

ABB MEASUREMENT & ANALYTICS | DATA SHEET

# DAT200 – Asset Vision Basic and DTM

## Device Typ Manager



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# Measurement made easy

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## DTM500

Contains ABB device driver (DTM)

- Supports FDT Standard 1.2/1.2.1
- Adheres to the FDT Style Guide
- Graphics-based overview of DTM functions
- Easy Set-up wizard
- Diagnostics in accordance with NAMUR NE107; provide additional maintenance information

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## DTM400

Contains ABB device driver (DTM)

- Supports FDT Standard 1.2
- Diagnostic information

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## DAT200 Asset Vision Basic

FDT frame application for configuration, diagnostics, and maintenance tasks on intelligent devices

- Supports FDT Standard 1.2/1.2.1
- Supports all current fieldbus protocols via communication DTMs
- Point-to-point wizard
- Create a project tree at the touch of a button
- Structured according to user accounts in line with the FDT Style Guide, with optional password protection
- Online help
- Supported by .NET 3.5

## FDT / DTM technology

FDT technology makes an important contribution towards ensuring unrestricted utilization of the fieldbus potential by standardizing the communication interface between the field devices and the systems.

A key feature is its independence from the communications protocol, the software environment for the devices, and the host systems. Using FDT, it is possible for any host to access any device - via any protocol.

The heart of the FDT concept lies in the Device Type Manager (DTM), a component offered by ABB for a multitude of devices. It can be used in any system that supports the FDT interface.

The DTM is the configuration and management component of a field device. It is familiar with all the rules governing devices (plausibility checks), and contains all graphical user dialogs, the device configuration, diagnostics, and maintenance.

DTMs are loaded into the libraries of the automation system or of stand-alone tools, in a similar way to a printer driver in an office environment.

## DTM (Device Type Manager)

### General

'ABB DTM400' and 'ABB DTM500' are designations given to different ABB driver libraries for HART, PROFIBUS, FOUNDATION Fieldbus and Modbus devices.

### Areas of application

- Configuration and parameterization of devices
- Diagnosis of devices, retrieval of status messages
- Online and offline display of device data (measurement data, diagnosis, configuration / parameterization and status information) in multivisual form

### Parameterize

- Graphics-based overview of parameter groups
- Online / offline configuration
- Uploading device data: read parameterization-/ configuration information from the device
- Downloading device data: write saved device data back to the device
- 'Easy Set-up' program wizard for guided, quick parameterization of intelligent devices
- Non-identical device parameters in instance data set and physical device are clearly marked

### Online display of measurement and status data

- Select how measured values are displayed:
  - Numerically
  - As a bar with alarm limits
  - As an analog dial
  - As a trend graph
- All graphical elements feature a scalable time axis
- Status and diagnosis in accordance with NAMUR:
  - Includes notices (DTM500) on "possible cause" and "recommended action"

### Archiving

- Backup and load TAG-related device data
- Print selected device data (DTM500)

... DTM (Device Type Manager)

- Miscellaneous
- Select from two display windows (DTM500):

Main Operation

Display all of the DTM-functions in a single window

Application

Display selected DTM-functions in individual windows.
  - Navigation area with tree structure (DTM500)
  - Comprehensive online help available throughout the DTM

- Note
- Information on
- System requirements (hardware / software),
  - Number and type of DTMs in each of the bundles,
  - Licensing
- is available either in ‘Supplement Info’ under \Documentation on the data storage medium supplied, or in its current version at [www.abb.com/fieldbus](http://www.abb.com/fieldbus).
- On the Internet site, enter the following number in the Search box:
- for the DTM400 device driver ‘3KXD801400R3903’
  - for the DTM500 device driver ‘3KXD801500R3903’

Overview of the drivers and applications

Software	FDT Specification		Windows operating system*		DTM	Graphic	Easy
	1.2	1.2.1	7 (32/64-Bit)	8.1, 10 (32/64-Bit)	Style guide	Summary	
DTM400	•	–	•	–	–	–	–
DTM500	•	•	•	•	•	•	•
DAT200	•	•	•	•	–	–	–

\* For minimum operating system requirements (e. g. Service Pack) see “Requirements in the supplementary information of the software”.

## DAT200 Asset Vision Basic

### General

Asset Vision Basic is an FDT frame application used for configuration, diagnosis and maintenance tasks on intelligent devices.

