

Operating Manual

iqPDCT

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1 Introduction

This document describes how the program **iqPDCT** (IQ² Port & Device Configuration Tool) is used.

2 Product Version

The version of iqPDCT used in this document: 1.6.0.

This version can be used on Windows 7, Windows X, and Windows 11.

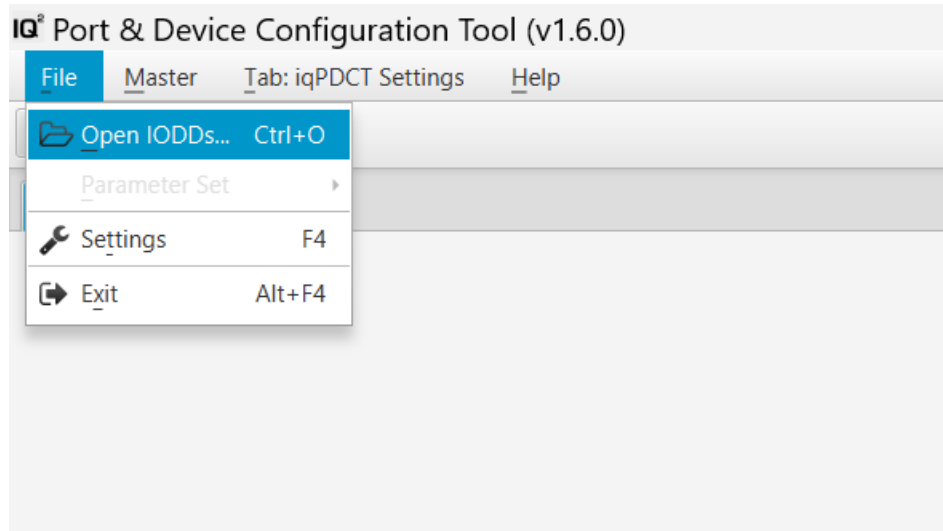
Operation of iqPDCT

Start the program **iqPDCT** and you can do the following:

- Load an IODD
- View the IODD sub-menus
- Establish a connection with an IO-Link device
- Use data storage from the IO-Link device
- Change language English/German
- Enable/disable user roles in the IODD

