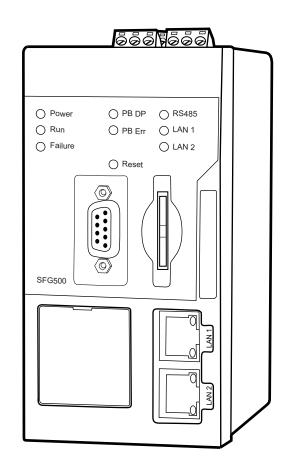
Operating Instructions Fieldgate SFG500/SFM500

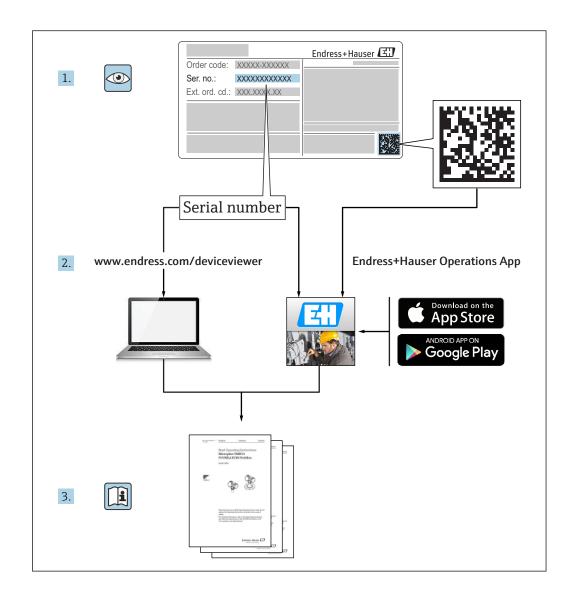
Solutions

Access Point, Asset Monitor, Process Monitor









Revision history

Product version	Operating Instructions	changes	Comments
1.00.xx	BA00071S/04/EN/ 01.11	Original manual	-
1.00.xx	BA00071S/04/EN/ 02.12	Editorial Chapter 3 Chapter 5.1.1 Chapter 5.3.4 Chapter 5.3.5 General	IP LAN1: 10.126.84.100 New DTM function: PROFIBUS Scan Range New DTM function: Set Device Address Additional text regarding the Set Device Address function Renumbering, TOC, Index
1.01.xx	BA00071S/04/EN/ 03.13	Chapter 5 Chapter 5.2 Chapter 5.3 Update New CD	Screenshots and texts updated Embedded web server added Additional functions restructured
	BA00072S/04/EN/ 01.13	Original manual	-
1.02.xx	BA00071S/04/EN/ 04.14	Chapter 1 General	New, IT security Screenshots and texts updated
	BA00072S/04/EN/ 02.14	New function Chapter 1 General	Support of HART Remote IO New, IT security Screenshots and texts updated
1.03.xx	BA00071S/04/EN/ 05.14	No change	-
	BA00072S/04/EN/ 03.14	3.2.4 E-mail Settings 4.2 Assets	Options for e-mail messaging Grid view
1.04.xx	BA00071S/04/EN/ 06.14	No change	-
	BA00072S/04/EN/ 04.14	4.2 Assets	Additionally supported HART Remote IOs
1.05.xx	BA00071S/04/EN/ 07.14	No change	-
	BA00072S/04/EN/ 05.14	3.2.4 E-Mail setup 4.2 Assets 4.2.2 Asset library	Additionally supported HART Remote IOs Importing, exporting and updating assets Libraries and GSD files
1.06.xx	BA00071S/04/EN/ 08.15	No change	-
	BA00072S/04/EN/ 06.15	2 Assets 4.2.2 Asset library	Additionally supported HART Remote IOs Filter Asset Library, Print Asset Descriptions
1.07.xx	BA00071S/04/EN/ 09.15	Chapter 3.2.1 Chapter 5.2.5 Chapter 5.3.4	Screenshots and texts updated Screenshots and texts updated Screenshots deleted and texts updated
	BA00072S/04/EN/ 07.15	 3.1 Preliminaries 3.2.1 Network Settings 3.2.2 Date and Time 3.2.3 Tag and Location 3.2.4 E-Mail Settings 3.2.5 Firmware Update 4.1.1 PROFIBUS live list 4.3.1 Event Logging 	Screenshots and texts updated Screenshots and texts updated
1.08.xx	BA01579S/04/EN/ 01.15	New Operating Instructions 9 Process Monitor	Merging BA00072S and BA00071S

Product version	Operating Instructions	changes	Comments
1.09.xx	BA01579S/04/EN/ 02.16	Chapter 6 Chapter 12	Adjusted header on web server Error display via SG500 status in header
1.09.xx	BA01579S/04/EN/ 03.16	Screenshots and texts updated	-

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1 Document information

1.1 Document function

These instructions provide all the information required for use of the software: from the product description, installation and use to system integration, operation, diagnostics and troubleshooting to software updates and disposal.

