

Operating Instructions

Fieldgate FXA720

Ethernet/PROFIBUS DP gateway with Web server



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Revision History

Product version	Manual	Changes	Remarks
1.00.xx	BA030S/04/en/02.04	Original manual	
1.01.xx	BA030S/04/en/12.04	Single channel version Getting started revised Update of user interface Addition of limit alarms New security set-up E-mails now possible	Chapter 4 revised accordingly Chapter 5 describes web and pass through set-up Chapter 7.2 Chapter 7.4 Chapter 7.5, Maintenance user added Chapter 7.6
2.00.xx	BA030S/04/en/07.07	Product	Java Applets no longer supported Revision of Web server pages
		Editorial	Removal of Java Applets TOF-Tool/Commuwin II replaced by Fieldgate

Software Compatibility

Product version	DTM (PROFIdtmDPV1)	PROFIBUS Driver	PROFIBUS DP OPC Server
	Supplied on Fieldgate FXA720 CD-ROM		Purchased Separately
1.00.xx	Version 1.00 (74)*	Version 26.00.00	Version 1.15
1.01.xx	Version 1.00 (74)*	Version 27.00.00	Version 2.00
2.00.xx	Version 1.00 (74)*	Version 27.00.00	Version 2.00

* Also supplied with FieldCare, backwards compatible.

Registered Trademarks

PROFIBUS®

Registered trademark of the PROFIBUS User Organisation, Karlsruhe Germany.

Microsoft®, Windows®, Windows 2000®, Windows XP® and the Microsoft logo are registered trademarks of the Microsoft Corporation.

All other brand and product names are trademarks or registered trademarks of the companies and organisations in question

1 Safety

1.1 Designated use

Fieldgate FXA720 is a PROFIBUS/Ethernet Gateway with integrated web server that can be used:

- as a PROFIBUS DP/Ethernet gateway within a PROFIBUS monitoring and control system
- as a remote data acquisition module for PROFIBUS devices connected to its PROFIBUS DP channels.

More information on these applications is to be found in the manual, or visit the Fieldgate web page at www.products.endress.com/fieldgate.

1.2 Installation, commissioning and operation

Fieldgate FXA720 must be installed, connected, operated and maintained according to the instructions in this manual: personnel must be authorised and suitably qualified.



Warning

- You require a unique IP address to set up Fieldgate. The use of IP addresses is strictly controlled. Usually your system administrator will be authorised to allocate unique addresses for your Fieldgates. Assigning an unauthorised address to a Fieldgate may result in conflicts within your system and the failure of the associated devices!

1.3 Operational safety

The unit must not be used in explosion hazardous areas. The permissible ambient conditions given in the technical data must be complied with.

Repair

Do not open the housing of the Fieldgate FXA720. It does not contain any parts that need to be maintained or repaired by the user. In the event of a fault or defect, return the unit to the vendor. Opening the unit will void the warranty!

1.4 Technical improvement

Endress+Hauser reserves the right to make technical improvements to its hardware and software at any time and without prior notification. Where such improvements have no effect on the operation of the equipment, they are not documented. If the improvements effect operation, a new version of the operating instructions is normally issued, see Revision History.

1.5 Declaration of conformity

CE Notice

Fieldgate FXA720 complies with the requirements of the EC Directives 89/336/EEC "Electromagnetic Compatibility" (EMC directive).

- Emission: EN 50022:1998 Class A (ITE Product Standard)
EN 50011:1998 Group 1 Class A (ISM Product Standard)
- Immunity: EN 61000-4-5:1999 Generic Immunity Standard
EN 61000-4-3: 1996 RF Electromagnetic Fields

A Declaration of Conformity in compliance with the above standards has been made and can be inspected at Endress+Hauser Process Solutions AG on request.

North America

Fieldgate FXA720 conforms with the following North American Electromagnetic Compatibility standards:

- UL 508: Industrial Control Equipment
- CSA C22.2 # 14.795: Industrial Control Equipment

Note!



- For compliance with the legal EMC requirements, the other components (AC adapter, PROFIBUS stations, etc.) must also meet these requirements.
- To meet the EMC conditions, the device must be installed and connected in accordance with the Installation Instructions.

Warning!



- This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

FCC

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

1.6 Writing conventions

The following writing conventions and symbols have been used to provide the user with a better overview of the contents of this manual and to highlight important information:

Text emphasis

The following table provides you with a brief overview of the methods used to emphasise text in this manual.

Text emphasis	Function	Example
"Bold in inverted commas"	Keys, buttons, program icons, tabs, menus, commands	"Start =>Programs =>Endress+Hauser" or "Enter"
		Select "Print" in the "File" menu.
	With the CTRL key (CONTROL key) held down, press the SHIFT key.	Keep the "CTRL key" pressed and press the "SHIFT key".
	With the CTRL key (CONTROL key) held down, click the left mouse button.	Keep the "CTRL key" pressed and left-click the mouse.
CAPS	Details on paths and file names in the text	DOKUFMR2XX.PDF or WIN.HLP
Angle brackets	Variables	<CD-ROM drive>

Safety conventions

Safety relevant information is highlighted by an icon in the margin plus the note, caution or warning text.

Icon	Meaning
	Note! A note highlights actions or procedures which, if not performed correctly, may indirectly affect operation or may lead to an instrument response which is not planned
	Caution! Caution highlights actions or procedures which, if not performed correctly, may lead to personal injury or incorrect functioning of the instrument
	Warning! A warning highlights actions or procedures which, if not performed correctly, will lead to personal injury, a safety hazard or destruction of the instrument

1.7 Drawing conventions

The following symbols may be found within technical drawings.

Explosion protection

Icon	Meaning
	Device certified for use in explosion hazardous area If the device has this symbol embossed on its name plate it can be installed in an explosion hazardous area in accordance with the specifications in the certificate or in a safe area
	Explosion hazardous area Symbol used in drawings to indicate explosion hazardous areas. Devices located in and wiring entering areas with the designation “explosion hazardous areas” must conform with the stated type of protection
	Safe area (non-explosion hazardous area) Symbol used in drawings to indicate, if necessary, non-explosion hazardous areas. Devices located in safe areas still require a certificate if their outputs run into explosion hazardous areas.

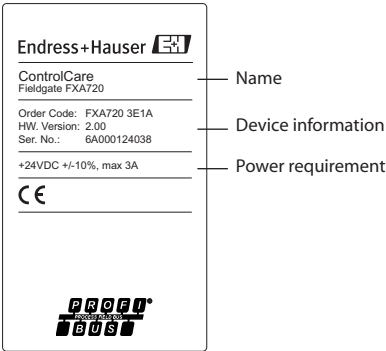
Electrical symbols

Icon	Meaning
	Direct voltage A terminal to which or from which a direct current or voltage may be applied or supplied
	Alternating voltage A terminal to which or from which an alternating (sine-wave) current or voltage may be applied or supplied
	Grounded terminal A grounded terminal, which as far as the operator is concerned, is already grounded by means of an earth grounding system
	Protective grounding (earth) terminal A terminal which must be connected to earth ground prior to making any other connection to the equipment
	Equipotential connection (earth bonding) A connection made to the plant grounding system which may be of type e.g. neutral star or equipotential line according to national or company practice

2 Identification

2.1 Device designation

The device designation is to be found on the nameplate affixed to the righthand side of the module .



The device type can be derived from the product code as follows:

Root				Description
FXA720-	1 2 3 4 9			No. of Channels 1x PROFIBUS port 2x PROFIBUS ports 3x PROFIBUS ports 1x PROFIBUS port, small housing Special version
		E Y		Power Supply 24 VDC (+/- 20%) Special version
			1 9	Modem Interface Ethernet 100Base-Tx/ 10Base-T Special version
			A Y	DAT Module Without DAT module Special version

2.2 Scope of delivery

Please check that the delivery is complete and free of defects before starting installation. The scope of delivery comprises the following parts:

- Fieldgate FXA720 gateway
- 24V female plug connector
- Profibus drivers and installation manual (on CD-ROM)
- "Getting Started" manual (printed document)
- If appropriate, additional software licences including documentation

2.3 Licensing agreement

The PROFIBUS driver supplied with the Setup CD can be used on any computer that is to be used with Fieldgate FXA720. The license agreement is on the Setup CD.

The software required for start-up and commissioning is freely available or is subject to the licensing conditions of its manufacturer. Installation of the software on your computer implies that you accept the terms of the corresponding licensing agreement.

3 Function and System Design

3.1 Function

Fieldgate FXA720 connects host systems to PROFIBUS DP networks via Ethernet. It can be equipped with up to three RS-485 ports, each giving access to up to 125 PROFIBUS DP devices.

Fieldgate is designed for Windows and web-based applications such as configuration, monitoring, and visualisation. Process data can be monitored with the integrated Web server.

Fieldgate can also be integrated into system applications via OPC, DTM or XML, eg.:

- OPC for exchanging data with applications such as SCADA/HMI OPC clients, e.g. P View SPV200
- DTM for exchanging data with FDT frame applications, e.g. FieldCare
- XML for exchanging data with Microsoft Office applications or simple visualisation applications such as Field Viewer SPV10

3.2 Design

A schematic of the front panel of the Fieldgate FXA720 is shown in Fig. 3.1 below.

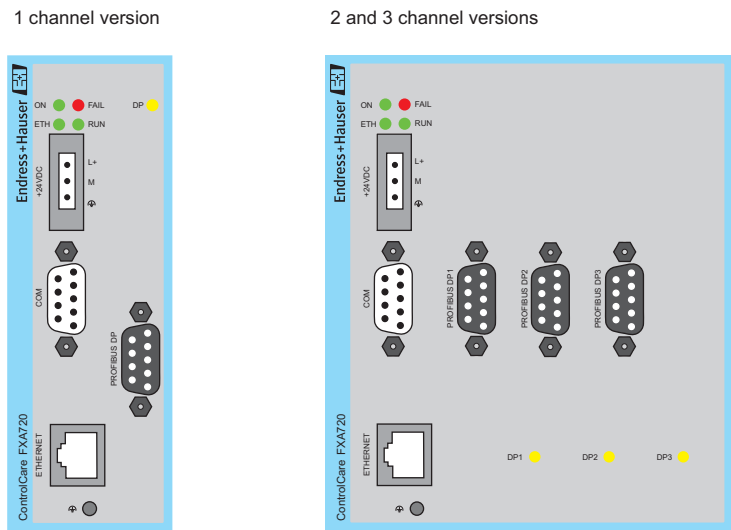


Fig. 3-1: Front panel of the Fieldgate FXA720

3.2.1 Connectors

Power supply	24 VDC: a female plug connector is supplied with the device.
Communication ports	- Ethernet 10Base-T/100Base-TX connection - Depending on type, up to three RS-485 ports for PROFIBUS DP - COM service port (not relevant to normal operation)

3.2.2 Display elements (LEDs)

ON	Green LED indicating the power supply status: - On: internal power supply is ensured. - Off: the supply voltage (24 V) is missing or the internal voltage generation is defective. In this case, the unit needs to be returned to the manufacturer for repair..
ETH	Green Ethernet LED: On: proper communication (link connection to a hub/switch/NIC) via Ethernet is possible. It goes out temporarily during transmission and blinks when Browser clients are connected to the Fieldgate
RUN	Available for application-specific purposes and is off by default.
FAIL	Available for application-specific purposes and is off by default.
DP1, DP2, DP3	Green LEDs that are the token LEDs of the PROFIBUS Master. The corresponding LED lights as soon as the master has received the token (communication authorization). - DPx LEDs will normally not light when the device is used as a pass-through gateway and the scan service for the corresponding channel is set to off. - DPx LEDs will normally light when a channel has been scanned by the web-server within the Fieldgate such as in remote monitoring applications via web. - DPx LEDs may also light up if the bus has not been connected or is defective.

3.3 System architecture

Web-based applications

Fig. 3.2 shows the generic architecture for web-based applications. The devices to be monitored or configured are connected to the Fieldgate FXA720 via max. 3 PROFIBUS DP channels (RS-485 ports), to which PROFIBUS DP devices can be connected directly. PROFIBUS PA devices are connected to the DP segment via a segment coupler or link.

