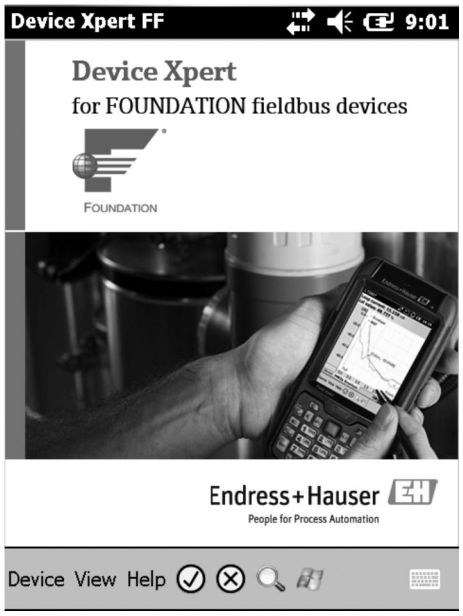
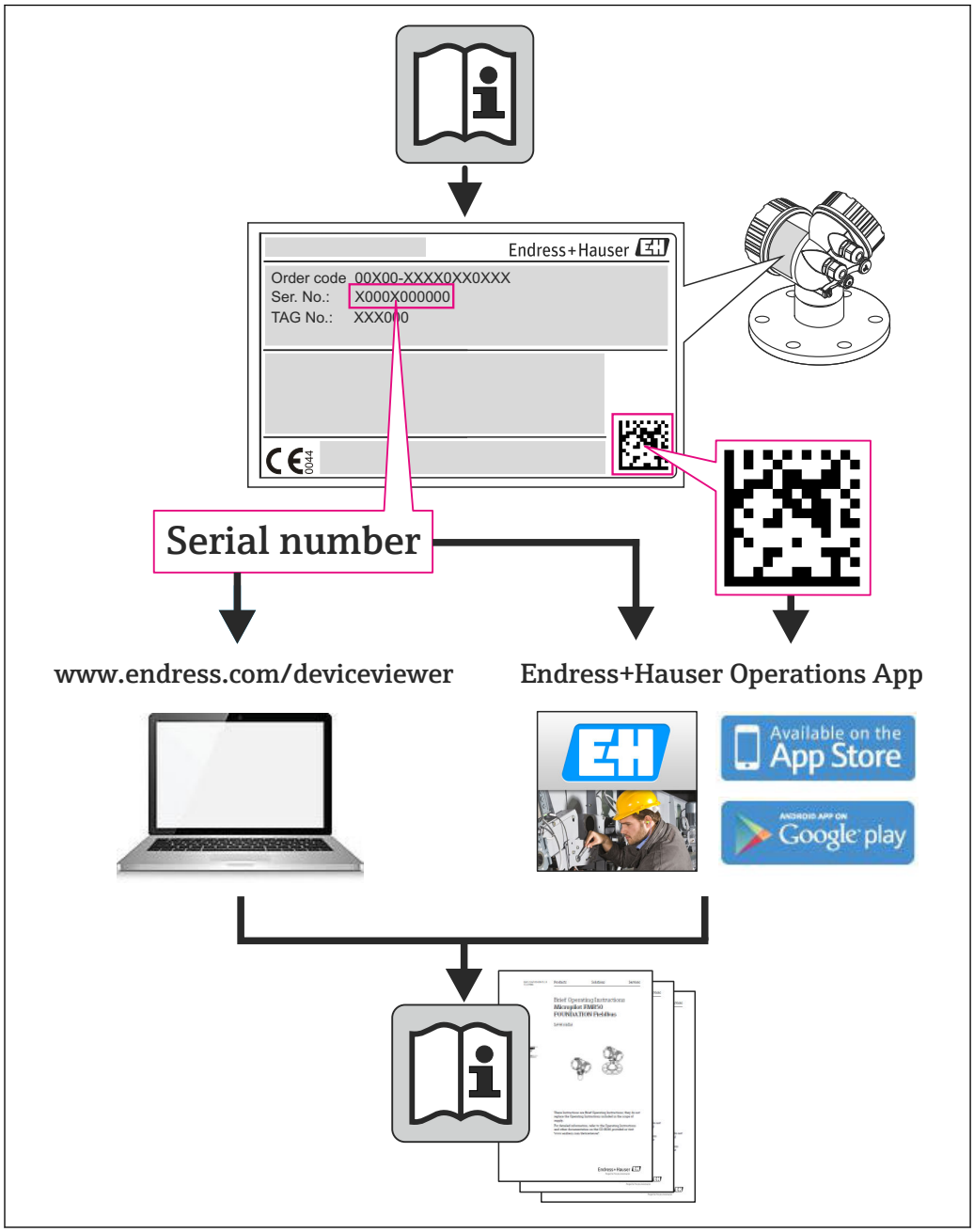
Operating Instructions
Device Xpert

Device configuration software
HART and FOUNDATION fieldbus



Endress+Hauser
People for Process Automation


Endress+Hauser
Order code 00X00-XXXX0XX0XXX
Ser. No.: X000X000000
TAG No.: XXX000
Serial number
www.endress.com/deviceviewer
Endress+Hauser Operations App
Available on the App Store
Google play

Revision history

Product version	Operating Instructions	Changes	Comments
1.08.xx [1] 1.02.xx [2]	BA01211S/04/EN/01.13	New	Separation of Device Xpert software from hardware manual
1.09.xx [3] 1.03.xx [4]	BA01211S/04/EN/02.14	Amendments to Chapter 4.3.5 and Chapter 4.9	New functionality
2.00.xx [5] 1.04.xx [6]	BA01211S/04/EN/03.15	Amendments to Chapter 4.9	New functionality

1) Device Xpert HART
2) Device Xpert FOUNDATION fieldbus
3) Device Xpert HART
4) Device Xpert FOUNDATION fieldbus
5) Device Xpert HART
6) Device Xpert FOUNDATION fieldbus

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1 Document information

1.1 Document function

1.2 Symbols used

1.2.1 Safety symbols

Symbol	Meaning
DANGER	**DANGER!** This symbol alerts you to a dangerous situation. Failure to avoid this situation will result in serious or fatal injury.
WARNING	**WARNING!** This symbol alerts you to a dangerous situation. Failure to avoid this situation can result in serious or fatal injury.
CAUTION	**CAUTION!** This symbol alerts you to a dangerous situation. Failure to avoid this situation can result in minor or medium injury.
NOTICE	**NOTE!** This symbol contains information on procedures and other facts which do not result in personal injury.

1.2.2 Symbols for certain types of information

Symbol	Meaning
	Permitted Indicates procedures, processes or actions that are permitted.
	Preferred Indicates procedures, processes or actions that are preferred.
	Forbidden Indicates procedures, processes or actions that are forbidden.
	Tip Indicates additional information.
	Reference to documentation Refers to the corresponding device documentation.
	Reference to page Refers to the corresponding page number.
	Reference to graphic Refers to the corresponding graphic number and page number.
1., 2., 3. …	**Series of steps**
✓	**Result of a sequence of actions**
	Help in the event of a problem

1.3 Software icons

Symbols	Description
	New notification
	New SMS message
	New e-mail message
	New instant message
	Missed call
	Hands-free speaker-phone switched on
	Roaming
	Alarm switched on
	Microphone switched on
	Internet call
	Bluetooth headset recognized
	ActiveSync connection established
	Problem with ActiveSync synchronization
	ActiveSync synchronization with USB
	CDMA connection active
	CDMA connection available, but no data transfer
	UMTS network available
	Connected to a UTMS network
	UTMS connection active
	3G+ network available
	EDGE network available
	Connected to an EDGE network
	EDGE connection active
	GPRS network available
	Connected to a GPRS network
	GPRS connection active
	HSDPA network available

Symbols	Description
	Connected to a HSDPA network
	HSDPA connection active
	Bluetooth active
	WiFi active but not connected, no network found
	WiFi not connected to network, other networks were found
	Other wireless network was found
	Connected to a wireless network
	Synchronization via a WiFi connection
	Connected to a wireless network, other networks were found
	Information available about a new wireless network
	Network connection active
	Network connection inactive
	Phone has maximum signal strength
	Phone has no signal
	Phone is switched off
	No telephone service
	Searching for telephone service
	Data transfer
	Voice call active
	Call waiting
	No SIM card inserted
	Sound switched off, vibrate mode is active
	Sound switched on
	Sound switched off
	Battery fully charged
	High battery power
	Medium battery power
	Low battery power

Symbols	Description
	Very low battery power
	Battery is being charged
	No battery in the device
	Call forwarding active
	Voice mail switched off
	GPS localization switched off
	GPS localization switched on

1.4 Text emphasis

Emphasis	Meaning	Example
Bold	Keys, buttons, program icons, tabs, menus, commands	**Start → Programs → Endress+Hauser** select **Print** option in the **File** menu.

1.5 Acronyms used

Acronyms	Meaning
BA	Operating Instructions
BOF	Basic Operational Functionality
DD	Device Description
FF	FOUNDATION fieldbus
OOS	Out of Service
ToF	Time-of-Flight
USB	Universal Serial Bus
WiFi	Wireless Fidelity

1.6 Registered trademarks

PROFIBUS® is a registered trademark of the PROFIBUS User Organization, Karlsruhe/ Germany.

FOUNDATION™ fieldbus is the trademark of the FieldComm Group, Austin, TX 78759, USA.

HART®, WirelessHART® is the registered trademark of the FieldComm Group, Austin, TX 78759, USA.

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FFblue Interface Softing Industrial Automation GmbH, Germany.

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2 Basic safety instructions

2.1 Requirements for personnel

It is extremely important that the users of the software are adequately trained and qualified in commissioning fieldbus devices and have the necessary authorization to do so.

2.2 Designated use

Device Xpert is a device configuration software that is supplied installed on Field Xpert SFX100, SFX350 and SFX370 industrial PDAs. Versions are available for both HART and FOUNDATION fieldbus. The software can be used for the purposes described in these Operating Instructions. Functionality has been tested for devices registered with the HART Communication Foundation and the Fieldbus FOUNDATION. There is no guarantee that unregistered devices can be configured, although this is often the case.

2.3 Workplace safety

Device Xpert is used to configure fieldbus devices. As such it is possible that incorrect configurations may lead to unwanted or hazardous situations in a process plant.

Device Xpert is delivered already installed on the Field Xpert industrial PDA. The commissioning and operation of the Field Xpert SFX350 and SFX370 devices together with the associated Bluetooth modems and plant access points is described in **Operating Instructions BA01202S/04/en** and that of Field Xpert SFX100 in **Operating Instructions BA00060S/04/en**.

2.4 Technical improvements

Endress+Hauser reserves the right to make technical improvements to the hardware and software at any time and without prior notification. If such improvements have no effect on the operation of the equipment, they are not documented. If the improvements affect operation, a new version of the Operating Instructions is created and issued.

3 Function and system design

3.1 Function

Field Xpert from Endress+Hauser is a powerful, compact industrial PDA based on the Windows Embedded Handheld operating system and offering integrated WLAN, USB, Bluetooth and infrared interfaces. This allows it to be connected to HART and/or FOUNDATION fieldbus devices via a modem or gateway. With a range of Ex approvals, Field Xpert meets the needs and requirements of the process industry for applications inside and outside hazardous areas.

Once the Field Xpert hardware and the Device Xpert software are communicating with a device, it can be parameterized. Depending upon the system architecture, only one device may be seen (e.g. in HART point-to-point) or all the devices connected to the segment (e.g. in FOUNDATION fieldbus applications).

1 *Device Xpert FOUNDATION fieldbus start page and live list of connected devices*

Other functions, described in more detail in Chapter 3 are:
- Device Description (DD) updates
- Envelope curve
- Favorites folder
- Search function
- Device diagnosis
- Upload/Compare function
- Device Report (XML)
- Application help
- Generic DD

3.2 Connecting to HART devices

⚠ WARNING

If additional devices are connected to an intrinsically safe circuit, proof of the intrinsic safety of the circuit must be verified once more.

Connecting devices to circuits that are not intrinsically safe causes the modem to no longer be intrinsically safe.

- ▶ Once a modem has been used in a non-Ex facility, it may not be installed in an Ex facility afterwards.

3.2.1 VIATOR Bluetooth modem

The VIATOR Bluetooth modem allows point-to-point connections to be made with a HART device. There are two possibilities to do so:

- For a normal transmitter power supply unit, (e.g. RMA42) via a 270 Ω load resistor (250 to 1 100 Ω) connected into the loop as shown in **Fig. 2**.
- With a transmitter power supply unit with built-in HART communication resistor, via the two HART communication sockets on the front panel as shown in **Fig. 3**.
  Suitable HART transmitter power supply units are:
  – RNS221, RMA422, for non-Ex applications
  – RN221, RMA421 for Ex and non-Ex applications

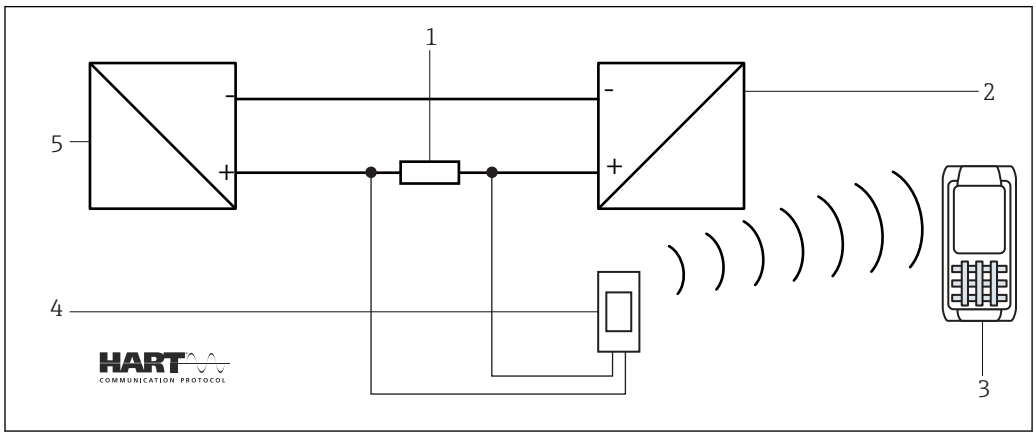
The connection between the Field Xpert and the modem is wireless.

⚠ CAUTION

The modem is certified for use in hazardous areas, Zone 1.

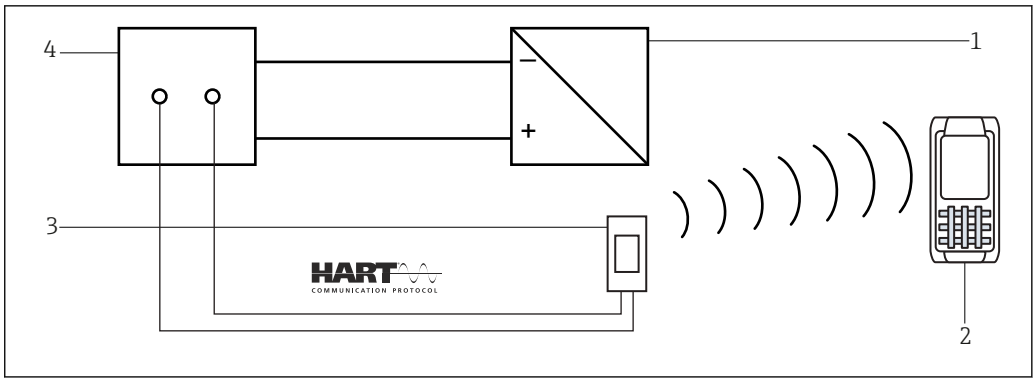
There is the risk that the protective circuits were overloaded unintentionally, with the result that they no longer work correctly.

- ▶ Once a modem has been used in a non-Ex facility, it may not be installed in an Ex facility afterwards.



2 Connection via a load resistor

1 Load resistor: 250 to 1 100 Ω
2 HART device
3 Field Xpert
4 VIATOR Bluetooth modem
5 Transmitter power supply unit

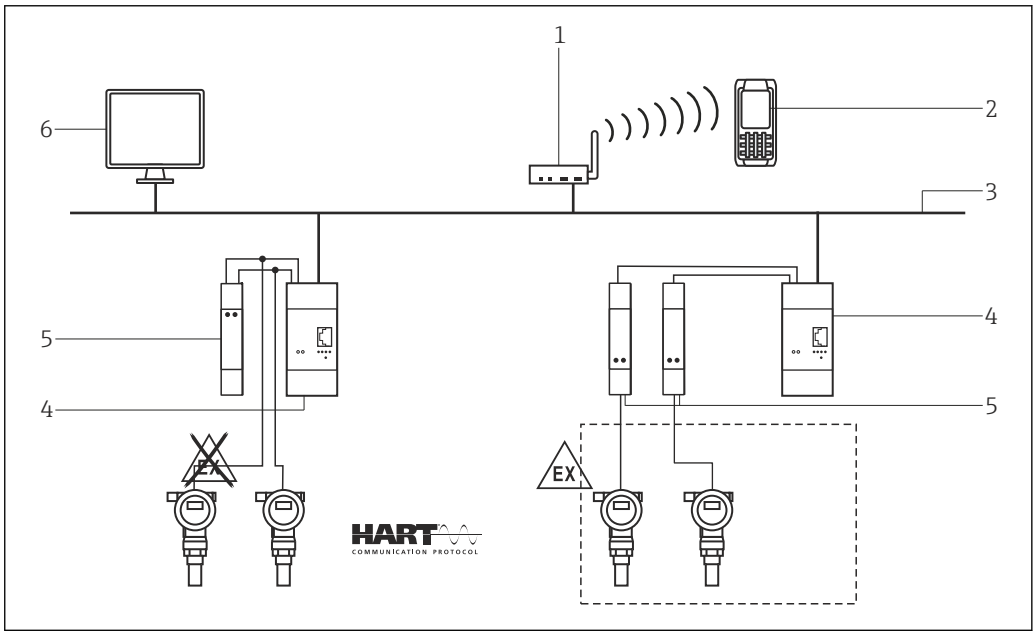


3 *Connection via a transmitter power supply with HART communication sockets (internal load resistor)*

1 HART device
2 Field Xpert
3 VIATOR Bluetooth modem
4 Transmitter power supply unit

3.2.2 WiFi HART point-to-point connection via Fieldgate FXA520

Two HART devices can be connected directly to the input channels of the Fieldgate FXA520. If the appropriate version of Fieldgate was ordered, the devices can be used in hazardous areas. The inputs meet the requirements of SIL 2 for 4 to 20 mA loops (IEC 61508). Fig. 4 shows the equipment architecture, whereby the Field Xpert communicates with the Fieldgate FXA520 via a WiFi access point and the Fieldgates are powered by RN221 or RN221N-B transmitter power supply units.

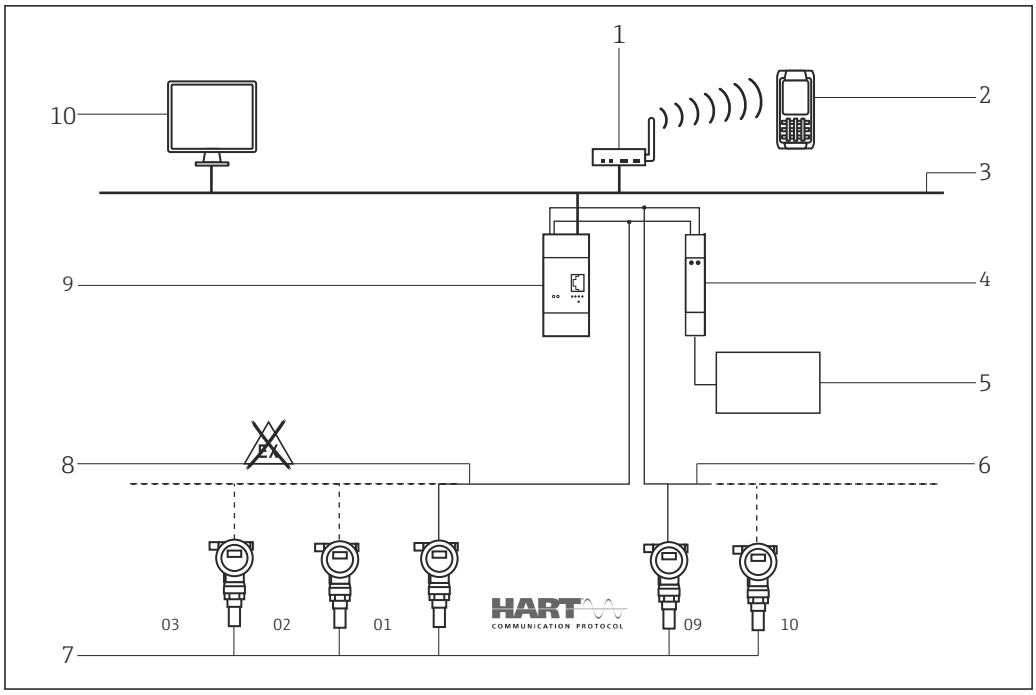


4 *Equipment architecture for HART point-to-point connection*

1 WiFi access point
2 Field Xpert
3 Ethernet
4 Fieldgate FXA520
5 e.g. RN221N-B
6 SCADA visualization

3.2.3 WiFi HART multidrop connection via Fieldgate FXA520

With the FXN520 multidrop module, up to 2 x 8 HART devices operating in a non-hazardous area can be connected to the Fieldgate FXA520. **Fig. 5** shows the equipment architecture.

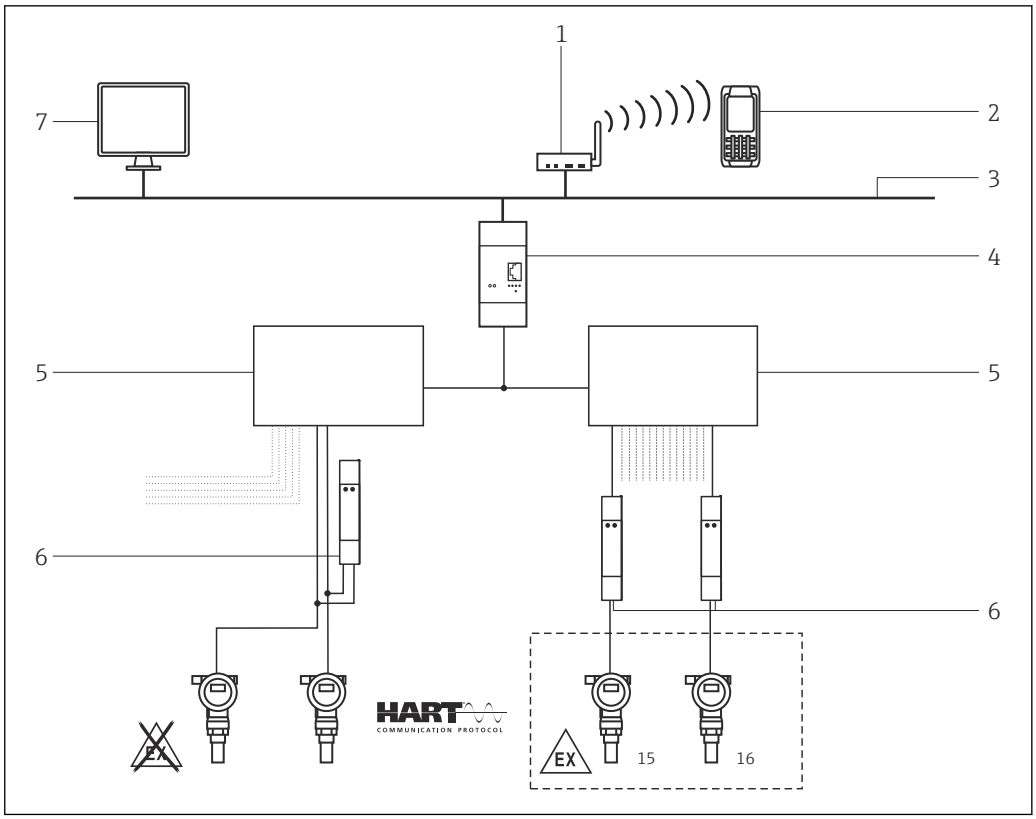


5 Equipment architecture for HART multidrop connection

1 WiFi access point
2 Field Xpert
3 Ethernet
4 Multidrop input module FXN520
5 Power supply 24 VDC
6 Channel 2 up to 8 devices
7 Device addresses
8 Channel 1 up to 8 devices
9 Fieldgate FXA520
10 SCADA visualization

3.2.4 WiFi HART multiplexer connection via Fieldgate FXA520

Fig. 6 shows the equipment architecture for a HART multiplexer connection. The RS-485 interface for Fieldgate FXA520 can be used for connecting up to two HART multiplexers, e.g. the KFD2-HMM-16 from Pepperl+Fuchs. Up to 30 HART devices can be connected in this way. If the devices are used in a safe area, the RNS221 transmitter power supply can be used to power two devices. Ex devices can also be installed in hazardous areas. In this case, the signal must be connected to the safe side of a RN221N-B transmitter power supply.



6 *Equipment architecture for HART multiplexer connection*

1 *WiFi access point*
2 *Field Xpert*
3 *Ethernet*
4 *Fieldgate FXA520*
5 *MASTER HART multiplexer e.g. Pepperl+Fuchs KFD2-HMM-16 with max. 15 devices*
6 *e.g. RN221N-B*
7 *SCADA visualization*

3.3 Connecting to FOUNDATION fieldbus devices

⚠ WARNING

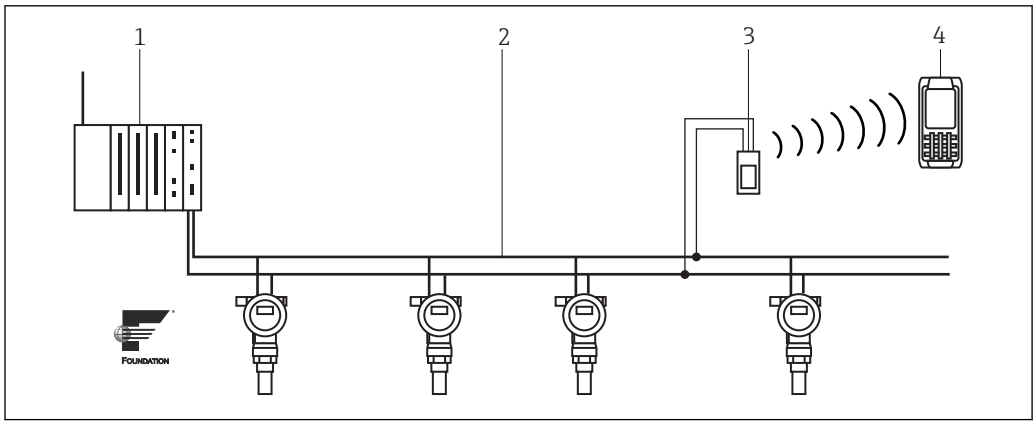
If additional devices are connected to an intrinsically safe circuit, proof of the intrinsic safety of the circuit must be verified once more.