Asset Vision Basic offers support for devices using all current communication protocols via communication DTMs.

Asset Vision Basic contains a point-to-point wizard that is not only intuitive for users but also enables a device to be parameterized quickly.

Asset Vision Basic conforms to FDT Specification 1.2.1. and supports FDT 1.2; it is, therefore, open for certified DTMs. Asset Vision Basic is supported by .NET 3.5.

### Areas of application

- Provides the FDT frame for DTMs (device DTMs, communication DTMs, remote I/O DTMs, and so on)
- Straightforward tool for quick device parameterization (point-to-point wizard)
- Visual device overview that maps device communication links in systems (project tree)
- Storage / management of device data
- Device measuring point planning and management

### Management

- Management of devices and networks in projects
- Display and management of all installed DTMs (device catalog), incl. a filter function for sorting by:
  - Device type
  - Manufacturer
  - Groups
  - Protocols
- Assignment of measuring point names (TAG names) in the project manager (network)
- Assignment of device / DTM addresses in the project manager (network) via the communication DTMs
- Device recognition via device TAG number or address
- Simultaneous communication (online) with several devices
- Scanning of devices connected via communication DTMs
- Automatic generation of a project tree in the project manager (network) via communication DTMs

### Archiving

- Back up and load project-related data
- Print project-related data

### Point-to-point (Tool Mode) wizard

- The wizard guides you in opening a project for a device.
- The wizard assists you in configuring communication interfaces, finding the device, and selecting the right DTM.

- The wizard offers three modes:

#### Online

Automatic device selection, connection to device, and reading of device data

#### Offline

Manual device selection and display of device instance data

#### File open

Opens a previously saved point-to-point project in offline or online mode

### Miscellaneous

- Password protection available for user accounts with fixed roles
- Language settings
- Configuration of Tool Mode wizard
- Configuration of frame window and shortcuts
- Option of connecting FDT and error monitor
- Adaptable tool bar
- Application view can be switched to a tab or window
- Comprehensive online help available throughout the tool
- For minimum operating system requirements (e. g. Service Pack) see 'Requirements in the supplement information of the software'.

### Note

Information on

- System requirements (hardware / software),
- Registration

is available either in 'Supplement Info' under \Documentation on the data storage medium supplied, or in its current version at [www.abb.com/fieldbus](http://www.abb.com/fieldbus).

On the Internet site, enter the following number in the Search box:

- '3KXD151200R3903'