The remote connection is made via Ethernet TCP/IP:

- Ethernet port/Internet
- Ethernet port/Remote wireless LAN access points
- Ethernet port/modem
- Ethernet port/LAN with firewall

The following applications may be running on the monitoring station:

- Via XML: Microsoft Office applications (on-line/off-line data acquisition and display)
- Via XML: Fieldgate Viewer SPV10 (data acquisition and visualisation)
- Via OPC: SCADA/HMI OPC clients, e.g. P View (data acquisition and visualisation with trends and historian)
- Via DTMs: FDT frame applications such as FieldCare (asset management, Information & Configuration) or other Information & Configuration tool
- Any other OPC client, FDT-based or XML/HTML application.

Note!



- Depending upon application or architecture requirements, each channel can be connected to an independent PROFIBUS DP network or used to access the same network. The latter requires the use of field devices with more than one Service Access Point

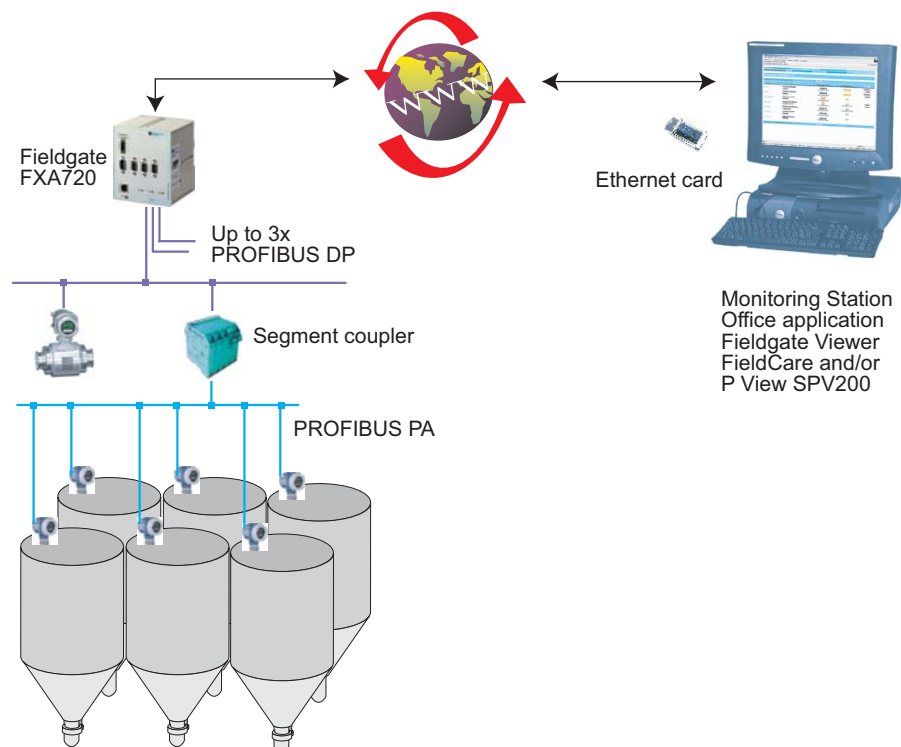


Fig. 3-2: Generic system architecture for web-based visualisation applications

Network applications

When used as a Ethernet/PROFIBUS gateway, Fieldgate FXA720 will normally provide the connection between host applications running on Ethernet and PROFIBUS devices connected to a PROFIBUS DP or PROFIBUS PA network. Fig. 3.3 shows a typical example.

Examples of applications running on Ethernet are:

- Via OPC: SCADA/HMI OPC clients, e.g. P View
- Via DTM: Asset management tools based on FDT frames, e.g. FieldCare
- Via XML: Microsoft Office and e-Commerce applications
- Any other OPC client, FDT-based or XML/HTML application.

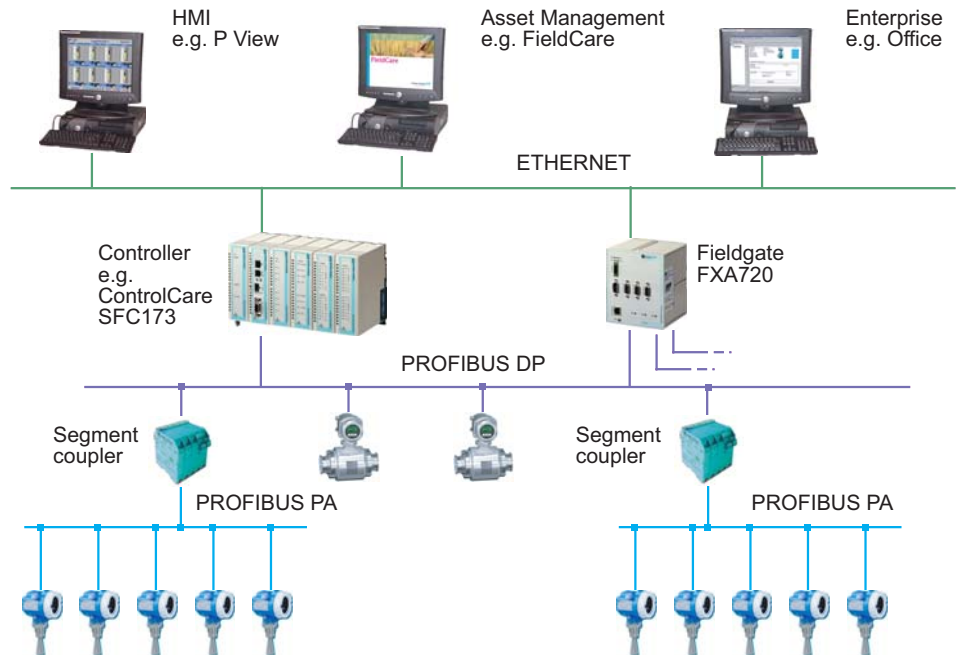


Fig. 3-3: Typical example of a PROFIBUS DP control network with Fieldgate used in pass-through mode

3.4 System requirements

Operating System

Operating system	Service Pack / extensions
Windows 2000	SP 1 or higher
Windows XP	Home/Professional SP2 or higher

Remote monitoring via web browser

Web browser	Service Pack / extensions
MS Internet Explorer	> 5.0 with current security updates
Netscape Navigator	> 4.7 with current security updates
Opera	> 6.0 with current security updates
Mozilla Firefox	≥ 1.0 with current security updates

Remote Information & Configuration with PROFIBUS Client

Add-on	Version	Function
FieldCare	≥ 1.0	FieldCare is Endress+Hauser's FDT-based Plant Asset Management tool which can be used to configure all devices

SCADA and visualisation

Add-on	Version	Function
P View	≥ 1.0	P View is Endress+Hauser's SCADA tool
Fieldgate Viewer SPV10	≥ 1.0	Web server for data acquisition and visualization of measured values

4 Hardware Installation

4.1 Mounting

Fieldgate is intended for mounting on TS35 DIN carrier rails (EN 50022) installed in a control cabinet.

- The device is convection-cooled. It must be installed in such a way that the ventilating ducts are at the top and bottom of the unit.
- Ensure that there is a ventilation space of at least 30 mm above and below the device.
- There is no need for a lateral clearance.

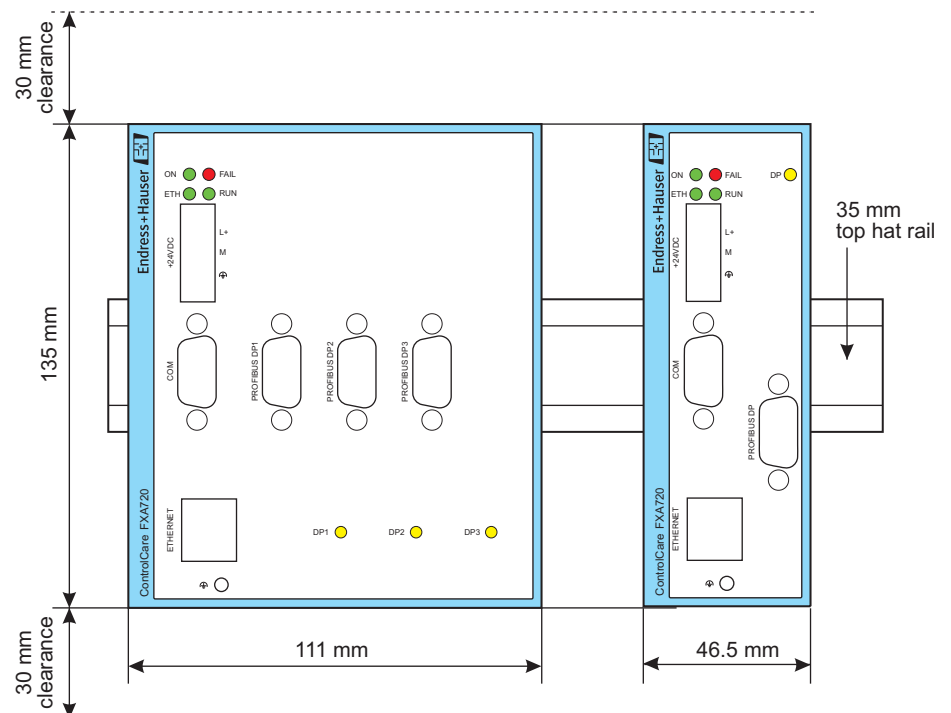


Fig. 4-1: Dimensions and clearances for Fieldgate mounting

4.2 Wiring

4.2.1 Power supply

Fieldgate FXA720 is powered by 24 V DC. The power supply female plug connector is included in the delivery. The power supply male socket connector on the front panel is labeled 24VDC (see Fig. 4.1).

The two power supply terminals are labeled L+ and L–.

- Connect L+ to +24 VDC and connect L– to 0 VDC.

The two terminals are provided with an internal reverse-polarity protection.

Grounding

Proper grounding is prerequisite for compliance with the EMC directives and for ensuring a proper operation.

- The functional ground terminal is labeled $\oplus$ and must be connected to the protective ground.
- For use in an environment that is highly subject to electromagnetic interference, an additional ground connection can be provided at the grounding screw below the "ETH" connector.

The power supply is connected to the plug connector via flexible wires with a cross-section of 0.75 to 1.5 mm². The ground connection wire must have a cross-section of 1.5 mm².

Fuse

The Fieldgate FXA720 has an internal safety fuse which blows if an overvoltage occurs in the power supply (of approx. 30V or higher) or if a fault occurs in the device. The safety fuse can be replaced by the device manufacturer only.

Note!



- The start-up current of the Fieldgate FXA720 may be up to 3A. The power supply must provide this starting current in compliance with the voltage range to ensure a safe startup.

4.2.2 Communication ports

Ethernet

The Ethernet port is labeled "ETH" and has been implemented as a 10Mbit/s or 100 Mbit/s (10Base-T/100Base-TX) connection with automatic baudrate recognition. The connection is made using a RJ45 connector and a twisted pair category 5 cable.

- Use a crossover cable if Fieldgate is to be connected directly to a Ethernet NIC card in the personal computer
- Use a straight through cable if the connection is to be made via a hub or switch

COM

The COM port is a RS-232C serial interface and for Service use only. The connection is made using a 9-pin male D-sub connector with the following pin assignment:

Pin #	Signal	Description	Pin #	Signal	Description
1	Reserved	Do not connect	6	Reserved	Do not connect
2	RXD	Receive Data	7	Reserved	Do not connect
3	TXD	Transmit Data	8	Reserved	Do not connect
4	Reserved	Do not connect	9	Reserved	Do not connect
5	GND	Signal Ground			

Table 4-1: Pin assignment COM RS-232 port

PROFIBUS

Fieldgate FXA720 may be equipped with up to three PROFIBUS DP channels (RS-485) labeled "DP1", "DP2" and "DP3". Each channel is electrically isolated up to a voltage of 500V DC. The connecting element is a 9-pin female D-sub connector with the following pin assignment:

Pin #	Signal	Description
1	SHIELD	Housing
2	NC	Not assigned
3	RxD/TxD-P	PROFIBUS signal B/B'
4	/RTS	RTS
5	GND	Ground
6	VCC	Bus-termination power supply (load 10mA max.)
7	NC	Not assigned
8	RxD/TxD-N	PROFIBUS signal A/A'
9	NC	Not assigned

Table 4-2: Pin assignment of RS-485 PROFIBUS DP ports

Note!