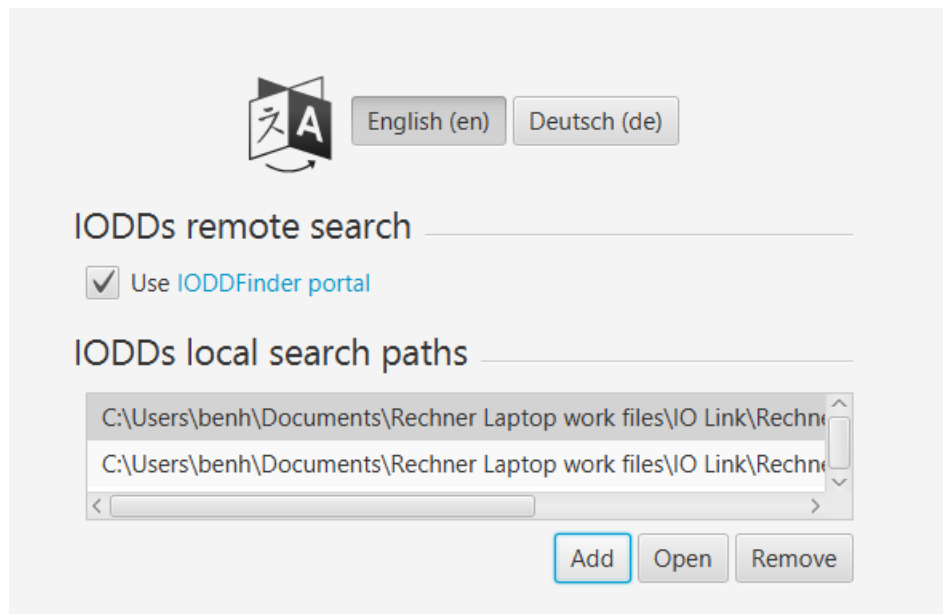
3.1 Loading an IODD File

- File -> Open IODDs

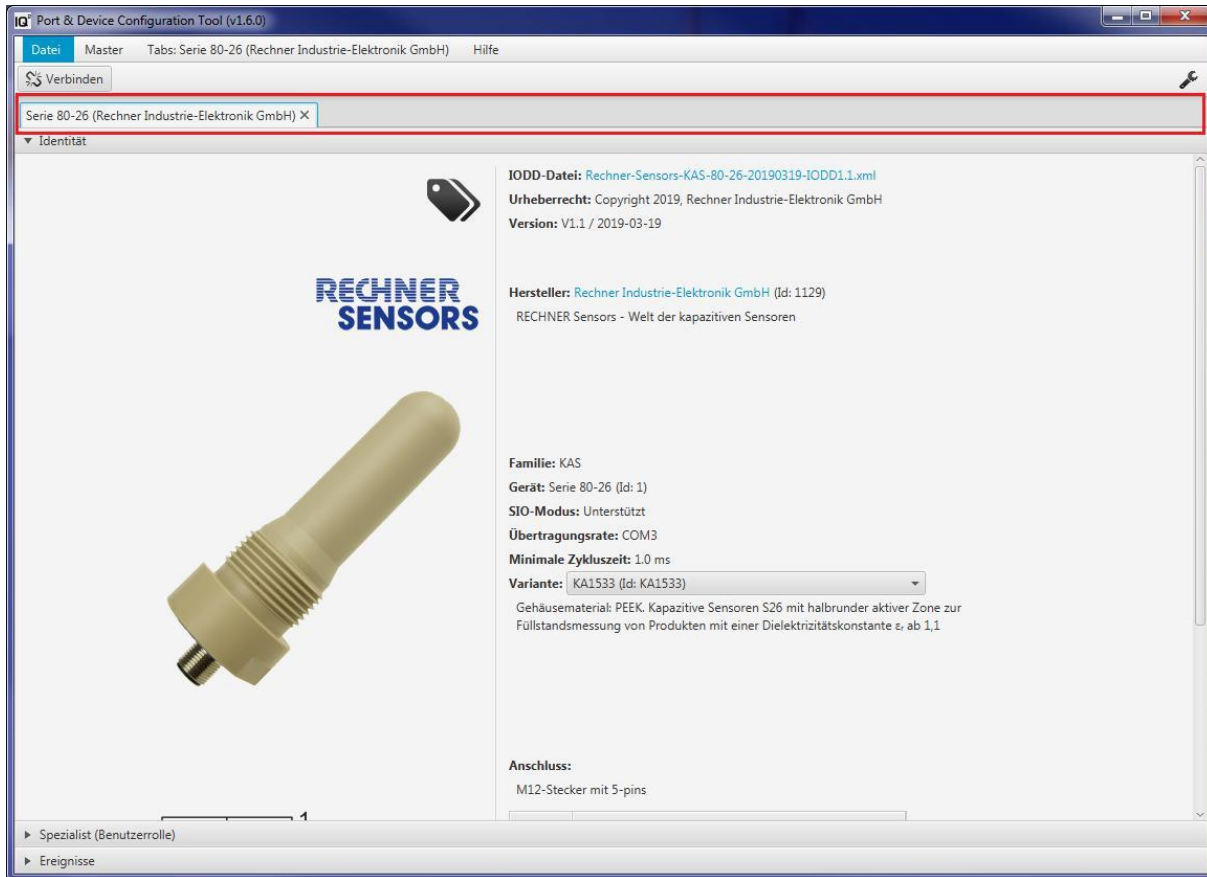


Download IODD files for Rechner products here: "<https://ioddfinder.io-link.com/productvariants/search?vendorName=%22RECHNER%20Industrie-Elektronik%20GmbH%22>"