Connecting devices to circuits that are not intrinsically safe causes the modem to no longer be intrinsically safe.

- ▶ Once a modem has been used in a non-Ex facility, it may not be installed in an Ex facility afterwards.

3.3.1 FFblue Bluetooth modem

Field Xpert communicates with a FOUNDATION fieldbus device via the FFblue Bluetooth modem. The connection between the Field Xpert and the modem is wireless. The modem can be connected at any point on the H1 fieldbus segment, or directly to the fieldbus terminals of the device itself. The modem can also be used in explosion hazardous areas, provided that the Field Xpert used with it is also certified for Ex applications.

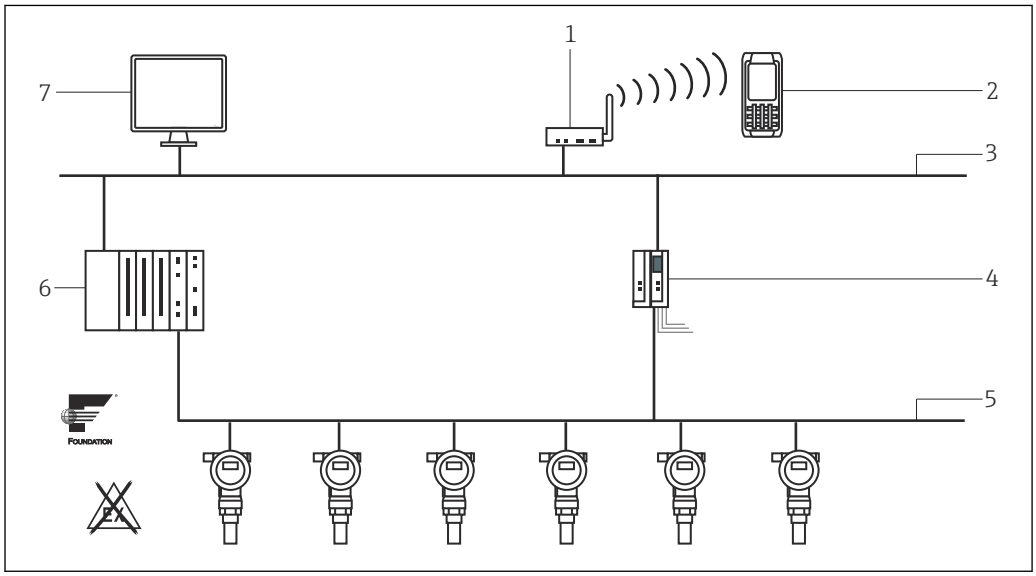


7 *Connection of FFblue modem to FOUNDATION fieldbus H1 segment*

1 *Controller with fieldbus power supply*
2 *FOUNDATION fieldbus H1*
3 *FFblue modem*
4 *Field Xpert*

3.3.2 WiFi FOUNDATION fieldbus connection via SFC162 gateway

Fig. 8 shows the equipment architecture, whereby the Field Xpert communicates with the SFC162 gateway via a WiFi access point. The SFC162 gateway is connected in parallel to the controller. It has four channels, each of which may be connected to a different FOUNDATION fieldbus H1 segment.



8 *Equipment architecture for FOUNDATION fieldbus network (Non-Ex)*

1 *WiFi access point*
2 *Field Xpert*
3 *Ethernet*
4 *SFC162 gateway visitor with power unit*
5 *FOUNDATION fieldbus H1*
6 *Controller*
7 *SCADA visualization*

4 Operating Field Xpert

4.1 Getting started

4.1.1 Connections

The commissioning of Field Xpert is described in **Operating Instructions BA01202S/04/en**.

Bluetooth connections

Before Field Xpert can be used to configure HART or FOUNDATION fieldbus devices it must be commissioned.
What exactly must be done depends upon the type of connection that is in use and the license th

- A Bluetooth connection for HART has already been configured and installed in Field Xpert by Endress+Hauser prior to delivery if a HART or HART plus FOUNDATION fieldbus Device Xpert license has been purchased
- A Bluetooth connection for FOUNDATION fieldbus has already been configured and installed in Field Xpert by Endress+Hauser prior to delivery if a FOUNDATION fieldbus or HART plus FOUNDATION Fieldbus Device Xpert license has been purchased
- A WiFi connection must always be configured and installed by the user.

The user may also need to configure and install a Bluetooth connection if the license is upgraded or if the modem needs to be reconfigured following a Field Xpert clean reset. This procedure is described in **Operating Instructions BA01202S/04/en**.

WiFi connections

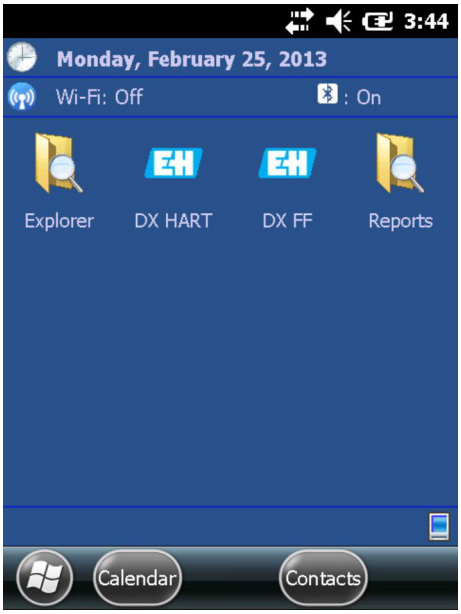
If a WiFi connection to a Fieldgate FXA520 (HART) or SFC162 gateway (FOUNDATION fieldbus) has been selected, then the connection must be set up before the associated Device Xpert software can be used. This setup procedure is described in **Operating Instructions BA01202S/04/en**.

- The VIATOR Bluetooth modem switches off if there is no traffic for 30 minutes. Switch the modem on again to reactivate it. Um das Modem wieder zu aktivieren, erneut einschalten.
- The FFblue Bluetooth modem goes to sleep if there is no traffic for 10 minutes. Reconnect the modem to the bus to reactivate it.

4.1.2 Power up

If the Fieldgate FXA520 or SFC162 gateway is used, check that the devices are powered up and that the network is up and running.

1. Switch on Field Xpert by pressing the **on/off button**.
   ↳ The Field Xpert home screen appears. The Field Xpert switches on automatically when the USB connector is inserted into the computer.



2. Check that the correct communication mode is active.

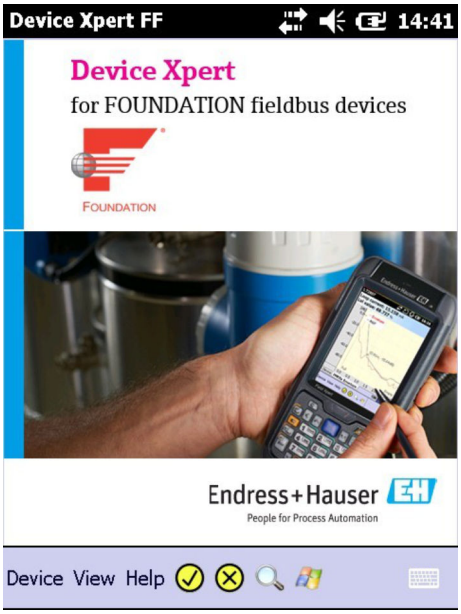
Selecting the communication mode

1. Switch to the Wireless Center.
2. Tap on the desired communication mode.

The communication mode is selected.

More information about wireless settings are provided in **Operating Instructions BA01202S/04/en**.

▶ Select the Device Xpert software.
↳ The start screen of the selected Device Xpert version opens.



- By tapping the Windows icon located on the navigation bar in the Device Xpert home screen, the Device Xpert operating system is minimized and the user returns to the Windows Operating system
- Device Xpert is minimized only and continues to run in the background

4.1.3 Synchronizing the DD library (DD update)

Device Xpert is supplied with the latest set of HART and/or FOUNDATION fieldbus device descriptions available at the time of factory configuration. For a period of 60 days after this time, or longer if an optional DD updating license (Software Update Service) has been purchased, Device Xpert will connect to the Endress+Hauser Field Xpert - Device Xpert DD Update Server, where the latest DD libraries are available. Device Xpert automatically detects whether a valid license is available, e.g. if purchased at a later date or updated. It is recommended that the library is synchronized during the initial setup of the device, then at regular intervals thereafter (if the Software Update Service is licensed).

To update your DD device library, the Field Xpert must be connected to the internet. This can be done either:
- directly via a WiFi connection or
- via a USB or Bluetooth connection with your laptop/PC

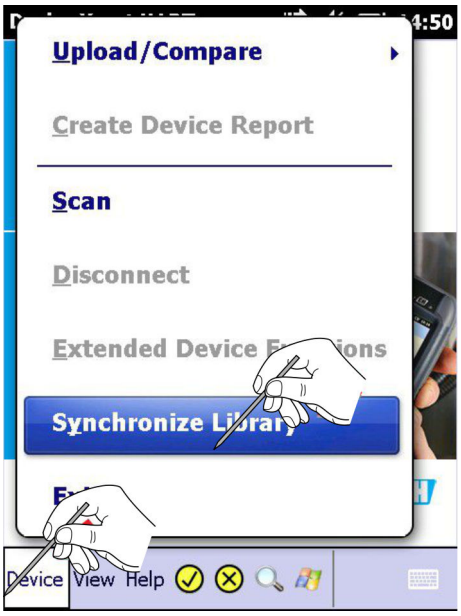
To activate the license via a Bluetooth or USB connection, Windows Mobile Device Center (Windows 7) or ActiveSync Version 4.5 or higher (Windows XP) is required. Please check if Windows Mobile Device Center or ActiveSync is installed on the PC. If not, download Windows Mobile Device Center or ActiveSync from the Microsoft web site and install the software package.

Depending on the type of connection selected, connect the USB cable to your Field Xpert docking station and a free USB port on your PC or activate the Bluetooth interfaces on the PC and Field Xpert.

The following steps are independent of the connection type and therefore apply equally to all of the internet connections described above.

1. Start Windows Mobile Device Center / ActiveSync.
2. If Field Xpert is to access the Internet via a proxy server, configure the proxy server parameters in **Chapter 4.11.3**. → 94

3. Start Device Xpert and select **Device → Synchronize Library**.



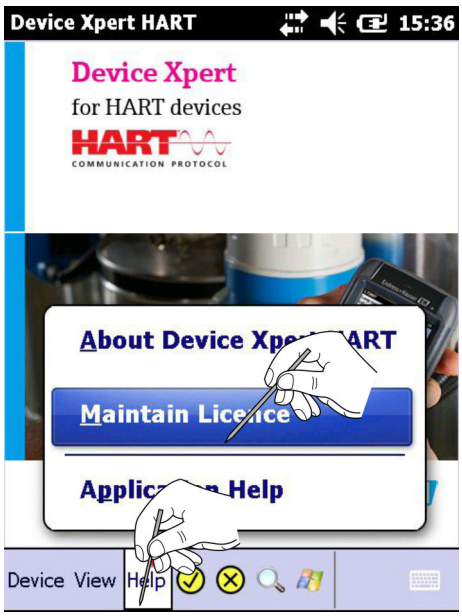
Synchronization starts and Device Xpert checks automatically if there are new DDs.
If there have been no updates since the last connection, a message will be displayed to this effect.

4. Select **Yes** to confirm the synchronization.
   → The **download** starts automatically.

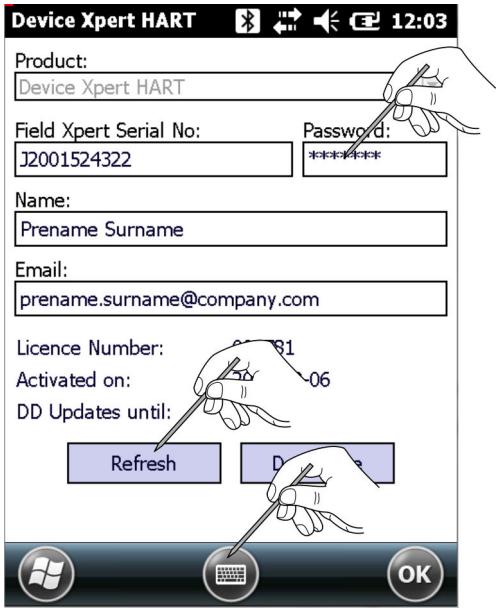
After download, the new device descriptions (DDs) can be used.

4.1.4 Updating your personal license details

Field Xpert is delivered with a license filled with factory default values for the name and e-mail. We suggest that you enter the name of the user or the name of the company and a contact e-mail address.

1. 

In Device Xpert HART or Device Xpert FF, select **Help → Maintain License**.
↳ The **Maintain License** window opens.



2. Tap on the keyboard icon.
3. Enter the name of the user or the company and an e-mail address.
4. Enter the password. The password can be found on the back of the DVD supplied.
5. Tap on **Refresh**.

The changes are saved.

The license information is shown at the top and bottom of the screen:
- Product: software package licensed on the Field Xpert
- Device Xpert software license number
- Activated on: date when the license was activated
- DD Updates until: date of the last possible DD update, see **Chapter 4.1.3** → 21

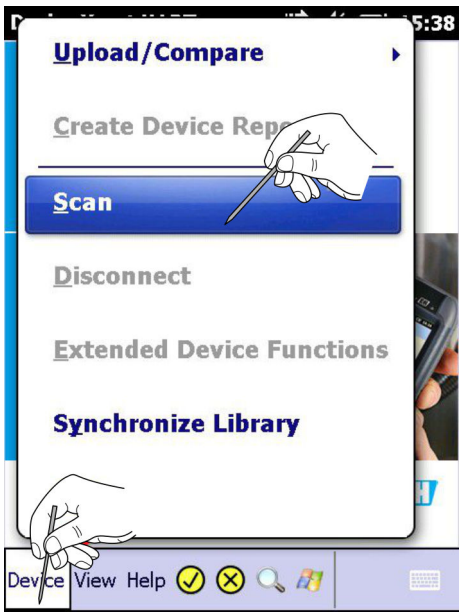
4.2 Connecting to a HART device

Device Xpert HART is configuration software for device commissioning, diagnosis and maintenance of HART devices that are registered at the FieldComm Group. It is available in English and German language. Device Xpert HART enables automatic scanning of the HART network as well as quick and easy configuration and diagnosis of the available devices.

Check that the Field Xpert is switched on and has an active Bluetooth or WiFi connection.

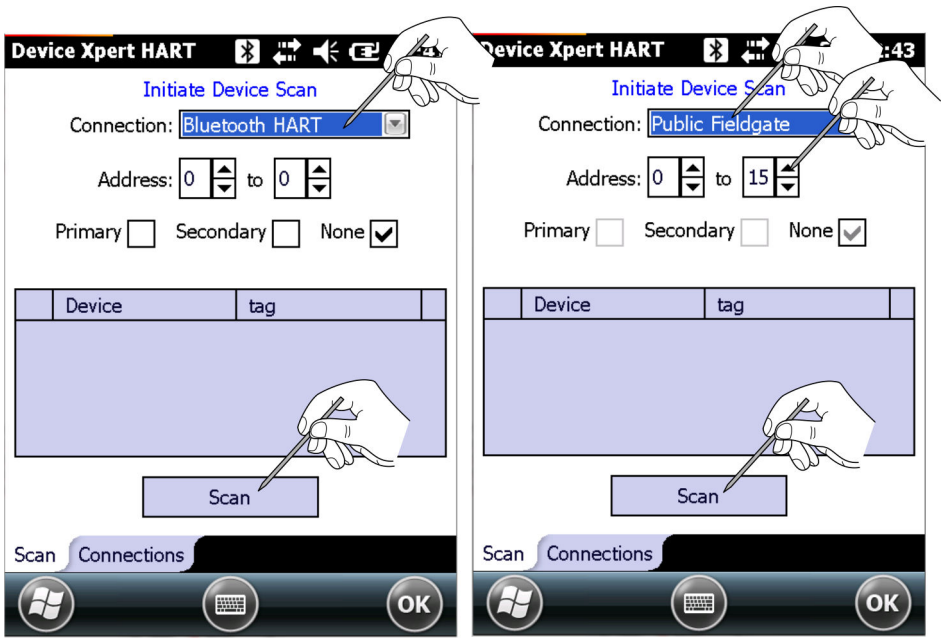
1. Tap on the HART icon in the Field Xpert start screen.

The Device Xpert HART software is started and the Device Xpert HART start screen is displayed.

2. 

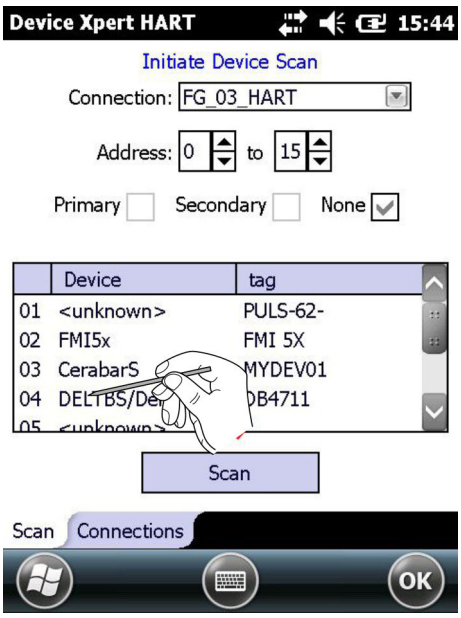
Select **Device → Scan**.

↳ The **Initiate Device Scan** window opens.

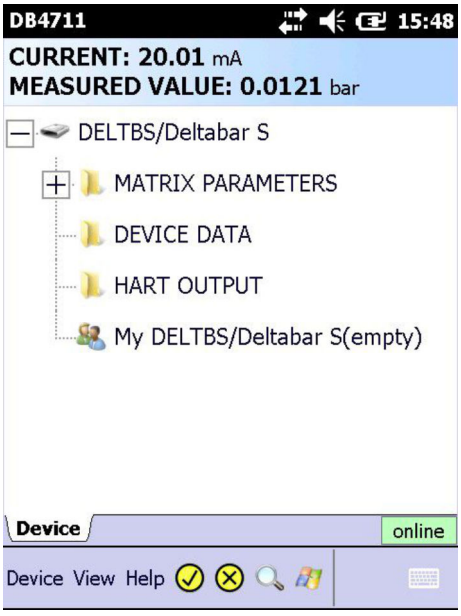


3. Check that the right connection has been selected in the **Connection** field. The connection can be changed in the Connections tab.
4. Set the address range in the **Address** field. By default the address range is 0 to 0, which corresponds to a 4 to 20 mA HART signal. For HART multidrop, the address range must be set to cover all HART polling addresses used.
5. If there is a HART primary master in the loop:
   Tap on the **Secondary box**.

6. Tap on **Scan**.
   ↳ Device Xpert now searches the connected network for HART devices and automatically assigns the appropriate device driver to the connected devices.
   For 4 to 20 mA HART, the window with the **parametrization overview** appears. (Continue with **Step 7**)
   For HART multidrop or Fieldgate FXA520, several devices may be found.



7. Tap on the **device name**.
   ↳ The window with the **parametrization overview** opens.



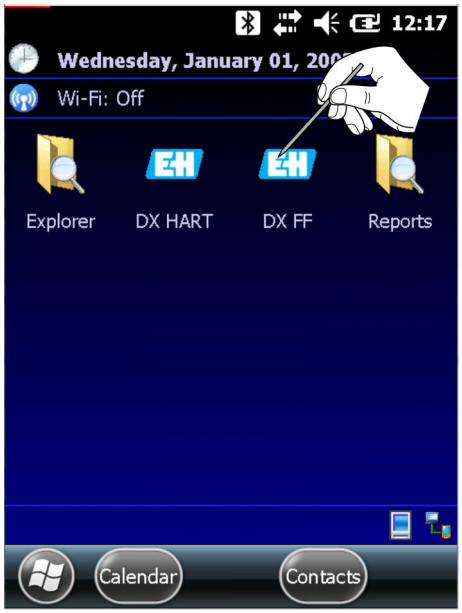
4.3 Connecting to a FOUNDATION fieldbus device

Device Xpert FF configuration is software for device commissioning, diagnosis and maintenance. It supports FOUNDATION fieldbus devices that are registered at the FieldComm Group. Device Xpert FF enables automatic scanning of the FOUNDATION fieldbus network as well as quick and easy configuration and diagnosis of the available devices.

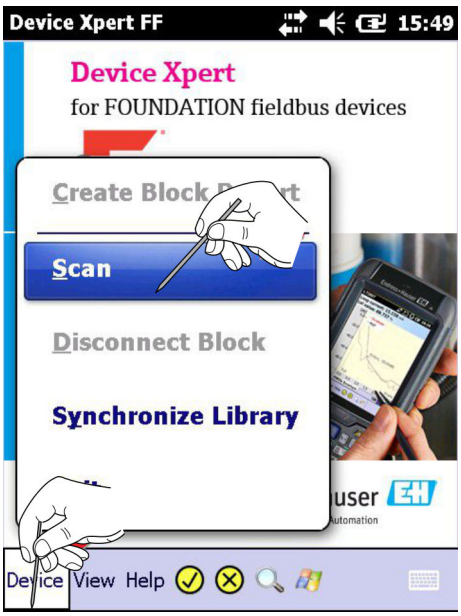
4.3.1 Generating a live list

Check that the Field Xpert is switched on and has an active Bluetooth or WiFi connection.

1. Tap on the FF icon in the Field Xpert start screen.

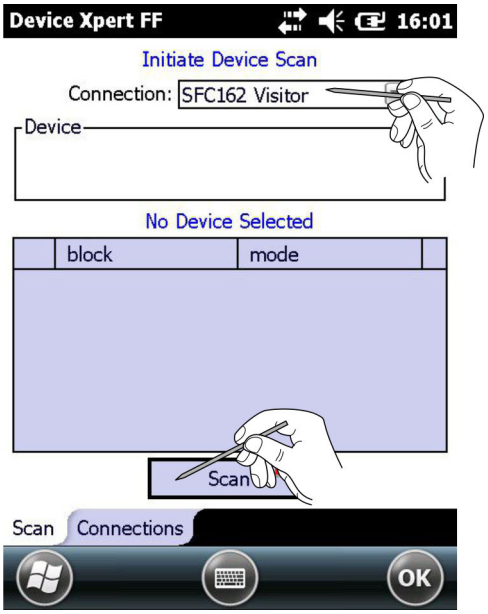


The Device Xpert FF software is started and the Device Xpert FF start screen is displayed.

2. 

Select **Device → Scan**.

↳ The **Initiate Device Scan** window opens.



3. Check that the right modem or gateway has been selected in the **Connection** field. The connection can be changed in the Connections tab.

4. Tap on **Scan**.
   ↳ Device Xpert now searches the connected network for FOUNDATION fieldbus devices and publishes a live list.

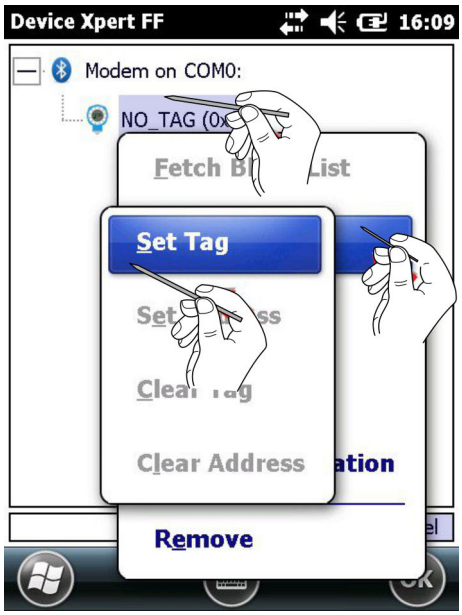
Example: SFC162 gateway left, FFblue Bluetooth modem right

- For uncommissioned devices, the device name and identifier normally appear (continue with **Chapter 4.3.2** → 29)
- For commissioned devices, a block and parameter list can now be generated as described in **Chapter 4.3.4**→ 33

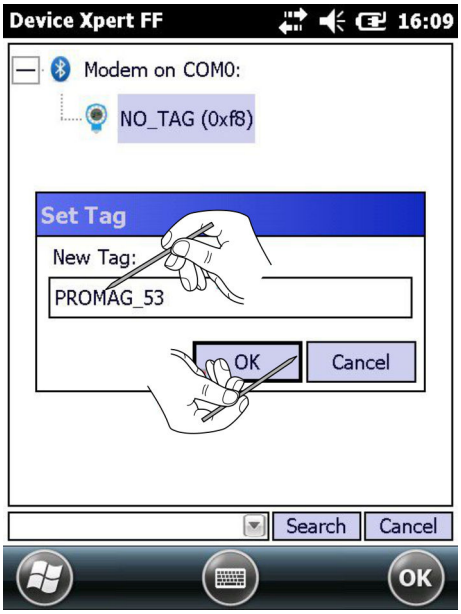
4.3.2 Setting a tag and device address

- This function is primarily for commissioning of individual devices which are connected point-to-point with a modem or gateway, i.e. test bench operation
- Device Xpert identifies commissioned devices and deactivates the corresponding menu items

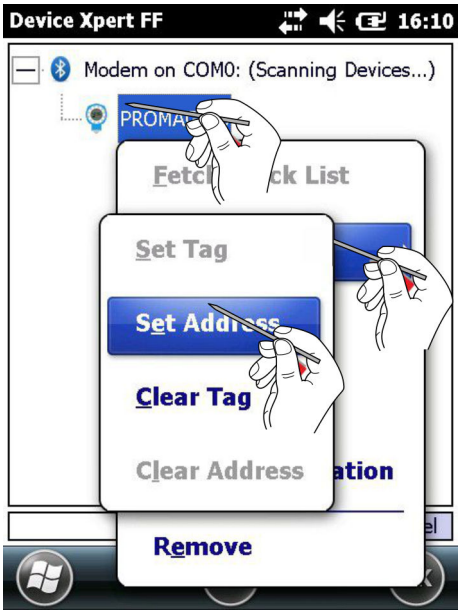
1. Tap on the **device** and hold.
   ↳ The **context menu** appears.



