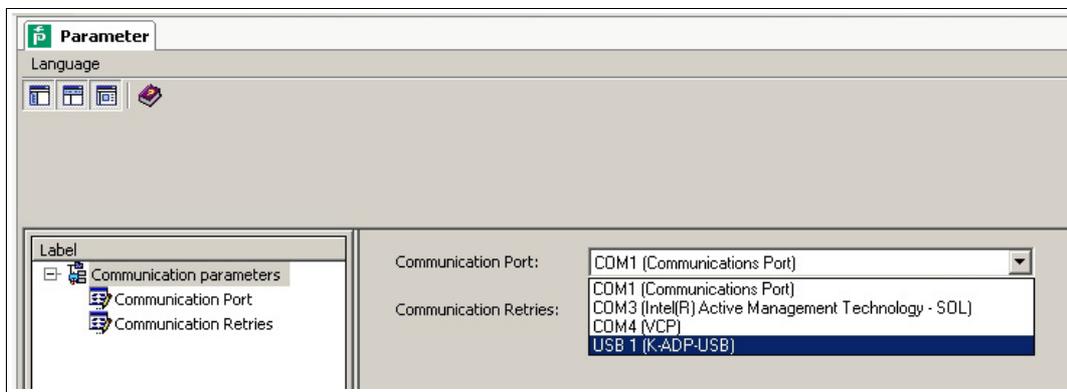
5. From the **Communication Retries** drop-down list, select the desired parameter.
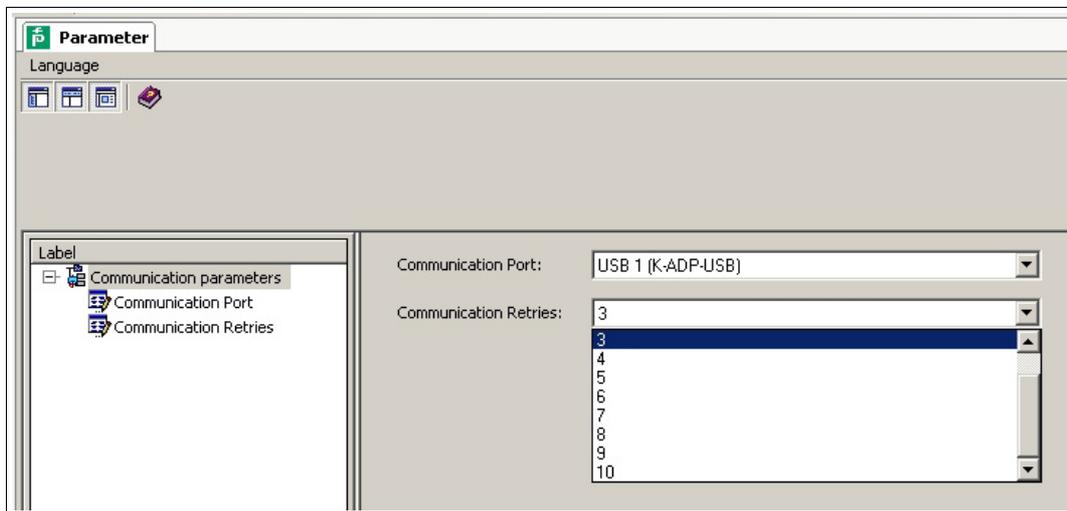
↪ The communication DTM is configured.

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▶ **Establishing the Connection between the Communication DTM and PC**

1. In the project window, select **P2P RS232 FDT** and then use the right mouse button to open the context menu.

2. Choose **Connect**.

↪ The connection is established. The connection status is displayed:

▶ **Disconnecting the Communication DTM from the PC**

1. In the project window, select **P2P RS232 FDT** and then use the right mouse button to open the context menu.

2. Choose **Disconnect**.

↪ The connection is disconnected. The status is displayed:

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Saving a Project

Save the project with **Save project**.

Note!

For more information on operating **PACTware**, see the online help.

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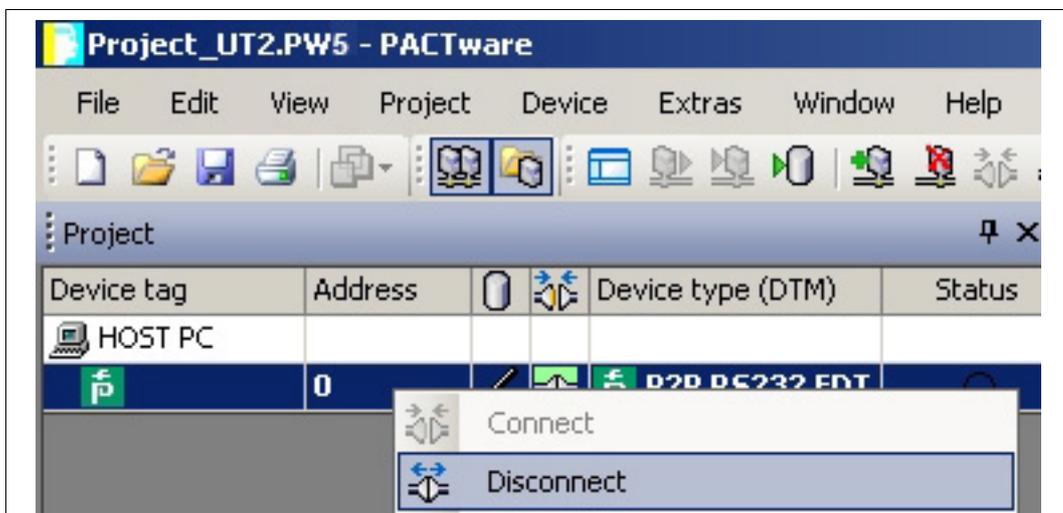
5.4   Configuring the Device DTM

Various device DTMs are available for the devices. Select the appropriate device DTM for your device from the device list. You can configure the device only if you have selected the correct device DTM.