- Please observe the installation guidelines for PROFIBUS devices, which are available from the PROFIBUS Trade Organization, at www.profibus.com or in Endress+Hauser Operating Instructions BA034S/04/en.

5 Getting Started

Before you start the installation:

- Check that you have administrator rights for your computer.
- Check that you have a unique IP address for each Fieldgate to be installed together with subnet, gateway (LAN/router/firewall) and, if appropriate, broadcast IP addresses.

If a previous version is installed on your computer, we recommend that you deinstall it before installing the new version.



Warning!

- The use of IP addresses is strictly controlled. Usually your system administrator will be authorised to allocate unique addresses for your Fieldgates. Assigning an unauthorised address to a Fieldgate may result in conflicts within your system and the failure of the associated devices!

5.1 Preparing for installation

5.1.1 Checking the system requirements

Procedure

1. Place the Fieldgate CD-ROM in your CD-ROM drive, the Setup menu appears.
2. First check that your computer fulfils the minimum requirements as described below, see also Section 3.4.



3. Now carefully read the "**Release Notes**" before starting the installation - a double-click opens them up.



5.1.2 Installing the documentation

Procedure

1. Now install the documentation: Click on the "**Component Installation**" option:



2. Click on "**Install Documentation**" to install the FieldCare FXA720 manual:



3. The installation wizard appears: Proceed with the installation by clicking the "**Next**" button.
4. To open, select "**Start => Programs => Endress+Hauser => Fieldgate => FXA720 => English => Manuals**" and select the document you require.

5.1.3 Adobe Acrobat Reader

You require Adobe Acrobat Reader to read the PDF file. The current Reader version is supplied on the CD-ROM.

1. To install, select the "**Component Installation**" option. Then, double-click on "**Adobe Acrobat Reader**".
2. The installation wizard appears: Proceed with the installation by clicking the "**Next**" button.

5.2 Establishing communication

5.2.1 Making initial contact

Note!



- To make initial contact with the Fieldgate FXA720, the IP address of your computer must be temporarily changed to the same domain as the Fieldgate default address (192.168.253.1). If you are unsure of how to do this, consult your system administrator.
- The following procedure applies to internet connection via Windows XP. The procedures for Windows 2000 is described in Chapter 11.

Before starting, the Fieldgate FXA720 must either:

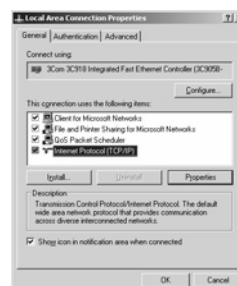
- be installed in the network connected to a switch/hub with a straight cable or
- be connected directly to the computer with a cross-link cable.

Procedure

1. Right-click "**Start => Settings => Control Panel => Network Connections**".



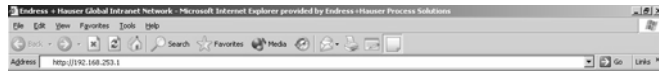
2. Right-click "**Local Area Connection => Properties**"
Using the left mouse button, double-click "**Internet Protocol (TCP/IP)**" or click once, then click "**Properties**".



3. Now you can enter/change the values and click "**OK**" to confirm.
 - Enter e.g. **192.168.253.2** (in this example, an address 192.168.253.2 – 254 is valid)
 - Enter a subnet mask, e.g. **255.255.255.0**



4. Start the web browser, e.g. Internet Explorer.
Now enter the default address of the Fieldgate "**192.168.253.1**" in the address field of your browser and press the "**Enter**" key of your computer.



5. The browser makes connection with the Fieldgate, a User **Login** window appears.
– Enter the password: "**superb**"

 A screenshot of the "FXA720 Login" web interface. At the top, there's a header with "Endress+Hauser" and some navigation links. Below that, the title "FXA720 Login" is displayed. There are two input fields: "User" containing the text "EXEC" and "Password" which is masked with asterisks. A "Login" button is positioned below the password field.

- Press "**Login**" to display the entry page of the Fieldgate.
– If no connection can be made, consult Chapter 12.3.
6. After the password has been entered, the Fieldgate Web Server opens (you will not necessarily see devices at this point):

 A screenshot of the "FXA720 Overview" web interface. The page has a header with "Endress+Hauser" and navigation links like "Refresh", "Overview of Selected Devices", "Switch to Specialist Mode", and "Information & Configuration". Below the header, there's a section titled "FXA720 Overview" with a "Channel 1" tab. A table displays data for "56 PIC100 CERABAR S" devices. The table has columns for "Point Name", "Description", "Current Value", "Limit", and "Range". Two rows are visible: "FB0011_b_input_analog" with a pressure of 0.978458 bar and "TB0011_b_pressure" with a primary value of 0.978458. The page footer shows the date "19.06.2007 09:42:37 (UTC+0)" and "Top of page".

Point Name	Description	Current Value	Limit	Range
FB0011_b_input_analog	Pressure 100	0.978458 bar 19.06.2007 09:10:15	19.06.2007 09:42:37	Min: 0.9 bar Max: 1.0 bar
TB0011_b_pressure	Primary Value	0.978458 19.06.2007 09:10:15	19.06.2007 09:42:37	Min: Max:

5.2.2 Changing the Fieldgate address

Procedure

1. Press **"Switch to Specialist Mode"**
 - Enter the user name **"admin"** and password **"super"**
 - Press **"Login"**

2. The live list is displayed (you may not necessarily see devices at this stage)
 - All active addresses on the bus are displayed
 - Masters are normally listed with N.A. entries

FXA720			Live List					
Channel 1								
Show in Overview	Address / Device Tag	Device Type	Status	Manufacturer	Serial #	SW Rev. #	HW Rev. #	PA Profile
☐	3.N.A.	N.A	On	N.A	N.A	N.A	N.A	N.A
☒	56 (PC100)	CERABAR S	On	Endress+Hauser	6K30118	2.0	1.0	0300

3. Now press **"Information & Configuration"** followed by **"Network Setup"**
 - In the **Ethernet** screen enter the **IP address** given to you by the system administrator, in this example 192.168.253.50:
 - Enter the **Subnet mask**, in this example 255.255.255.0
 - If appropriate, enter a **Gateway** address (router/firewall connecting LAN to WAN/WWW)

- Press **"Send"** to download the parameters to the Fieldgate.
4. Contact with the Fieldgate may break down at this stage.
In all cases, close the browser.
 5. Reset the IP address in your computer back to the original value, see Section 5.2.1.
 6. You can now make contact with Fieldgate FXA720 through the network browser by entering the new address.
 7. Now set up the Fieldgate web server as described in Chapter 6.

5.3 Installing FXA720 PROFIBUS Driver

The FXA720 PROFIBUS Driver must be installed only if Fieldgate FXA720 is to be used in pass-through mode to allow a host application, e.g. P View, to access a PROFIBUS DP network.



Warning!

- Do not install this driver if a Fieldgate PROFIBUS driver has already been installed with the Host application, e.g. in connection with FieldCare. Overwriting the original will cause the application to malfunction. You will be warned during installation, if a driver already exists.

5.3.1 Installing the driver

Procedure

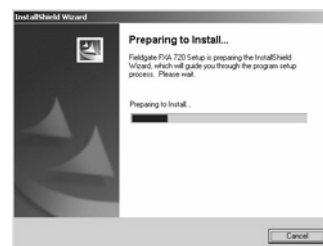
- Place the Fieldgate CD-ROM in your CD-ROM drive, the Setup menu appears.
- Click on **"Component Installation"** to start the software installation process.



- Click on **"FXA720 PROFIBUS Driver"** to install the Fieldgate tool.



- The Setup program immediately starts the installation process.



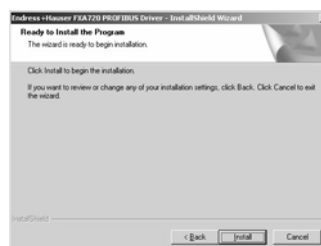
5. Read the license agreement and check "**I accept ...**" then press "**Next**".
 - "**Print**" causes the license to be printed out
 - "**Cancel**" breaks off the installation procedure



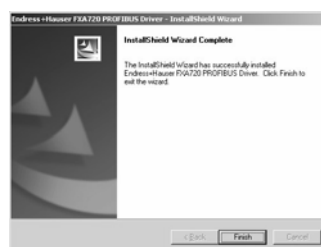
6. Now enter your customer information
Press "**Next**" to proceed.



7. Press "**Install**" to start the installation.



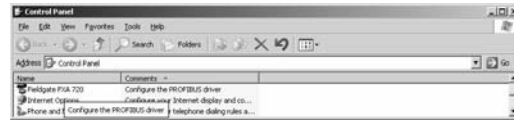
8. Press "**Finish**" to close the wizard.



5.3.2 Configuring the driver

Procedure

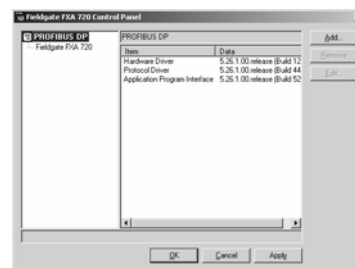
1. Open the Control Panel via **START => Settings => Control Panel**.
Double-click on the "**Fieldgate FXA720**" icon to open the driver.



Note!

If you are using Fieldgate FXA720 with FieldCare, the select the "**PROFIGate**" driver

2. Select the **PROFIBUS DP** line, to display the general release information



3. Now select the "**Fieldgate FXA720**" line and press "**Add**".



4. A symbolic node name for each PROFIBUS DP channel (Default value: "Node 0") can now be entered. Click "**Next**" to proceed with the configuration.



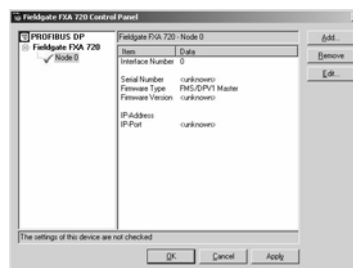
5. Enter the current **Fieldgate IP** address and select the **Bus connector** (the channel to be used with the node specified in Step 4).



6. Click "**Finish**" to accept the default timeout settings and end the configuration.
Caution: Timeout settings should be changed by PROFIBUS specialists only



7. If the Fieldgate is found in the network and is working properly, then the Node line will be marked with a green check mark. In addition, Fieldgate information is displayed.
 - The node configuration can be modified from this screen by clicking the "**Edit**" button. To save the configuration please click "**Apply**".



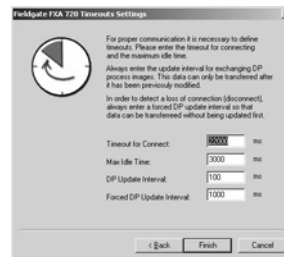
8. For single channel Fieldgates, press "**OK**" to store the configuration and close the configuration window, otherwise continue with Step 9.

For two and three channel versions

9. Now configure the other channels of your Fieldgate by pressing the **"Add"** button.
 - Follow the sequence from Step 3 to Step 5 inclusive.
 - Enter the same IP address: Fieldgate requires only one IP address for operation.
 - Select **"Bus 2"** or **"Bus 3"** as appropriate.



10. Click **"Finish"** to accept the default timeout settings and end the configuration.
Caution: Timeout settings should be changed by PROFIBUS specialists only



11. On completion, the new node will be added to the network tree:
 - Press **"Apply"** to store the configuration



Note: the screenshot shows the two channel version.

12. When all channels have been configured, press **"OK"** to store the configuration and close the configuration window.

5.3.3 Setting PROFIBUS DP bus parameters in FieldCare

Note!