Add IODD files in the iqPDCT program:



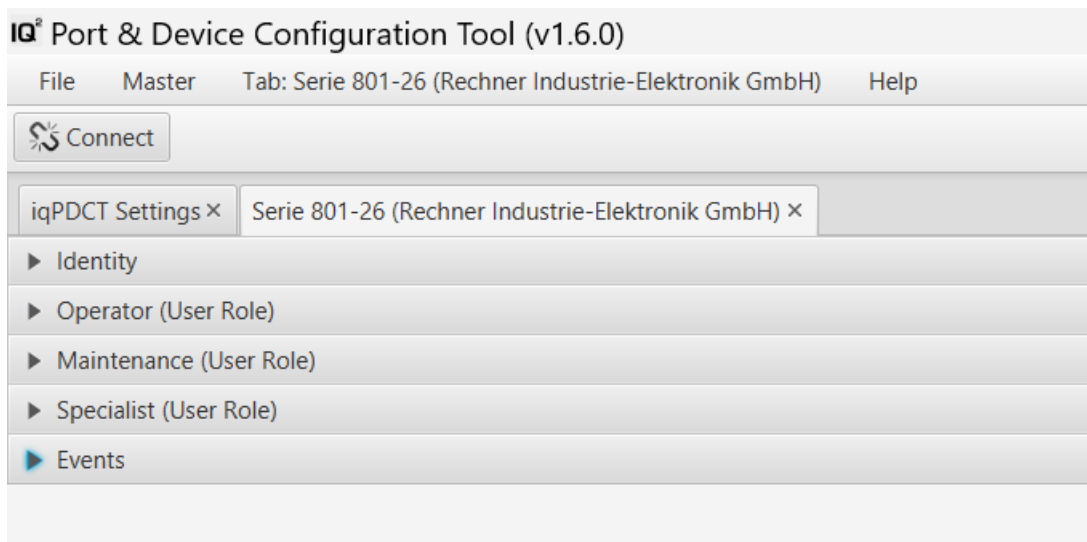
- Open an IODD by clicking File -> Open IODDs... After opening, the IODD will appear beneath the Connect button in the IODD tab area (marked in red). Multiple IODDs can be displayed simultaneously in the IODD tab area.



3.2 Presentation of the IODD

The IODD is displayed with a maximum of 5 sub-menus:

- **Identity**
- **Operation and Monitoring (User Role)**
- **Maintenance (User Role)**
- **Specialist (User Role)**
- **Events**



The three sub-menus of interest are **Identity**, **Specialist**, and **Events**. The two User Roles **Operator** and **Maintenance** can be disabled as these two are just slimmed down variants of the **Specialist** User Role.

The **Specialist** User Role allows changes to be made to all programmable aspects of the sensor.

The **Maintenance** and **Operator** User Roles only allow an Application Specific tag to be written to the sensor.

3.2.1 Identity

Under the **Identity** sub-menu, you can get an overview of the IO-Link device. Information such as appearance, pin assignment, device name, etc., is displayed here.

The screenshot shows the 'Identity' tab in the IQ Port & Device Configuration Tool. The main content area is divided into two columns. The left column features the Rechner Sensors logo, a photograph of the device, and a schematic diagram of the device's internal circuitry. The right column contains detailed technical information about the device, including its IODD file, copyright, version, vendor, family, device name, SIO mode, transmission rate, minimum cycle time, and variant. A table at the bottom right lists the pin assignments for the M12 connector.