Device	Device DTM	Group
ED2-UT-Ex2 ED2-UT-Ex2-2	ED2-UT-* FDT	Temperature
HiC2081	HiC2081 FDT	Temperature
HiD2081	HiD2081 FDT	Temperature
HiD2082	HiD2082 FDT	Temperature
HiD2891	HiD2891 FDT	Digital input
KFD2-CRG-1.D KFD2-CRG-Ex1.D KFU8-CRG-1.D KFU8-CRG-Ex1 KFU8-CRG-Ex1.D	KF*-CRG-* FDT	Analog input
KFD2-CRG2-1.D KFD2-CRG2-Ex1.D KFU8-CRG2-1.D KFU8-CRG2-Ex1.D	KF*-CRG2-* FDT	Analog input
KFD2-GU-1 KFD2-GU-Ex1	KFD2-GU-* FDT	Temperature
KFD2-GUT-1.D KFD2-GUT-Ex1.D KFU8-GUT-1.D KFU8-GUT-Ex1.D	KF*-GUT-* FDT	Temperature
KFD2-UFC-1 KFD2-UFC-1.D KFD2-UFC-Ex1 KFD2-UFC-Ex1.D KFU8-UFC-1 KFU8-UFC-1.D KFU8-UFC-Ex1 KFU8-UFC-Ex1.D	KF*-UFC-* FDT	Digital input
KFD2-UFT-2.D KFD2-UFT-Ex2 KFD2-UFT-Ex2.D KFU8-UFT-2.D KFU8-UFT-Ex2 KFU8-UFT-Ex2.D	KF*-UFT-* FDT	Digital input
KFD2-UT-1 KFD2-UT-1-1 KFD2-UT-Ex1 KFD2-UT-Ex1-1	KFD2-UT-* FDT	Temperature

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Device	Device DTM	Group
KFD2-UT2-1 KFD2-UT2-1-1 KFD2-UT2-2 KFD2-UT2-2-1 KFD2-UT2-Ex1 KFD2-UT2-Ex1-1 KFD2-UT2-Ex2 KFD2-UT2-Ex2-1	KF*-UT2-* FDT	Temperature
KFD2-WAC2-1.D KFD2-WAC2-Ex1.D	KF*-WAC2-* FDT	Analog input

Table 5.1

Note!

The configuration of the device is shown using the configuration of the KFD2-UT2-Ex2 temperature converter as an example.

Starting a Project

1. Start **PACTware** by double-clicking the icon [ ] .

   ↳ The **PACTware** main window is displayed.

2. Start a new project via **Create new project**.

or

Opening a Project

1. Start **PACTware** by double-clicking the icon [ ] .

   ↳ The **PACTware** main window is displayed.

2. Open an existing project with **Open project**.

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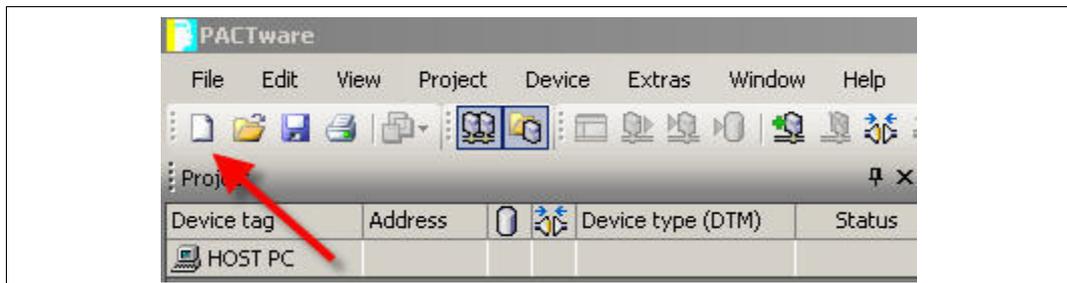
▶ **Adding a Device to the Project**