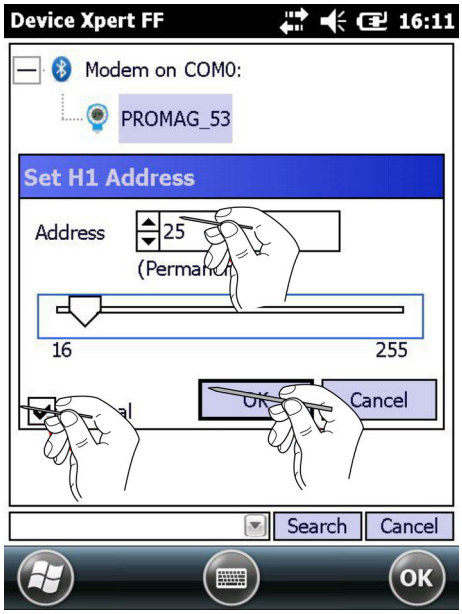
2. Select **Tag/Address → Set Tag**.
   ↳ The window for entering the changes opens.



3. Enter the **tag** and tap on **OK**.
   ↳ The **changes** are accepted.
4. Tap on the **device** and hold.
   ↳ A **context menu** opens.



5. Tap on **Tag/Address → Set Address**.
   ↳ The window for entering the changes opens.



6. Select the **address** from the drop-down menu or use the slider.
7. Check the **Decimal** check box to change from hexadecimal to decimal addresses.
8. Tap on **OK**.

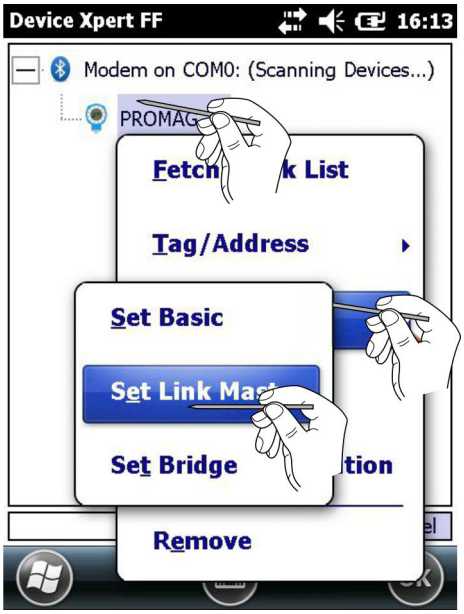
The changes are saved and the address is downloaded to the device.

- It can take some time to download the address to the device.
- Addresses from 0 x 10 (16) to 0 x 13 (19) are reserved for bridges. Addresses from 0 x 14 (20) to 0 x F7 (247) are reserved for field devices, whereby any device with BOF Class "Link Master" should have a lower address than a device with BOF Class "Basic".

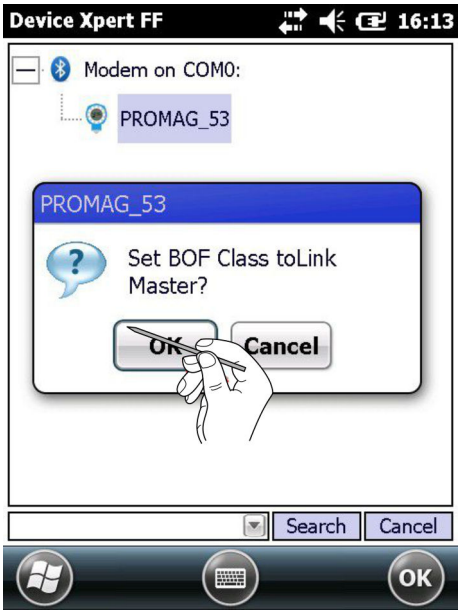
4.3.3 Setting a BOF Class

If the device is to be assigned link master functionality, the BOF Class can now be changed to "Link Master". Normally only one field device in an H1 segment will be allocated this functionality. Not all devices support Link Master functionality.

1. Tap on the **device** and hold.
   ↳ The **context menu** appears.



2. Tap on **BOF Class → Set Link Master**.
   ↳ The window for entering the changes opens.



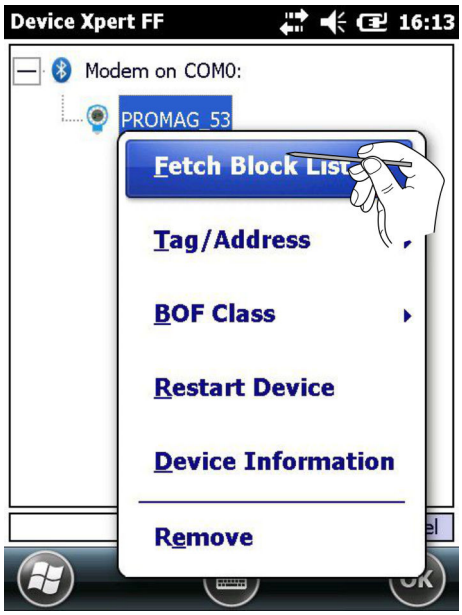
3. Tap on **OK**.

4. Tap on the **device** and hold.
   ↳ The **context menu** appears.

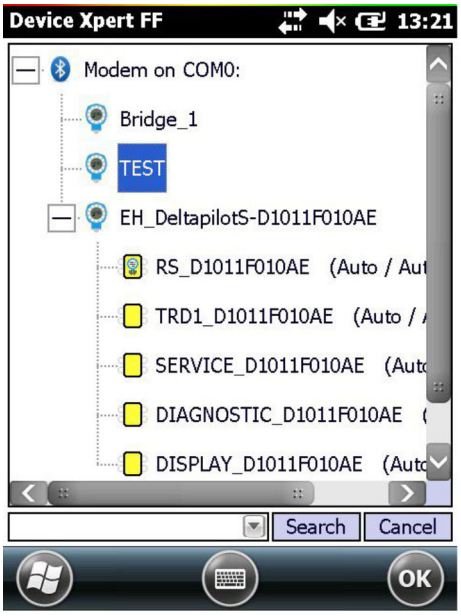
5. Tap on **Restart Device**.
6. Tap on **OK**.
   ↳ When the device has restarted the "Link Master" functionality is activated.

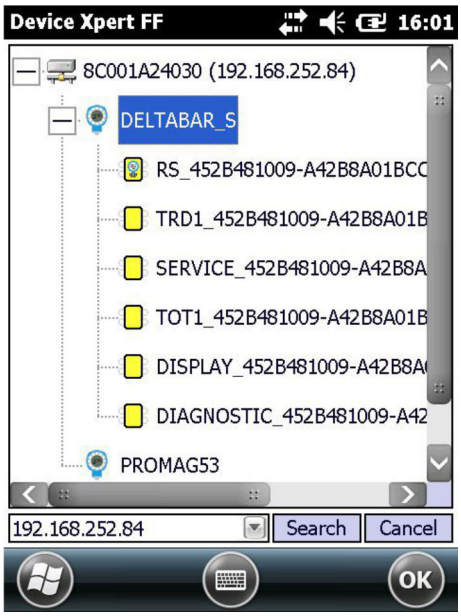
4.3.4 Generating a block and parameter list

1. Tap on the **device** and hold.
   ↳ The **context menu** appears.

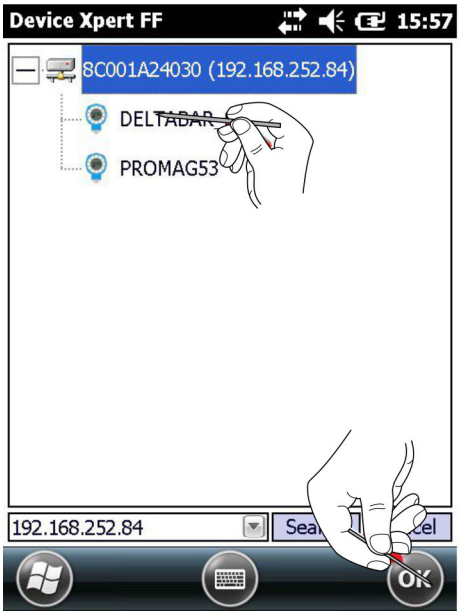


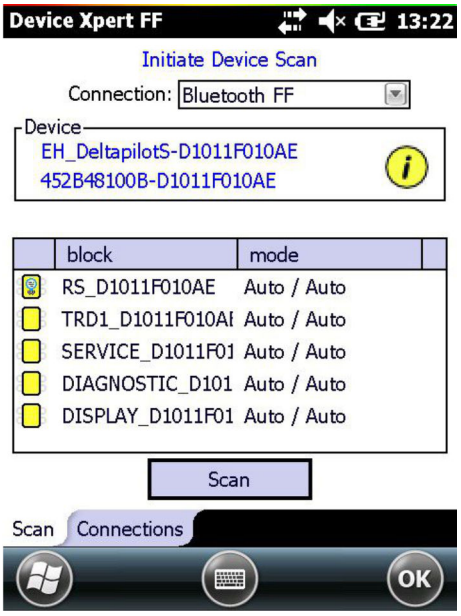
2. Select **Fetch Block List**.
   ↳ All the blocks from the device are loaded and displayed.





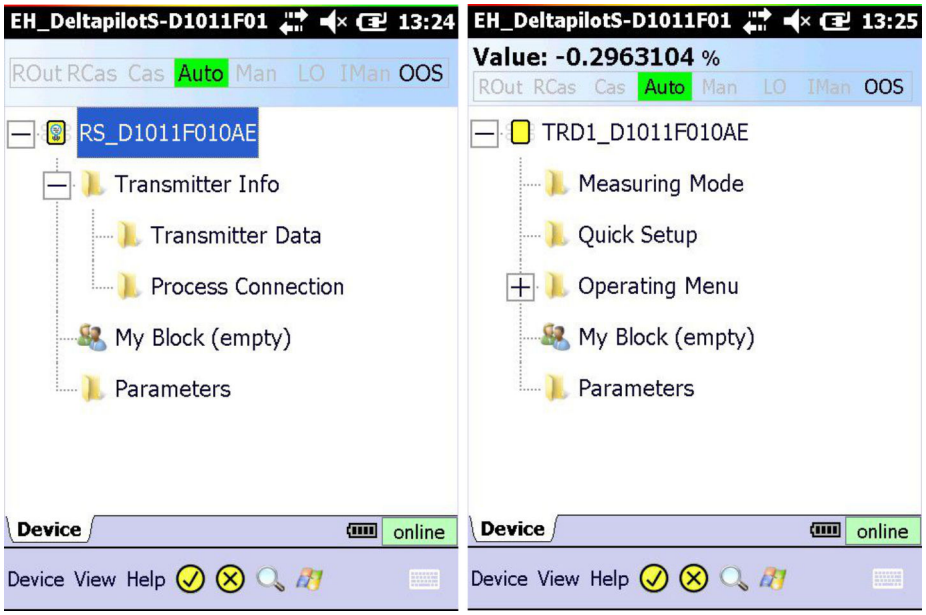
Alternatively, tap on a device and then tap OK. This loads the blocks in the Scan window.





3. Tap on a **block**.
   ↳ The **block** opens.
4. Expand the **navigation tree**.
   ↳ The individual **menu options** are displayed.

5. Tap on **Device → Disconnect Block**.
   ↳ The block list is displayed again.



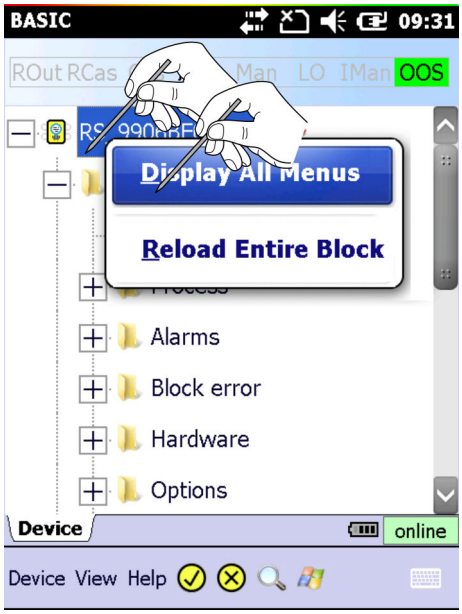
The block list and parameter list have been generated.

Depending on device DD, it is possible that not all input parameters are visible in their own block. The block Parameters, however, contains all the parameters in the device not contained in menu items.

4.3.5 Activating and deactivating reduced view

Some field devices support reduced menu views that are adjusted specifically to handheld configurators. For these field devices, the reduced view is shown by default.

1. Tap on the **block name** and hold.
   ↳ The **context menu** appears.



2. Select **Display All Menus**.

All the menus and parameters specified in the **device DD** are displayed.

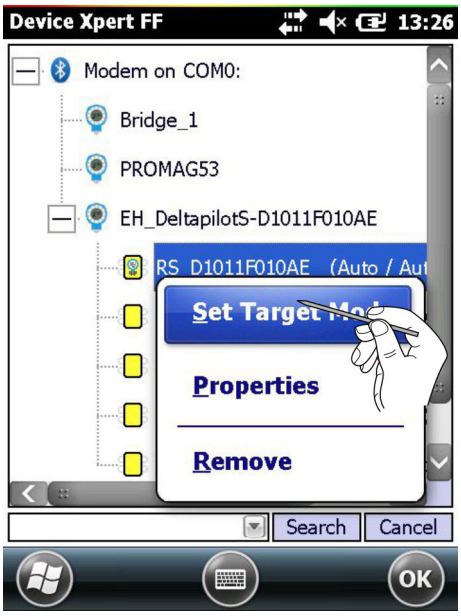
The above option is deactivated and all menus and parameters are shown if the DD for a specific field device does not contain such a view adjusted for handheld devices.

4.3.6 Changing the block target mode

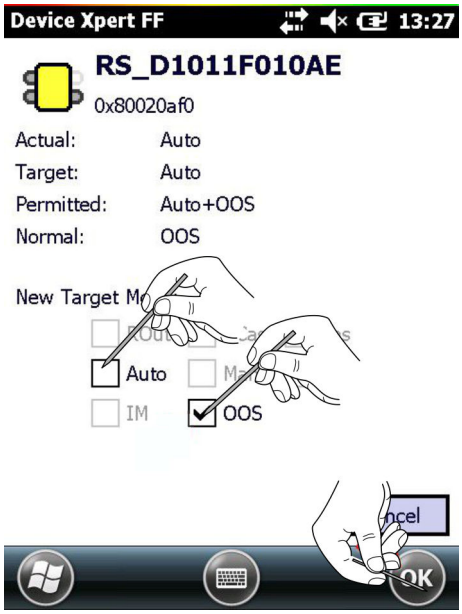
In general, the parameters of a FOUNDATION fieldbus transducer block can only be changed when the block is out of service (OOS). Depending on how you have chosen to generate the parameter list, this can be done from the live list, the block list or the parameter list. After all parameters have been changed and downloaded, the block target mode must be set to Auto again.

All blocks in the selected device can be put out of service by putting the resource block out of service in the live list.

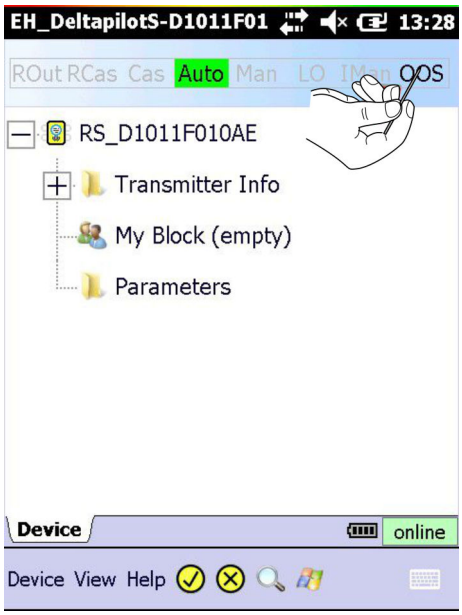
1. Tap on **Resource Block** and hold.
   ↳ The **context menu** appears.



2. Select **Set Target Mode**.
   ↳ The window for entering the changes opens.



Alternatively, tap on **OOS** in the block mode header.



3. Untick the **Auto** option and tick the **OOS** option.
4. Tap on **OK**.

The changes are accepted.

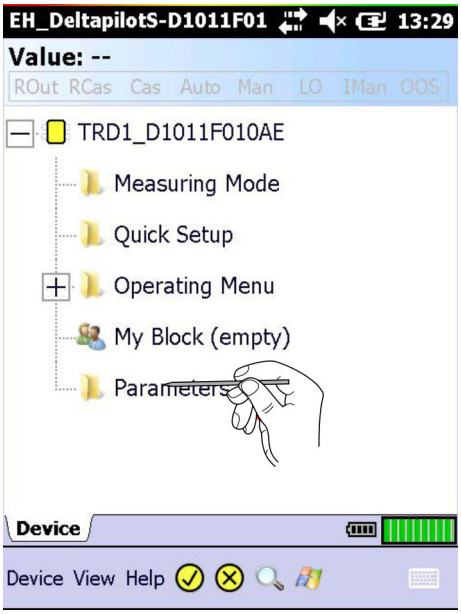
An individual block can be put out of service in the same manner as above by selecting the block in the live list.

1. Tap on the **block** and hold.
   ↳ The **context menu** appears.
2. Select **Set Target Mode**.
   ↳ The window for entering the changes opens.
3. Untick the **Auto** option and tick the **OOS** option.

4. Tap on **OK**.

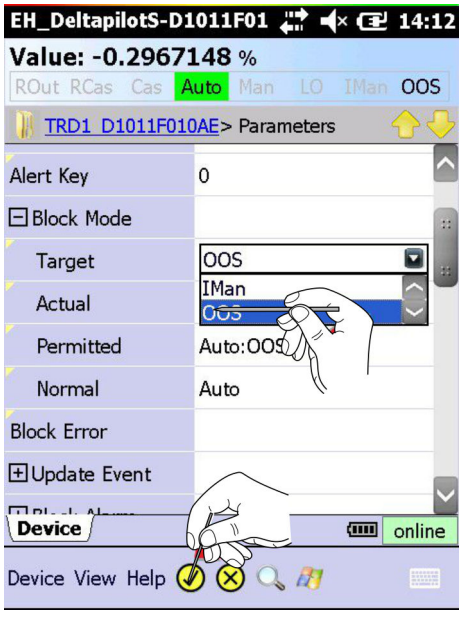
The changes are accepted.

If supported, an individual block can also be put out of service in the parameter list.

1. 

   Tap on the **Process** or **Parameter** parameter group.

2. Open the **Block Mode** → **Target** parameter.
3. Change the value to **OOS**.
4. Tap on the tick mark with the yellow background.

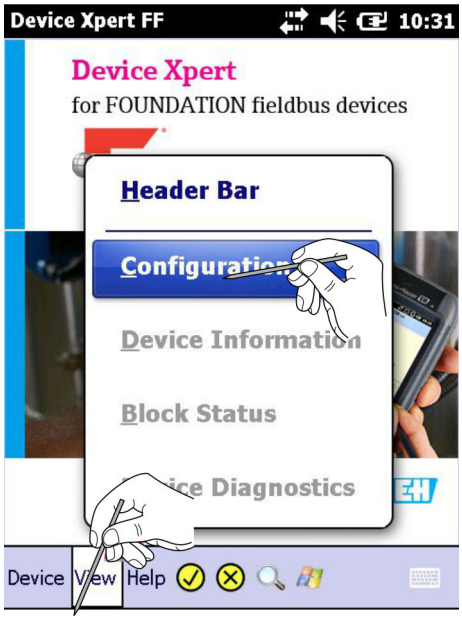


The changes are accepted.

Put the blocks back into operation, but select the **Auto** option.

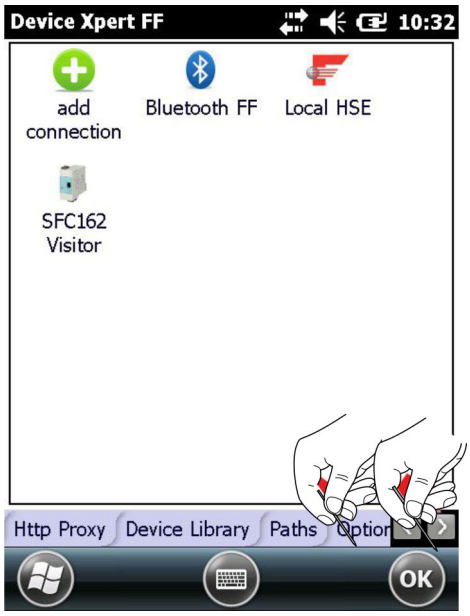
4.3.7 Enabling function block viewing

Normally Device Xpert is not used to configure function blocks: this task is done in the engineering software for the DCS in use. For this reason, the default setting for Device Xpert is to hide the corresponding information. If you wish to see the function blocks in the block list, this must be changed in the configuration of the Device Xpert.

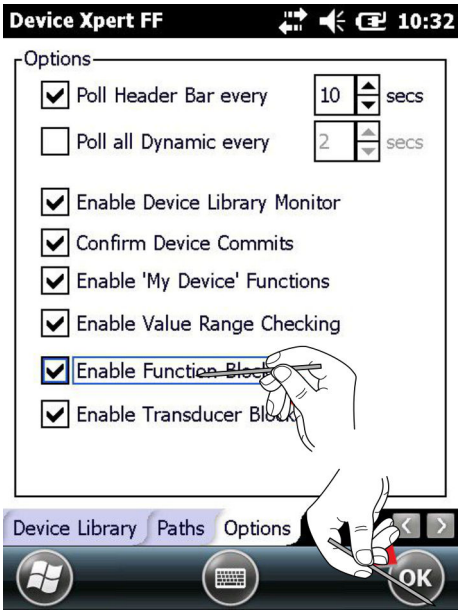
1. 

   From the Device Xpert start page select **View → Configuration**.

2. A window opens.

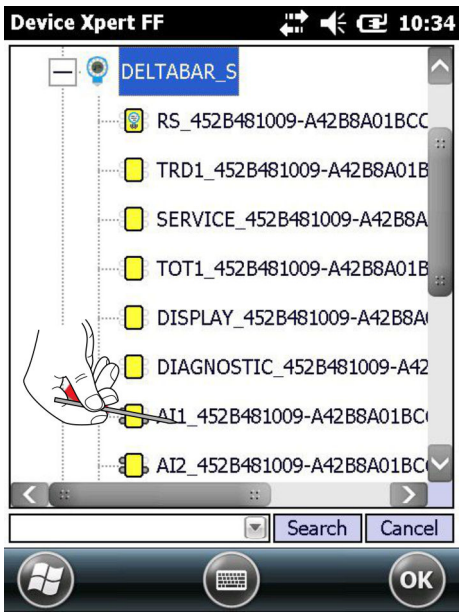


3. Use the arrow to switch to the **Options** tab.
   ↳ The **Options** tab appears.



4. Tick the **Enable Function Blocks** check box and tap on **OK**.

The changes are saved and the **function blocks** appear in the block list.



If the function blocks are only enabled after the block list has been loaded, the block list must be loaded again in order to display the function blocks, see **Chapter 4.3.4** → 33

4.4 Parameterization of devices

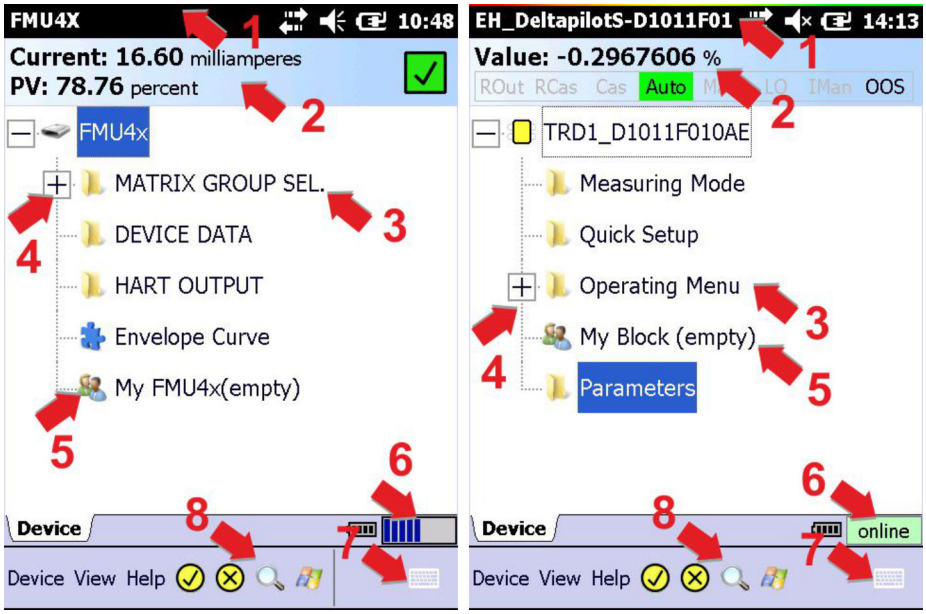
FOUNDATION fieldbus blocks must be put out of service (Target Mode = OOS) before any parameter changes can be downloaded to the device, see **Chapter 4.3.5**. → 36

The parameters offered by a device depend upon its manufacturer, type and function. For this reason it is not possible to describe how a particular device is parameterized in order that it functions properly - here the user is referred to the device's operating manual. It

should also noted that not all the functions described in this chapter are available in all devices.

4.4.1 Parameter folder tree

All parameterization starts at the parameter folder tree (HART, left) or block folder tree (FOUNDATION fieldbus, right) which is read from the Device Description of the device. The table below lists the most important features of the parameter tree page.