Connection types

PROFIBUS connection via USB adapter

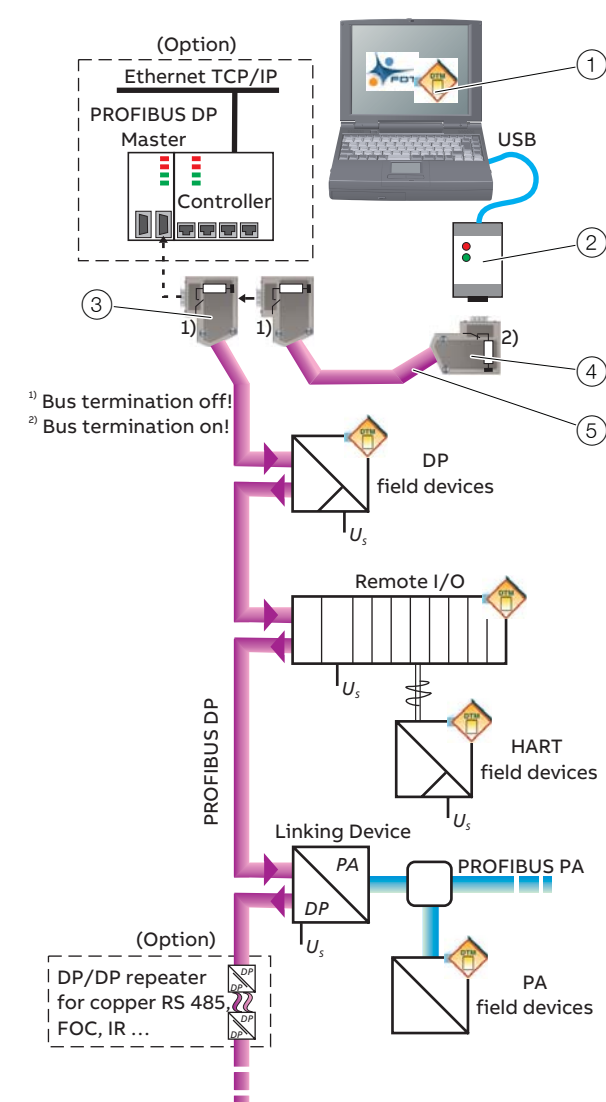


Figure 1: PROFIBUS connection via USB adapter

	Description	Ordering number	Data sheet
①	<b>DTM and DAT200</b> Device DTM and Asset Vision Basic - driver and device management tool for configuration and parameterization of intelligent field devices. Communication DTM: "is Pro adapter V3"*	9820027	DS/DTM/DAT200
②	<b>NDA121-NO</b> USB - PROFIBUS DP / PC adapter	9890002	10/63-6.31
③	<b>NDE230-NO</b> DP cable connector, 9-pin, SUB-D incl. switchable bus termination and SUB-D programming connection, ≤ 12 Mbps, IP 40 <b>Pin assignment</b> IN: 1A = RxD/TxD-N, 1B = RxD/TxD-P OUT: 2A = RxD/TxD-N, 2B = RxD/TxD-P	9890119	10/63-6.40
④	<b>NDE220-NO</b> DP cable connector, 9-pin, SUB-D incl. switchable bus termination, ≤ 12 Mbps, IP 40 <b>Pin assignment:</b> IN: 1A = RxD/TxD-N, 1B = RxD/TxD-P OUT: 2A = RxD/TxD-N, 2B = RxD/TxD-P	9890118	10/63-6.40
⑤	<b>PROFIBUS DP cable, violet</b> NDC110-NO - 2 x 0.32 mm <sup>2</sup> (AWG 22/1), 65 / 330 / 1000 m	989014x	10/63-6.47
<b>ABB field device overview</b>			
	PROFIBUS DP	–	10/63-0.47
	PROFIBUS PA	–	10/63-0.46
<b>Installation suggestions</b>			
	PROFIBUS DP / PA	–	10/63-0.40

\* Recommended adapters / modems

### PROFIBUS connection via Ethernet gateway

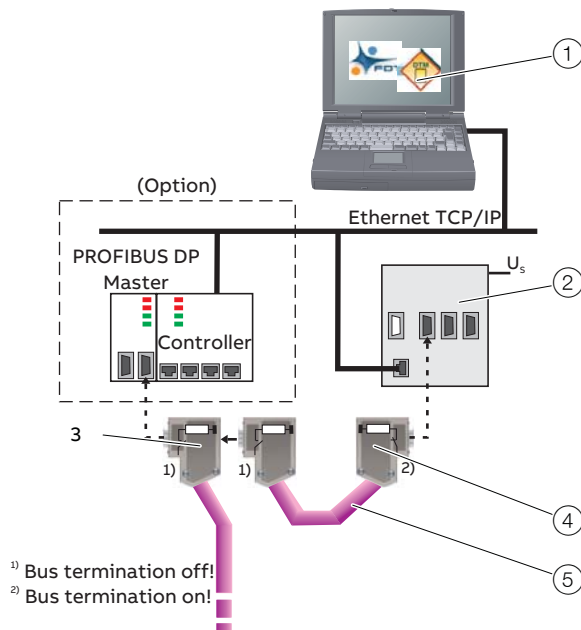


Figure 2: PROFIBUS connection via Ethernet gateway

	Description	Ordering number	Data sheet
①	<b>DTM and DAT200</b> Device DTM and Asset Vision Basic - driver and device management tool for configuration and parameterization of intelligent field devices. Communication DTM: upon request.	9820027	DS/DTM/DAT200
②	<b>Ethernet PROFIBUS DP Gateway</b> On request		
③	<b>NDE230-NO</b> DP cable connector, 9-pin, SUB-D incl. switchable bus termination and SUB-D programming connection, ≤ 12 Mbps, IP 40 <b>Pin assignment</b> IN: 1A = RxD/TxD-N, 1B = RxD/TxD-P OUT: 2A = RxD/TxD-N, 2B = RxD/TxD-P	9890119	10/63-6.40
④	<b>NDE220-NO</b> DP cable connector, 9-pin, SUB-D incl. switchable bus termination, ≤ 12 Mbps, IP 40 <b>Pin assignment:</b> IN: 1A = RxD/TxD-N, 1B = RxD/TxD-P OUT: 2A = RxD/TxD-N, 2B = RxD/TxD-P	9890118	10/63-6.40
⑤	<b>PROFIBUS DP cable, violet</b> NDC110-NO - 2 x 0.32 mm <sup>2</sup> (AWG 22/1), 65 / 330 / 1000 m	989014x	10/63-6.47