1. Add a communication DTM to your project. See chapter 5.3.

2. In the project window, select **P2P RSD232 FDT** and then use the right mouse button to open the context menu.

3. Select **Add device**.

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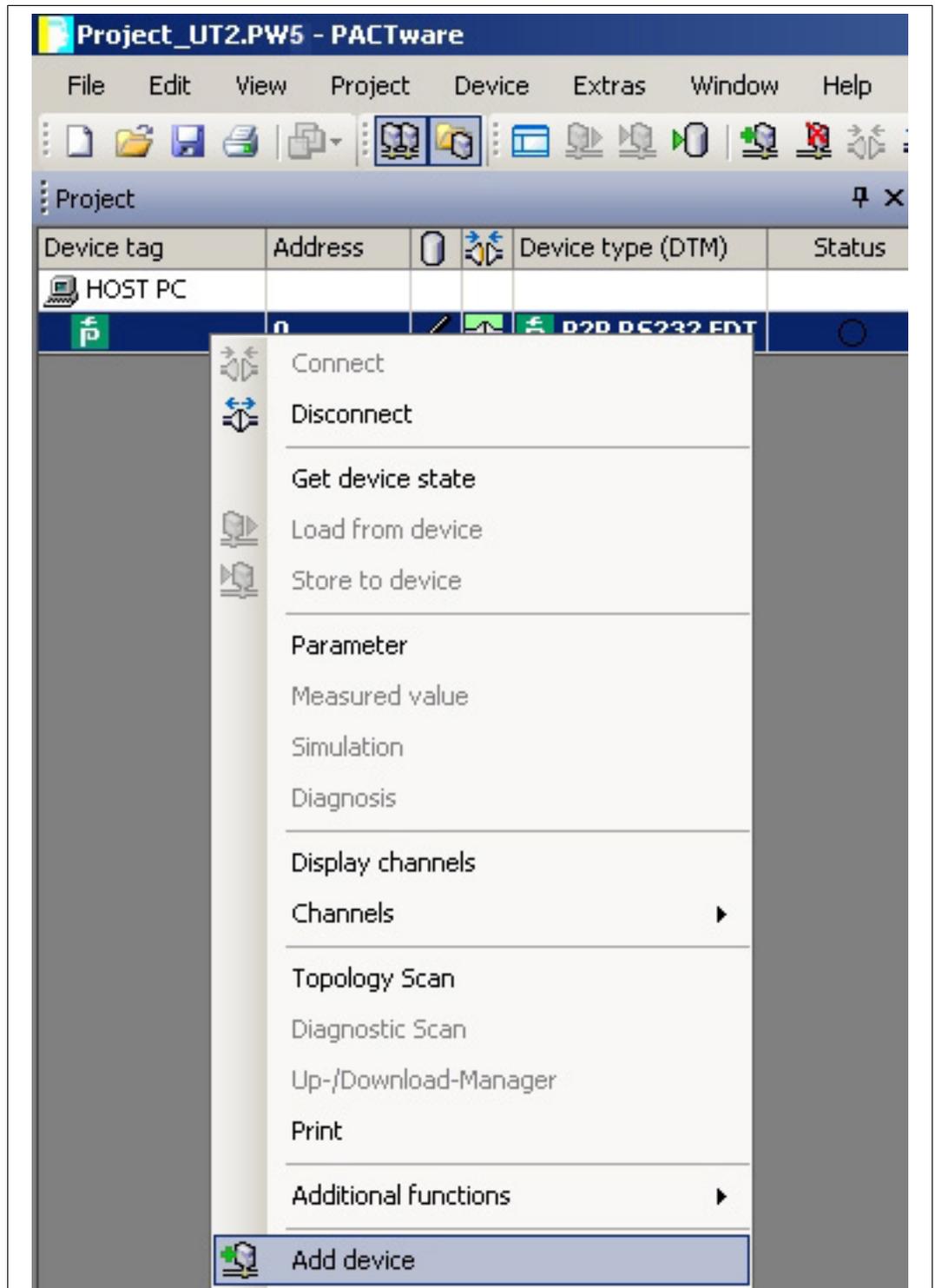
↳ The list of device DTMs is displayed.
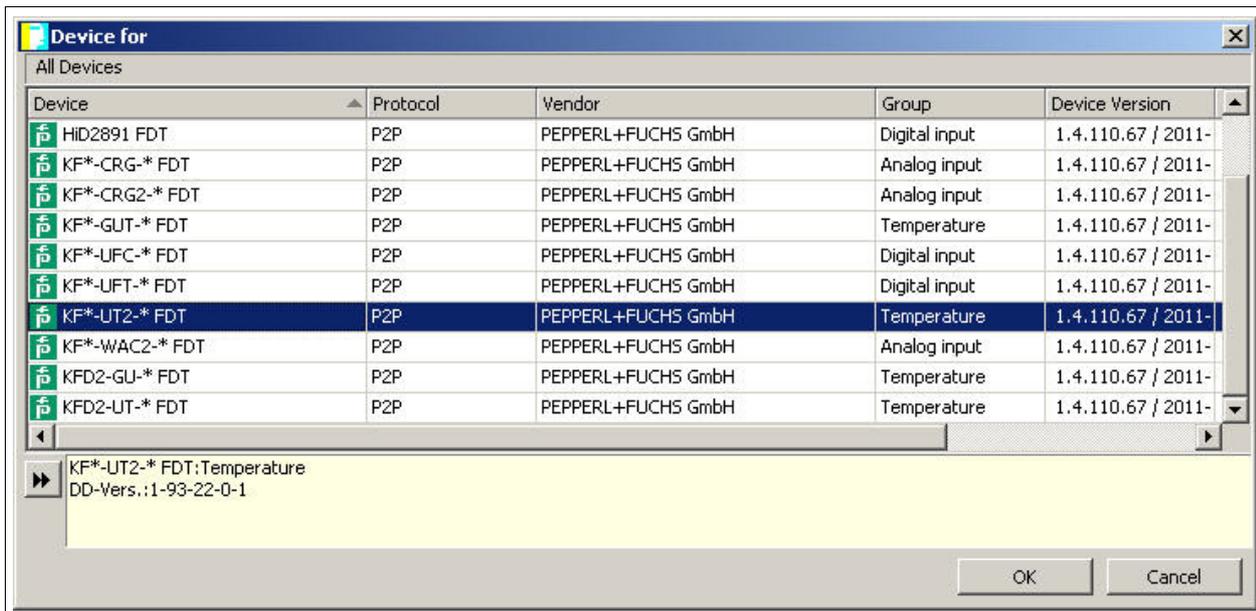
4. Select the required device DTM and confirm your selection with **OK**. Example: KF*-UT2-*FDT.

↳ The device DTM is included in the project tree.