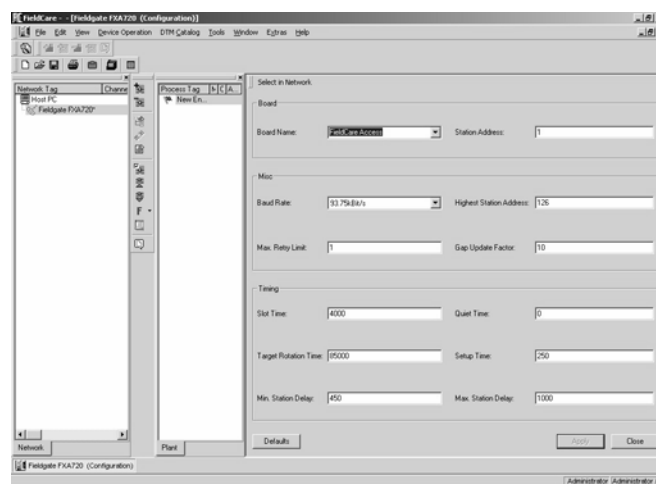


- FieldCare uses the PROFIGate driver for Fieldgate FXA720. This should be configured before the PROFIBUS DP parameters are set (The procedure is identical to that in Section 5.3.2)

When Fieldgate FXA720 is used together with FieldCare, the PROFIBUS DP baudrate is set in the Fieldgate FXA720 CommDTM (PROFIdtmDPV1).

Procedure

- Create your project as described in the extended Getting Started manual supplied on the FieldCare CD-ROM.
- Add the Communication device PROFIdtmDPV1 - this is the Fieldgate FXA720 CommDTM. Right-click on the node (in our example it has been re-named Fieldgate FXA720) and select "**Configuration**". The CommDTM for Fieldgate FXA720 appears



- The board names are automatically taken from the node names set in the **PROFIGate** driver.
 - Select the node you want to use
 - Enter a station address
 - Set the bus parameters for communication on the PROFIBUS DP network
 - Press "**Apply**" to confirm the changes
 - Repeat the procedure for any other nodes where FieldCare is to have access
 - Press "**Close**" return to the main program.

5.3.4 Setting PROFIBUS DP bus parameters in P View

Note!

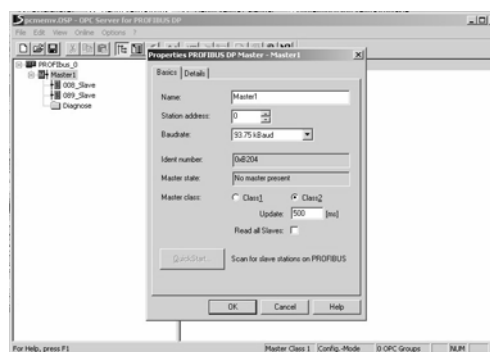


- If you are using P View and FieldCare together, the PROFIGate driver should be used for the Fieldgate, see Section 5.3.2.

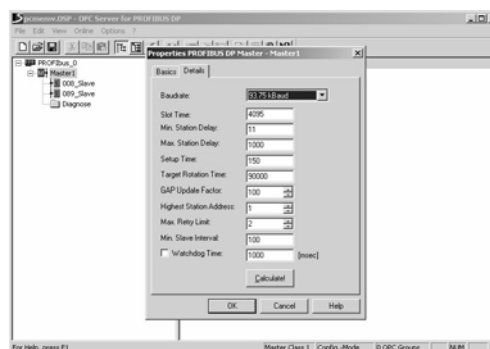
When Fieldgate FXA720 is used together with ControlCare P View, the PROFIBUS DP baudrate is set in the PROFIBUS OPC server.

Procedure

1. Start the OPC server from the Control Panel and set it up as described in the P View manual. Click on the Fieldgate node (Master) to open the configuration window.
2. In the **"Basic"** folder, set
 - Station name
 - Station address
 - Baudrate
 - Master Class 2
 - If necessary check "Read All Slaves" and press "Quickstart" to scan the bus



3. In the **"Details"** folder, set
 - Bus parameters



4. Press "OK" to store the parameters.

5.4 Modifying, repairing or removing the application

5.4.1 Fieldgate FXA720 PROFIBUS Driver

If you have already installed the Fieldgate application, you can modify, repair or remove it by starting the Fieldgate Maintenance program.

Procedure

1. Start the Fieldgate FXA720 Maintenance program by clicking on **"Start => Settings => Control Panel => Add or Remove Programs => Fieldgate FXA720"**
2. To install or remove individual components to remove select **"Modify"** then **"Next"**.
 - Now select or deselect **"PROFIBUS Driver"** and press **"Next"** to proceed.
 - Press **"Finish"** to complete the installation.



3. To repeat the installation procedure and install the Fieldgate application again, select **"Repair"**.
 - Now select the components you desire and press **"Next"** to install.
 - Press **"Finish"** to complete the installation.
4. To remove the Fieldgate application entirely, select **"Remove"**.
 - Press **"OK"** to confirm

5.4.2 Fieldgate FXA720 documentation

If you have already installed the Fieldgate application, you can modify, repair or remove it by starting the Fieldgate Maintenance program.

Procedure

1. Start the Fieldgate FXA720 Maintenance program by clicking on **"Start => Settings => Control Panel => Add or Remove Programs => Fieldgate FXA720"**
2. To install or remove individual components to remove select **"Modify"** then **"Next"**.
 - Now select or deselect **"Manuals"** and press **"Next"** to proceed.
 - Press **"Finish"** to complete the installation.

6 Configuring the Web Server

Note!



- For security reasons, Fieldgate will automatically logout of the Specialist mode if it registers no activity in the User Interface for a period of two minutes.
- You cannot change device parameters with the Fieldgate Web Server. This requires the help of a configuration tool, e.g. FieldCare, that uses Fieldgate as a pass-through interface

6.1 Logging on

Once the IP address has been entered in your web browser and the connection made, you are prompted to enter a user role and the password.

Note!



- All Fieldgate FXA720 passwords are case sensitive

Fig. 6-1: User login dialogue

User roles and default passwords

Table 7.1 lists the user roles with passwords that are currently available in the Fieldgate. Security Setup, Chapter 6.5, provides more information on setting up passwords etc.

Role	User name	Default password	Rights
Administrator	admin	super	Can access Fieldgate in both User and and Specialist mode: ■ Can configure network settings ■ Can set all passwords and user IDs ■ Can change visualisation page settings ■ Can set events, alarms, e-mail and time parameters ■ Can configure PROFIBUS settings ■ Can set special page options ■ Can reset Fieldgate to factory settings
Maintenance	maint	great	Can access Fieldgate in both User and and Specialist mode: ■ Can configure PROFIBUS settings ■ Can reset Fieldgate to factory settings
Executive	exec	superb	Can access Fieldgate in User Mode only ■ Can view any page with the exception of the factory, communication and special settings, but has no rights to change parameters

Table 6-1: Fieldgate user roles and rights

Logging off

In specialist mode, click on the "Logout" link then close the internet browser. In user mode, close the internet browser.

6.2 User interface

Once logged on, depending upon the devices connected, a display such the following might appear in the web browser. If you are connecting up for the first time, it is also possible that only the Navigation bar appears because the Fieldgate needs to be set up to enable communication with the PROFIBUS devices in the network, see Chapter 6.6.

Refresh		Endress+Hauser	
Overview of Selected Devices		Switch to Specialist Mode	Information & Configuration
19.06.2007 09:42:37 (UTC+0)		Live List	KML Export
FXA720		Overview	
56		Next	
Channel 1			
56 (PC100)		CERADAR S	Endress+Hauser
OK		OK	
Plant Name	Description	Current Value	Limit
FB0011_ib_input_analog	Pressure 100	0.978458 bar	Min: 0.9 bar
		19.06.2007 09:10:15	19.06.2007 09:42:37
TB0011_ib_pressure	Primary Value	0.978458	Max: 1.0 bar
		19.06.2007 09:10:15	19.06.2007 09:42:37
			Min: Mac
19.06.2007 09:42:37 (UTC+0)		Top of page	

Fig. 6-2: Fieldgate home page

Approx. 1 second update time is required for every measured value in the overview. For a large network, this means that the first build up of the overview may take some time.

The user interface consists of the following elements:

- Menu bar (belongs to the web browser installed)
- Navigation bar
- Information & Configuration pages

6.2.1 Menu bar

Example of how the menu bar is displayed in MS Internet Explorer



The IP address of the Fieldgate is entered in the address field of the Internet web browser.

Note!



- The menu bar contains the standard functions of the installed web browser. More detailed information on the individual menus is provided in the documentation on the web browser.
- It is possible that additional or modified menu bars appear when Fieldgate is operating with plug-ins from other applications.

6.2.2 Navigation bar

The navigation bar offers the following functions in "User" or "Specialist" mode.

In User mode:

Refresh		Endress+Hauser
Overview of Selected Devices	Switch to Specialist Mode	Information & Configuration
16:49:40 2004/11/09 (UTC+2h)	Live List	XML Export

Fig. 6-3: Navigation bar in User mode

Function	Description
Refresh	Updates the current display with fresh information from the Fieldgate
Endress+Hauser	Calls the Endress+Hauser Fieldgate Web site
Overview of Selected Devices	Displays the values you have selected for monitoring and visualisation
Switch to Specialist Mode	Switches the navigation to specialist mode: the user is asked to log on with name and password
Information & Configuration	Displays information on Fieldbus location and hardware
Time and Date	Current time and date in selected format
Live List	Displays all devices connected to the Fieldgate according to channel
XML Export	Exports all information about Fieldgate and the devices connected to it in XML format

Table 6-2: Functions available in User mode

In Specialist mode:

Refresh	Logout	Endress+Hauser
Live List	Switch to User Mode	Information & Configuration
11:47:29 2004/12/09 (UTC+2h)	Overview	XML Export

Fig. 6-4: Navigation bar in Specialist Mode

Function	Description
Refresh	Updates the current display with fresh information from the Fieldgate
Logout	Changes to User Mode
Endress+Hauser	Calls the Endress+Hauser Fieldgate Web site
Live List	Displays all devices connected to the Fieldgate and allows them to be configured and selected for display.
Switch to User Mode	Switches the navigation to user mode
Information & Configuration	Allows the Fieldgate location to be entered and displays the hardware configuration. Reveals the following Setup menus: - Security Setup – Password administration - Network Setup – IP address, etc - PROFIBUS Setup – Communication parameters - Service Setup – Firmware download - Java Applets Setup – Selection of device parameters in Java Applets SPV 60 application
Time and Date	Current time and date in selected format
Overview of Selected Devices	Displays the values you have selected for monitoring and allows the list to be modified
XML Export	Exports all information about Fieldgate and the devices connected to it in XML format

Table 6-3: Functions available in Specialist Mode

6.2.3 Information & Configuration pages

Depending upon whether User or Specialist Mode is selected, clicking on Information & Configuration reveals the Fieldgate information or configuration pages. A change from one view to another is made by clicking on:

Switch to Specialist Mode/Switch to User Mode

as appropriate and when prompted, by entering the corresponding password, see Chapter 6.1.

Fieldgate Information

The Fieldgate Information page (User Mode) provides a read-only view of the Fieldgate Location and Hardware Information:

Refresh		Endress+Hauser
Overview of Selected Devices	Switch to Specialist Mode	Fieldgate Information
		XML Export

FXA720

Fieldgate Information

Fieldgate Location

Fieldgate Tag Identification	FXA720
Fieldgate Location	Fieldgate Location
Installation Date	2004
Remarks	

Hardware Information

Product Designation (HW #)	FXA 720 2E1A
HW Version	01.00
FXA 720 Serial #	5A002124036
FXA 720 Web Server Version	1.01.00-29
FXA 720 Firmware Version	1.0.0.21

Fig. 6-5: Fieldgate Information page

Fieldgate Configuration

The user information on the Fieldgate Location page can be edited in Specialist mode.

Additional pages allow the configuration of users and well as the setup of Ethernet and PROFIBUS networks.

Fieldgate Location

Fieldgate Tag Identification	FXA720
Fieldgate Location	Fieldgate Location
Installation Date	2004
Remarks	

Send

Hardware Information

Product Designation (HW #)	FXA 720 2E1A
HW Version	01.00
FXA 720 Serial #	5A002124036
FXA 720 Web Server Version	1.01.00-29
FXA 720 Firmware Version	1.0.0.21
OS Version	LK 2
# Channels	2

Fig. 6-6: Fieldgate Configuration page

6.3 Fieldgate location page

The Fieldgate location function provides you with the option of entering additional information on the location and characteristics of the Fieldgate. These data are entered in the Specialist Mode but have no effect on the functionality of the Fieldgate.