### HART connection via FSK / USB modem

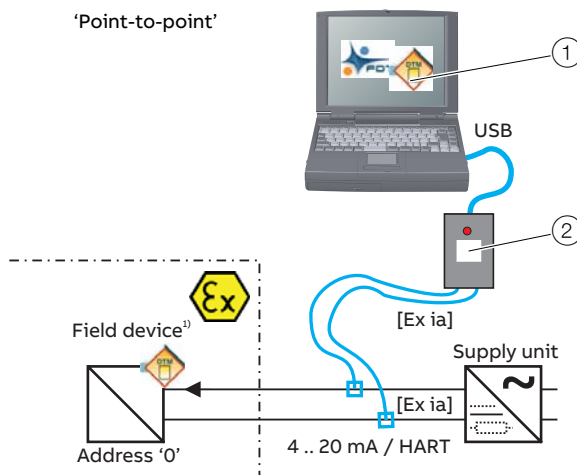


Figure 3: HART connection via FSK / USB modem

	Description	Ordering number	Data sheet
①	<b>DTM and DAT200</b> Device DTM and Asset Vision Basic - driver and device management tool for configuration and parameterization of intelligent field devices. Communication DTM: 'is HRT USB v2'*	9820027	DS/DTM/DAT200
②	<b>NHA121-NX</b> USB - HART FSK / PC modem, electrical isolation, Ex protection type II (2) G [Ex ia] IIC	3KDE636710L0001	10/63-6.71
	<b>NHA121-NO</b> USB - HART FSK / PC modem, electrical isolation, non-Ex applications (alternative, not shown)	3KDE636710L0002	10/63-6.71

\* Any HART devices. Not for TSx02 with "FSK 600 baud"

#### Note

During workshop operation with a power supply unit, a 250 Ω-resistor must be connected in series.

... Connection types

HART Multidrop network via FSK / USB-modem

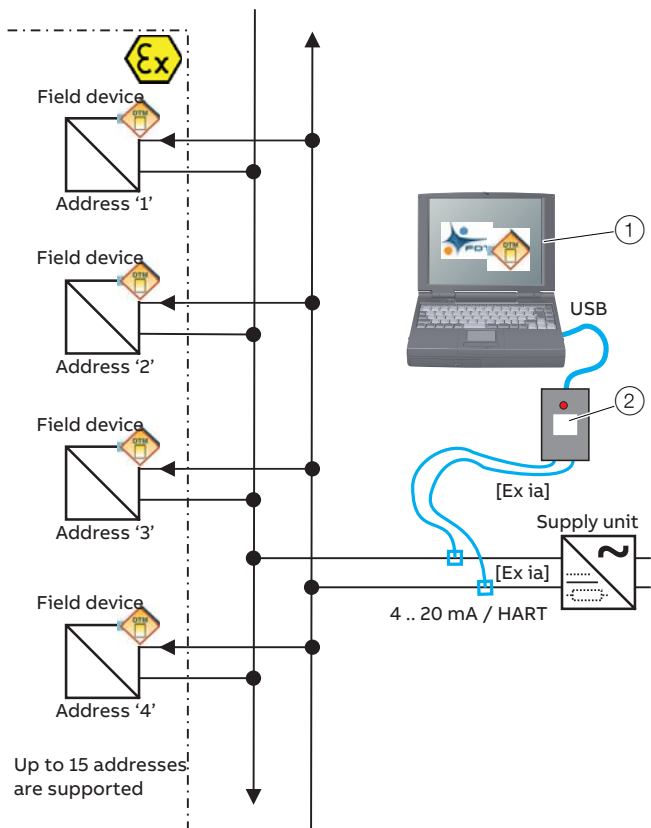


Figure 4: HART Multidrop network via FSK / USB modem

	Description	Ordering number	Data sheet
①	<b>DTM and DAT200</b> Device DTM and Asset Vision Basic - driver and device management tool for configuration and parameterization of intelligent field devices. Communication DTM: 'is HRT USB v2'*	9820027	DS/DTM/DAT200
②	<b>NHA121-NX</b> USB - HART FSK / PC modem, electrical isolation, Ex protection type II (2) G [Ex ia] IIC	3KDE636710L0001	10/63-6.71
	<b>NHA121-NO</b> USB - HART FSK / PC modem, electrical isolation, non-Ex applications (alternative, not shown)	3KDE636710L0002	10/63-6.71