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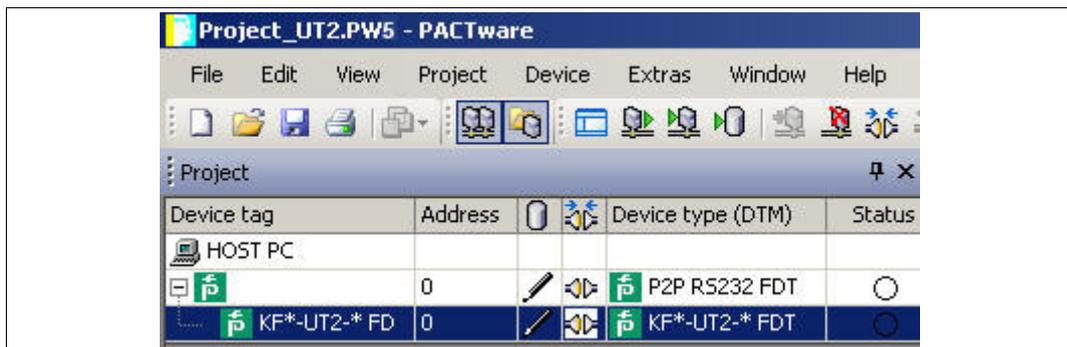
▶ **Establishing the Connection between the Device and PC**

1. In the project window, select **KF*-UT2-*FDT** and then use the right mouse button to open the context menu.
2. Choose **Connect**.
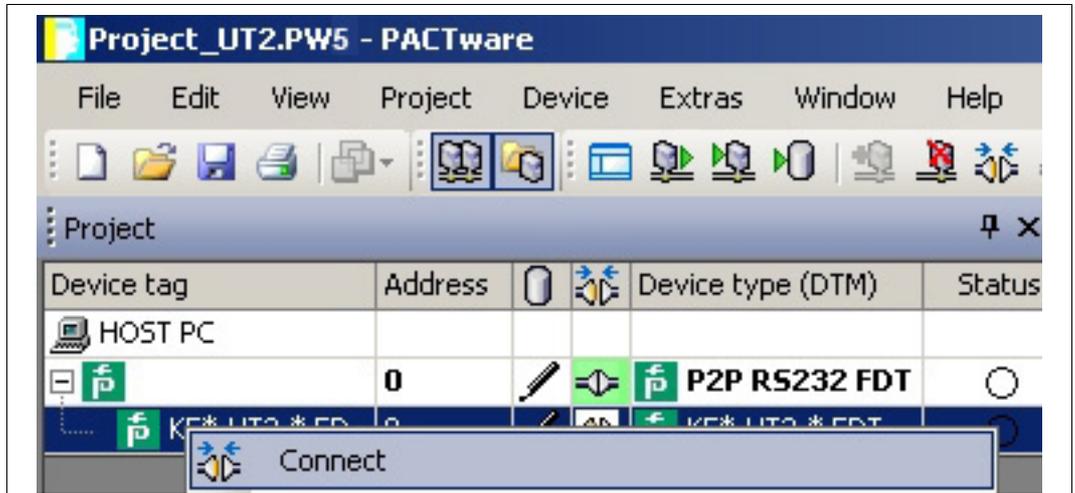
  ↳ The connection is established. The connection status is displayed:

▶ **Configuring the Device**

1. In the project window, select **KF*-UT2-*FDT** and then use the right mouse button to open the context menu.
2. Choose **Parameter**.

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↳ The Parameter window is displayed.