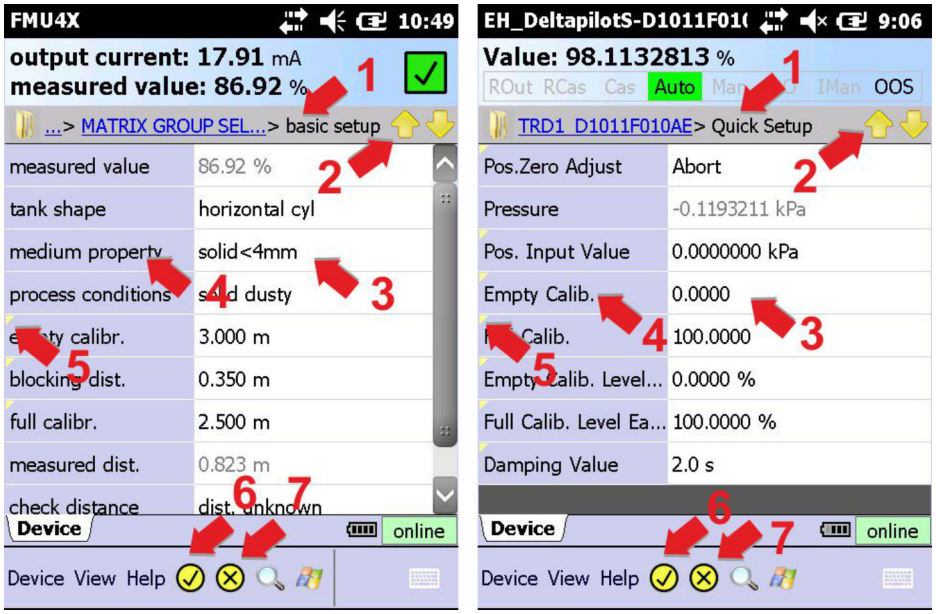


Item	Function	Comments
1	Tag name	▪ HART: Tag name read from the connected device ▪ FOUNDATION fieldbus: Block name
2	Header bar	▪ HART – Loop current (in the example the device is a HART multidrop = 4 mA) – Primary value (in the example level in percent) ▪ FOUNDATION fieldbus – Primary value (in the example percent) – Block target mode (permitted in black, actual with green background)
3	Parameter group folder	▪ Tap on the node to open the folder and display the associated parameters, see **Chapter 4.4.2** → 🖹 42 ▪ For FOUNDATION fieldbus, if the input parameters are not available in their own sunblockk, the block "Parameters" contains all said parameters for the block
4	Expansion/ contraction point	▪ **+** expands the tree to show the parameters beneath the node ▪ **–** contracts the tree to hide the parameters beneath the node
5	Customized parameter folder	Folder in which a customized view of the device parameters can be stored.
6	Connection status	Status indicating whether the device is online or offline.
7	Keypad	▪ Tap on the keyboard icon to display the keyboard ▪ Tap on the icon when the keyboard is displayed to hide it again.
8	Search	Tap on the keyboard icon to open the search function.

The header bar of the parameter tree can be hidden/displayed by selecting **View → Header Bar**.

4.4.2 Parameter folders

The parameter folders group together input and output parameters associated with particular device functions. The table below lists the most important features of the parameter tree page.



Item	Function	Comments
1	Horizontal navigation	▪ Indicates the current position in the navigation tree ▪ A tap on the higher level closes the current level and moves the user upwards
2	Vertical navigation	▪ Navigates between parameter group folders ▪ Arrow up: moves to and opens the parameter group folder above ▪ Arrow down: moves to and opens the parameter group folder below
3	Device parameters	▪ Current value of a device parameter ▪ Tap on the parameter to change the setting – Normal parameters can be changed – Grey parameters are read only and cannot be changed – Red parameters have not been accepted by the field device
4	Device parameter name	Designation of parameter; select a **parameter** to open the context menu (see below) ▪ Normal parameters can be changed ▪ Bold parameters have been changed in this session ▪ Grey parameters are read only and cannot be changed Tap and hold a parameter to open the context menu for the parameter ▪ Display Help: display the help text for the parameter ▪ Show Valid Range: display the range of valid parameter values ▪ Refresh Value: causes the value to be read from the device again ▪ Refresh Group: causes the parameter group to be read from the device again ▪ Refresh Variables On/Off: toggles the automatic refresh of the selected value ▪ Display Error: displays a parameter error ▪ My **Device**: adds the selected parameter to the preferred customized parameter folder – Select My **Device**. The **Add** submenu opens. – Select **Add**
5	Parameter help available	Yellow triangle indicates that the parameter has an online help.
6	Confirm updates	Transfers all updates made in the folder to the field device.
7	Discard updates	After confirmation with **Yes**, discards all updates made since last edit.

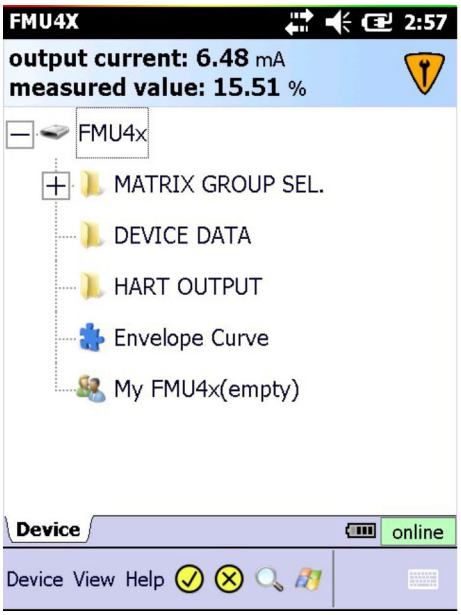
4.4.3 Device diagnosis (NAMUR 107)

Device Xpert offers a range of information on the device status and diagnostics that are provided by the device description (DD).

Symbol	Meaning	Description
	Failure	The field device has malfunctioned such that one or more device variables (i.e. measurement or control) are invalid or inaccurate.
	Function check	The field device is being serviced and one or more device variable values may be (temporarily) frozen or invalid.
	Out of specification	One or more device variable values may have been compromised due to past or present ambient/operating conditions deviating from device requirements.
	Maintenance required	To ensure continued proper operation, maintenance must be performed on the field device.
	OK	The field device is operating correctly.

- Not all field devices are capable of supporting this functionality
- FOUNDATION fieldbus block types do not support this functionality

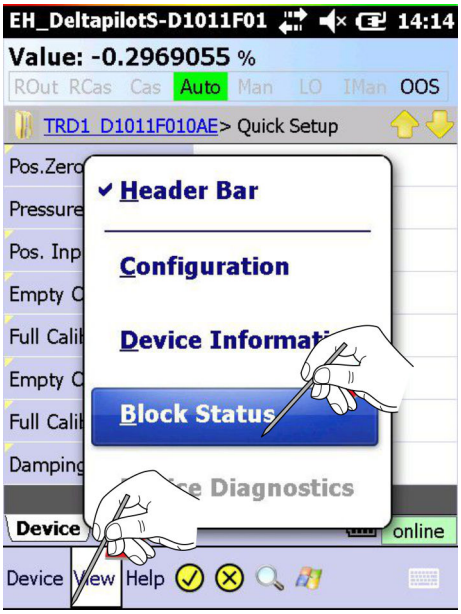
▶ Tap on the **Function Check** icon in the top right-hand corner.
↳ The **diagnostics information** is displayed.



4.4.4 Block/device and parameter diagnosis

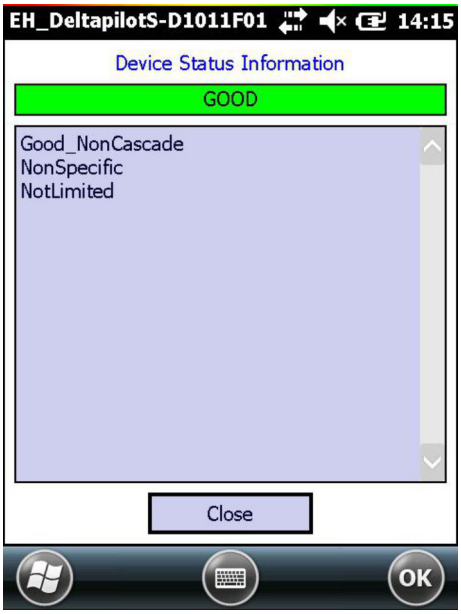
The block status information of FOUNDATION fieldbus devices and device status information of HART devices not supporting NAMUR NE107 can be also be shown using the View menu. Incorrectly configured parameters can also be diagnoses using the Display Error function.

1.



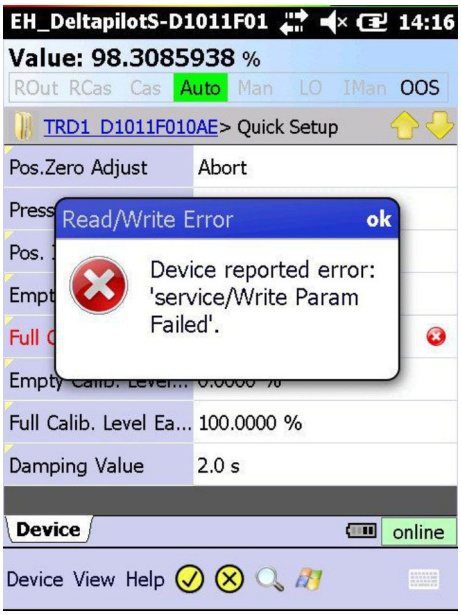
Select **View → Block Status (Device Status)**.

↳ The **device status information** is displayed.



2. Parameters in the parameter list which are permanently displayed in red have an error.
   Tap on the **parameter name** and hold.
   ↳ The context menu appears.

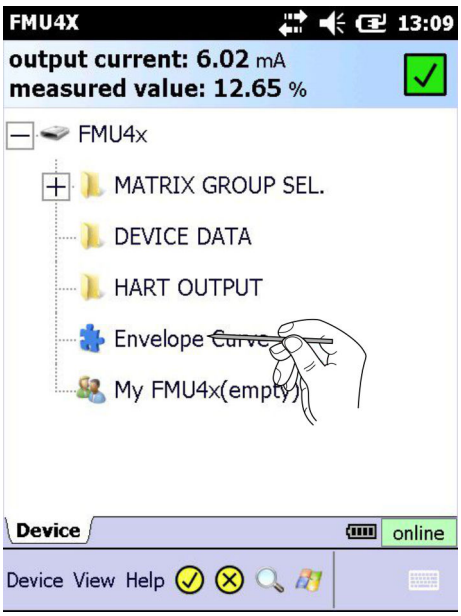
3. Select **Display Error**.
   ↳ A box with a description of the error opens.



4.5 Envelope curve

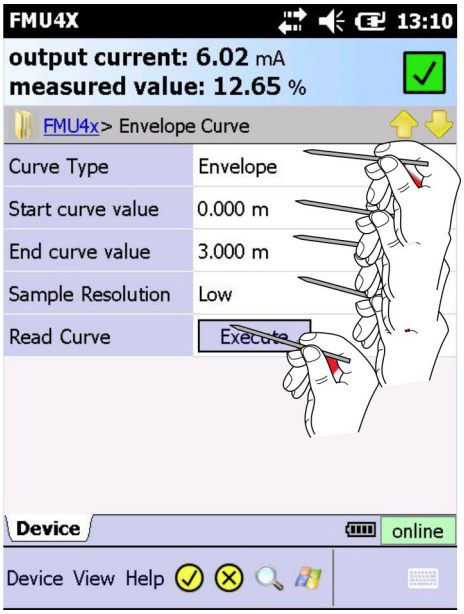
Device Xpert provides an envelope curve display for all Endress+Hauser ToF level transmitters using the HART protocol. It is added as an Envelope Curve parameter group in the parameter group tree. A full description of the functions is provided in the operating instructions of the connected device.

1.



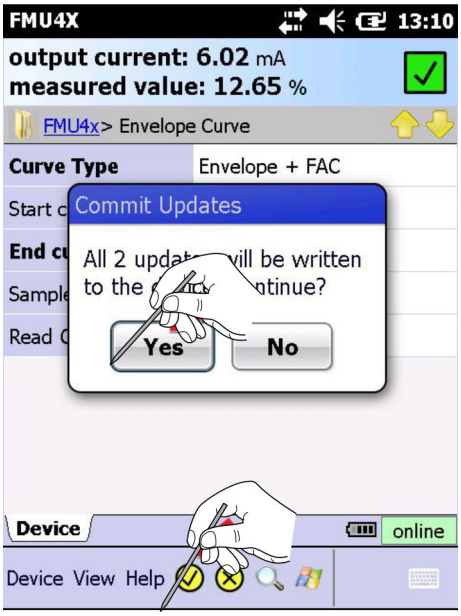
In the device parameter group tree, tap on **Envelope Curve**.

↳ The parameter display opens.

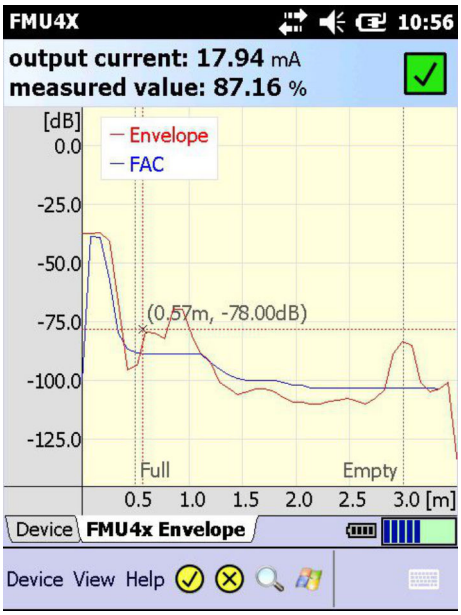


2. Make the necessary parameter settings. (See the operating instructions of the connected device)

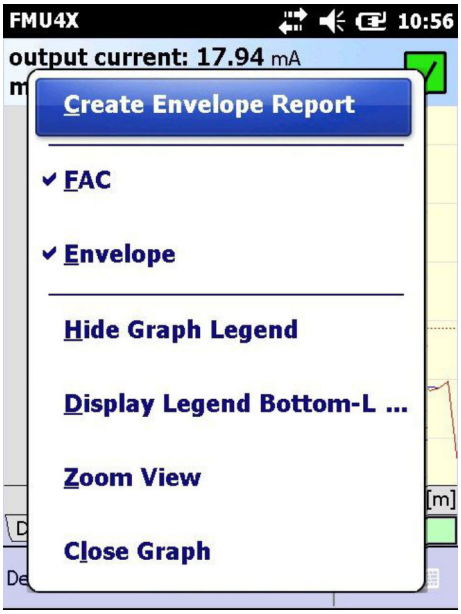
3. Tap on the tick mark with the yellow background.
   ↳ The message for the download procedure appears.



4. Select **Yes** to confirm the download.
   ↳ The envelope curve is now recorded and displayed. (This procedure can take several minutes.)



5. Tap on the graphic and hold.
   ↳ The context menu appears.



To change the presentation (**FAC, Envelope**)
To change the legend (**Hide Graph Legend/Display Legend Bottom/Top Left**)
To zoom in or out of the envelope curve view (**Zoom View/Small View**)
To close the envelope curve (**Close Graph**)
To create an envelope report (see **Chapter 4.8.2** → 📄 58)

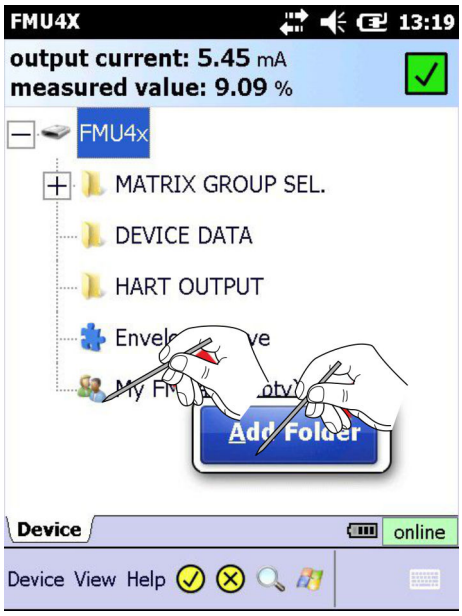
Parameter	Meaning
Curve Type	Determines the type of curve to be sampled ▪ Envelope curve ▪ FAC ▪ MAP ▪ Envelope + FAC
Start Curve Value	Value in meters from the probe head at which the envelope sampling should start.
End Curve Value	Value in meters from the probe head at which the envelope sampling should end.
Sample Resolution	Determines the resolution of the curve ▪ Low ▪ Low-Medium ▪ Average ▪ Medium-High ▪ High
Execute Curve	Tapping on Execute starts the sampling process.

4.6 Favorites folder

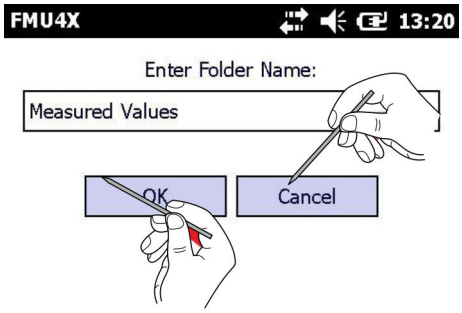
In every device description there is a Favorites folder with the name **My Device Name** (HART) or **My Block** (FOUNDATION fieldbus). All the parameters that need to be immediately to hand can be put in this folder. It is also possible to group parameters into different subfolders.

4.6.1 Adding a folder

1. Tap on the **My Device Name** folder and hold.
   ↳ The context menu appears.

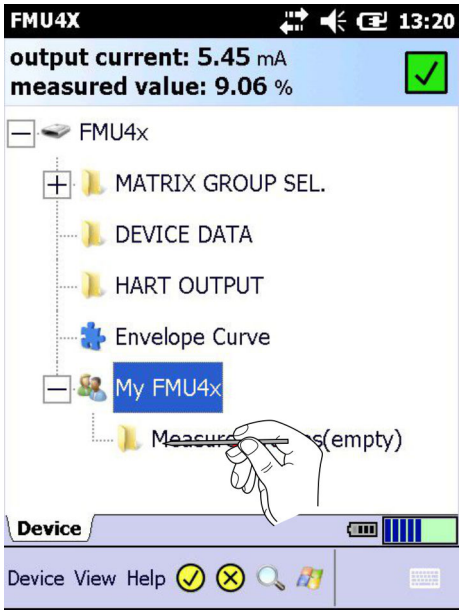


2. Tap on **Add Folder**.
   ↳ The **Enter Folder Name** window opens.



3. Tap on the **keyboard icon**.
   ↳ The **keyboard** is displayed.
4. Enter the **name** and tap on **OK**.

The **subfolder** is added to My Device Name.

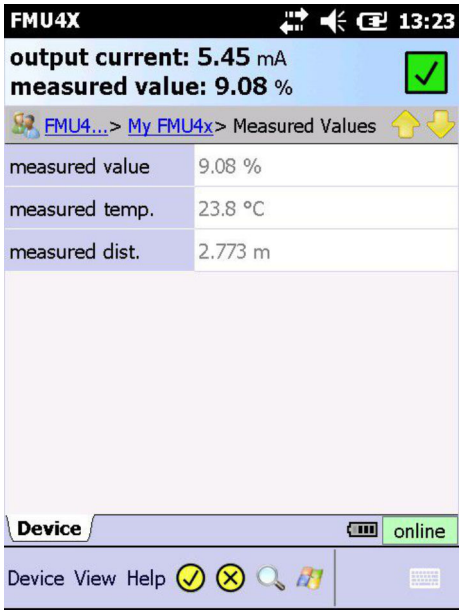


4.6.2 Adding parameters

1. Tap on the **parameter name** and hold.
   ↳ The context menu appears.

2. Select **My Device Name/My Block → Add** or **Subfolder → Add** and tap on **OK**.
   ↳ The parameter is added to the My Device Name/My Block folder or the subfolder.
3. Tap on **My Device Name/My Block** or the **subfolder**.

Parameters are displayed.



4.6.3 Removing parameters

1. Tap on the **parameter** and hold.
   ↳ The context menu appears.

2. Tap on **Remove from My Device Name/My Block** or **Remove from Subfolder**.

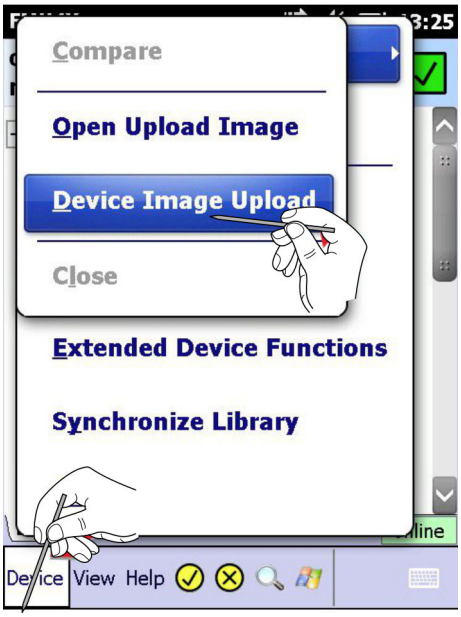
The **Parameters** are removed.

4.7 Upload/Compare function

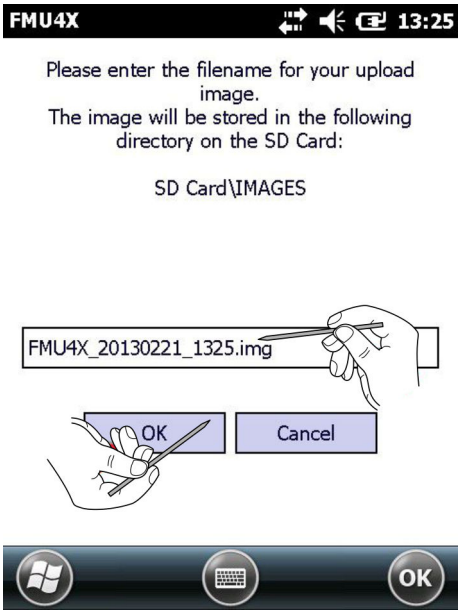
The Upload/Compare function enables HART device configurations to be saved in the form of an offline, upload image in the Field Xpert. Using such an image, the current device configuration can be easily viewed, compared with and verified against previous device configurations.

4.7.1 Upload

1. Tap on **Device → Upload/Compare**.
   ↳ The context menu appears.



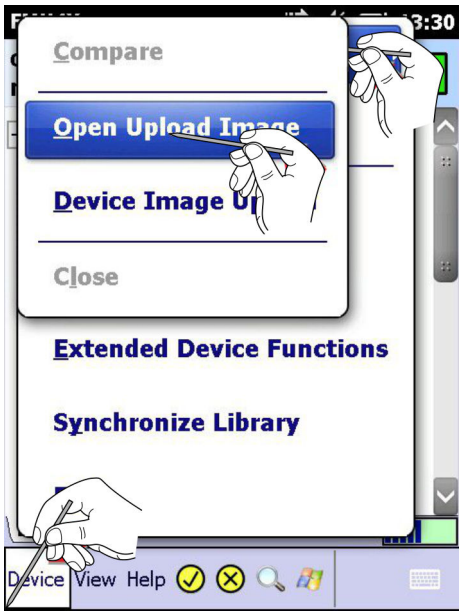
2. Tap on **Device Image Upload**.
   ↳ A question appears.
3. Tap on **Yes**.
   ↳ A window appears.



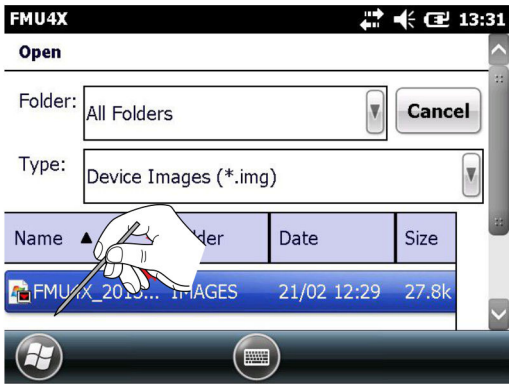
4. Enter the **file name** (by default, this name consists of the day, date and time) and tap on **OK**.
   ↳ Field Xpert uploads the current device configuration and stores it as an .img file at the location \SD Card\IMAGES.
   A successful upload is indicated by a corresponding message.
5. Tap on **OK**.

4.7.2 Compare

1. Tap on **Device → Upload/Compare**.
   ↳ The context menu appears.

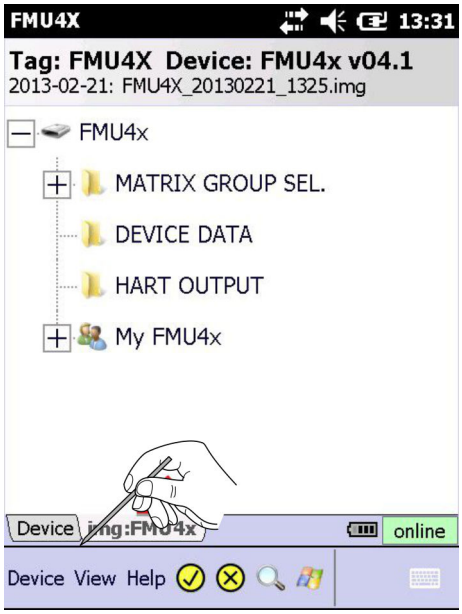


2. Tap on **Open Upload Image**.
   ↳ A window appears.



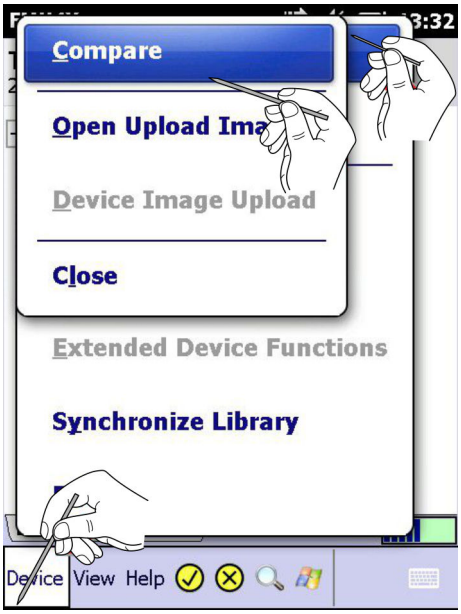
3. Switch to the **Open** window.
4. Tap on the **file** to be opened.

The file is opened in a new **tab**.



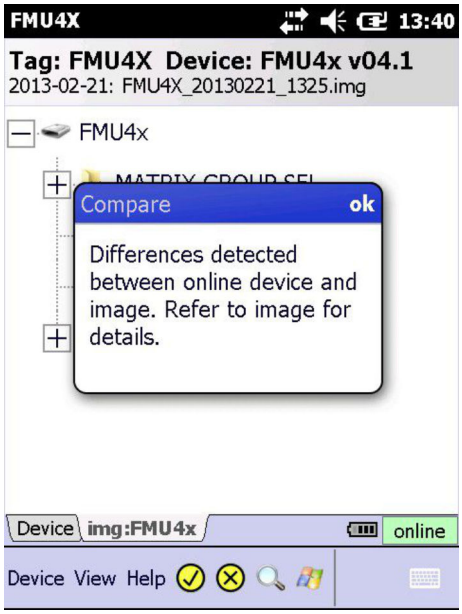
If the file name cannot be read, turn the Field Xpert SFX350/370 horizontally to view the window in landscape format and/or move the vertical column line (like in Excel). For Field Xpert SFX100, press the F1 key for a couple of seconds to toggle between portrait and landscape view.