\* HART devices. Not for TSx02 with "FSK 600 baud"

**Note**  
During workshop operation with a power supply unit, a 250 Ω-resistor must be connected in series.



Contrac connection via Contrac cable / USB

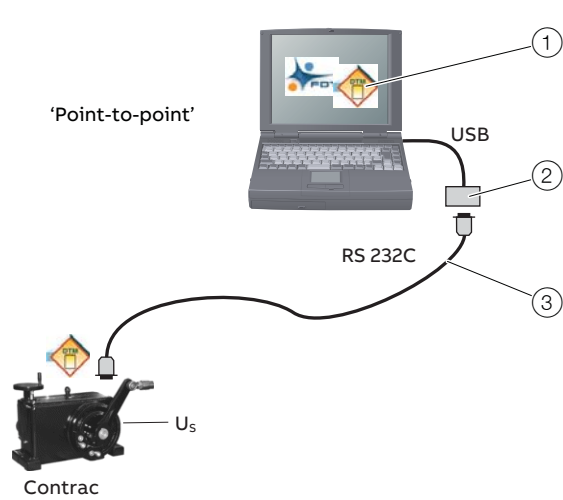


Figure 5: Contrac connection via Contrac cable

	Description	Ordering number	Data sheet
①	<b>DTM and DAT200</b> Device DTM and Asset Vision Basic - driver and device management tool for configuration and parameterization of intelligent field devices. Device DTM: 'Contrac HART' Communication DTM: 'ABB HART Communication Service Port'	9820027	DS/DTM/DAT200
②	<b>USB RS232C Adapter</b> standard	-	-
③	<b>Cable</b> RS 232C - PC connection cable for Contrac (4 to 20 mA, HART, or PROFIBUS DP-V0/V1)	746349	-

FieldKey wireless HART adapter via FSK / USB modem

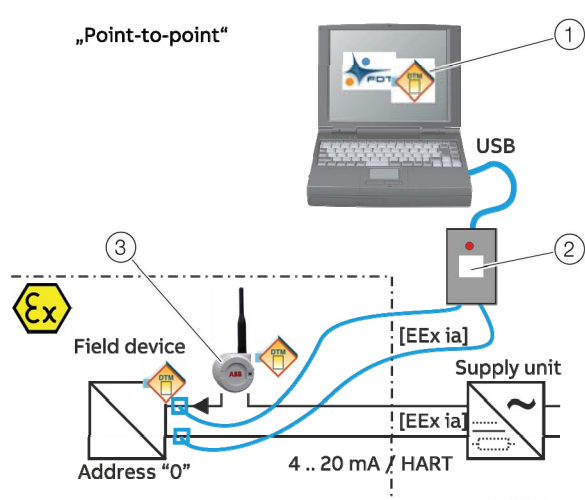


Figure 6: FieldKey WirelessHART adapter via FSK / USB modem

	Description	Ordering number	Data sheet
①	<b>DTM and DAT200</b> Device DTM and Asset Vision Basic - driver and device management tool for configuration and parameterization of intelligent field devices. Communication DTM: 'is HRT USB v2'*	9820027	DS/DTM/DAT200
②	<b>NHA121-NX</b> USB - HART FSK / PC modem, electrical isolation, Ex protection type II (2) G [Ex ia] IIC	3KDE636710L0001	10/63-6.71
	<b>NHA121-NO</b> USB - HART FSK / PC modem, electrical isolation, non-Ex applications (alternative, not shown)	3KDE636710L0002	10/63-6.71
③	<b>NHU200-WL (FieldKey)</b> Wireless upgrade adapter for HART devices, WirelessHART technology		DS/NHU200