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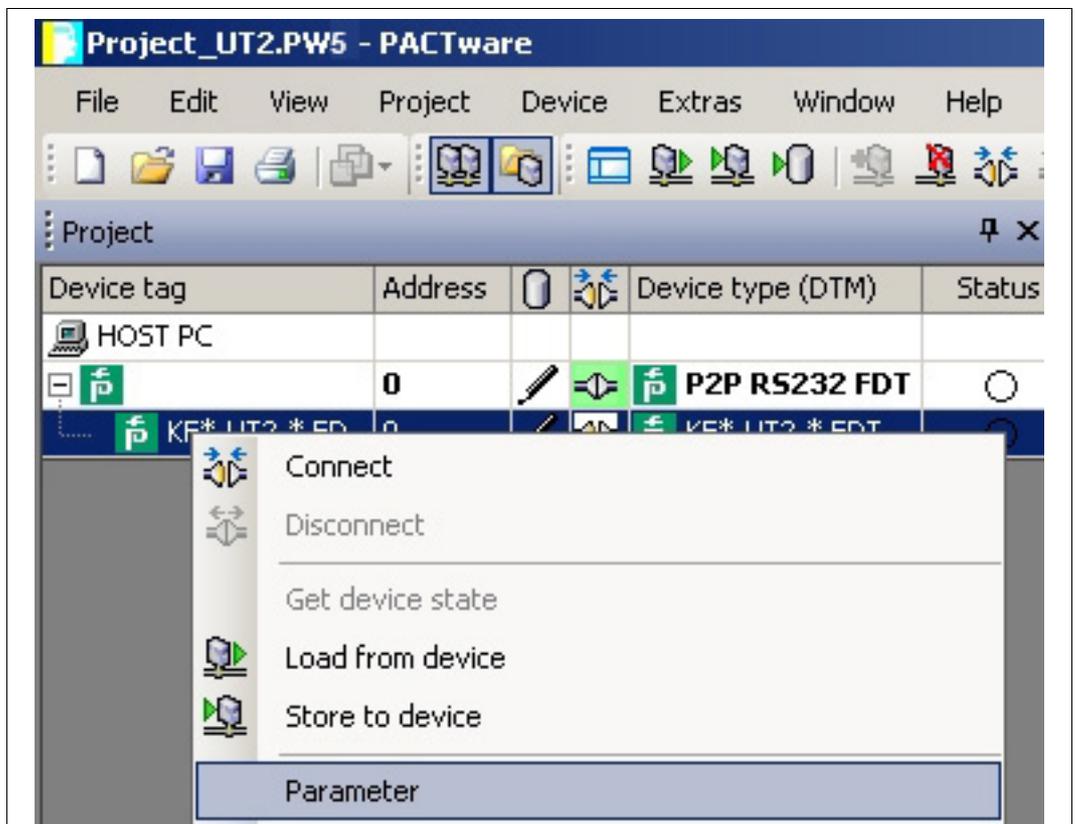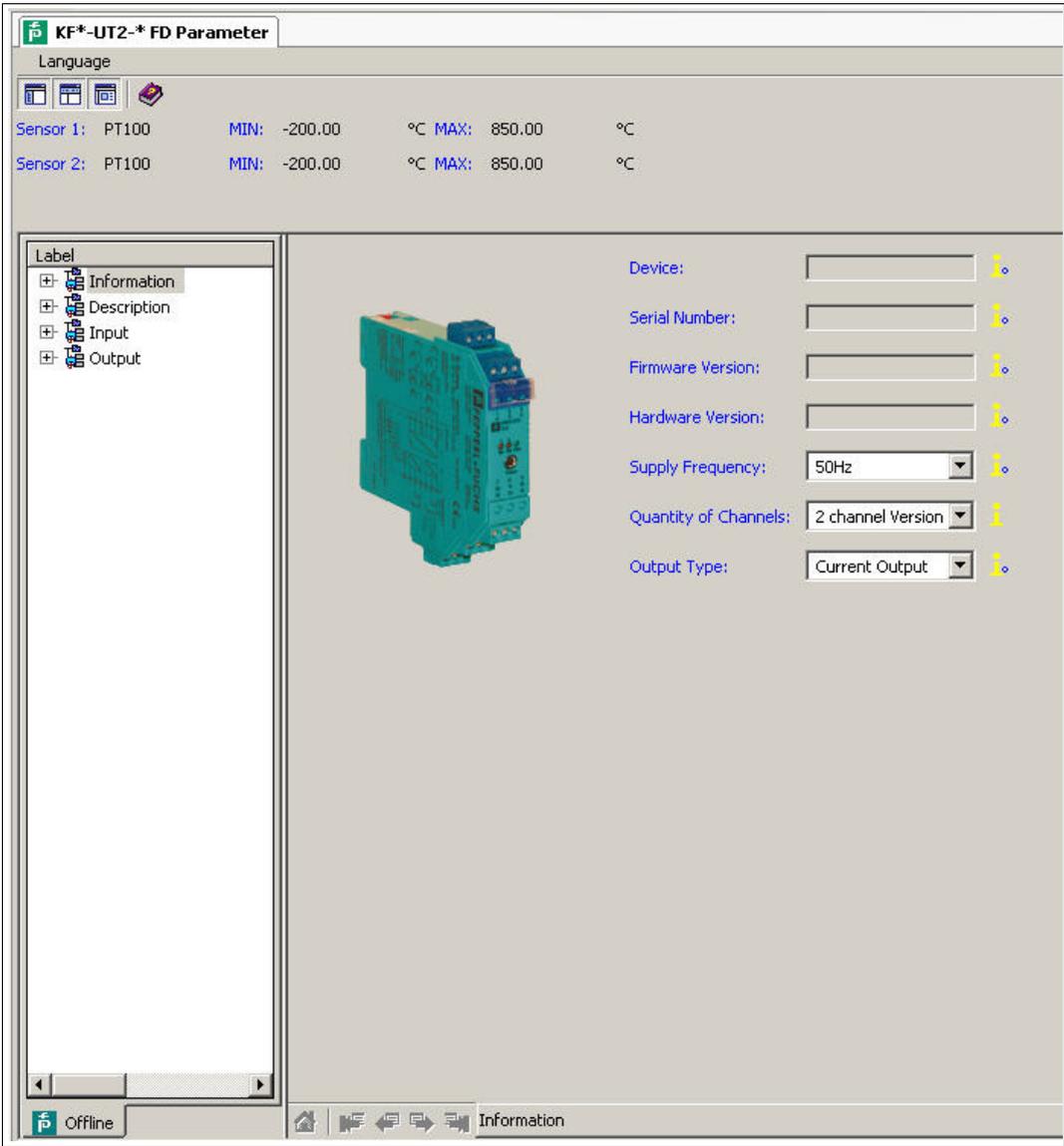
Changing the Language for Parameter Window