1. To compare the **online configuration** against the previously stored image:
   Tap on **Device → Upload/Compare**.
   ↳ The context menu appears.

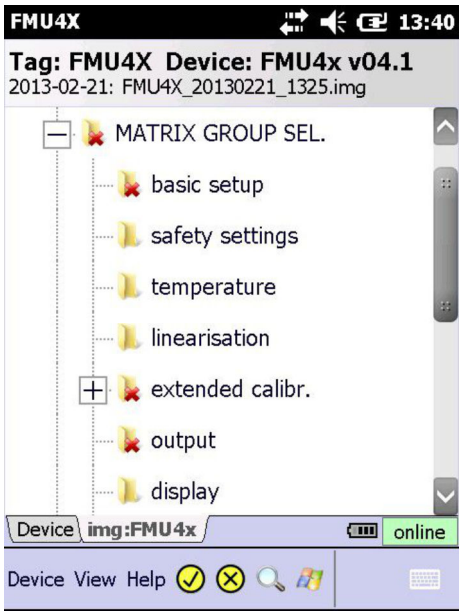


2. Tap on **Compare**.
   ↳ A question appears.

3. Tap on **Yes**.
   ↳ The device configuration is now compared.
   After the comparison, a compare message informs the user of any changes.

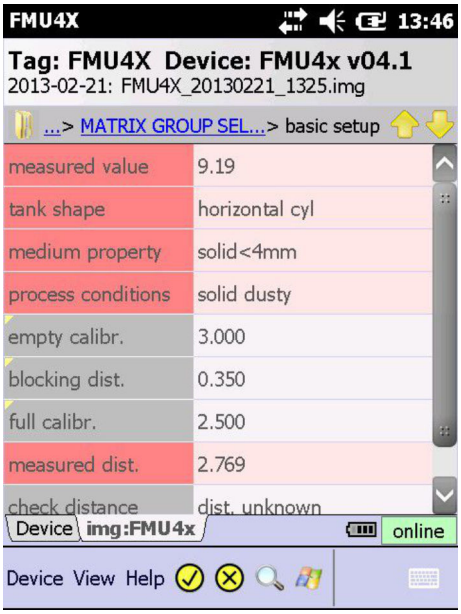


4. Tap on **OK**.
   ↳ The compare parameter tree is displayed.

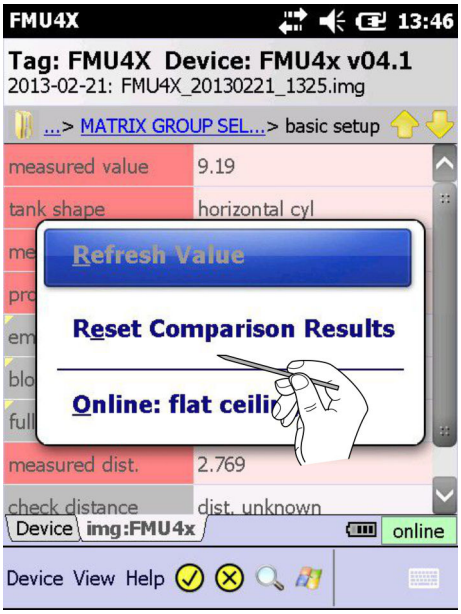


Parameter groups and parameters with differences are displayed in red.

5. Tap on one of the highlighted **folders**.
   ↳ The differences or changes are displayed in detail.

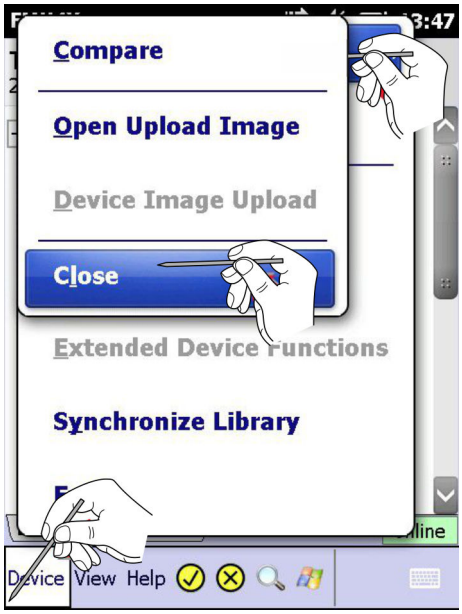


6. Tap on a highlighted parameter and hold.
   ↳ The context menu appears.



7. Tap on **Reset Comparison Results**.
   ↳ The highlighted comparison results are removed.

8. Tap on **Device → Upload/Compare**.
   ↳ The context menu appears.



9. Tap on **Close**.
   ↳ The image closes.

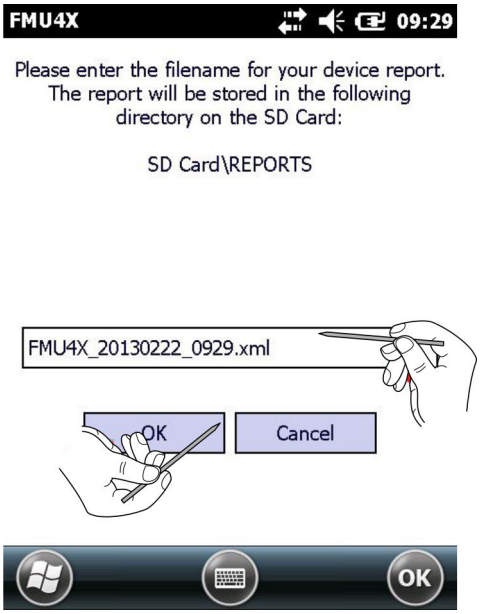
4.8 Device and block reports

4.8.1 Creating a device report (Device Xpert HART)

For documentation purposes, a report of the online device configuration can be created and saved on the PDA.

1. Tap on **Device → Create Device Report**.
   ↳ A question appears.

2. Tap on **Yes**.
   ↳ A window opens.



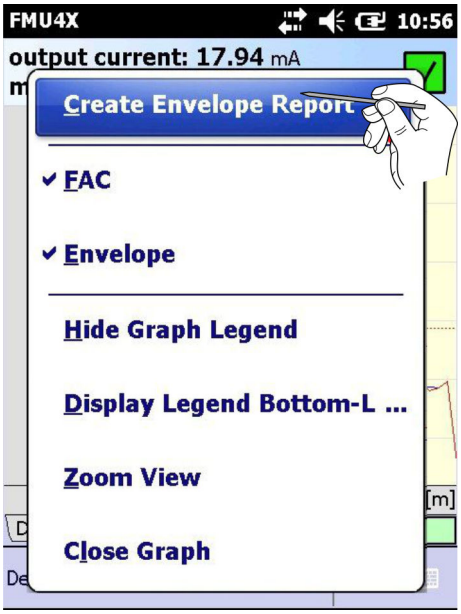
3. Enter the **file name** (by default, this name consists of the day, date and time) and tap on **OK**.
   ↳ Field Xpert stores the current block configuration as an XML file with an XSL style sheet at the location \SD Card\REPORTS.
   If saving is successful, a message is displayed to this effect.
4. Tap on **OK**.

The Device Report can be viewed with Internet Explorer on the PDA or PC. On the PC it is possible to import it into Excel.

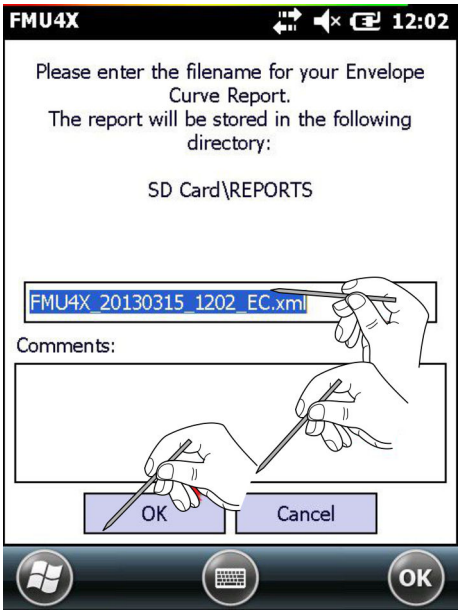
4.8.2 Creating an envelope report (device Xpert HART)

The envelope curve graph can be saved as an image, see **Chapter 4.5** → 45

1. Tap on the envelope curve and hold.
   ↳ The context menu appears.



2. Tap on **Create Envelope Report**.
   ↳ A window opens.



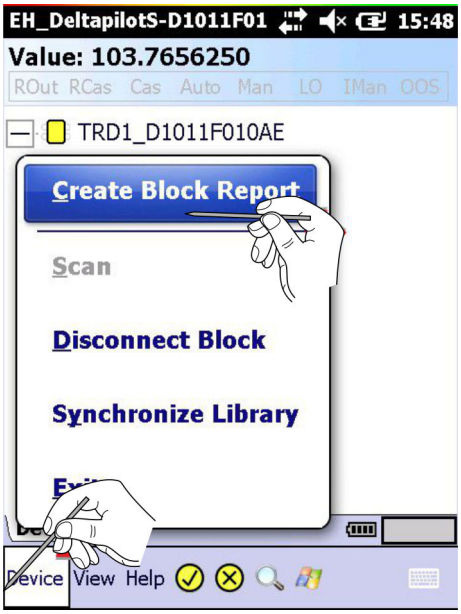
3. Enter the **file name** (by default, this name consists of the day, date and time) and tap on **OK**. Any comments can be entered in the comments box.
   ↳ Field Xpert stores the current block configuration as an XML file with an XSL style sheet at the location \SD Card\REPORTS.
   If saving is successful, a message is displayed to this effect.
4. Tap on **OK**.

The Device Report can be viewed with Internet Explorer on the PDA or PC. On the PC it is possible to import it into Excel.

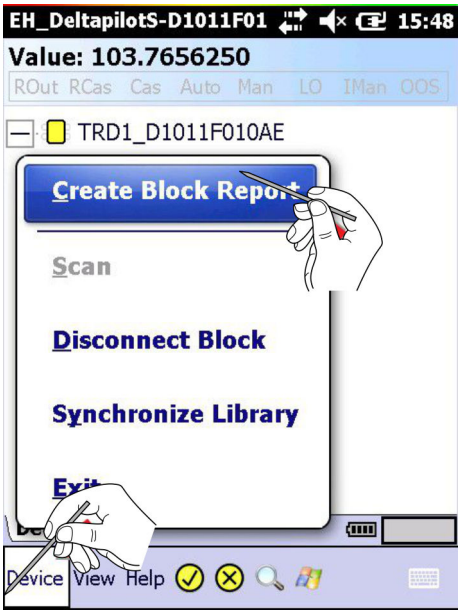
4.8.3 Creating a block report (device Xpert FF)

For documentation purposes, a report of the online device configuration can be created and saved on the PDA.

1. Tap on the **Device**.
   ↳ The context menu appears.



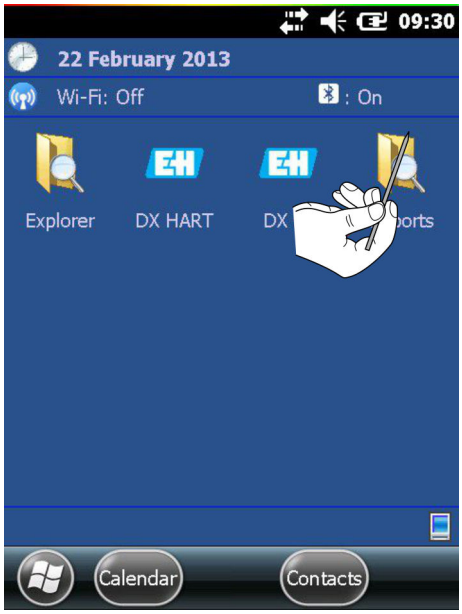
2. Tap on **Create Block Report**.
   ↳ A window opens.



3. Enter the **file name** (by default, this name consists of the day, date and time) and tap on **OK**.
   ↳ Field Xpert stores the current block configuration as an XML file with an XSL style sheet at the location \SD Card\REPORTS.
   If saving is successful, a message is displayed to this effect.
4. Tap on **OK**.

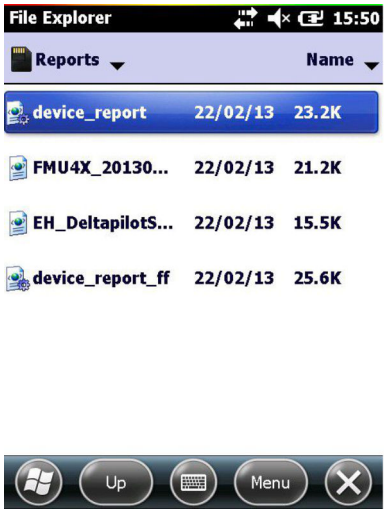
The Device Report can be viewed with Internet Explorer on the PDA or PC. On the PC it is possible to import it into Excel.

4.8.4 Viewing reports on the PDA

1. 

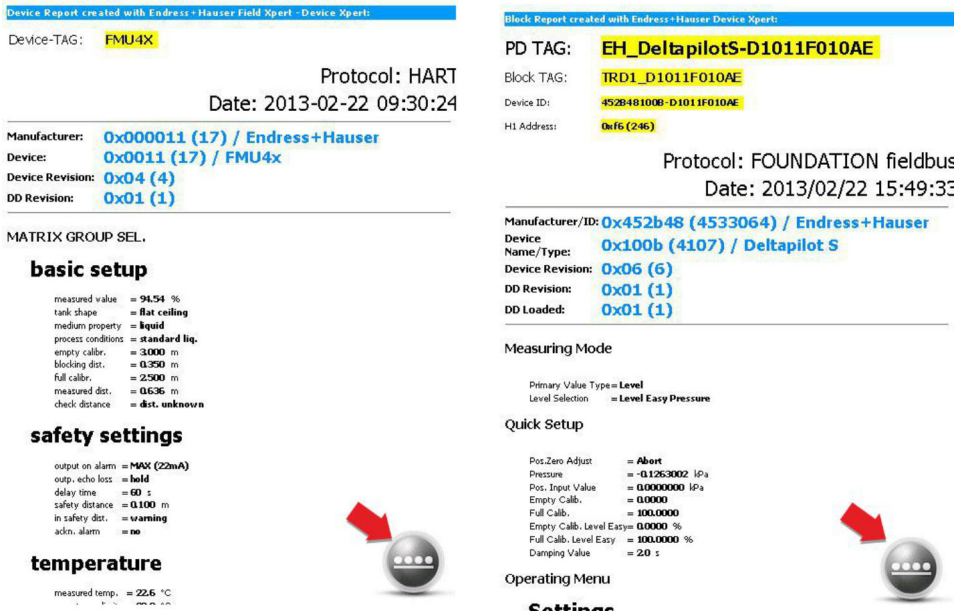
Tap on Reports in the start screen.

↳ A window opens.



2. Tap on the desired report.

The report opens.



The XML report (HART left, FOUNDATION fieldbus right) is displayed in Windows Internet Explorer using the XSL style sheet (here shown in landscape mode and in the smallest font).

- Scroll down to see more information.
- If the file name cannot be read, turn the Field Xpert SFX350/370 horizontally to view the window in landscape format (on the Field Xpert SFX100, press the F1 button for longer to switch between portrait and landscape format).

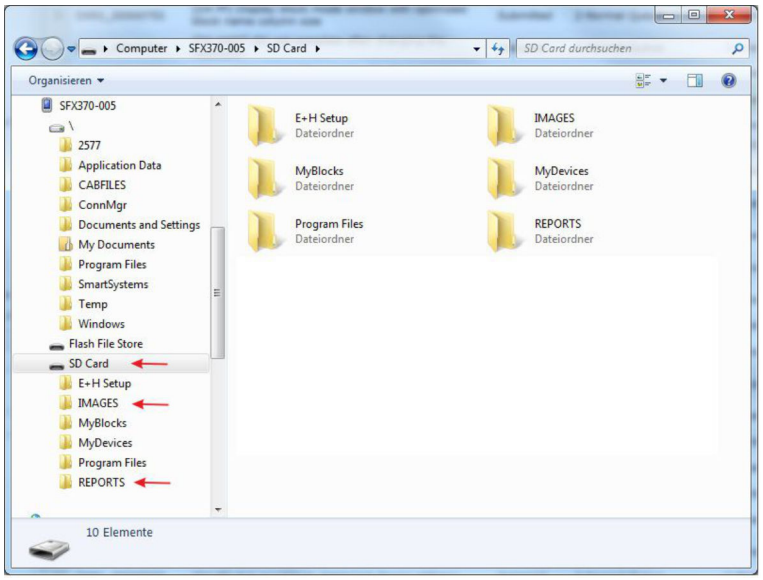
4.8.5 Backing up/copying reports and images

By using a Windows Mobile Device Center or ActiveSync connection from Field Xpert to the PC or laptop, it is possible to view and back up device reports and images.

▶ Make sure that the Windows Mobile Device Center or ActiveSync connection is up and running.

Start **Windows Explorer** on the PC or laptop and navigate as far as the **SD card** in the **Mobile Device** folder.

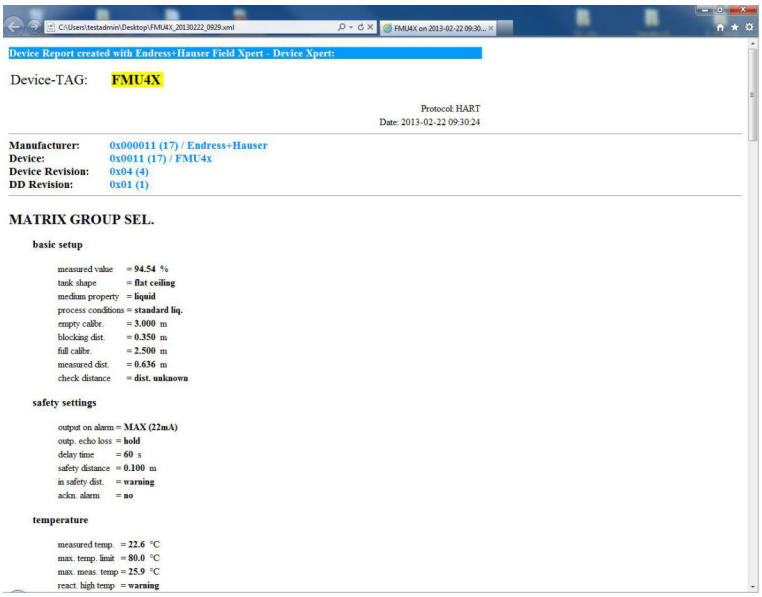
↳ The device configuration images and device reports can be found in the **IMAGES** or **REPORTS** folders.



Copy the desired files including the style sheet to a separate folder on the PC or laptop.

4.8.6 Viewing reports on a PC/laptop

The report can also be viewed by opening the desired report file with Internet Explorer. Make sure that the style sheet is saved in the same folder as the report.



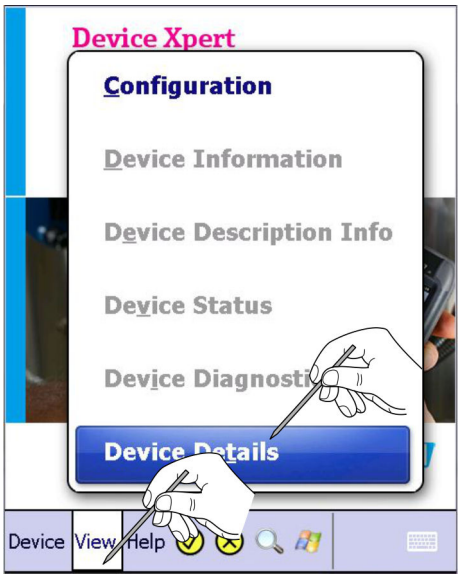
4.9 Device details about Endress+Hauser devices

Device Xpert HART and Device Xpert FF allow the user to download and display the technical documentation and the device details for Endress+Hauser devices. These additional, device-specific documents may include operating instructions, safety instructions and technical informations.

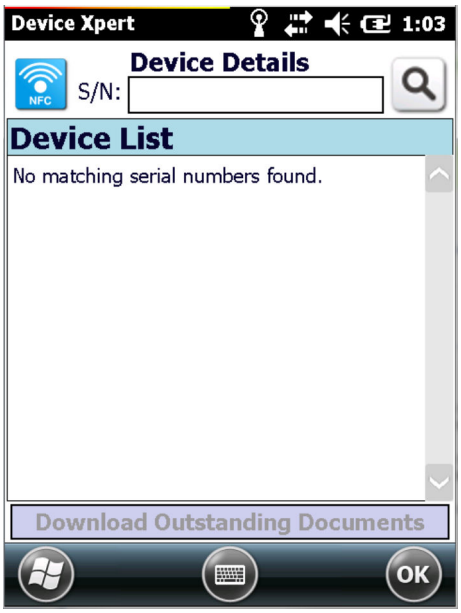
There are two ways of viewing the device details:
- Manually enter the serial number in the search field as described in **Chapter 4.9.1**
- Scan the serial number using an RFID TAG. This only works on the Field Xpert SFX370 with an RFID HF head module and Endress+Hauser- formatted RFID TAGs, see **Chapter 4.9.2** → 67
- Scan the serial number using the datamatrix code on the nameplate of the Endress+Hauser device, see **Chapter 4.9.3** → 73

4.9.1 Obtaining device details by manually entering the serial number (SFX350/SFX370)

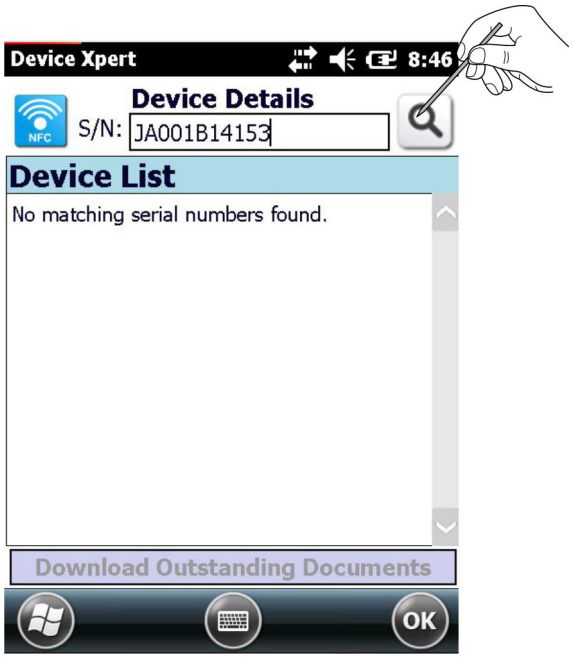
1. Tap on **View → Device Details**.



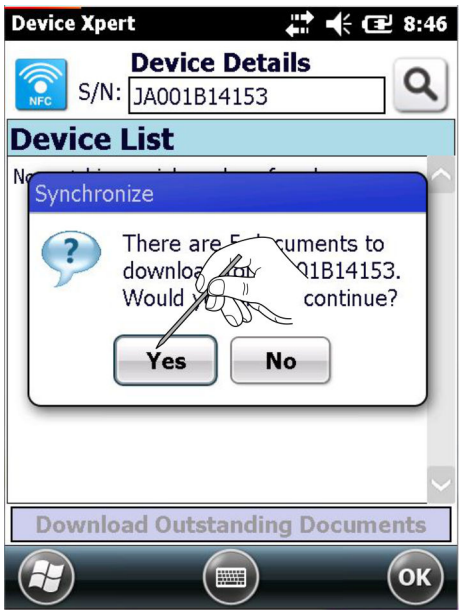
The device list opens.



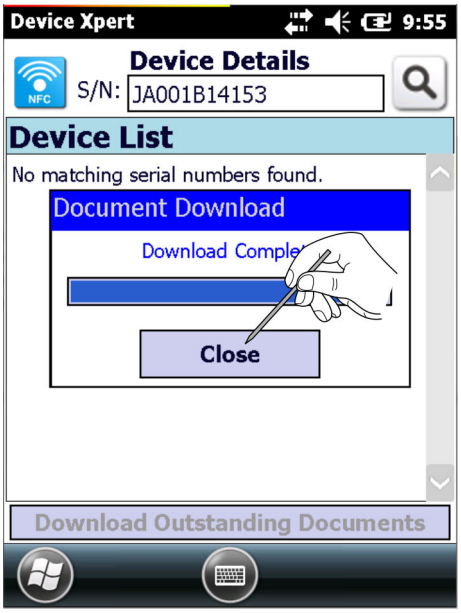
2. Enter the **serial number** of the device for which you wish to view more information and tap on the **magnifying glass** icon.
   ↳ While the serial number is being entered, Device Xpert compares the part of the serial number already entered with field devices that have already been viewed.



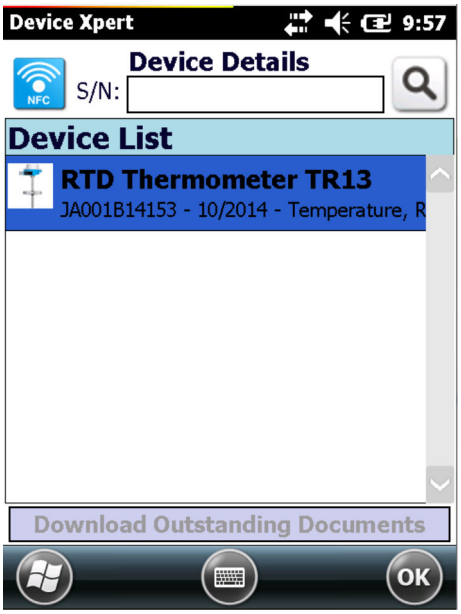
If an Internet connection is established and a valid serial number entered, Device Xpert asks whether all the documents found for this field device should be downloaded.