\* Recommended adapters / modems

... Connection types

TZIDC HART connection via LCI / USB

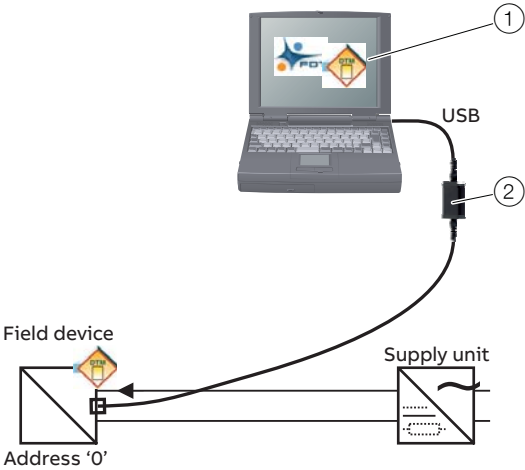


Figure 7: TZIDC HART connection via LCI / USB

	Description	Ordering number	Data sheet
①	<b>DTM and DAT200</b> Device DTM and Asset Vision Basic - driver and device management tool for configuration and parameterization of intelligent field devices. Device DTM: 'ABB Basic HART' Communication DTM: not in ABB scope of delivery Recommendation: CodeWrights HARTCommDTM	9820027	DS/DTM/DAT200
②	<b>LCI adapter with USB</b> Local communication interface (LCI) The LCI adapter with LCI service plug is an interface converter to establish a connection between the connected TZIDC-type digital positioner and a PC / Laptop.	3KXE000128U0100	OI/LCI-ADAPTER/POSITIONER-XA

HART connection via LCI / RS 232 Adapter

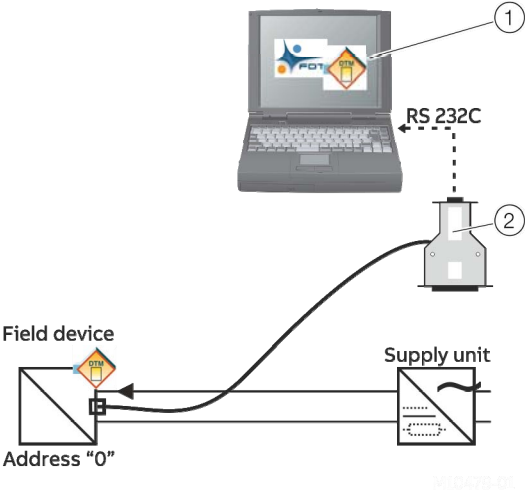


Figure 8: HART connection via LCI / RS 232 Adapter

	Description	Ordering number	Data sheet
①	<b>DTM and DAT200</b> Device DTM and Asset Vision Basic - driver and device management tool for configuration and parameterization of intelligent field devices. Device DTM: "ABB Basic HART" Communication DTM: not in ABB scope of delivery Recommendation: CodeWrights HARTCommDTM	9820027	DS/DTM/DAT200
②	<b>NHA201-NO*</b> RS 232C-HART-LKS / PC adapter with small plug for the positioner, TEU421, TEU471, BCI100	319621	10/63-6.71

\* Not suited for USB

Modbus connection special for 2600T (267xx / 269xx) via USB / RS 485-converter

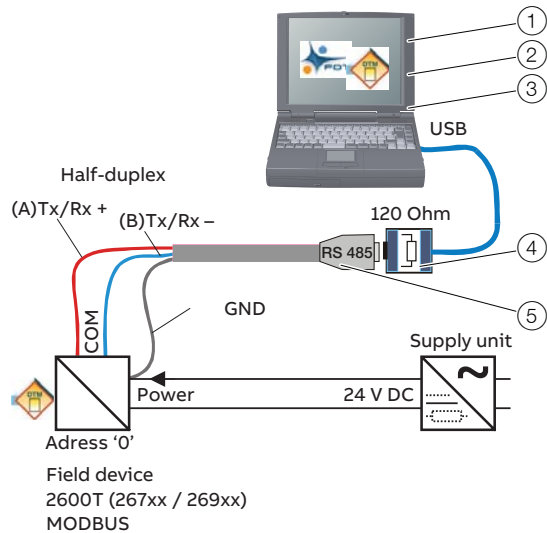


Figure 9: Modbus connection special for 2600T (267xx / 269xx) via USB / RS 485-converter