Identity

RECHNER SENSORS

IODD-File: [Rechner-Sensors-KS-801-26-20191121-IODD1.1.xml](#)
Copyright: Copyright 2019, Rechner Industrie-Elektronik GmbH
Version: V1.0 / 2019-11-21

Vendor: [Rechner Industrie-Elektronik GmbH](#) (Id: 1129)
RECHNER Sensors - World of Capacitive Sensors

Family: KS
Device: Serie 801-26 (Id: 2)
SIO mode: Supported
Transmission rate: COM3
Minimum cycle time: 1.0 ms
Variant: KA1611 (Id: KA1611)

Housing material: PEEK. Capacitive Sensors of the S26 series with hemispherical active surface for level control of products with a dielectric constant ϵ_r from 1,25

Connection:
M12 connector with 4 pins

Pin	Function
1	Power supply (+)
2	Not connected
3	Power supply (-)
4	Communication signal

► Specialist (User Role)
► Events

Under the **Variant** menu, you can select and view all devices that are still supported by the current IODD.

The screenshot displays a software interface for selecting a sensor variant. On the left, there is a product image of a cylindrical sensor and a wiring diagram. The diagram shows a PNP sensor with four pins: Pin 1 is labeled '4 C/Q', Pin 2 is labeled 'TEACH', Pin 3 is connected to a common ground, and Pin 4 is connected to a power supply (+). The sensor symbol is labeled 'C' and 'PNP'.

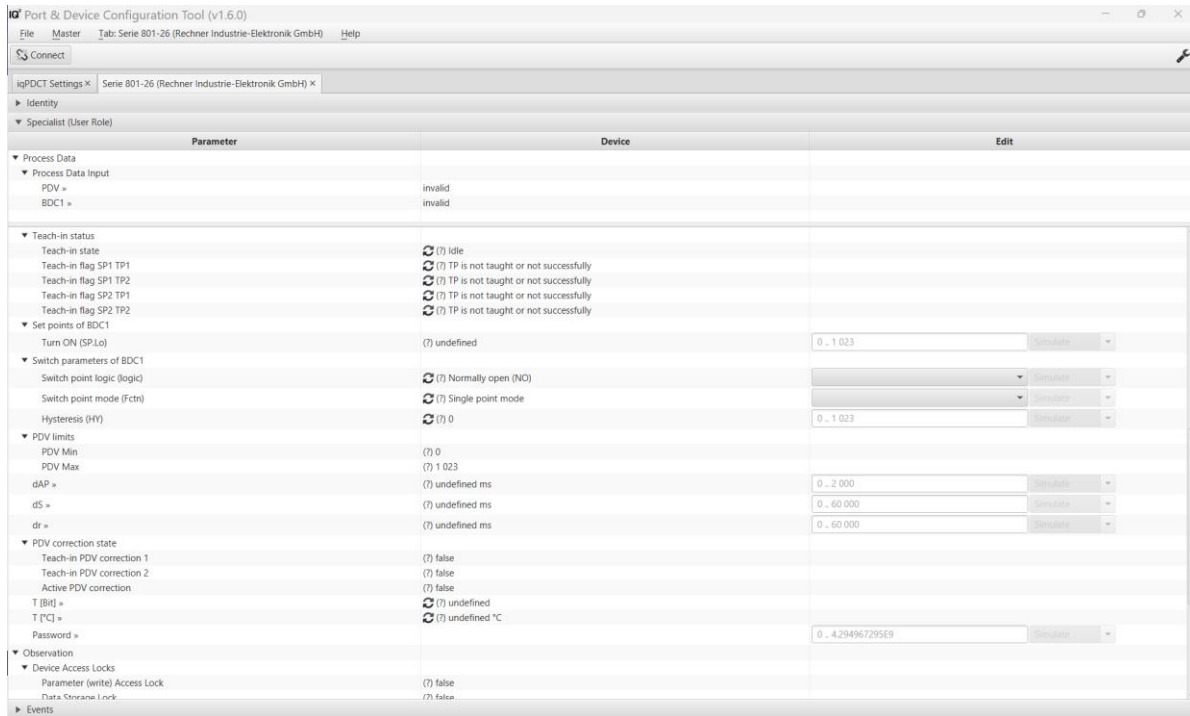
The main area shows a list of variants from KA1611 to KA1620. Each entry includes the part number and a description: 'Housing material: PEEK. Capacitive Sensors of the S26 series with hemispherical active surface for level control of products with a dielectric constant ϵ_r from 1,25'. A dropdown menu is set to 'KA1611 (Id: KA1611)'. Below the list, the selected variant's details are shown, including the same description and a 'Connection:' section.