3. Tap on **Yes**.
   ↳ The documents are downloaded and a message appears stating that the download was successful.

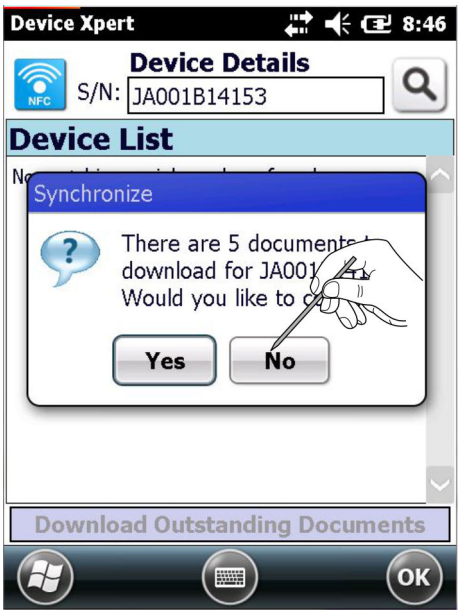


4. Tap on **Close**.
   ↳ The current device list appears.

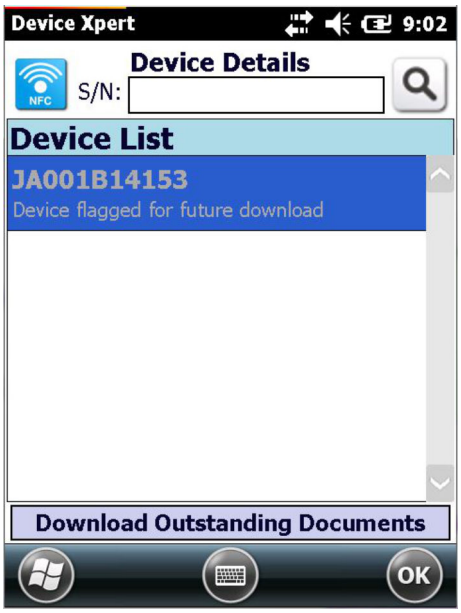


If **No** was selected or a connection to the Internet could not be established, the serial number can be saved for future document retrieval, see **Chapter 4.9.6**. → 81

- Tap on **No**.



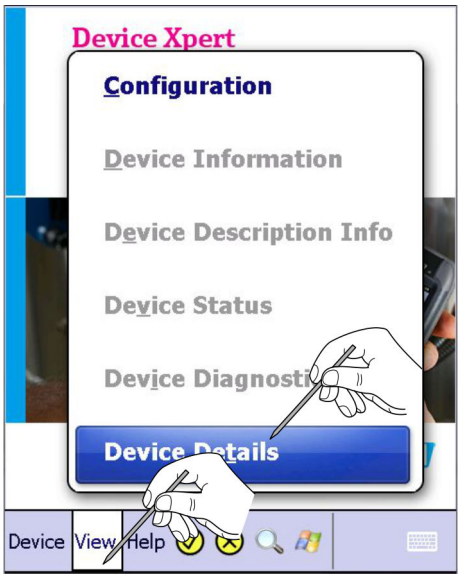
The serial number is saved for future document retrieval.



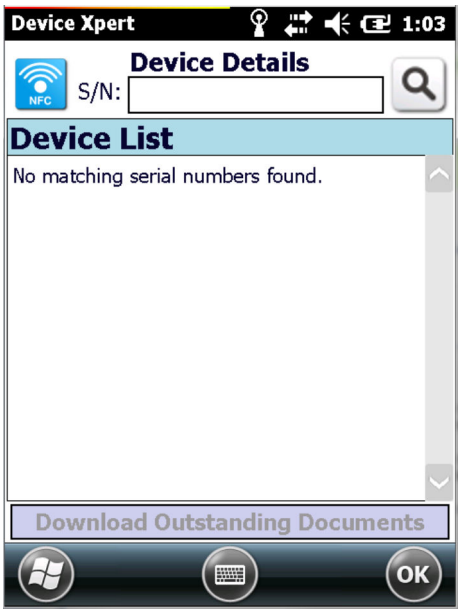
4.9.2 Obtaining device details via the RFID TAG

It is only possible to search for device details using an RFID TAG on the Field Xpert SFX370 with an RFID HF head module and Endress+Hauser -formatted RFID TAGs (NFC NDEF text format).

1. Tap on **View → Device Details**.

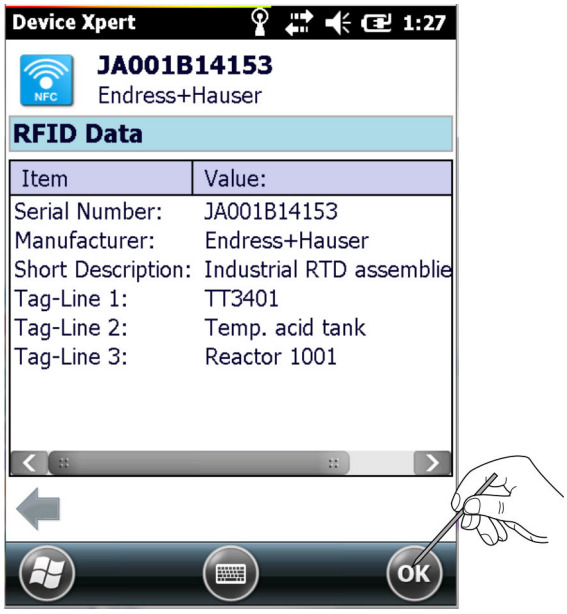


The device list opens.

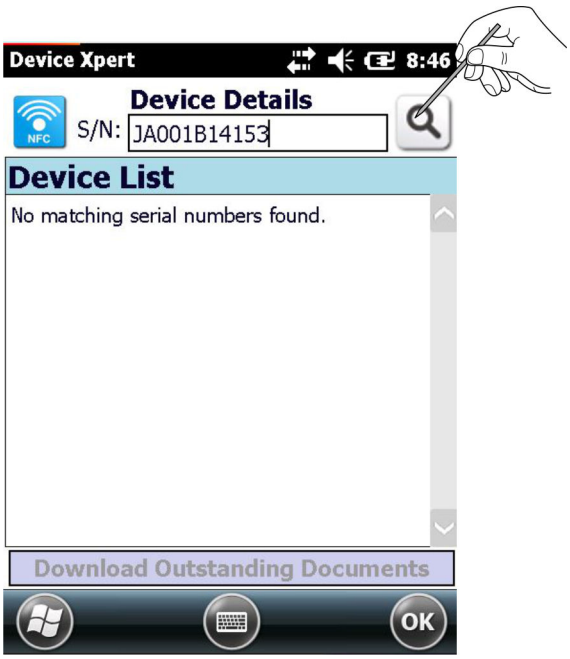


2. Tap on the **NFC symbol** and scan the **RFID TAG**.

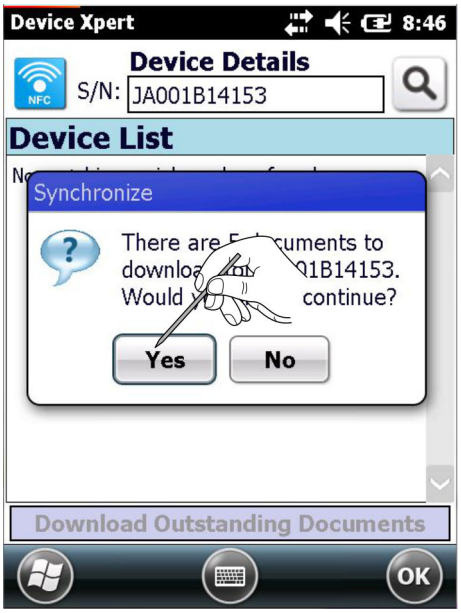
The **RFID data** are displayed.



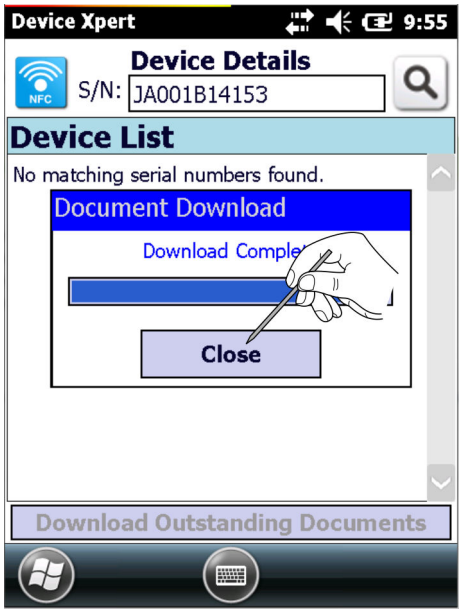
3. Tap on **OK**.
   ↳ The serial number is automatically entered in the search field.



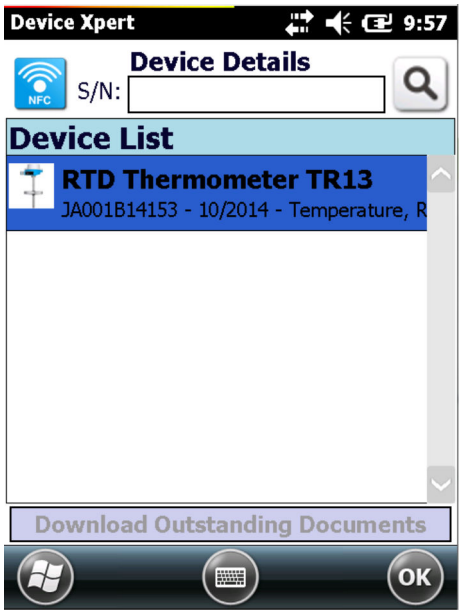
4. Tap on the **magnifying glass** icon.
   ↳ If an Internet connection is established and a valid serial number entered, Device Xpert asks whether all the documents found for this field device should be downloaded.



5. Tap on **Yes**.
   ↳ The documents are downloaded and a message appears stating that the download was successful.

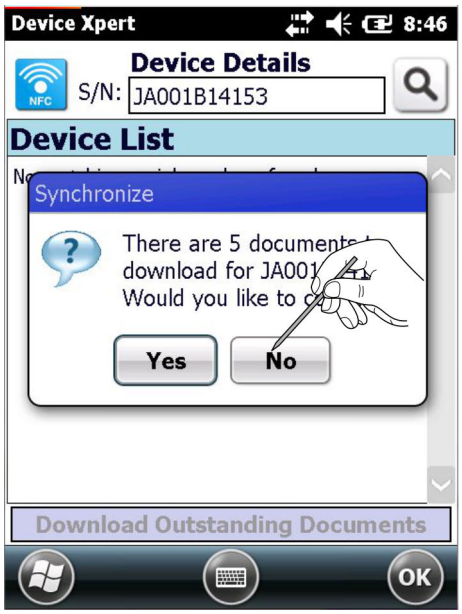


6. Tap on **Close**.
   ↳ The current device list appears.

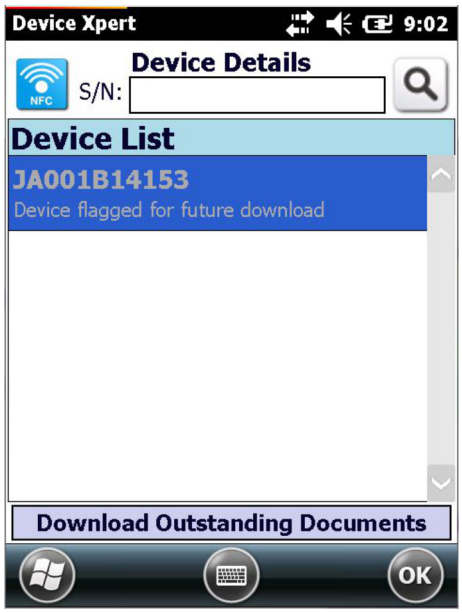


If **No** was selected or a connection to the Internet could not be established, the serial number can be saved for future document retrieval, see **Chapter 4.9.6**. → 81

- Tap on **No**.

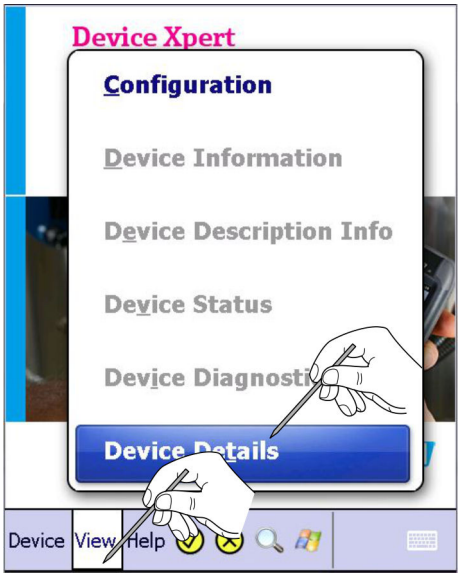


The serial number is saved for future document retrieval.

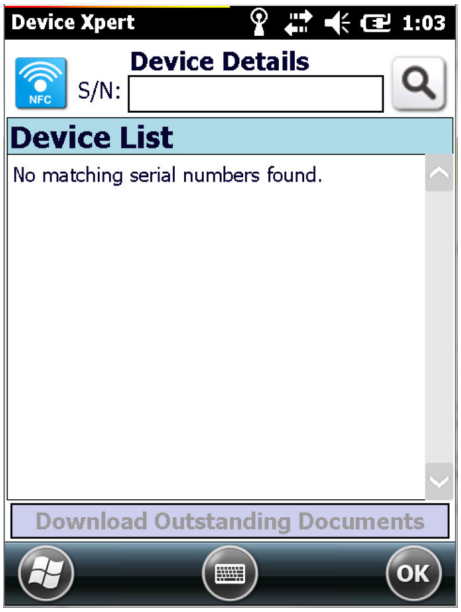


4.9.3 Obtaining device details via the datamatrix code

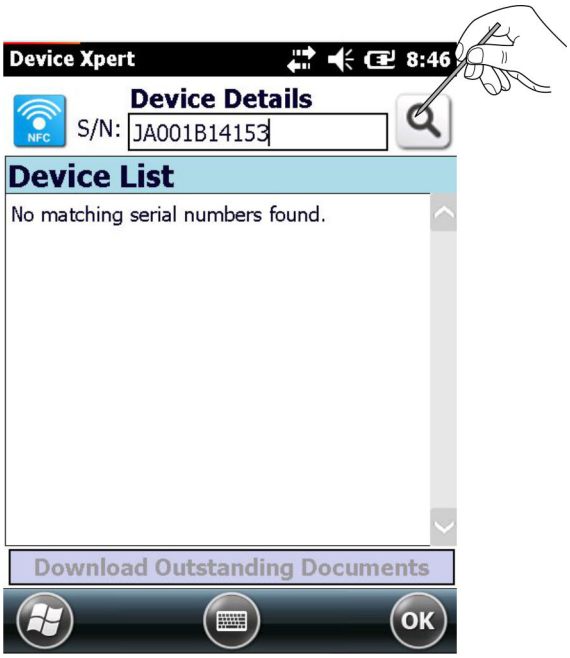
1. Tap on **View → Device Details**.



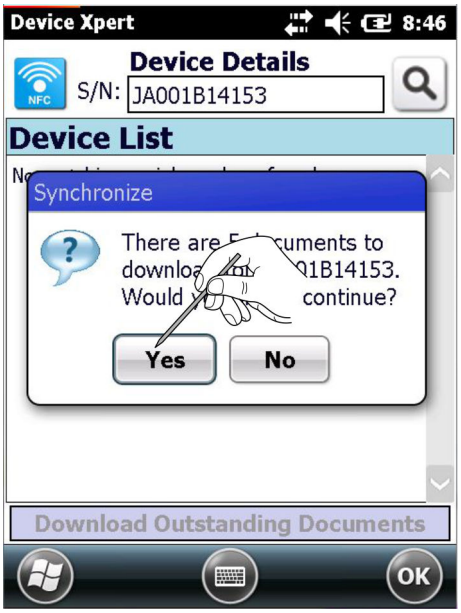
The device list opens.



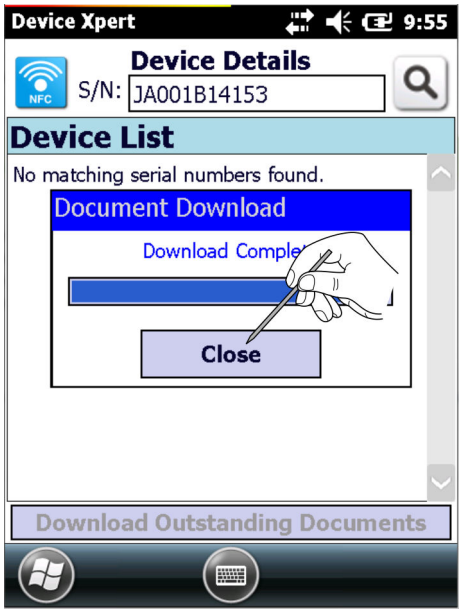
2. The serial number is printed on the nameplate of the Endress+Hauser device as the datamatrix code.
   Using the blue scan button on the Field Xpert, scan this optical code on the device for which you wish to view more information and then tap on the **magnifying glass** icon.
   ↳



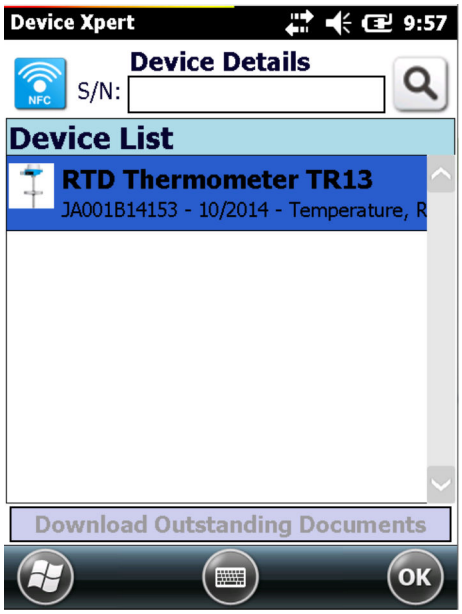
   If an Internet connection is established and a valid serial number entered, Device Xpert asks whether all the documents found for this field device should be downloaded.



3. Tap on **Yes**.
   ↳ The documents are downloaded and a message appears stating that the download was successful.

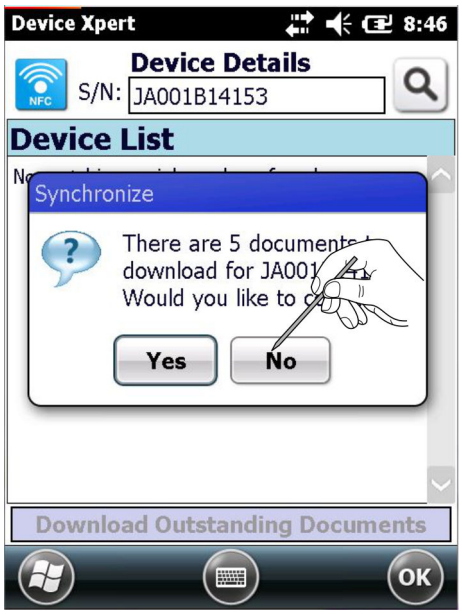


4. Tap on **Close**.
   ↳ The current device list appears.

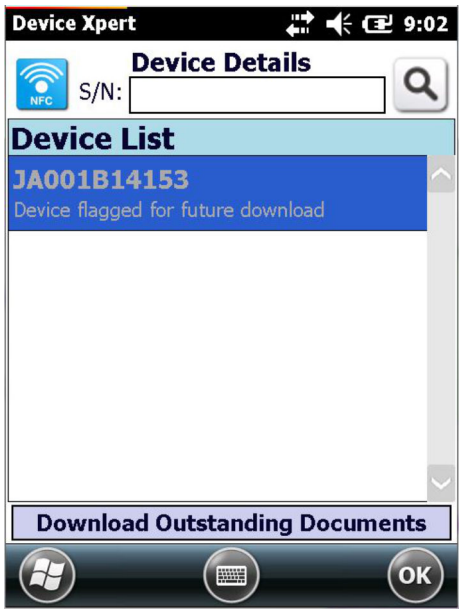


If **No** was selected or a connection to the Internet could not be established, the serial number can be saved for future document retrieval, see **Chapter 4.9.6**. → 81

- Tap on **No**.

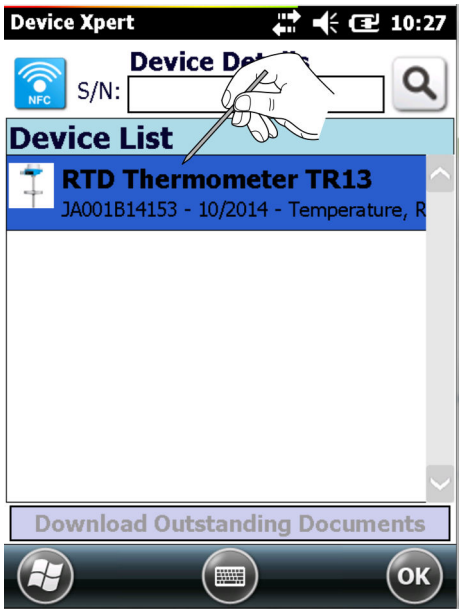


The serial number is saved for future document retrieval.

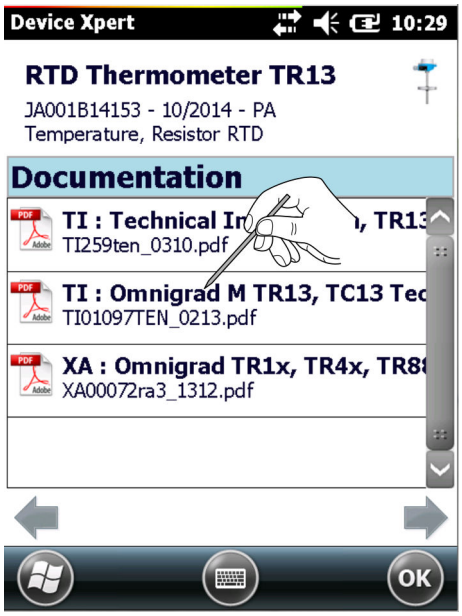


4.9.4 Viewing field device documents

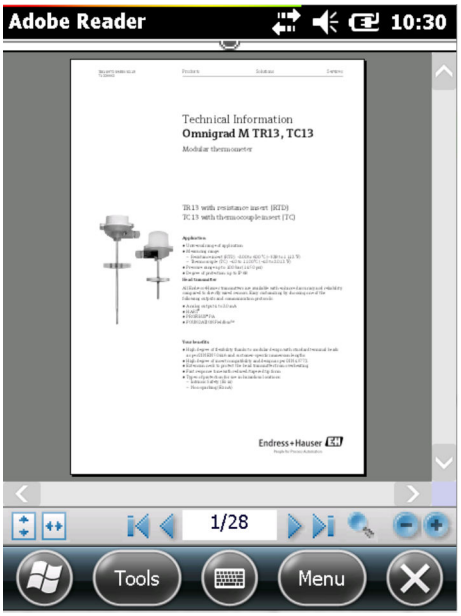
1. Tap on one of the stored **serial numbers**.

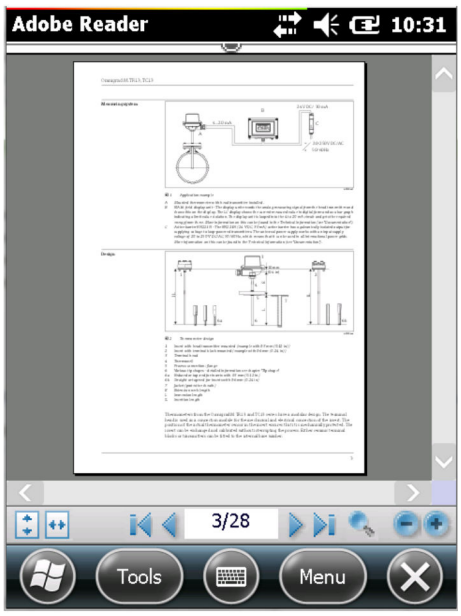


A selection of documents appears.



2. Tap on the desired document.
   ↳ The document opens.

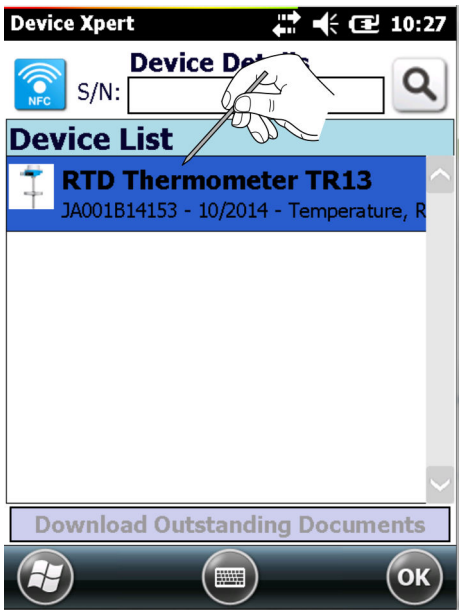




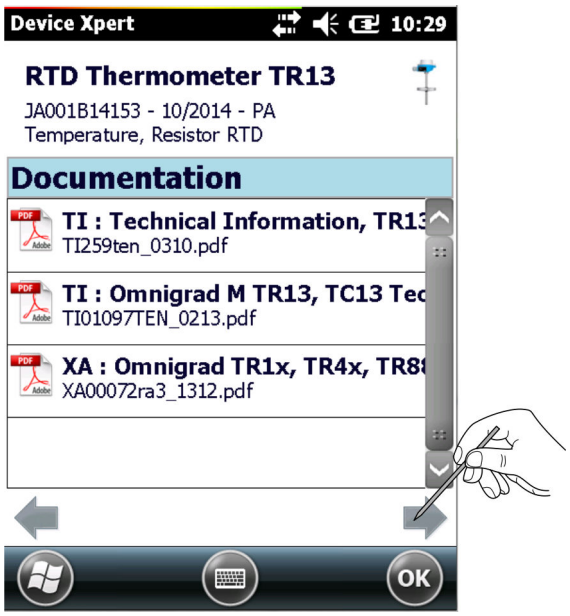
4.9.5 Viewing product details, the product status and RFID data

The RFID data are only displayed if the serial number was scanned using the RFID TAG.