- 1 If not already selected, press **"Switch to Specialist Mode"** and log in as administrator.
- 2 Press **"Information & Configuration"**, the Fieldgate location screens appear:

Fieldgate Configuration	
Fieldgate Location	
Fieldgate Tag Identification	FXA720
Fieldgate Location	Fieldgate Location
Installation Date	2004
Remarks	
Send	

- 3 Enter the parameters required – their significance is described in the following sections.
- 4 Press "**Send**" to download the parameters to the Fieldgate.

Fieldgate Location parameters

Parameter	Description
Fieldgate Tag Identification	Enter the name of the Fieldgate (e.g. FXA720-...) which is also displayed on the overview page, in the header of your browser, in the XML file and the header of the e-mail (in preparation). Note! Please note the characters which are permitted and not permitted for defining the Fieldgate identification (= name of the Fieldgate). Permitted characters are: – Letters "a " ... "z " and "A " ... "Z " (without taking case into account) – Numbers "0 " ... "9 " – Special characters such as "." (= period) and "-" (= minus), not however as the first character – All other characters are not permitted. These include German umlauts, symbols such as "&" and spaces.
Fieldgate Location	You can enter additional information on the location of the Fieldgate here. These data have no effect on the functionality and solely serve to provide additional information.
Installation date	Enter the date of installation or maintenance of the network, etc.
Remarks	You can enter remarks and additional information here, e.g. on the Fieldgate or network maintenance, service etc.. These data have no effect on the functionality and serve solely to provide additional information. When using text e-mails, these remarks are entered in the e-mail (e.g. "We hereby order...").

Table 6-4: Significance of Fieldgate Location parameters

6.4 Security setup

Access rights to the Fieldgate are managed with the "Security Setup" function. As the administrator, you can create and manage users here.



Caution!

- To avoid unauthorised access to the Fieldgate setup parameters, the administrator and maintenance passwords should always be changed from the default settings!
- If you have updated from Version 1.00.21 to Version 1.01.00, see also Chapter 8, you will need to set up a maintenance password.

Procedure

- 1 If not already selected, press "Switch to Specialist Mode" and log in as administrator.
- 2 Press "Information & Configuration", then "Security Setup".
The Security Setup screen appears:

FXA720

Security Setup

Account

Administrator

Administrator Name

admin

New Password

Retype New Password

Send

Account

Executive

User Name

exec

New Password

Retype New Password

Send

Account

Maintenance

User Name

maint

New Password

Retype New Password

Send

- 3 Enter the parameters you require in the screen – their significance is described in the table below:
 - Administrator rights allow access to all Fieldgate setup parameters.
 - Maintenance rights allow access to all Fieldgate setup parameters except security
 - Executive rights allow access for viewing parameters only.A full description of roles and rights is to be found in Table 6-1 in Section 6.1.
- 4 Press "Send" to download the security parameters to the Fieldgate.

Security parameters

Parameter	Description
User Name	Fixed by default: admin, exec or maint respectively
New Password	Enter your new password here.
Retype New Password	Enter your new password again to confirm the change.

Table 6-5: Significance of Security Setup parameters

6.5 Network setup

The **"Network Setup"** function contains the parameters for setting up Ethernet, SMTP and other network related parameters as well as addresses for e-mails and SMS messages (in preparation).

Procedure

- 1
- If not already selected, press **"Switch to Specialist Mode"** and log in as administrator.
- 2
- Press **"Information & Configuration"**, then **"Network Setup"**.
The Network Setup screens appear:

6.5.1 Ethernet

- 1
- The Ethernet screen allows you to configure the Ethernet connections of the Fieldgate.

Ethernet

Fieldgate Hostname	*
IP Address	192.168.253.4
Subnet Mask	255.255.254.0
Gateway	

Send

- 2
- Enter your settings and confirm with **"Send"**.



Caution

- Each IP address may only occur once in a network! You can get an IP address from your Internet provider or your system administrator.
- If you change the IP address in this screen:
 - Close the connection (it may break off automatically)
 - Use the new address in your browser to call up the Fieldgate.
 - If appropriate, enter the new IP address in the PROFIBUS driver of any host application, see Chapter 5.3.

Network parameters

Parameter	Description
Fieldgate Hostname	Enter a host name for the Fieldgate. This is a symbolic name (string) that can be more easily memorized than an IP address.
IP Address	Enter the IP address of the Fieldgate here (factory setting is 192.168.253.1). You can get this address from your system administrator.
Subnet Mask	Enter the IP address of the netmask.
Gateway	If appropriate, enter the address of the gateway connecting the LAN to the worldwide web via firewall/router

Table 6-6: Ethernet network parameters

6.5.2 E-mail

Procedure

- 1 Scroll down to reveal the e-mail settings page.
– Enter your settings and confirm with "**Send**".

- 2 After the parameters downloaded to the Fieldgate a test e-mail is sent to the address defined
– Depending on the SMTP server, this may take several hours to arrive

E-mail parameters

Parameter	Description
SMTP Gateway	If appropriate, enter the IP address of your e-mail server here.
SMTP User Name	If authentication is required for the specified SMTP Gateway, enter the user name here – Leave blank if no authentication is requested or no SMTP Gateway is used
SMTP Password	If authentication is required for the specified SMTP Gateway, enter the password here – Leave blank if no authentication is requested or no SMTP Gateway is used
Sender Address	Enter the sender address of the Fieldgate here, e.g. fieldgate@company.co.uk. This address appears in the sender field. Depending on the mail server used, this field can have any name or must correspond to a valid account. Ask your system administrator. – With some providers, the e-mail address of the account holder must be specified as the sender address. No mails will be accepted from other sender addresses.
Alarms E-Mail Address	Enter the recipient of the alarm mails here, e.g. name@company.co.uk. – Alarm notifications are sent in accordance with the settings made in the "E-Mail on Alarm" column of the device details page, see Chapter 6.4. – If the Fieldgate is restarted when alarm violations are present, e-mails will be resent, although the an alarm notification has already been sent.
Alarm on PV Limits	Tick this box if you want an alarm e-mail to be sent when the range limits you specified in the device "Description" are exceeded, see Chapter 6.4
Events E-Mail Address	Enter the recipient of the event mails here, e.g. name@company.co.uk. – Event notifications are sent in accordance with the settings of the parameters below
Login as Administrator	Tick this box if an event notification is to be sent everytime someone attempts to log on as administrator
Device Connection/Disconnection	Tick this box if an event notification is to be sent everytime a sensor is connected to or disconnected from the network attached to the Fieldgate Web Server – The measured value last determined is sent a separate event notification. – Two other event notifications are sent as soon as contact is re-established, one to confirm the connection and the other with the current measured value.
Fieldgate Restart	Tick this box if an event notification is to be sent everytime the Fieldgate is restarted

Table 6-7: E-mail parameters

6.5.3 Time server

With the aid of a time server, the Fieldgate automatically synchronises its time with the time of the configured server, if present in the LAN. An Internet connection or a time server in the local network is required for this. If you have any questions, please contact your system administrator.

Procedure

- 1 Scroll down to reveal the time server settings page.
 - Enter your settings and confirm with "Send".

The screenshot shows a web interface for configuring a time server. It includes fields for the time server IP, protocol, fetch interval, time zone, date/time format, and a manual time setting. A 'Send' button is located at the bottom right of the form.

- 2 A manual time setting must come effective within about 10 seconds
 - If this is not the case, stop PROFIBUS scanning (Section 6.3.2) and re-enter the time.

Time server parameters

Parameter	Description
Time Server	Enter the IP address of the time server here. You can find information on public NTP servers under: – "http://www.eecis.udel.edu/~mills/ntp/servers.htm" or – "http://www.google.de/search?q=public+ntp+servers"
Protocol	Set the protocol used by the time server here: – SNTP: (Standard port: 123) – MAN: Manual time setting.... timing is restarted with settings entered in "Set time" The time server operator can tell you the protocol the server uses.
Periodic Fetch	Enter the time interval after which the internal clock is to be resynchronised with the time server
Time Zone	If appropriate, enter an offset from UTC time here
Date/Time format	Select the date and time format to be used in the Web pages from the drop-down menu
Set Time (Manual)	If no time server is available in the LAN (Protocol = MAN), set the time manually here. – Format: dd.mm.yyyy hh:mi:ss – If the Fieldgate is switched off, the manually set time is lost.

Table 6-8: Time server parameters

6.6 PROFIBUS setup

The "PROFIBUS Setup" function allows the user to set up communication and scanning on the Fieldgate channels used by the web server.

Note!



- Where Fieldgate FXA720 is used in pass-through mode, the bus settings are made in the PROFIBUS OPC server (ControlCare P View) or the CommDTM PROFIdtmDPV1 (FieldCare).

6.6.1 Communication settings

Procedure

- If not already selected, press "Switch to Specialist Mode" and log in as administrator or maintenance engineer.
- Press "Information & Configuration" then "PROFIBUS Setup"
The following screen appears (the number of channels depends on the Fieldgate):

FXA720 PROFIBUS Setup	
Channel 1	
Master Class	Type 2
Channel Identification	pb1
Station Address	3
Highest Station Address (hsa) Master	6
Bus Settings	
Baudrate	93.75 kBaud
Communication Settings	
Slot Time (tsl)	4095
Min. Station Delay Time Response (min_tdsr)	22
Max. Station Delay Time Response (max_tdsr)	1000
Quiet Time (tqui)	0
Setup Time (tse)	250
Target Token Rotation Time (ttt)	30000
Gap Update Factor (g)	10
Max Retries Limit	3
Use default 'Communication Settings' for selected Baudrate	☐
Send	

- Set up each channel by entering or ticking the parameters, see Table 6-9.
 - The settings depend on the coupler or link in use, see the associated documentation.
 - Press "Send" to download the parameters to the Fieldgate.

Communication parameters

Parameter	Description
Master Class	Fieldgate master class = Type 2
Channel ID	Channel identification (user parameter, not required by PROFIBUS application)
Station Address	Fieldgate PROFIBUS DP address (Master Class 2), 0 – 126, default values are 3, 4 and 5. If two or more channels are connected to the same network, enter different addresses.
Highest Station Address	Determines the address range to be scanned for token passing. - Enter highest PROFIBUS master address to be found on the network connected to the channel. - If two channels or more channels are connected to the same network, then all connected masters must be considered.
Bus Settings	
Baudrate	Can be set separately for each channel - the other communication parameters change to the factory defaults for the selected baudrate if the "Set factory default" box is checked. For more information on individual settings see Appendix 12.3 All the PROFIBUS DP devices, including couplers and links, connected to a particular channel must have the same communication settings
Communication Settings	
Slot Time	Monitoring time – 'Wait for receipt' – of the senders (Requestor) of telegram for the acknowledgement of the recipient (Responder). After expiration, a retry occurs in accordance with the value of 'Max. telegram retries'.
Min. Station Delay Response Time	Shortest time period that must elapse before a remote recipient (Responder) may send an acknowledgement of a received query telegram. The shortest time period between receipt of the last Bit of a telegram to the sending of the first Bit of a following telegram.
Max. Station Delay Response Time	Longest time period that must elapse before a Sender (Requestor) may send a further query telegram. Greatest time period between receipt of the last Bit of a telegram to the sending of the first Bit of a following telegram. The Sender (Requestor, Master) must wait at least for this time period after the sending of an unacknowledged telegram (e.g. Broadcast only) before a new telegram is sent.
Quiet Time	Time delay that occurs for modulators (Modulator-trip time) and Repeaters (Repeater-switch time) for the change over from sending to receiving.
Setup Time	Minimum period "reaction time" between the receipt of an acknowledgement to the sending of a new query telegram (Reaction) by the Sender (Requestor).
Token Rotation Time	Pre-set nominal Token cycling time within which the Sender authorization (Token) will cycle around the ring. How much time the Master still has available for sending data telegrams to the Slaves is dependent on the difference between the nominal and the actual token cycling time.
Gap Update factor	Factor for determining after how many Token cycles an added participant is accepted into the Token ring. After expiry of the time period $G \cdot TTR$, the Station searches to see whether a further participant wishes to be accepted into the logical ring.
Max Retries Limit	Number of times the Fieldgate will try to establish communication with a device before it flags it as faulty
Repeat Channel 1 settings..	A tick causes the channel 1 settings to be loaded into the other channels
Use Default Communication Settings for Selected Baudrate	A tick causes the factory default settings for the selected baudrate to be loaded If the box is not ticked, the values entered in the appropriate fields are used

Table 6-9: PROFIBUS communication parameters

6.6.2 Scan settings

Procedure

- 1 Now set the scan parameters. For a description see Table 6-10 below:

Scan 1

Scan Cycle Time

auto

Scan For New Devices Now

☐

Automatic Live List Update Every

1h

Send

- 2 Press **"Send"** to download the parameters to the Fieldgate.