1. Change the language using the menu **Language** in the Parameter window.
2. Select the required parameter language in the drop-down list.
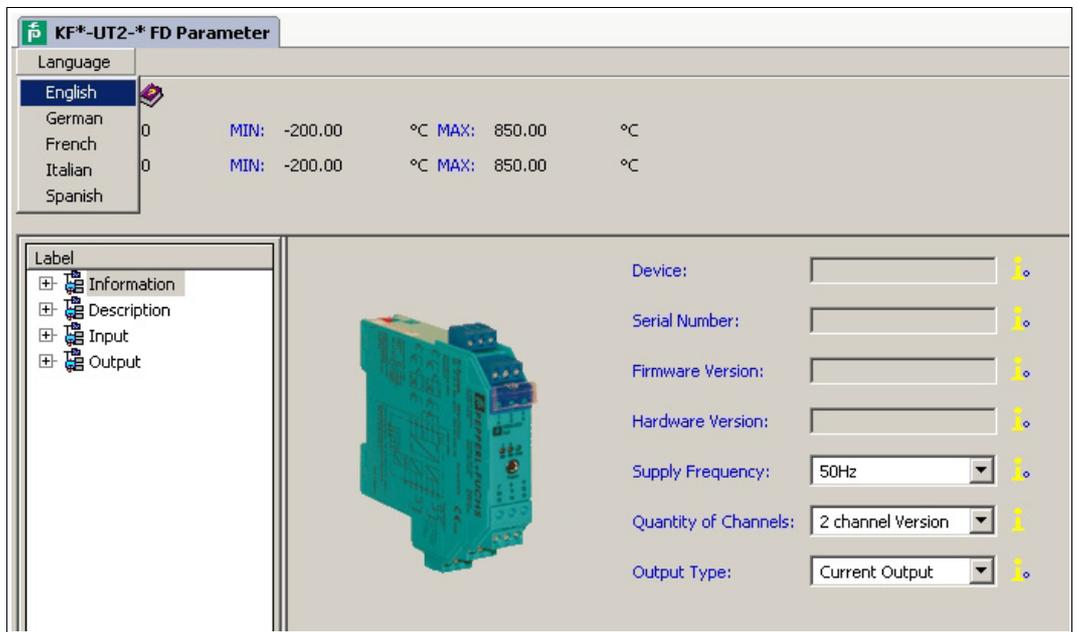

↳ The Language for Parameter window is changed.

Loading Device Data from the Device

1. In the project window, select **KF*-UT2-*FDT** and then use the right mouse button to open the context menu.
2. To transfer device data from the device to the PC, choose **Load from device**.

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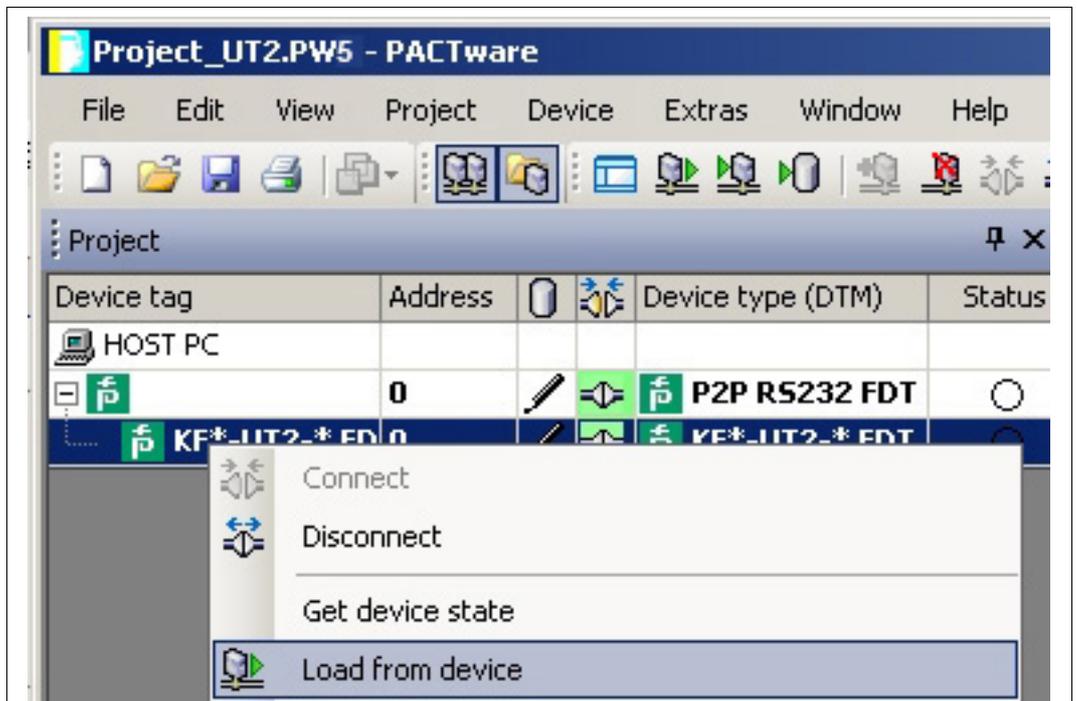
↳ The device data is displayed.