Connection:
M12 connector with 4 pins

Pin	Function
1	Power supply (+)
2	Not connected
3	Power supply (-)
4	Communication signal

3.2.2 Specialist (User Role)

Under the **Specialist** sub-menu, you will find all setting options (process data, parameters, commands, etc.) for the IO-Link device.

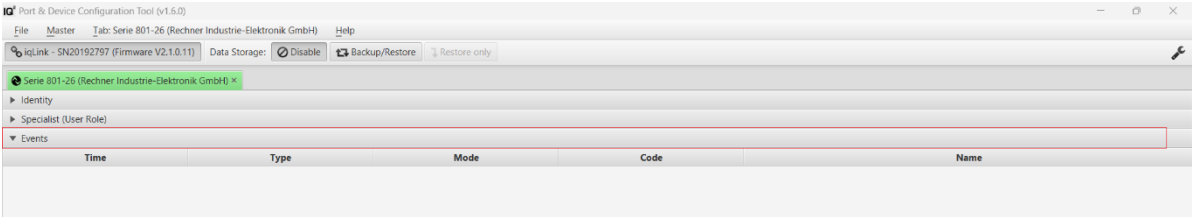


A detailed description of the functions contained in the IO-Link file can be downloaded here:

<https://www.rechner-sensors.com/en/documentations/io-link>
<https://www.rechner.com/IOLINK/>

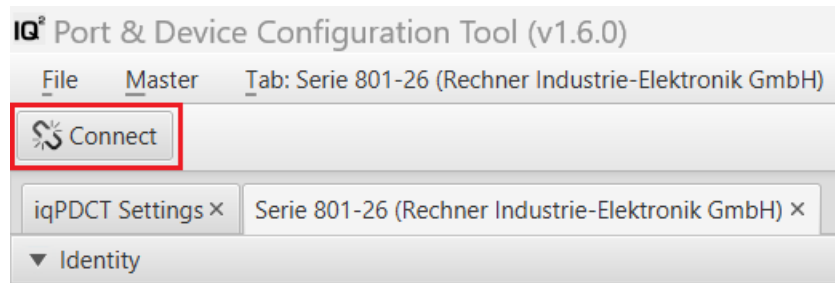
3.2.3 Events

Errors, warnings, and other information that were generated in the IO-Link device are posted in the **Events** sub-menu.

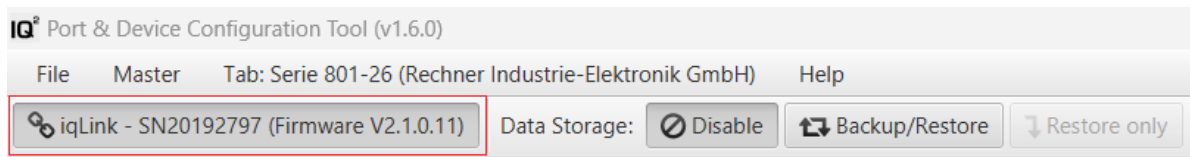


3.3 Establishing a Connection with an IO-Link Device

Click File and open the IODD file for your sensor, then click Connect to establish a connection between the computer and the IO-LINK Master.