Scan parameters

Parameter	Description
Scan Cycle Time	Interval at which the devices on the channel are to be scanned. ■ Select a scan time from the drop-down menu for all channels that are being used by the Internet browser (Web server) ■ Check that the setting is "off" (default) for all channels where an OPC client or configuration tool is using Fieldgate as a pass-through interface.
Scan for New Devices	Tick this box to cause the Fieldgate to scan for new devices when "Send" is pressed.
Automatic Live List Update every	Interval at which a new live list is read ■ Select a scan time from the drop-down menu for all channels that are being used by the Internet browser (Web server)

Table 6-10: Scan setup parameters

6.6.3 Live list

Procedure

- 1 Select **"Live List"** in the navigation bar.
- 2 Fieldgate scans each channel used by the web server and displays a list of all the devices found in the network attached to it
 - All active addresses are listed.
 - Fieldgate and other masters on the bus can be distinguished by the N.A. entries

FXA720Live List

Channel 1								
Show in Overview	Address / Device Tag	Device Type	Status	Manufacturer	Serial #	SW Rev. #	HW Rev. #	PA-Profile #
☐	3 / N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
☒	56 / PIC100	CERABAR S	OK	Endress+Hauser	6K30118	2.0	1.0	0300

Note!



- Fieldgate cannot reproduce the live lists of channels that are being used in pass-through mode (Scan Cycle Time = off). No devices are shown for these channels.

6.7 Overview of selected devices

In Specialist Mode, the "Live List" function allows the user to select the devices and device parameters that are to be displayed in the device overview and to set alarms and e-mail responses.

- 1 If not already selected, press "**Switch to Specialist Mode**" and log in as administrator or maintenance engineer.
- 2 By default, the "Live List" automatically appears:

FXA720 Live List								
Channel 1								
Show in Overview	Address / Device Tag	Device Type	Status	Manufacturer	Serial #	SW Rev. #	HW Rev. #	Profile #
☒	10 / PT 100	CERABAR M	OK	Endress+Hauser	6601AE01020	1.2	1.0 R	3
☒	11 / LT 100	PROSONIC M	BAD	Endress+Hauser	6600BE0109A	01.02.02	1.0	3
☒	12 / TT 100	TMT184	OK	Endress+Hauser	66000F04126	8211	1.00.06	3

- 3 Click on the **Device Tag** (in column Address/Device Tag) to reveal the details of the device.
 - Setup each device function block according to the descriptions in Table 6-6.
 - After the parameters have been set up for each device, press "**Send**" to download them.

FXA720

Device Details

56 / PIC100

CERABAR S

Endress+Hauser

OK

Description/Range/Limit/Alarm Setup

Show in Overview	Point Name	Current Value&Status dd.mm.yyyy hh:mm:ss	Limit Status dd.mm.yyyy hh:mm:ss	Limit	Hysteresis [%]	E-Mail on Alarm Set/Reset	Description
☒	fb_input_analog FB0011_fb_input_analog	OK 0.978458 bar 19.06.2007 09:10:16	OK 19.06.2007 09:26:32	0.98 IIII 0.97 H 0.96 L 0.95 LL	☐ 0	☐ SE ☐ RST	Pressure 100 Min 0.9 Max 1.0
☒	fb_pressure TB0011_fb_pressure	BAD 0.000000 19.06.2007 09:10:16	OK 19.06.2007 09:26:32	☐ HH ☐ H ☐ L ☐ LL	☐ 0.0	☐ SE ☐ RST	 Min Max

- 4 Now click the **Device Tag** (in header, top left) to view the selection you have made in the Overview page.

FXA720		Device Details					
56 / PIC100		CERABAR S		Endress+Hauser		OK	
Description/Range/Limit/Alarm Setup							
Show in Overview	Point Name	Current Value&Status dd.mm.yyyy hh:mm:ss	Limit Status dd.mm.yyyy hh:mm:ss	Limit	Hysteresis [%]	E-Mail on Alarm Set /Reset	Description
☒	fb_input_analog FB0011_fb_input_analog	OK 0.978458 bar 19.06.2007 10:31:47	OK 19.06.2007 11:37:47	0.98 HH 0.97 H 0.96 L 0.95 LL	0	☐ SET ☐ RST	Pressure 100 Min 0.9 Max 1.0 Primary Value
☒	fb_pressure TB0011_fb_pressure	OK 0.978458 19.06.2007 10:31:47	OK 19.06.2007 11:37:47	HH H L LL	0.0	☐ SET ☐ RST	Min Max

- 5 Return to the "Live List" and repeat the procedure for every device function block and every channel.

6.7.1 Device detail parameters

Parameter	Description
Show in Overview	Checking this box causes the parameters in the associated line to be shown in the overview of devices
Point Name	Read only parameter from device showing Block name and Measuring Tag (if configured) – These parameters are read from the device and cannot be changed from the web server
Current Value and Status	Read only parameter showing the current measured value and status of the measuring point – OK: device is operating correctly – UNCERTAIN: device is operating, but the status of the output value is uncertain, e.g. because a limit value within the device has been violated – BAD: the device has detected a fault, e.g. sensor failure (based on PA Profile 3.0, Chapter 3.11.4)
Limit Status	Read only value showing whether the associated value is within the alarm limits set in the web server for this parameter: – OK: within alarm limits – HH: High high alarm, the measured value is above the high high limit – H: High alarm, the measured value is above the high limit but below the high high limit – L: Low alarm, the measured value is below the low limit but above the low low limit – LL: Low low alarm, the measured value is below the low low limit – EDIT!: The limits set in the Web server and the range in the parameter description are not consistent. Note: The limit status applies to the limit values set in the web server. It has nothing to do with any limits set within the device itself
Limit	Allows four limits to be set in the web server on the parameter concerned: – HH: High high limit, an alarm is set when measured value moves above the high high limit – H: High limit, an alarm is set when the measured value moves above the high limit – L: Low alarm, an alarm is set when the measured value moves below the low limit – LL: Low low alarm, an alarm is set when the measured value moves below the low low limit The status is flagged in the Limit Status column. If no value is entered, the limit is disabled. Note: These limits are applied by the Fieldgate to the value it reads from the connected device. These limits have nothing to do with those that can be set within the device itself
Hysteresis	Allows a hysteresis band in percent of set range to be set below HH and H limits and above L and LL limits. When a measured value violates a limit, an alarm is immediately set. When it returns to within limits, the alarm is reset only when the value leaves the hysteresis band.
E-mail on alarm	Allows the response to an alarm event to be set. Check the options as appropriate: – SET: when checked will cause an e-mail to be sent on violation of a limit – RST: when checked will cause an e-mail to be sent when the value returns to normal The e-mail set up is described in Section 6.6.2, the alarm status table in Table 6-7.
Description	Allows two lines of text and the set range of the device to be entered. This text is displayed in the device overview

Table 6-11: Device detail parameters for overview

6.7.2 E-mail on alarm

Table 6-12 below shows the alarm status settings for the function "E-mail on alarm"

	to LL	to L	to OK	to H	to HH
from LL	–	RST	RST	SET	SET
from L	SET	–	RST	SET	SET
from OK	SET	SET	–	SET	SET
from H	SET	SET	RST	–	SET
from HH	SET	SET	RST	RST	–

Table 6-12: Alarm status table for e-mail messaging

6.7.3 Expert mode for Slot/Index configuration

Note



- This function should be used only by PROFIBUS experts possessing the necessary knowledge about profile versions, slot/index tables and PROFIBUS data types. Concrete information on these topics can be found in the operating instructions of the field devices concerned

In Specialist Mode, a click on the "Device Details" switches over to the configuration page for slot/index entries.

FXA720

Device Details

12 / PROMAG

PROMAG 50 PBUS

Endress+Hauser

OK

Description/Range/Limit/Alarm Setup

Show in Overview	Point Name	Current Value&Status xxxxxxxxxxxx	Limit Status xxxxxxxxxxxx	Limit	Hysteresis [%]	E-Mail on Alarm -Set -Reset	Description
☒	fb_input_analog FB0011_fb_input_analog	OK 0.000000 m³/h 20070730-091350	OK 20070727-191150	11.5 HH 9.0 H 6.5 L 0.0 LL	1.0 %	☒ SET ☐ RST	Flow Min: Max: EU m³/h

Depending upon requirement, this page allows the value, status and, if necessary, the engineering units of parameters other than those offered by default to be read from the function block and displayed in the Web browser.

12 / PROMAG

PROMAG 50 PBUS

Endress+Hauser

OK

Description/Range/Limit/Alarm Setup

Show in Overview	Value/Status/Unit Settings FOR PROFIBUS EXPERTS ONLY	Limit	Hysteresis [%]	E-Mail on Alarm -Set -Reset	Description																								
☒	Block Tag FB0011_fb_input_analog Block Start Slot/Index: 1/16 <table><thead><tr><th>Tag</th><th>ViewAs</th><th>Slot</th><th>Index</th><th>SubInd.</th><th>DataType</th></tr></thead><tbody><tr><td>Value</td><td>Float</td><td>1</td><td>26</td><td></td><td>101</td></tr><tr><td>Status</td><td>Status Text</td><td>1</td><td>26</td><td></td><td>101</td></tr><tr><td>Unit</td><td>Unit Text</td><td>1</td><td>26</td><td></td><td>DS36</td></tr></tbody></table> ☐ Reset to Default (Slot, Index, DataType)	Tag	ViewAs	Slot	Index	SubInd.	DataType	Value	Float	1	26		101	Status	Status Text	1	26		101	Unit	Unit Text	1	26		DS36	HH H L LL		☐ SET ☐ RST	fb_input_analog Flow Min: Max: EU m³/h
Tag	ViewAs	Slot	Index	SubInd.	DataType																								
Value	Float	1	26		101																								
Status	Status Text	1	26		101																								
Unit	Unit Text	1	26		DS36																								
☒	Block Tag FB0021_fb_calculation_totalizer Block Start Slot/Index: 2/16 <table><thead><tr><th>Tag</th><th>ViewAs</th><th>Slot</th><th>Index</th><th>SubInd.</th><th>DataType</th></tr></thead><tbody><tr><td>Value</td><td>Float</td><td>2</td><td>26</td><td></td><td>101</td></tr><tr><td>Status</td><td>Status Text</td><td>2</td><td>26</td><td></td><td>101</td></tr><tr><td>Unit</td><td>Unit Text</td><td>2</td><td>27</td><td></td><td>USIGN16</td></tr></tbody></table> ☐ Reset to Default (Slot, Index, DataType)	Tag	ViewAs	Slot	Index	SubInd.	DataType	Value	Float	2	26		101	Status	Status Text	2	26		101	Unit	Unit Text	2	27		USIGN16	HH H L LL		☐ SET ☐ RST	fb_calculation_totalizer EU m³
Tag	ViewAs	Slot	Index	SubInd.	DataType																								
Value	Float	2	26		101																								
Status	Status Text	2	26		101																								
Unit	Unit Text	2	27		USIGN16																								
☒	Block Tag TB0011_fb_flow_electromagnetic Block Start Slot/Index: 1/70 <table><thead><tr><th>Tag</th><th>ViewAs</th><th>Slot</th><th>Index</th><th>SubInd.</th><th>DataType</th></tr></thead><tbody><tr><td>Value</td><td>Float</td><td>1</td><td>97</td><td></td><td>101</td></tr><tr><td>Status</td><td>Status Text</td><td>1</td><td>97</td><td></td><td>101</td></tr><tr><td>Unit</td><td>Unit Text</td><td>1</td><td>98</td><td></td><td>USIGN16</td></tr></tbody></table> ☐ Reset to Default (Slot, Index, DataType)	Tag	ViewAs	Slot	Index	SubInd.	DataType	Value	Float	1	97		101	Status	Status Text	1	97		101	Unit	Unit Text	1	98		USIGN16	HH H L LL		☐ SET ☐ RST	tb_flow_electromagnetic EU m³/h
Tag	ViewAs	Slot	Index	SubInd.	DataType																								
Value	Float	1	97		101																								
Status	Status Text	1	97		101																								
Unit	Unit Text	1	98		USIGN16																								

Send

7 Viewing Information (User Mode)

The information provided by the the devices and Fieldgate is viewed in User Mode.