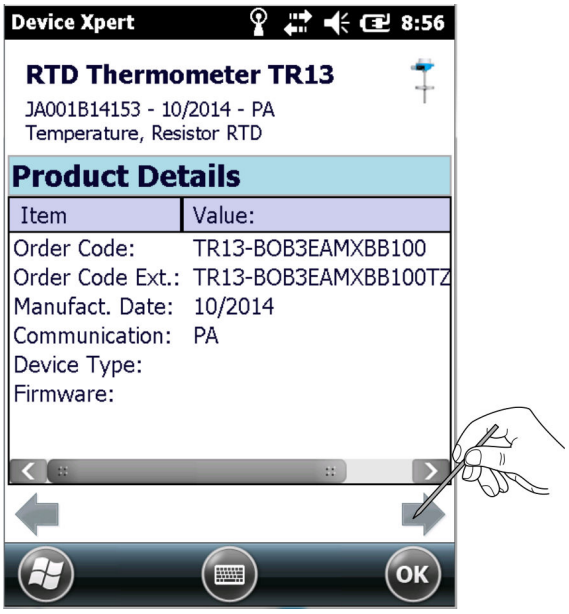
1. Tap on one of the stored **serial numbers**.



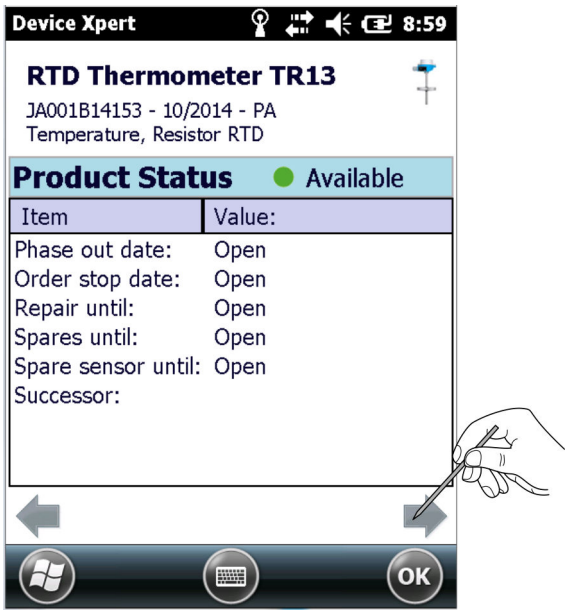
A selection of documents appears.



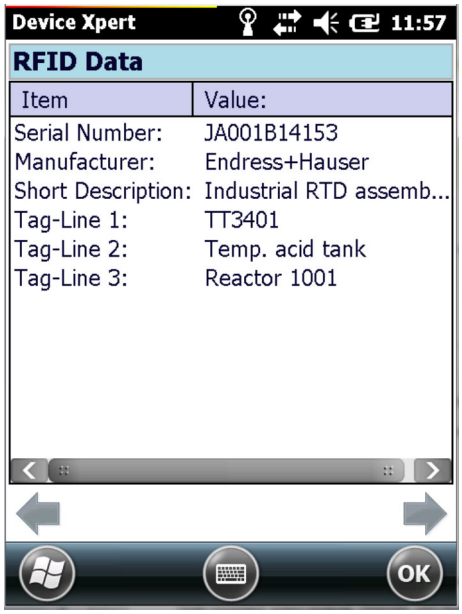
2. Tap on the arrow on the right.
   ↳ The product details are displayed.



3. Tap on the arrow on the right.
   ↳ The product status is displayed.



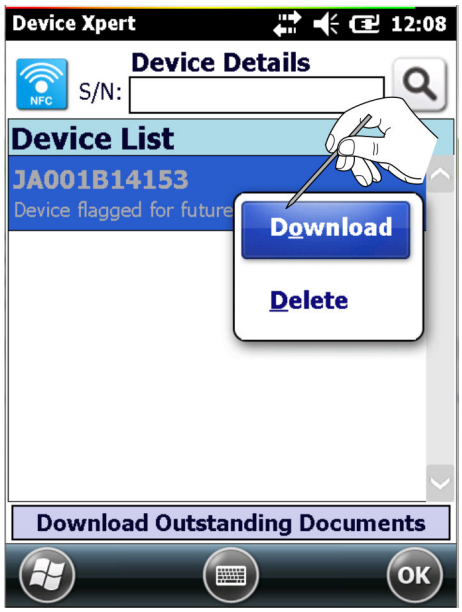
4. Tap on the arrow on the right.
   ↳ The RFID data are displayed.



4.9.6 Managing the list of stored devices

Downloading documents

1. Tap on the **serial number** and hold.
   ↳ The context menu is opened.



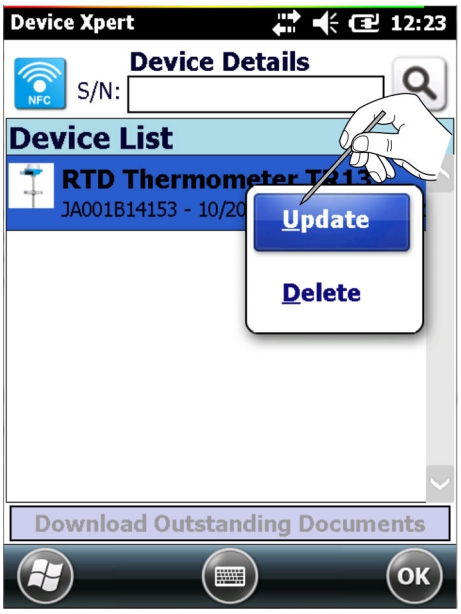
2. Select **Download**.

The documents are downloaded.

Available documents are downloaded if an Internet connection can be established.

Updating documents

1. Tap on the **serial number** and hold.
   ↳ The context menu is opened.



2. Select **Update**.

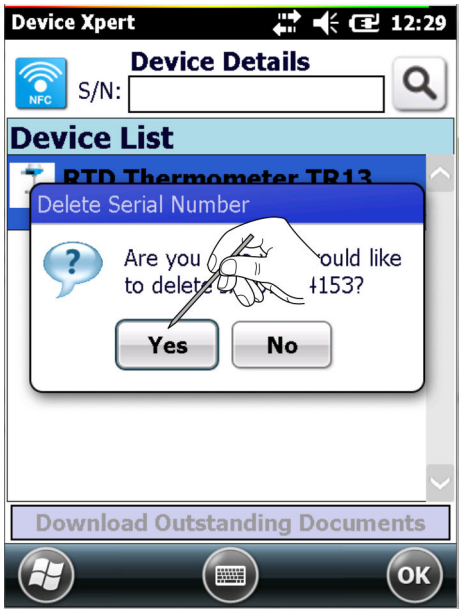
The documents are updated.

Available documents are downloaded if an Internet connection can be established.

Deleting documents

1. Tap on the **serial number** and hold.
   ↳ The context menu is opened.

2. Select **Delete**.
   ↳ A question appears.

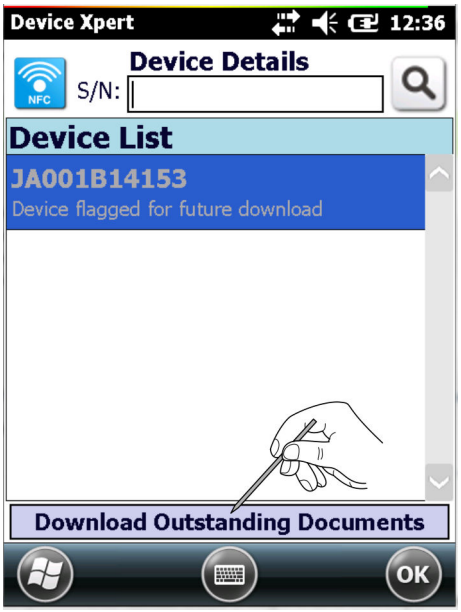


3. Tap on **Yes**.

The documents are deleted.

Downloading all outstanding documents

▶



Tap on **Download All Outstanding Documents**.

All the documents that have not previously been downloaded are retrieved.

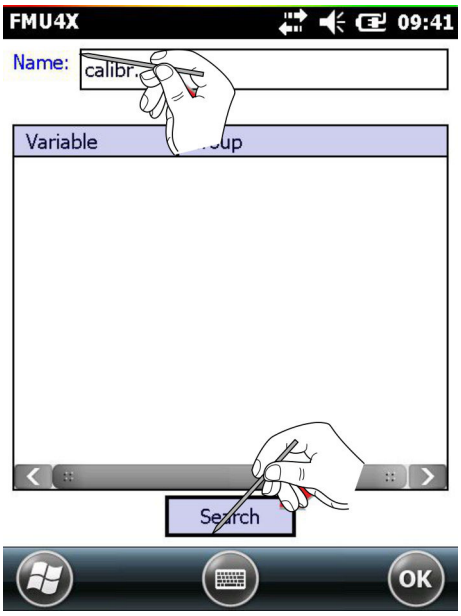
Available documents are downloaded if an Internet connection can be established.

4.10 Additional functions

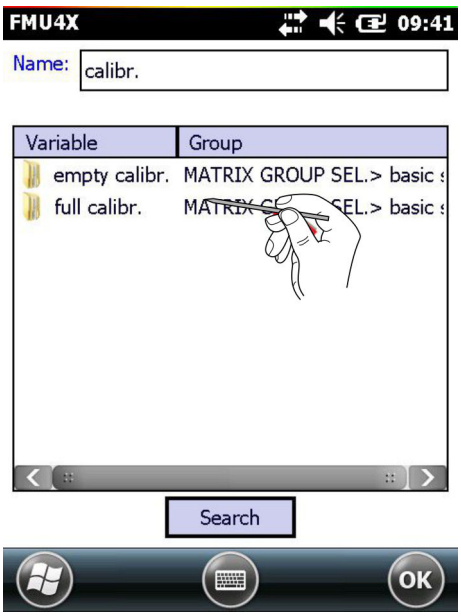
4.10.1 Search function

If the position of a specific parameter or special function in the device description is unknown, it can be found by using the integrated search function.

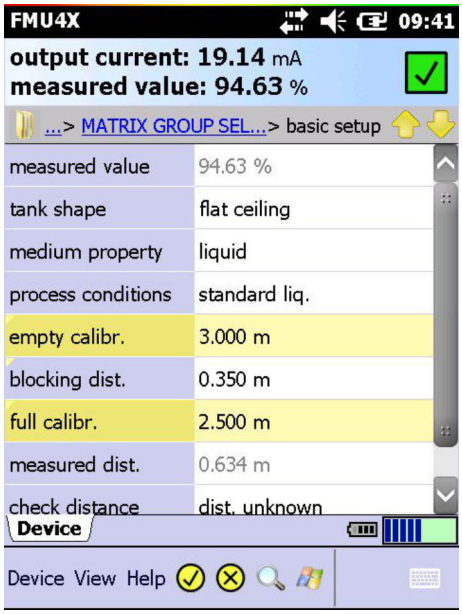
1. Tap on the **magnifying glass icon** in the lower menu bar.
   ↳ The window with the search function opens.



2. Enter the name of the parameter you are searching for (whole or in part) in the search field and tap on **Search**.
   ↳ A list of all the parameters containing the search string is displayed.

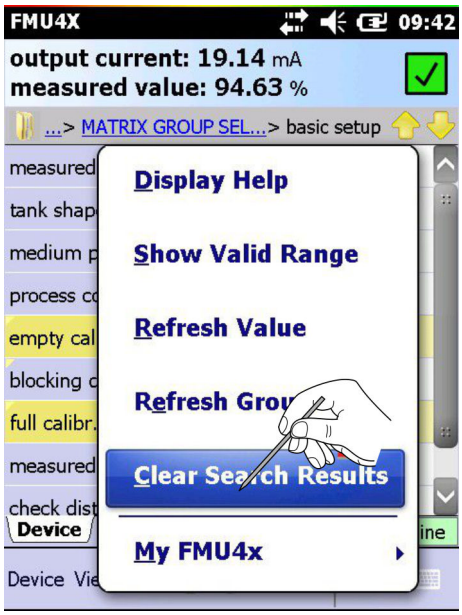


3. Tap on the **parameter**.
   ↳ The parameter folder opens.

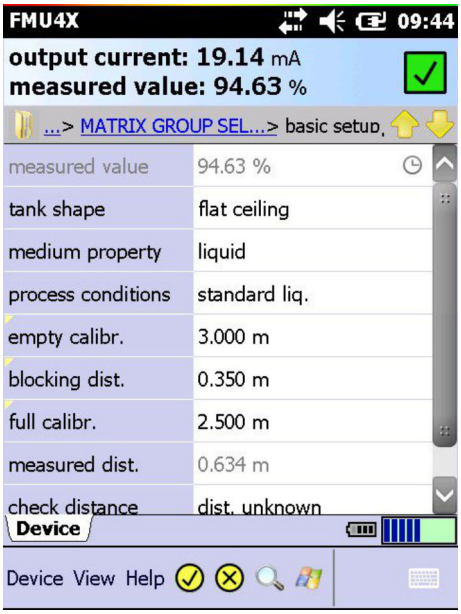


The parameters you are searching for are highlighted in yellow.

4. Tap on the parameter and hold.
   ↳ The context menu appears.



5. Tap on **Delete Search Results**.
   ↳ The search results are deleted and the parameters are displayed again as normal.



4.10.2 Use cases

Device Xpert possesses an application help in which detailed information is available.

▶

Tap on **Help → Application Help**.

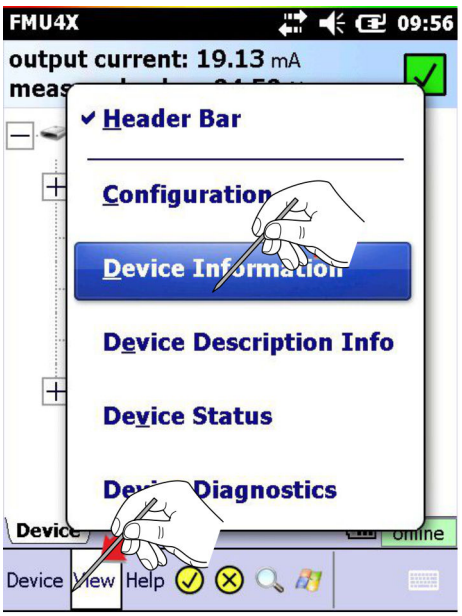
The **Application Help** opens and a list of the available topics appears.

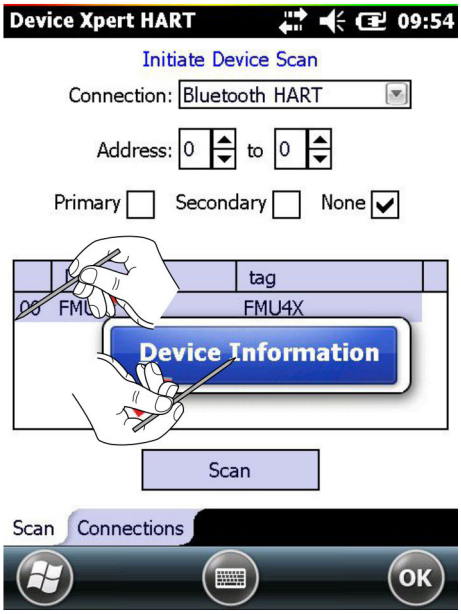
Select a topic you require.

The window for HART is displayed on the left, and the window for FOUNDATION fieldbus on the right.

4.10.3 Device information (HART)

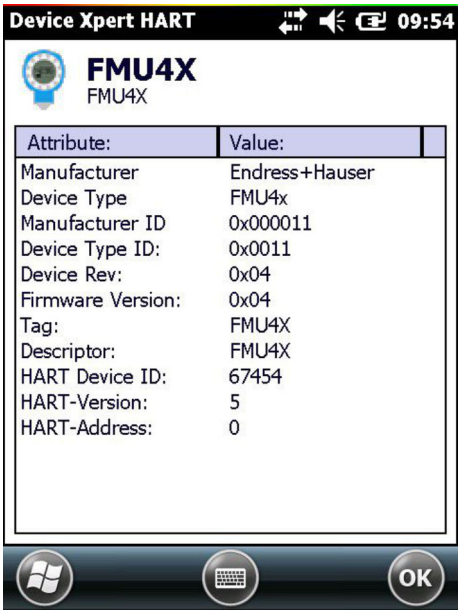
Device Xpert HART offers an overview of the device information.

1. 



Tap on **View → Device Information** or tap on the row with the device and hold.

↳ The device information is displayed.



2. Tap on **OK** to close the device information window again.

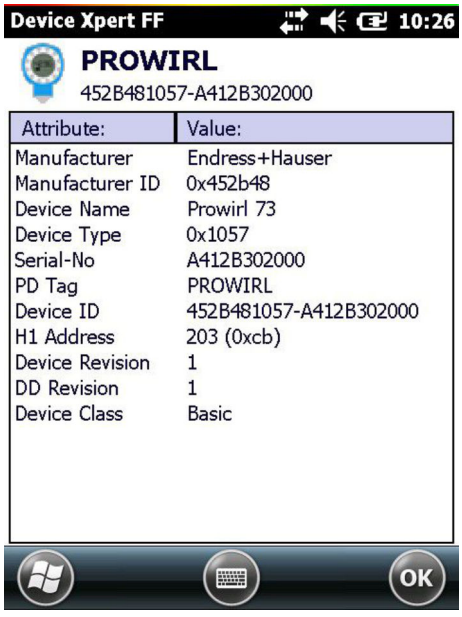
4.10.4 Device information and block properties (FF)

Device Xpert FOUNDATION fieldbus offers an overview of the device information and block properties.

Device information

1. Tap on the row with the device and hold.
   ↳ The context menu appears.

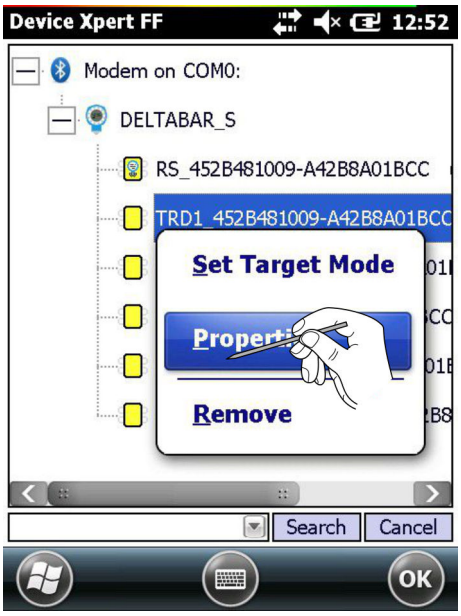
2. Select **Device Information**.
   ↳ The device information is displayed.



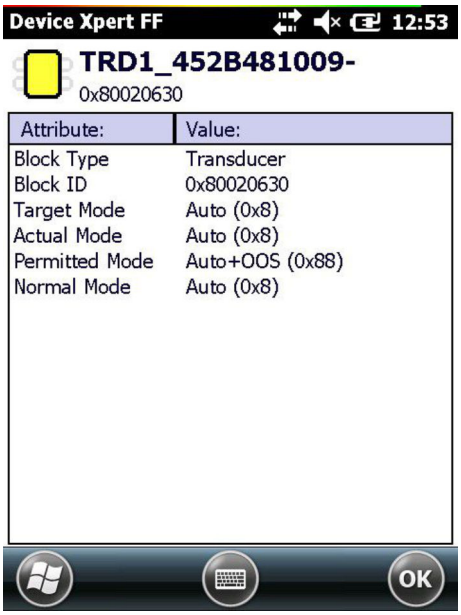
3. Tap on **OK** to close the device information window again.

Block properties

1. Tap on the row with the device and hold.
   ↳ The context menu appears.



2. Select **Properties**.
   ↳ The device information is displayed.

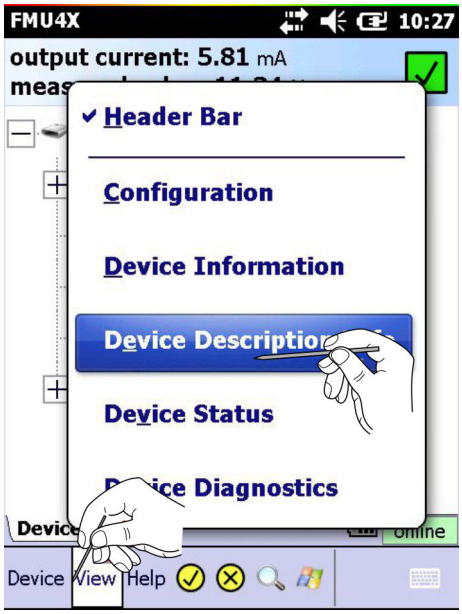


3. Tap on **OK** to close the device information window again.

4.10.5 Device description information

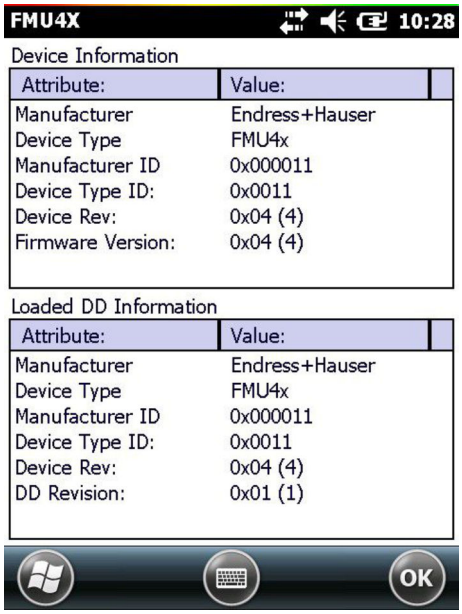
Information about the loaded device description

Information about loaded device description

1. 

   Tap on **View → Device Description Info**.

   ↳ The **device description information** appears.



2. Tap on **OK** to close the device description information window again.

4.10.6 Generic DD

Device Xpert HART supports the HART Generic DD. This feature ensures that Field Xpert user can perform a basic configuration of a HART Device, even when the specific Device Description is not available in Field Xpert.

1. Tap on **Device → Scan**.

   ↳ The scan window opens.

2. Tap on **Scan**.

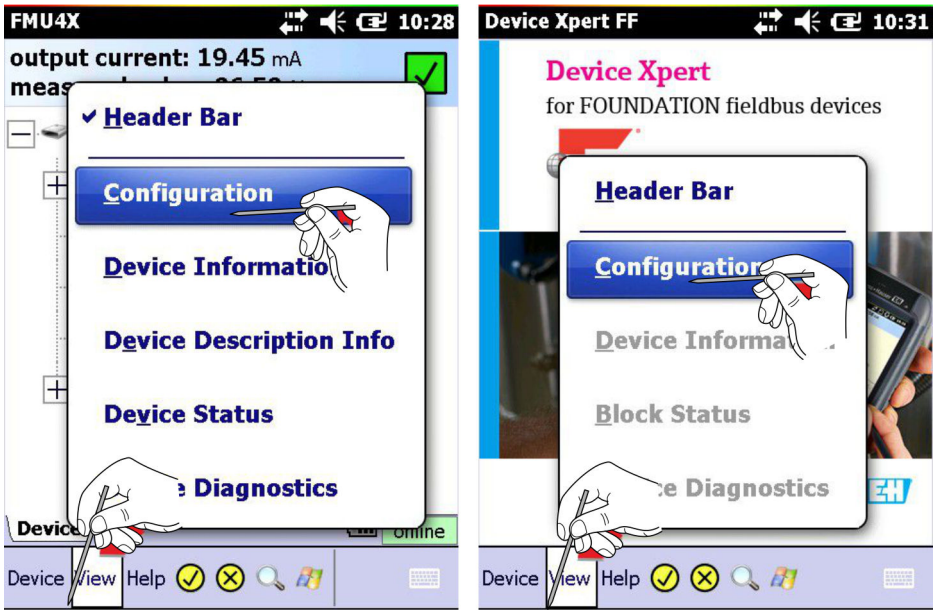
   ↳ Field Xpert searches for the device.

3. Tap on name of the device.
   ↳ Field Xpert searches for the registered DDs and a message appears.
4. Tap on **Yes** or **OK**.

If Field Xpert is unable to find a registered DD, it will automatically load the Generic DD.

4.11 Configuration menu

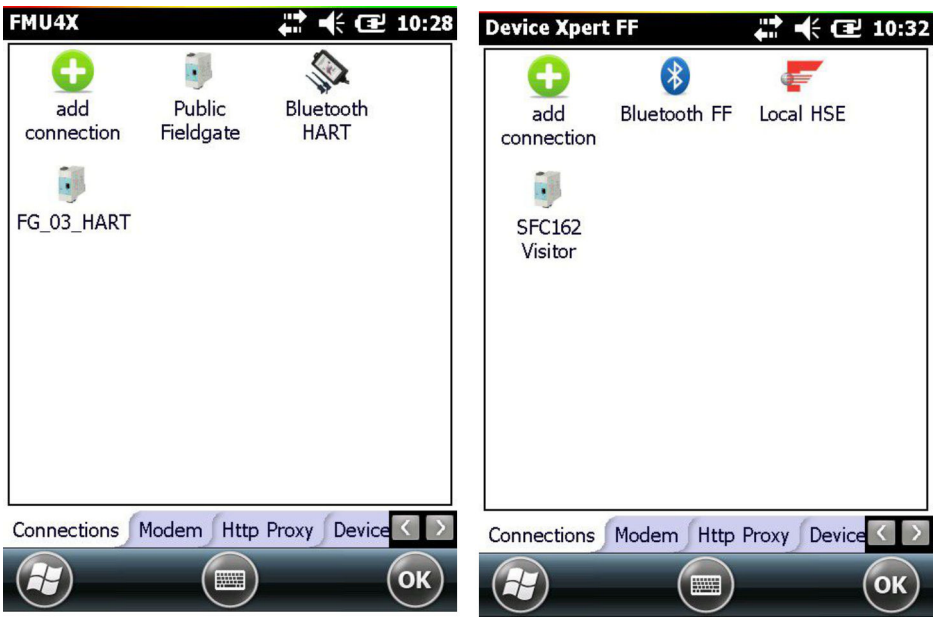
Device Xpert HART and Device Xpert FOUNDATION fieldbus have a configuration menu, under which all configuration dialogs are grouped. Some are called during commissioning and some offer additional options or device information. The menu is called by selecting **View → Configuration**.



The **Configuration** dialog has a number of tabs. Navigate using the two arrows on the bottom right and tap on the desired tab.

4.11.1 Connections

The **Connections** dialog shows the connections that are available for Device Xpert (HART left, FOUNDATION fieldbus right).



Tap on **Add Connection**. For HART devices, tap and hold **Add Connection**.