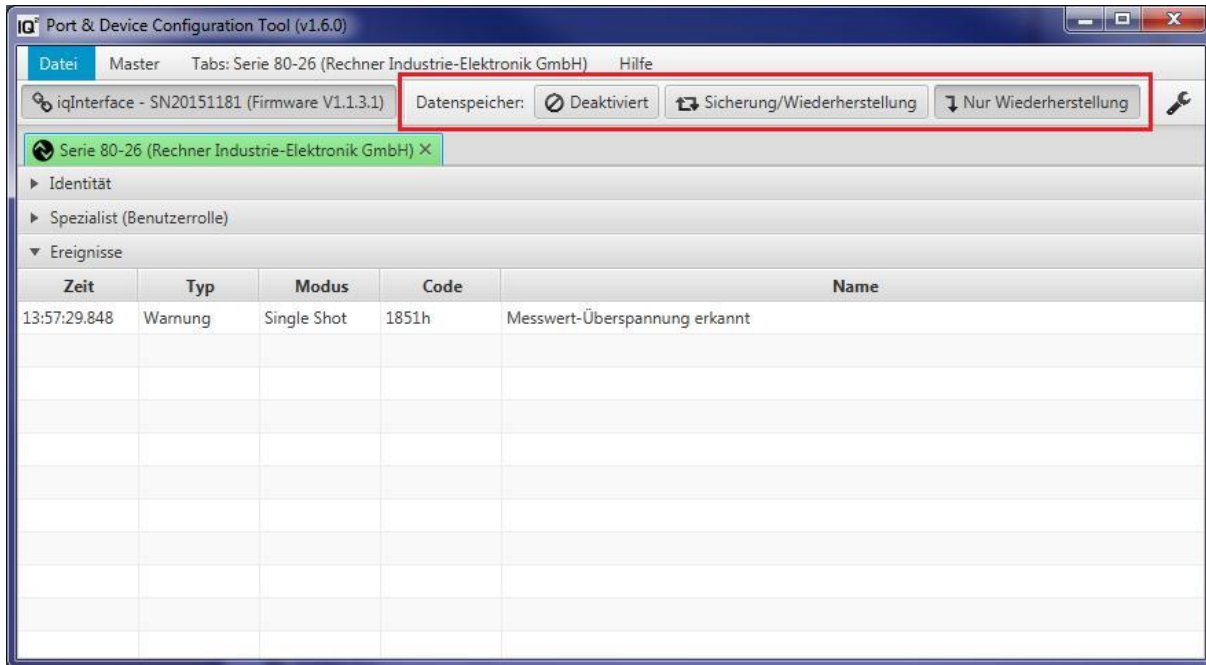
The **Serial Number** and **Firmware Version** of the connecting device will be displayed – SNxxxxxxx (Firmware Vx.xxx).



The IO-Link device can now be fully operated and configured under the **Specialist** role. If you then click the button **iqInterace – SNxxxxxxx (Firmware Vx.xxx)**, the connection will be terminated.

3.4 Using Data Storage from the IO-Link Device

After the connection to an IO-Link device has been established, Data Storage options appear next to the button **iqInterface – SNxxxxxxx (Firmware Vx.xxx)**.

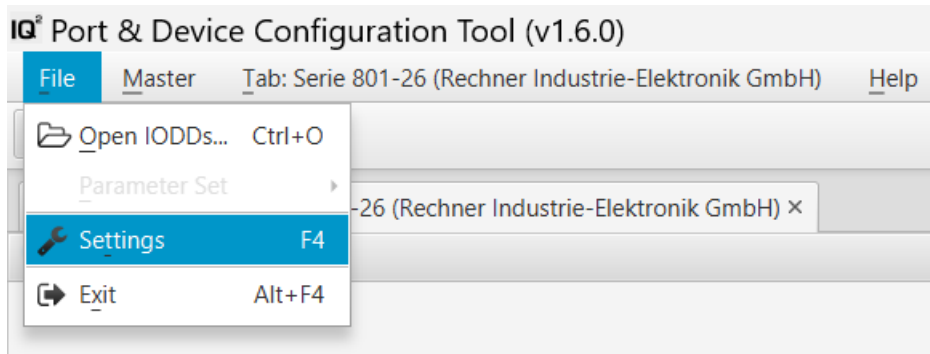


Explanation of the 3 buttons:

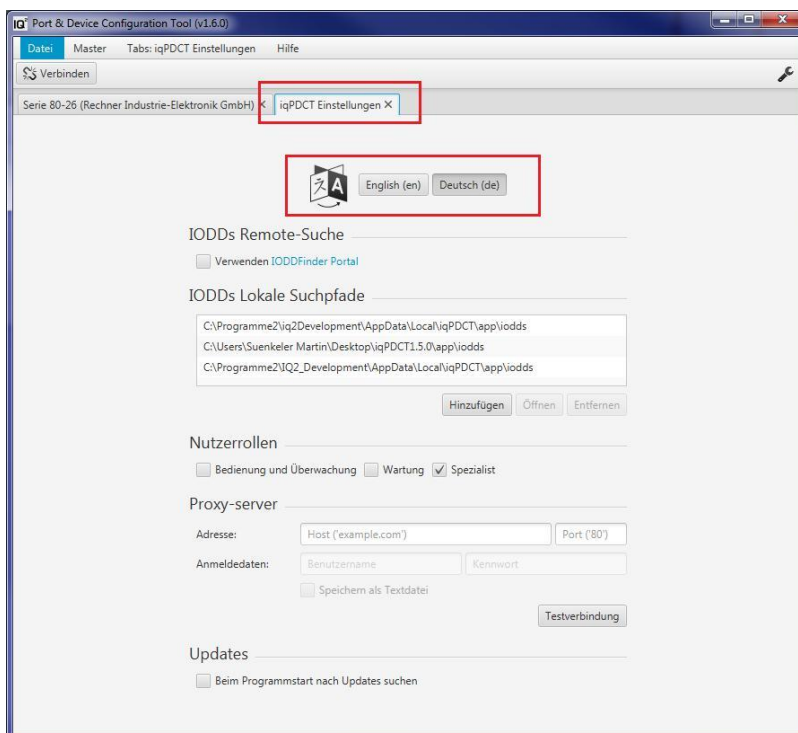
- **Disabled:** Device parameter changes are not saved. No parameter restore.
- **Backup/Restore:** Device parameters will be saved. Automatic parameter restore.
- **Restoration:** Device parameter changes will not be saved. Automatic parameter restore.

3.5 Change Language English/German

The display language for the program can be changed between English and German. You can open the settings menu by pressing F4, by clicking File -> Settings, or via the wrench icon.

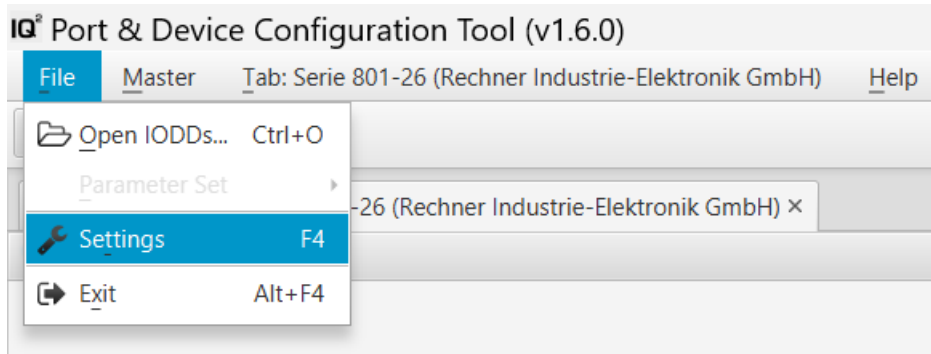


The menu item appears in the IODD tab area and the language can be changed at the top.



3.6 Enabling/Disabling User Roles in the IODD

In the menu item iqPDCT settings, the user roles can be changed. You can access the menu by pressing F4, by clicking File -> Settings, or via the wrench icon.



The menu item appears in the IOOD tab area, and the user roles can be activated/deactivated in the middle area.