	Description	Ordering number	Data sheet
①	<b>DTM and DAT200</b>	9820027	DS/DTM/DAT200
	Device DTM and Asset Vision Basic - driver and device management tool for configuration and parameterization of intelligent field devices.		
②	<b>CommDTM</b>	Not in ABB scope of delivery	
	Communication DTM for the USB / RS 485 converter. Recommendation: CodeWrights HARTCommDTM		
③	<b>DTM MV2010TC Modbus</b>	9820027	DS/DTM/DAT200
	Device DTM of 2600T (267xx / 269xx) Modbus		
	<ul style="list-style-type: none"><li>Part of the DTM400 bundle</li><li>Driver for the configuration and parameterization of the field device</li></ul>		
④	<b>USB / RS 485 converter</b>	Not in ABB scope of delivery	
	At the end on the MODBUS interface with 120 Ω-resistance between '(A)Tx/Rx +' / '(B)Tx/Rx -'		
⑤	<b>RS 485 cable</b>	Not in ABB scope of delivery	
	Half-duplex wiring with (A)Tx/Rx +, (B)Tx/Rx - and GND		
	<ul style="list-style-type: none"><li>Connect 'Tx +' und 'Rx +'</li><li>Connect 'TX -' and 'Rx -'</li></ul>		

Before starting configuration via DTM, the transmitter function must be switched from 'Operate' to 'Configuration' mode (using the 3 buttons on the device). After configuration is completed, the transmitter must be switched back to 'Operate'. For detailed information see: '42/15-727 EN' instruction, chapter 2.

## Ordering Information

Description	Ordering number
<b>Device Management Software package (on DVD) incl. DTM and Asset Vision Basic</b>	9820027
<p>The following software packages are in the scope of delivery of the DVD as a single-user license:</p> <ul style="list-style-type: none"> <li>• DTM500 device driver</li> <li>• DTM400 device driver</li> <li>• DAT200 Asset Vision Basic</li> <li>• Universal Basic HART</li> <li>• Communication DTM for HART and PROFIBUS</li> </ul> <p>Extensive documentation, support, notices and installation tools including license for data storage, import / export, printing</p>	
<p>DTM500 device driver:</p> <ul style="list-style-type: none"> <li>• Supports FDT Standard 1.2 / 1.2.1</li> <li>• Windows 7 / 8.1, 10 (32/64-Bit)</li> </ul>	
<p>DTM400 device driver</p> <ul style="list-style-type: none"> <li>• Supports FDT Standard 1.2</li> <li>• Windows 7 (32/64-Bit)</li> </ul>	
<p>DAT200 Asset Vision Basic:</p> <ul style="list-style-type: none"> <li>• ABB Software Tool for configuration, diagnosis and maintenance of intelligent devices</li> <li>• Supports FDT Standard 1.2 / 1.2.1</li> <li>• Windows 7 / 8.1, 10 (32/64-Bit)</li> </ul>	
<p>Currently available driver types and 'supplement info' are available on line at <a href="http://www.abb.com/fieldbus">www.abb.com/fieldbus</a></p> <p>On the ABB website, enter the following numbers in the search box:</p> <ul style="list-style-type: none"> <li>• For DTM500 '3KXD801500R3903'</li> <li>• For DTM400 '3KXD801400R3903'</li> <li>• For DAT200 '3KXD151200R3903'</li> </ul>	
<p>Find out more about 'device management, fieldbus and wireless' on the ABB website <a href="http://www.abb.com/fieldbus">www.abb.com/fieldbus</a></p>	



## Notes



Notes

Sales



Service



Trademarks

HART is a registered trademark of FieldComm Group, Austin, Texas, USA

WirelessHART is a registered trademark of FieldComm Group, Austin, Texas, USA

Windows is a registered trademark of Microsoft Corporation.

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**ABB Limited****Measurement & Analytics**

Howard Road, St. Neots  
Cambridgeshire, PE19 8EU  
UK

Tel: +44 (0) 870 600 6122

Fax: +44 (0)1480 213 339

Mail: [enquiries.mp.uk@gb.abb.com](mailto:enquiries.mp.uk@gb.abb.com)

**ABB Automation Products GmbH****Measurement & Analytics**

Schillerstr. 72  
32425 Minden  
Germany

Tel: +49 571 830-0

Fax: +49 571 830-1806

**ABB Inc.****Measurement & Analytics**

125 E. County Line Road  
Warminster, PA 18974  
USA

Tel: +1 215 674 6000

Fax: +1 215 674 7183

[abb.com/fieldbus](http://abb.com/fieldbus)

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