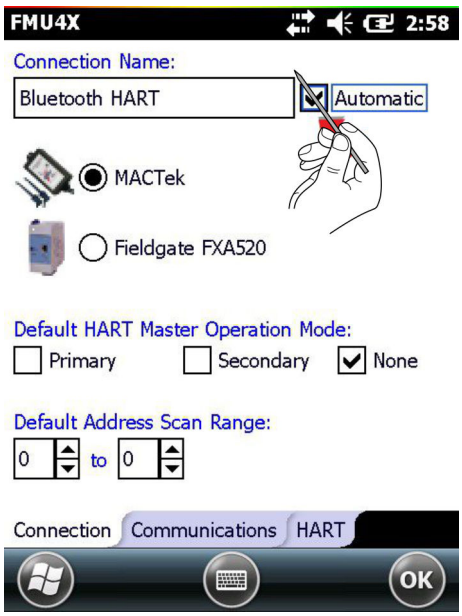
↳ It is now possible to configure a new connection, see Field Xpert BA01202S/04/en.

In the case of HART devices, a context menu with the following options appears:
- Default Master Operation mode
- Default Address Range
- Automatic scan option, see **Chapter 4.11.2**

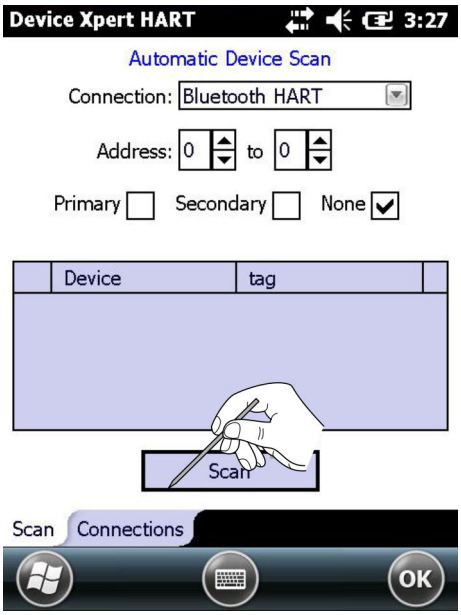
4.11.2 Automatic HART scan

For Device Xpert HART, automatic scanning can be selected in the Connection menu as follows:

1. Tap on the Bluetooth or Fieldgate FXA520 connection and hold.
   ↳ The context menu appears.
2. Tap on **Properties**.
   ↳ The **Connection Configuration menu** opens.



3. Tick the **Automatic** check box and then tap on OK. If necessary, set the scan range, see **Chapter 4.2**. → 24
4. Tap on **OK**.
   ↳ The changes are saved and the scan page opens.



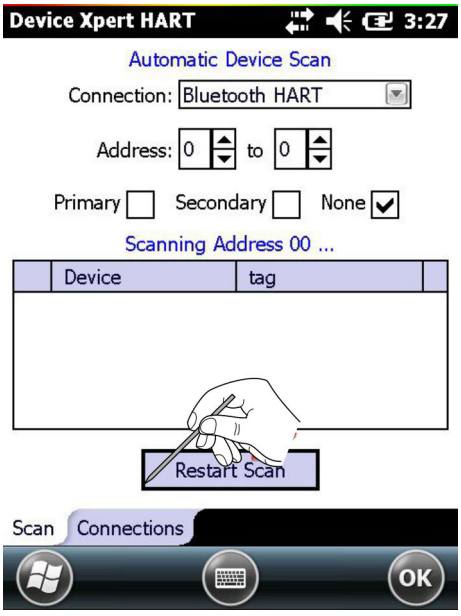
5. Tap on **Scan**.

Scanning starts.

The parameters can still be changed during the scan.

Changing the parameters during the scan

▶

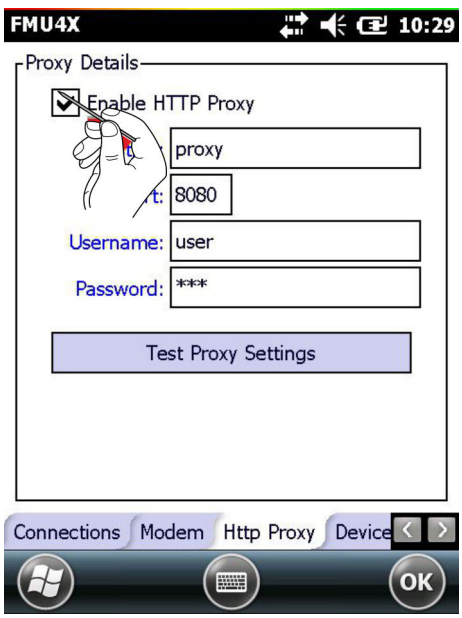


Change the parameters and tap on **Restart Scan**.

Scanning starts with the new parameters.

4.11.3 HTTP Proxy

The HTTP Proxy dialog is required if Field Xpert is to access Internet via a proxy server.

1. 

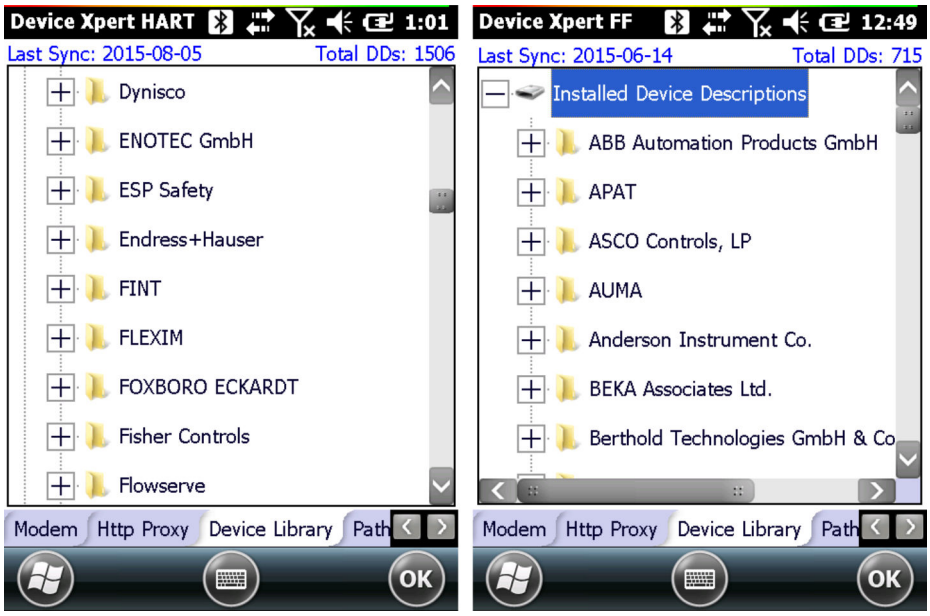
   Tick the **Activate HTTP Proxy** check box in the **HTTP Proxy** window.
   ↳ The proxy is activated.

2. Enter the proxy data and tap on **Test the Proxy Settings**.

The Internet connection is tested.

4.11.4 Device library

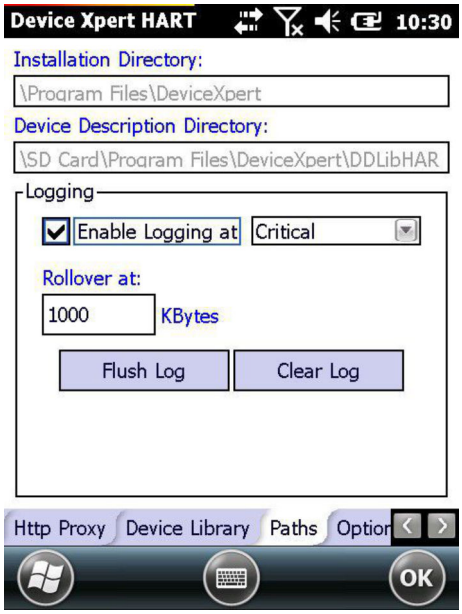
The Device library dialog shows a list of all the DDs (HART or FOUNDATION fieldbus) supported by Device Xpert. The tree can be opened out to reveal the device names and DD versions.



Tap on a folder and hold to get additional information.

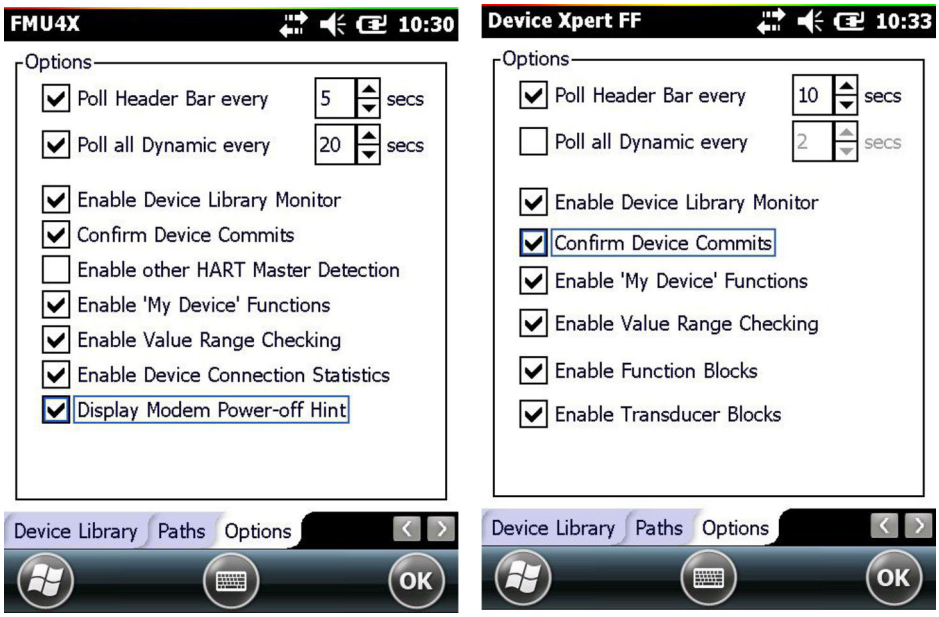
4.11.5 Paths

The **Paths** dialog displays the paths where the Device Xpert programs and DDs are stored. It also controls the logging function for Field Xpert. When activated, the logs are to be found in **\Programs\DeviceXert\log_hart.txt** or **log_ff.txt**.



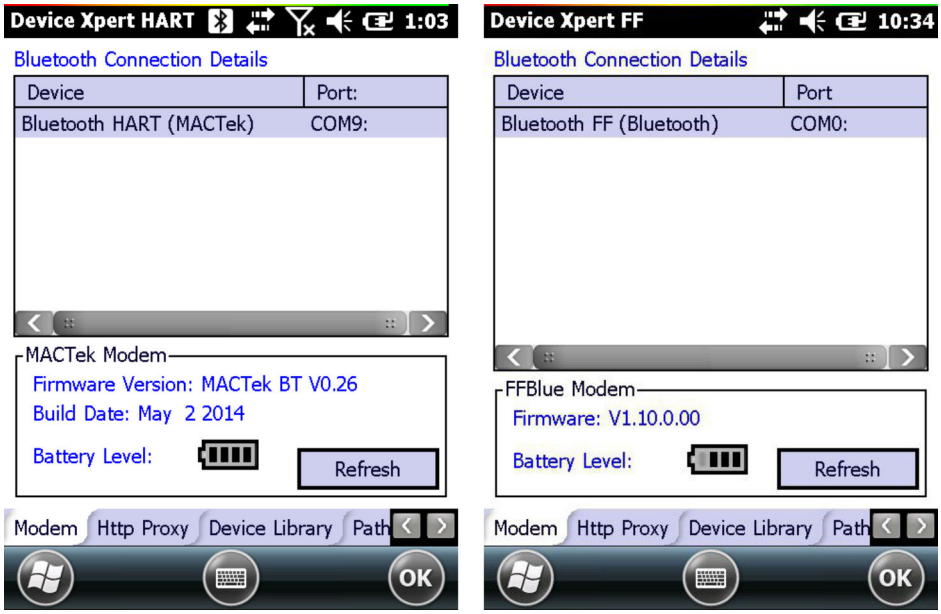
4.11.6 Options

The **Options** dialog controls the various Device Xpert functions, e.g. whether **My Device/My Block** appears in the device or block list of a HART or FOUNDATION fieldbus device.



4.11.7 Modem

The **Modem** dialog lists the Bluetooth modems that are currently paired with Field Xpert and allows the default modem for the current application to be selected.



The screen also contains information about the connected modem, including the firmware version and battery level of the used modem.

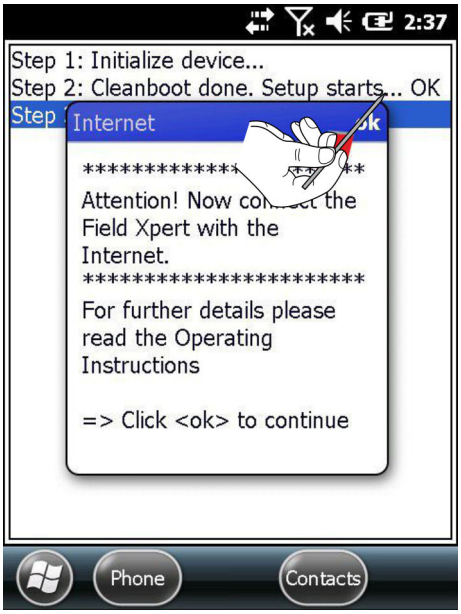
5 Troubleshooting

We expect our hardware and software products to function without any problems. Nevertheless, we are unable to provide a 100% guarantee that this will be the case. For this reason, here are some tips and solutions for dealing with possible faults.

5.1 Reinstalling Device Xpert

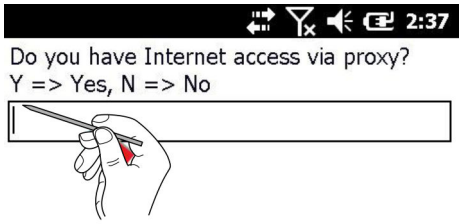
- For reinstallation, the laptop/PC must be linked to the Internet via Windows Mobile Device Center or ActiveSync. One of these applications must be installed and connected before you can proceed.
- Device Xpert installation files are on the SD card of Field Xpert. After a clean reset, they must be reinstalled in Field Xpert's device memory and licensed again.

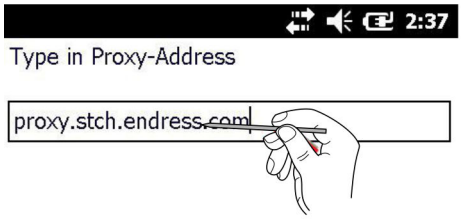
1. Perform a clean reset, see **BA01202S/04/en**.
   ↳ The installation routine starts automatically.

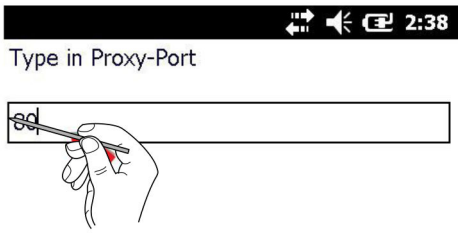


2. Connect to the Internet.
   ↳ A connection is established with the Windows Mobile Device Center or ActiveSync.
   If it is not possible to establish an internet connection, the DD library will not be updated and license will not be reactivated automatically during the installation routine. These actions must be performed manually afterwards, see **Chapter 4.1.3** → 🖹 21 and **Chapter 4.1.4** → 🖹 22.

3. Tap on **OK**.
   ↳ The **Proxy Configuration** prompt appears.

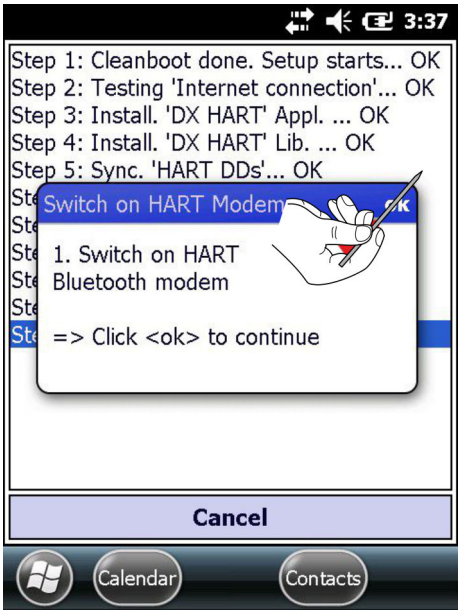


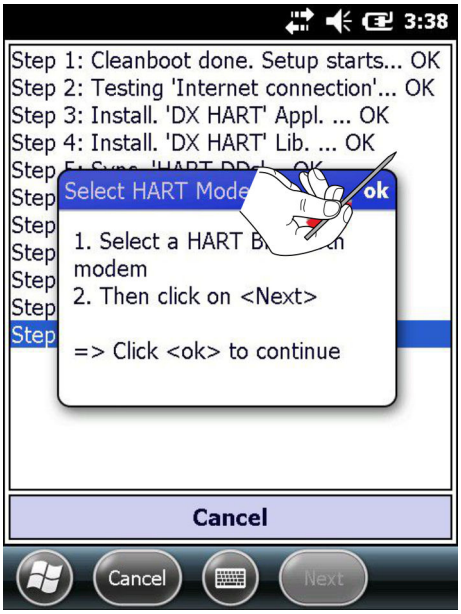




4. If Field Xpert communicates via a proxy server, enter **Y**. Otherwise enter **N** and tap on **OK**.
5. Enter the **proxy address** and the **proxy port** and tap on **OK**.
   ↳ If there is an Internet connection, **DD library synchronization** and **license activation** are performed automatically. If there is no Internet connection, these actions must be performed manually afterwards, see **Chapter 4.1.3** → 21 and **Chapter 4.1.4** → 22.

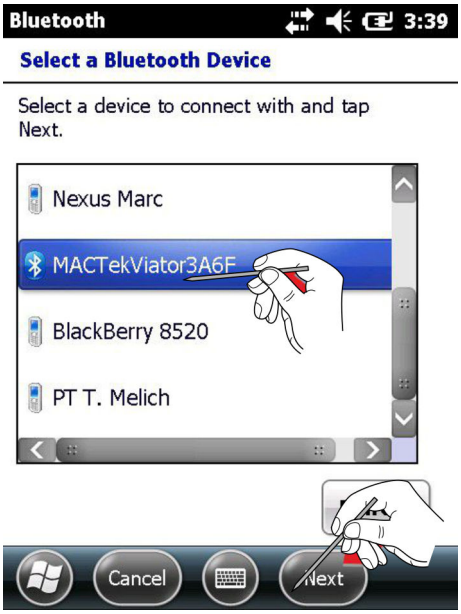
1.





Switch on the HART Bluetooth modem and tap on **OK**.

↳ A selection of modems appears.

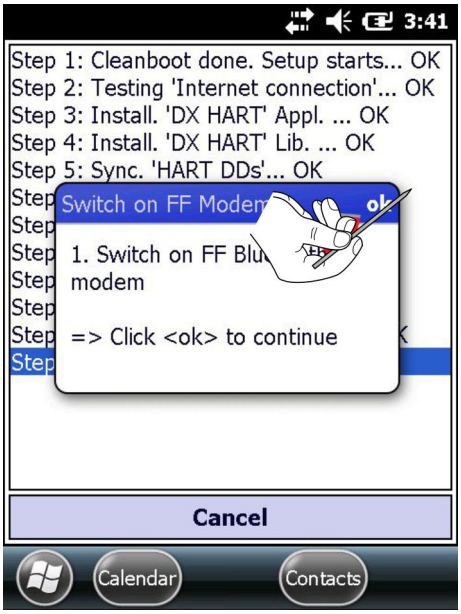


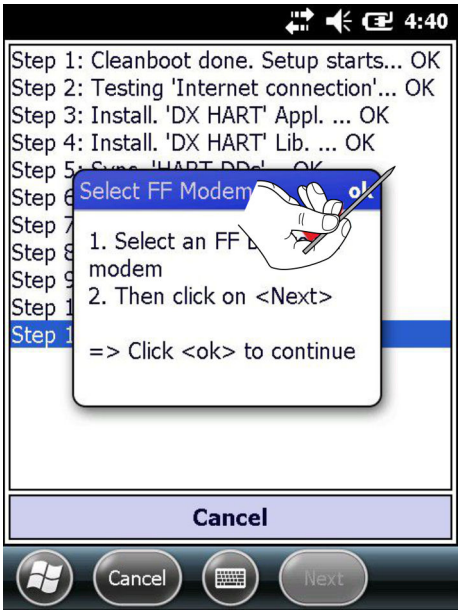
2. Select a modem and tap on **Next**.

The modem is connected.

Refresh updates the modem selection list.

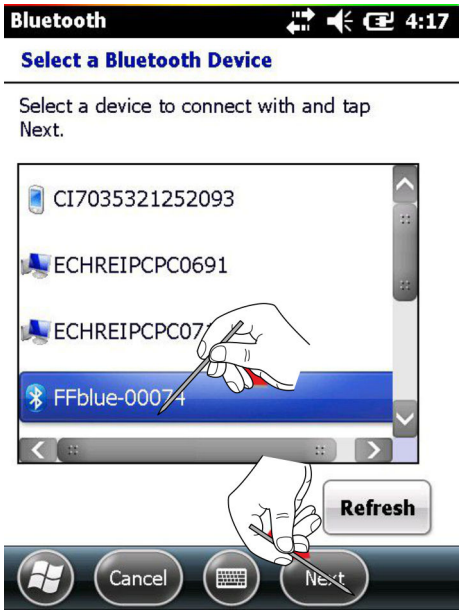
1.





Switch on the FFblue modem and tap on **OK**.

↳ A selection of modems appears.



2. Select a modem and tap on **Next**.

The modem is connected.

Refresh updates the modem selection list.

Field Xpert completes the installation
- The **Reboot** pop-up appears for 15 seconds and indicates that the setup procedure is finished. Field Xpert is restarted.
- The home screen appears after rebooting.

5.2 Connection problems

All types of connection (Bluetooth modem, FXA520 and SFC162) should function without any fa

Fault	Cause/remedy
VIATOR Bluetooth modem does not connect	Communication error ▪ Modem or Field Xpert Bluetooth communication not switched on ▪ Batteries flat (< 10 %), see Operating Instructions **BA01202S/04/en** - exchange batteries ▪ Communication stalled: Switch off Field Xpert and the modem, wait 10 seconds, switch on the modem, wait 10 seconds, switch on Field Xpert Communication settings incorrect ▪ Check that the VIATOR modem has been selected, (see **Chapter 3.2**) → 14 ▪ Check that the modem has been correctly configured, see **BA01202S/04/en** ▪ Check that the modem has been selected as the default modem, see **Chapter 4.11.7** → 96
FFblue Bluetooth modem does not connect	Communication error ▪ Modem or Field Xpert Bluetooth communication not switched on – Modem goes to sleep if there is no traffic over a specific period (5 min) – To awaken, disconnect from fieldbus, then reconnect to fieldbus ▪ Batteries flat (< 10 %), see **BA01202S/04/en** - exchange batteries ▪ Communication stalled: Switch off Field Xpert and disconnect the modem, wait 10 seconds, reconnect the modem, wait 10 seconds, switch on Field Xpert Communication settings incorrect ▪ Check that the FFblue modem has been selected, see **Chapter 3.3** → 17 ▪ Check that the modem has been correctly configured, see **BA01202S/04/en** ▪ Check that the modem has been selected as the default modem, see **Chapter 4.11.7** → 96

Fault	Cause/remedy
Fieldgate FXA520 does not connect	Communication error ▪ Fieldgate FXA520 or Field Xpert WiFi communication not switched on ▪ Communication stalled: Switch off Field Xpert and the FXA520, wait 10 seconds, switch on the FXA520, wait 10 seconds, switch on Field Xpert Field Xpert communication settings incorrect ▪ Check that Fieldgate FXA520 has been selected ▪ Check that Fieldgate FXA520 has been correctly configured, see **BA01202S/04/en** Fieldgate FXA520 communication settings incorrect ▪ Check that the Ethernet network addresses have been correctly set up ▪ More information can be found in the Fieldgate FXA520 operating manual
Gateway SFC162 does not connect	Communication error ▪ Gateway SFC162 or Field Xpert WiFi communication not switched on ▪ Communication stalled: Switch off Field Xpert and the SFC162, wait 10 seconds, switch on the SFC162, wait 10 seconds, switch on Field Xpert Field Xpert communication settings incorrect ▪ Check that gateway SFC162 has been selected ▪ Check that gateway SFC162 has been correctly configured, see **BA01202S/04/en** SFC162 gateway communication settings incorrect ▪ Check that the gateway SFC162 is operating as visitor ▪ Check that the Ethernet network addresses have been correctly set up ▪ More information can be found in the gateway SFC162 operating manual
USB connection of Field Xpert to a PC does not work	Windows Mobile Device Center/ActiveSync connection lost ▪ Disconnect and reconnect USB port ▪ Restart PC WiFi connection operating in parallel ▪ Set up ActiveSync to accept a parallel wireless connection ▪ If necessary consult your IT specialist

5.3 Software problems

Fault	Cause/Remedy
Device Xpert freezes	Software error ▪ No software error - function requires time to complete ▪ Communication stalled: Switch off Field Xpert and the modem/gateway, wait 10 seconds, switch on the modem/gateway, wait 10 seconds, switch on Field Xpert ▪ Device Xpert crash: perform a soft reset, see **BA01202S/04/en** Communication settings incorrect Check that a modem is connected and ready to use, see **BA01202S/04/en**
All values in parameter list go red	Communication interrupted Check that a modem is connected and ready to use, see **BA01202S/04/en**
Changes to FOUNDATION fieldbus parameters cannot be downloaded	Operator error Set the Block Target Mode to OOS and try again, see **Chapter 4.3.6** → 📄 36
Dynamic variables do not update	Normal operation To maintain a low level of communication on the HART protocol, dynamic variables as per the initial setting are not updated. This can be changed manually: – Select **View → Configuration → Options** – Select **Poll All Dynamic Every X Seconds** and enter the desired number of seconds – Select **OK** to confirm your entry and to close the window

5.4 DD updates

If it becomes necessary to synchronize the DD library, e.g. if there are new devices on the market, this be can done by using the DD update service (Software Update Service) with the order number SFX301 provided by the local Endress+Hauser Sales Center. You will be requested to give the Endress+Hauser serial number of the Field Xpert.

The DD Update Service will be enabled for your specific Field Xpert, so that the user can synchronize the library.

Detailed information on the ordering structure is available:
- In the Product Configurator on the web site: www.endress.com → Corporate → Products → System Components and Data Manager → Product Search → Search for Field Xpert SFX100/Field Xpert SFX350/Field Xpert SFX370
- Endress+Hauser Sales Center: www.addresses.endress.com

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W
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Workplace safety 12

www.addresses.endress.com

Endress+Hauser

People for Process Automation