7.1 Logging on

Procedure

- 1. Enter the Fieldgate IP address your web browser: after connection has been made, you will be asked to log on

		Endress+Hauser
FXA720 Login		
User	Password	
exec		
Login		

- 2. Enter your password in the "Password" field (default password = superb)
- 3. The Fieldgate home page is now shown with the "Overview of Selected Devices":

Refresh		Endress+Hauser
Overview of Selected Devices	Switch to Specialist Mode	Information & Configuration
19.06.2007 09:42:37 (UTC+0)	Live List	XML Export

FXA720 Overview	
56	Next
Channel 1	

56 / PIC100		CERABARS	Endress+Hauser	OK
Point Name	Description	Current Value	Limit	Range
FB0011_ft_input_analog	Pressure 100	OK 0.978458 bar 19.06.2007 09:10:15	HI 19.06.2007 09:42:37	Min: 0.9 bar Max: 1.0 bar
TB0011_ft_pressure	Primary Valve	OK 0.978458 19.06.2007 09:10:15	OK 19.06.2007 09:42:37	Min: Max:

19.06.2007 09:42:37 (UTC+0)	Top of page
-----------------------------	-------------

7.2 Live list

The live list provides information on all devices connected to the Fieldgate sorted according to channel.

Note!



- The Live List identifies all active participants on the bus.
- The scan functions for PROFIBUS Profile 3.0 devices, since these can be uniquely identified.
- Depending upon the device, Profile 2.0 or earlier may work correctly, but no guarantee can be given.

Procedure

- 1 Press **"Live List"**
 - All active addresses are listed.
 - Fieldgate and other masters on the bus can be distinguished by the N.A. entries
 - The significance of the parameters is described in the table below.

FXA720			Live List					
Channel 1								
Show in Overview	Address / Device Tag	Device Type	Status	Manufacturer	Serial #	SW Rev. #	HW Rev. #	PA-Profile #
☐	3 / N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
☒	56 / PIC100	CERABAR S	OK	Endress+Hauser	6K30118	2.0	1.0	0300

- 1 By clicking the mouse over the **"Address"** link you can change from the Live List to the Overview.
- 2 By clicking the mouse over the **"Device Tag"** link you can change from the Live List to the Device Details.

Live list parameters

Parameter	Description
Show in Overview	Devices checked in this column will appear in the Overview
Address/ Device Tag	PROFIBUS address and tag number or name of the device These also link to the Overview and Device Detail pages respectively
Device Type	Name or model type designation of the device
Status	Profibus device status: OK, UNC (Uncertain), BAD
Manufacturer	Name of the manufacturer of the device
Serial #	Device serial number
SW Rev #	Revision number of the device firmware
HW Rev #	Revision number of the device hardware
Profile	PROFIBUS Profile version, e.g. Profile 2, Profile 3 etc.

Table 7-1: Parameters in Live List view page

7.3 Overview of selected devices

The "Overview of Selected Devices" function allows the user to view the devices and parameters he has selected. This is the standard view when connection is made to the Fieldgate.

- 1 Press "Overview".
The significance of the parameters is in described in the table below.

FXA720		Overview	
56	Next	Channel 1	
56 / PIC100	CERABAR S	Endress+Hauser	
Point Name	Description	Current Value	Limit
FB0011_ft_input_analog	Pressure 100	OK 0.978458 bar 19.06.2007 09:10:15	II 19.06.2007 09:42:37
TB0011_ft_pressure	Primary Valve	OK 0.978458 19.06.2007 09:10:15	OK 19.06.2007 09:42:37
		Range	
		Min: 0.9 bar Max: 1.0 bar	
		Min: Max:	

Parameters

Parameter	Description
Address/ Device Tag	PROFIBUS address and tag number or name of the device The Device Tag also toggles between the Overview and Device Detail pages
Device Type	Name or model type designation of the device
Manufacturer	Name of the manufacturer of the device
Device Status	Device status, general status
Point Name	The name of the parameter that is being monitored at the association address
Current value	The current value of the parameter with parameter status and time stamp
Limit	The status of the limit values set in the Fieldgate for the parameter with time when last status change occurred: – OK: within alarm limits – HH: High high alarm, the measured value is above the high high limit – H: High alarm, the measured value is above the high limit but below the high high limit – L: Low alarm, the measured value is below the low limit but above the low low limit – LL: Low low alarm, the measured value is below the low low limit – EDIT!: The limits set in the Web server and the range in the parameter description are not consistent. Note: The limit status applies to the limit values set in the web server. It has nothing to do with any limits set within the device itself
Description	Description of the parameter displayed that has been entered in Specialist Mode*

Table 7-2: Parameters in Overview of Selected Devices view page

7.4 Fieldgate information

The "Fieldgate Information" function provides information on the Fieldgate location and hardware.

- 1 Press "Information&Configuration".
The significance of the parameters is in described in the table below.

FXA720

Fieldgate Information

Fieldgate Location

Fieldgate Tag Identification

Fieldgate Location

Installation Date

Remarks

FXA720

Hardware Information

Product Designation (HW #)

HW Version

FXA 720 Serial #

FXA 720 Web Application Version

FXA 720 Firmware Version

OS Version

Channels

FXA720 1E1A
00.00
000000000
01.02.00
5.27.0.00
Lk 2
1

Parameters

Parameter	Description
Fieldgate Location	
Fieldgate Tag Identification	Fieldgate tag number/name
Fieldgate Location	Place where Fieldgate is installed
Installation date	Date of installation/maintenance
Remarks	User information about Fieldgate
Hardware Information	
Product Designation	Complete product designation of the Fieldgate (see nameplate)
Hardware Version	Fieldgate hardware version number
Serial #	Fieldgate serial number
Web Server Version	Version number of the web server embedded in the Fieldgate
Firmware Version	Fieldgate firmware version
OS Version	Version of the operating system used.
# Channels	No. of channels available in the Fieldgate

Table 7-3: Parameters in Information pages

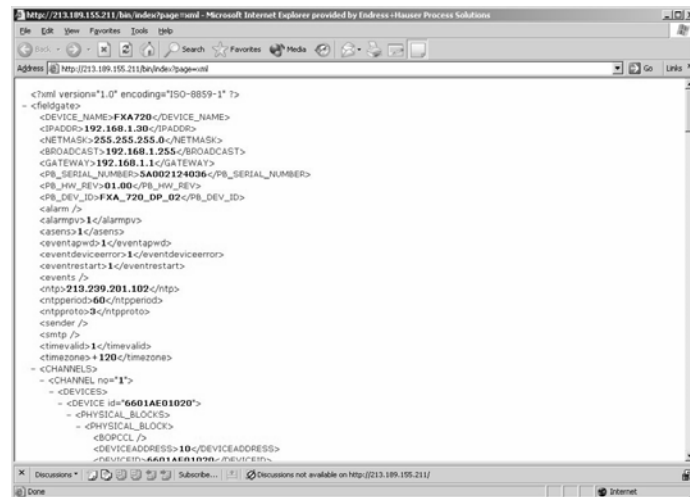
7.5 XML export

The XML Export function allows the information on the complete Fieldgate configuration plus the parameters and configuration of the connected devices to be downloaded to your computer for use in Office or other applications.

1 Press **"XML Export"**.

The parameters are downloaded into a separate page, from where they can be copied and pasted.

– More information on the XML elements can be found in the Appendix, Chapter 12.2



2 Note the web address: this can then be accessed by your browser as a read only page (no values can be changed) without prior login to the Fieldgate

7.6 Other view functions

7.6.1 Refresh function

The "**Refresh**" function reloads the page currently displayed and has the same function as the "**Refresh**" function of your web browser (e.g. Internet Explorer with the "**F5**" key). It does not initiate a bus scan.

Refresh			Endress+Hauser
Overview of Selected Devices	Switch to Specialist Mode		Fieldgate Information
			XML Export

7.6.2 Endress+Hauser function

With the "**Endress+Hauser**" function, you go directly to the Fieldgate homepage on the Endress+Hauser internet site. You require Internet access for this. There is no charge for displaying the page

Note!



- This page can also be called directly via Internet browser by entering the following address:
www.products.endress.com/fieldgate

8 Firmware Update

Fieldgate allows you to update the firmware of your device. Normally, the firmware, together with release notes and the latest version of the operating manual, will be sent to you by e-mail or supplied on a CD-ROM.

Procedure

- 1. Store the firmware on your computer, preferably in the folder "**Endress+Hauser => Fieldgate => FXA720 => Firmware**", and read the release notes.
- 2. If not already selected, press "**Switch to Specialist Mode**" and log in as administrator or maintenance engineer.
- 3. Press "**Information & Configuration**", then "**Service Setup**"
The Service Setup screens appear:

FXA720

Service Setup

Fieldgate Update

Firmware File

Browse...

Download Firmware and Restart

Fieldgate Restore Settings

Restore Factory Settings and Restart Fieldgate

☐

Restore and Restart

Fieldgate Restart

Restart

- 4. Click on "**Browse**" and browse to the location of the firmware file. Press "**Download Firmware and Restart**" to download the firmware to the Fieldgate.



Caution!
Do not interrupt the download process: this will result in a malfunction that can be repaired by the manufacturer only

- 5. Select the **PROFIBUS Setup** page and press "**Send**" to download the PROFIBUS settings and Scan settings
- 6. If you are upgrading from version 1.00.21 to 1.01.xx, go to the **Security Setup** page and define a maintenance password.

Parameters

Parameter	Description
Firmware File	Browse to or enter the address of the place that the firmware is located then press load " Download Firmware and Restart ". The firmware is downloaded and the fieldgate restarts
Restore Factory Settings and restart Fieldgate	Tick the box and press " Restore and restart " in order to restore the factory settings of the Fieldgate - the IP address is not changed.
Restart	Press " Restart " to restart Fieldgate

Table 8-1: Service Setup parameters

9 Trouble-Shooting

If you cannot find the advice you require in this chapter, send your problem or question to the following service address: **fieldgate@solutions.endress.com**. To help our specialists, please include a full description of the application and the Fieldgate **Hardware Information** (Chapter 7.4) with your help request.