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▶ Editing Device Data

1. In the project tree, choose the entry that you want to edit. Example: Input 1.

↳ The device data for Input 1 is displayed.
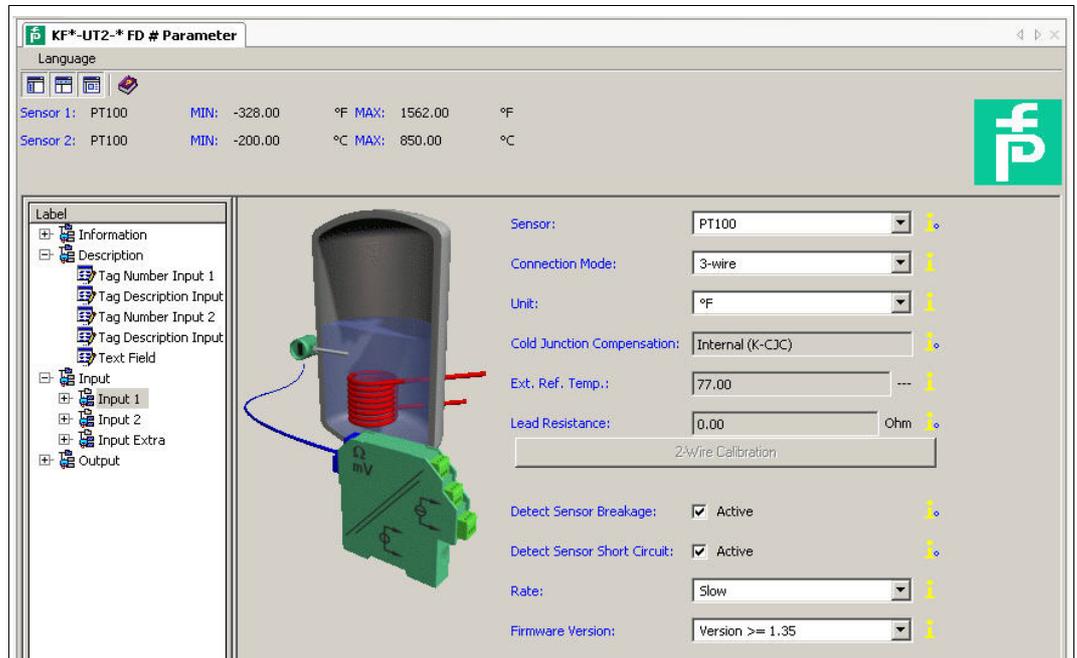
2. Edit the device data. For more information about editing the device data, see the **KFD2-UT2-(Ex)*(-1) Temperature Converter Manual**.
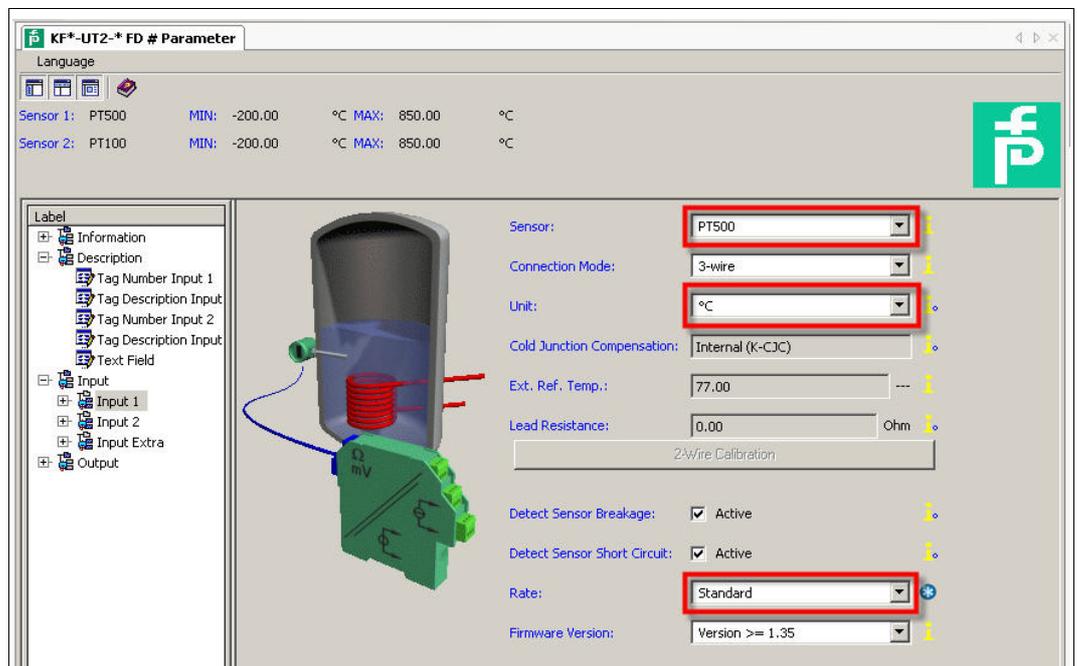
3. Select the required parameter from the drop-down list.

4. Confirm your selection with **Return**.

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Storing Device Data on the Device