9.1 Problems and remedies

Problem	Remedy
Unable to connect to the Fieldgate	See Chapter 9.3
Unable to connect the Profibus Driver to the FXA 720	- The bus scanning must be disabled for the bus to which you wish to connect: - Login with administrator rights. - Select Information & Configuration. - Select Profibus Setup. - Set channel 1 (2, 3?) scanning to OFF - Press Send to download the changes - Now return to the Control Panel to configure the Profibus driver - When using FieldCare, make the appropriate settings in your Profibus CommDTM

9.2 FAQ – Frequently Asked Questions

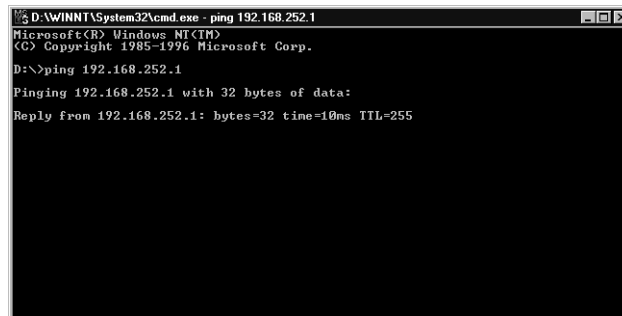
Question	Answer
Is Master Class attribute configurable via OPC and DTM?	- Fieldgate FXA720 can handle both Master classes without any configuration. If cyclic data exchange is initiated by the application it implicitly becomes a Master Class I. - In case of a configuration tool, all acyclic data initiated by the configurator is forwarded to devices through the Fieldgate as Master Class II services. For example, PROFIBUS OPC Server normally behaves as Master Class I and CommDTMs as Master Class II.
What parameters are available for configuration via web-server?	- Chapter 6 describes the Fieldgate parameters that can be configured. - The devices connected to the Fieldgate cannot be configured: if this is required, a separate configuration tool is required.
How do I use Fieldgate with link device (LM 157) from Siemens?	- If Fieldgate is operating as a plant access point for remote diagnosis or inventory monitoring, the link can be used in the normal way. - If you wish to configure the devices with an FDT based tool, e.g. FieldCare, then a CommDTM is required for the link. - PA links are not supported if Fieldgate is operating as a Web server.
If customers have a PROFIBUS system (PLC, DCS), what is important to know before using a Fieldgate?	- When used for remote diagnosis or inventory control, the Fieldgate acts as a secondary master and must be configured as described in Section 7.2 of this manual. - If you wish to configure PROFIBUS devices with an FDT based tool, e.g. FieldCare, then Device DTMs are required for the devices. A coupler does not require a CommDTM but a Siemens link does.

9.3 Troubleshooting on no connection

- 1 Is the Link LED lit on the Fieldgate?
 - Yes, proceed with point 2
 - No, check the cable or connection to Fieldgate and PC/Network
- 2 Is the Link LED of the PC network card lit?
 - Yes, proceed with point 3
 - No, check the cable or connection to Fieldgate and PC/Network
- 3 Open the DOS prompt "**Start => Run => cmd** "



- 4 Enter "**ping 192.168.252.1**". Do you get the answer 192.168.252.1 Bytes=32...
 - Yes. The connection is OK.
Check your browser settings (If a proxy server is used try to bypass the IP-address 192.168.254.1).
 - No. There is no connection to the Fieldgate.



- 5 Check if Fieldgate's IP and Subnet mask are in the same network as your PC:
 - No: Reconfigure the gateway address.

10 Accessories

10.1 E+H power supply units

Product	Description
SXP 100	Standard power supply 5A, 24 VDC

11 Technical Data

The following summary provides you with the most important technical data:

■ Supply voltage:	+24V DC (direct current)
■ Supply voltage tolerance:	±10% (incl. ripple)
■ Typical current consumption:	0.6A (depending on operating mode) 0.3A (single channel version)
■ Start-up current:	3A
■ Dimensions (W x H x D):	111 x 135 x 111 (mm), multi-channel version 46.5 x 135 x 111 (mm), single channel version
■ Mounting:	TS35 DIN carrier rail (EN 50022)
■ Weight (approx.):	0.9 kg/0.3 kg
■ Protection class:	III
■ Degree of protection:	IP 20
■ Degree of contamination:	1
■ Ambient temperature during operation:	0°C to 55°C
■ Ambient temperature for storage:	-20°C to 70°C
■ Relative air humidity:	max. 90% at +25°C (non-condensing)
■ Mechanical resistance:	Vibration (IEC 60068-2-6) 10 ≤ f ≤ 57 Hz: 0.075 mm 57 ≤ f ≤ 150 Hz: 1.0 g Shock (IEC 60068-2-29) 15 g, 11 ms

12 Appendix

12.1 Changing the Internet address (Windows 2000)

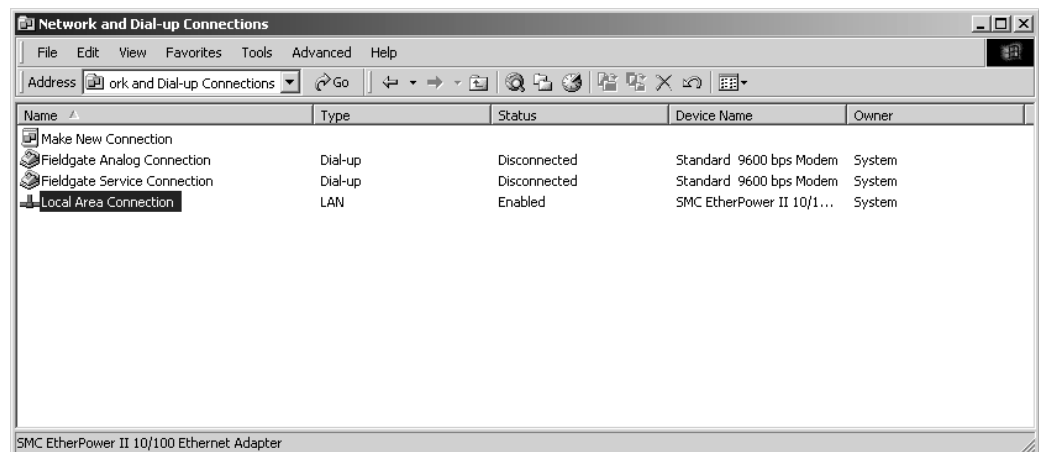
Caution!

- For the following instructions under Windows® 2000, you require administrator rights. Contact your system administrator.

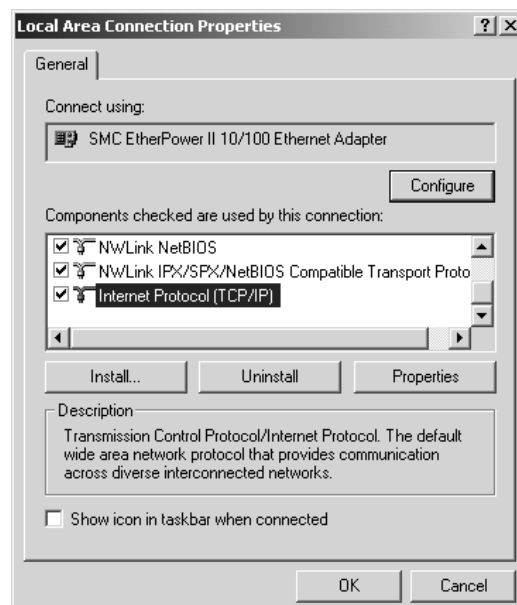


Procedure

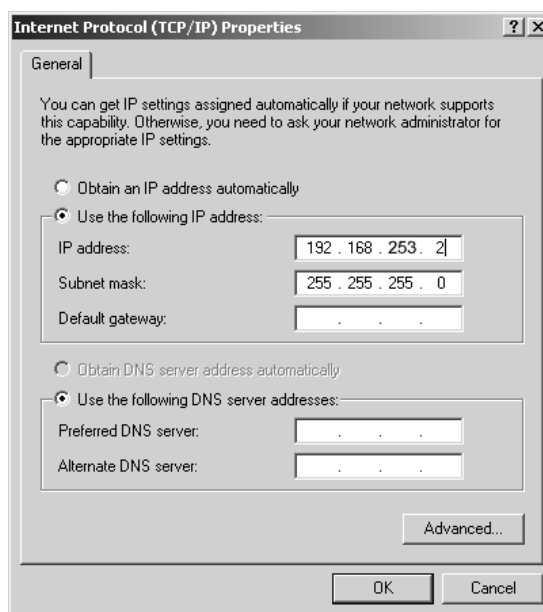
- 1 Right-click on the desktop icon "My Network Places" and select "Properties".
Right-click "Local Area Connection" => "Properties".



- 2 Using the left mouse button, double-click "Internet Protocol (TCP/IP)".



- 3 Now you can enter/change the values and click "OK" to confirm.



- 4 Start the web browser, e.g. Internet Explorer.
- 5 Now enter the same address, e.g. "192.168.253.1" in the address field of your browser. The Fieldgate FXA720 password window is displayed.

12.2 XML data elements

XML	Bedeutung
" <?xml version=""1.0"" encoding=""ISO-8859-1"" ?>	Introduction
- <fieldgate>	Start: Fieldgate data
<timezone>+270</timezone>	Time offset to UTC im minutes
<REVISION>'00000'</REVISION>	XML revision
<DEVICE_NAME>FXA720Testcenter1</DEVICE_NAME>	Fieldgate Tag
<PB_SERIAL_NUMBER>88001124038</PB_SERIAL_NUMBER>	Fieldgate Serial No.
<PB_DEV_ID>FXA_720_DP_03</PB_DEV_ID>	Fieldgate Type Information
- <CHANNELS>	Start: PROFIBUS channel data
" - <CHANNEL no=""1"">	Start: PROFIBUS channel No. 1
- <DEVICES>	Start: PROFIBUS devices
" - <DEVICE id=""7BFFFF0108D"">	Start: PROFIBUS device
- <PHYSICAL_BLOCKS>	Start: physical blocks
- <PHYSICAL_BLOCK>	Start: physical block
<DEVICEADDRESS>19</DEVICEADDRESS>	PROFIBUS device address
<DEVICEID>7BFFFF0108D</DEVICEID>	Device ID
<MANUFACTURER>Endress+Hauser</MANUFACTURER>	Device manufacturer
<DEVICETAG>LICSA0100_10</DEVICETAG>	Device tag
<DEVICETYPE>FMR 2XX</DEVICETYPE>	Device type
<HWREV>2.01</HWREV>	Device hardware revision
<SWREV>01.01.02</SWREV>	Device software revision
<STATESIGN>OK</STATESIGN>	Device status
</PHYSICAL_BLOCK>	End: physical block
</PHYSICAL_BLOCKS>	End: physical blocks
- <FUNCTION_BLOCKS>	Start: function blocks
" - <FUNCTION_BLOCK type=""fb_input_analog"">	Start: function block
<TAG>FB0011_fb_input_analog</TAG>	Point name
<LIMITSIGN>LO</LIMITSIGN>	Limit status (HH, HI, OK, LO, LL)
<OUT>0.818859</OUT>	Current value
<STAMP_DATE_VAL>20070621</STAMP_DATE_VAL>	Date stamp of current value
<STAMP_TIME_VAL>170445</STAMP_TIME_VAL>	Time stamp of current value
<STAMP_DATE_LVL>20070619</STAMP_DATE_LVL>	Date stamp of limit status
<STAMP_TIME_LVL>231534</STAMP_TIME_LVL>	Time stamp of limit status
<STATESIGN>OK</STATESIGN>	Block status (OK, UNG, BAD, N.A.)
<UNITSTRING>m</UNITSTRING>	Engineering unit
<HH>4</HH>	Limit value: high high
<HI>2.00</HI>	Limit value: high
<LO>1.00</LO>	Limit value: low
<LL />	Limit value: low low
<MAXDESC>5.00</MAXDESC>	Range max
<MINDESC>0</MINDESC>	Range min
<T1CH>Watertank #1</T1CH>	Value description (first line)
<T2CH />	Value description (second line)
</FUNCTION_BLOCK>	End: function block
</FUNCTION_BLOCKS>	End: function blocks
+ <TRANSDUCER_BLOCKS>	Start: transducer blocks ...
</DEVICE>	End: device
" + <DEVICE id=""6601AE01020"">	"Next device ...
" + <DEVICE id=""7A001F02000"">	"Next device ...
</DEVICES>	End: devices
</CHANNEL>	End: PROFIBUS channel
" + <CHANNEL no=""2"">	Start: PROFIBUS channel No. 2
" + <CHANNEL no=""3"">	Start: PROFIBUS channel No. 3
</CHANNELS>	End: PROFIBUS channel data
</fieldgate>	End: Fieldgate data

12.3 PROFIBUS bus parameter ranges

Table 12.1 below list the parameter ranges that are allowable when the PROFIBUS parameters are set individually.

- If a value is entered that is above the limit, the highest possible value will be set
- If a value is entered that is below the limit, the lowest possible value will be set

Parameter	Valid range
tsl	37 – 16383
min-tdsr	11 – 1023
max-tdsr	37 – 1023
tqui	0 – 239
tset	1 – 255
ttr	256 – 16777215
γ	1 – 100
hsa	1 – 126
station address	0 – 126

Table 12-1: PROFIBUS bus parameter ranges

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