1. In the project window, select **KF*-UT2-*FDT** and then use the right mouse button to open the context menu.

2. To transfer device data from the PC to the device, choose **Store to device**.
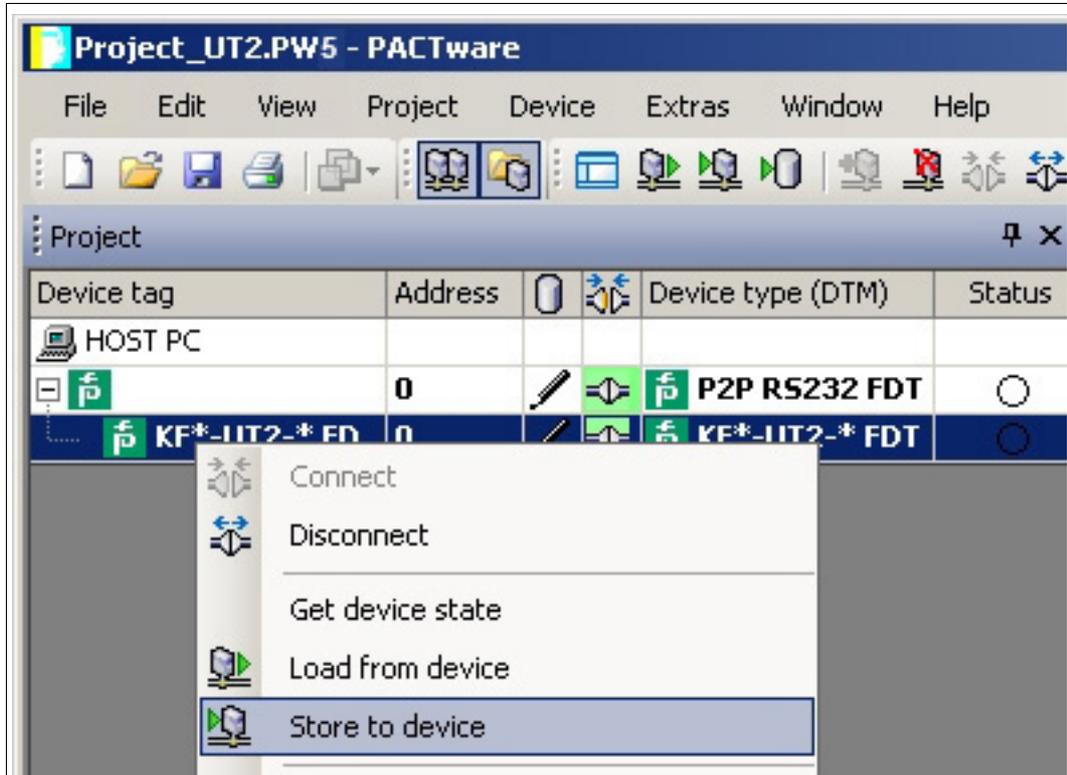
↳ The device is now configured.

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Disconnecting Devices from PCs

1. In the project window, select **KF*-UT2-*FDT** and then use the right mouse button to open the context menu.

2. Choose **Disconnect**.
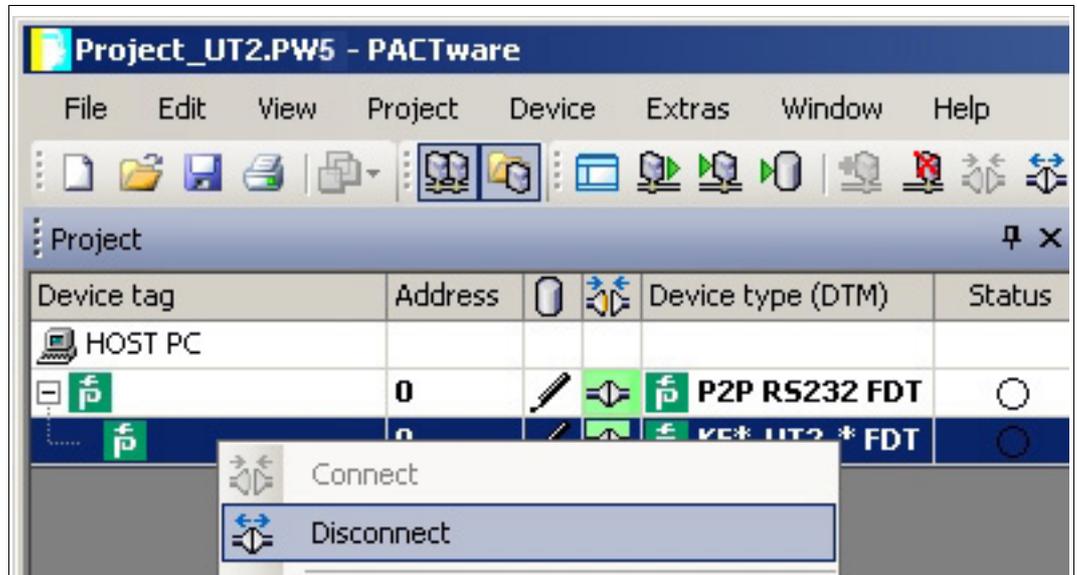
↳ The connection is disconnected. The status is displayed: ⬦

3. Disconnect the device from the PC by removing the adapter cable from the device or PC.

Saving a Project

Save the project with **Save project**.

Note!

For more information on operating **PACTware**, see the online help.

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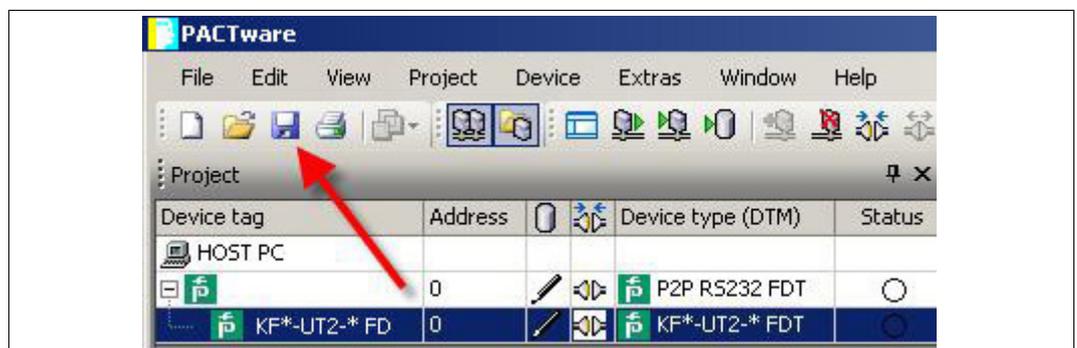
6 Additional Information on PACTware

Note!

You can find additional information about PACTware on the website http://www.pactware.com/support.

The following information is available:

- PACTware support contacts
- Release information
- Compatibility of PACTware with other software components
- Compatibility of PACTware functions
- Supported languages

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