1.2 Symbols used

1.2.1 Safety symbols

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

1.2.2 Symbols for certain types of information

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

1.2.3 Electrical symbols

Symbol	Meaning	Symbol	Meaning
	Direct current	\sim	Alternating current
∼	Direct current and alternating current	<u> </u>	Ground connection A grounded terminal which, as far as the operator is concerned, is grounded via a grounding system.
÷	Protective ground connection A terminal which must be connected to ground prior to establishing any other connections.	Ą	Equipotential connection A connection that has to be connected to the plant grounding system: This may be a potential equalization line or a star grounding system depending on national or company codes of practice.

1.2.4 Type of protection

Symbol	Meaning	
	Explosion-proof equipment which has undergone type examination 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.	
A0026000	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.	
A0026001	Safe area (non-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.	

1.3 Software icons

1.3.1 Fieldgate

Symbol	Meaning	
ఫ	Update Asset Library: Uploads a library file to the Fieldgate SFG500	
٩	Export Asset Library: Exports a library file from the Fieldgate SFG500	
GSD	Import GSD: Imports a GSD file with additional NAMUR NE107 information	
Ŷ	Filter Asset Library: Filters asset descriptions to vendor or device type	
	Edit Asset Description: Allows an existing asset description to be edited	
÷	Print Asset Descriptions: Prints individual asset descriptions	
=	Shows the connected devices in a list view	
	Shows the connected devices in a table view	

Symbol	Meaning	
	Shows the connected devices as module	
▼	Opens the subordinate live list	

1.3.2 NAMUR NE 107

Symbol	Description	
A0028390	Status OK.	
A0028391	Failure – the device is inoperative or faulty.	
A0028392	Check Function – the device is being checked, e.g. in simulation mode.	
A0028393	Out of Specification – the value that has been sent via the current output is outside of the set limits.	
A0028394	Maintenance Required – the device requires maintenance, e.g. cleaning in the case of a build up of contamination on a limit switch.	
A0028395	Not OK, Unknown – the device has diagnostic information that cannot be classified in accordance with NAMUR NE 107 because the corresponding file does not exist in the asset library.	

1.4 Text emphasis

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

1.5 Supplementary documentation

The following table lists the documents, both existing and planned, that contain information relevant to safety or instructions for the installation, commissioning and operation of the Fieldgate SFG500 and its web server. The manual PROFIBUS guidelines contains information on how to design and install a PROFIBUS network, in particular on how to ground the network in order to avoid electromagnetic interference on the bus. All of the documentation available when the product is released for distribution can be found on the Fieldgate SFG500 CD-ROM or at www.endress.com and is installed during setup under Start \rightarrow Programs \rightarrow Endress+Hauser SFG500 \rightarrow Manuals.

SFG500 documentation

Description	Document type	Description
Fieldgate SFG500; Installation and Commissioning	Operating Instructions	BA00070S/04/EN
Fieldgate SFG500; Getting Started	Operating Instructions	BA00073S/04/A2
PROFIBUS Guidelines	Operating Instructions	BA00034S/04/EN
FieldCare Project Tutorial	Operating Instructions	BA00065S/04/EN

1.6	Acronyms used
-----	---------------

Acronyms	Meaning
DCS	Distributed Control System
DHCP Server	Dynamic Host Configuration Protocol Server
CPU	Central Processing Unit
DP	Decentralized Peripheral
IP	Internet Protocol
LAN	Local Area Network
NS	Next Station
PA	Process Automation
PLC	Programmable Logic Controller
TS	This Station
UDP	User Datagram Protocol

1.7 Registered trademarks

 $\mathsf{PROFIBUS}^{\circledast}$ is a registered trademark of the $\mathsf{PROFIBUS}$ User Organization, Karlsruhe/Germany.

Microsoft[®], Windows[®], Windows 2000[®], Windows XP[®], Windows 2003 Server[®], Windows 2008 Server[®], Windows 7[®], Windows 10[®], Windows Vista[®] and the Microsoft logo are registered trademarks of the Microsoft Corporation.

Acrobat Reader[®] is a registered trade mark of Adobe Systems Incorporated.

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

2 Basic safety instructions

2.1 Requirements for personnel

The system must be installed, connected, configured, operated and maintained in accordance with the instructions in this manual and the associated manuals. In addition, the operating personal must have the necessary authorizations and appropriate qualifications.

2.2 Designated use

Fieldgate SFG500 is a system component that provides an independent access route to a PROFIBUS network. It may be used in a variety of applications that are supported by specific operating modes. The operating modes are determined by an optional memory card (Fieldgate Module SFM500).

Without memory card, Fieldgate SFG500 has the basic operating mode Access Point. In this case, it acts as an Ethernet gateway with adaptive PROFIBUS Master Class 2 capabilities to support FDT-based plant asset management host applications, e.g. FieldCare. Applications that require a memory card are being developed and will be described in separate manuals, see **Section 1.5**. $\rightarrow \cong 8$

When it is equipped with a memory card, the Fieldgate SFG500 listens to the bus traffic and presents the results in its web server. The user is able to check the status of devices according to Namur NE 107. Events on the bus can also be recorded and e-mails can be sent when specific events occur. The Asset Monitor cannot be used to carry out any device configurations except for setting PROFIBUS device addresses. To do so, the Fieldgate SFG500 must be used together with FieldCare or DeviceCare, as described in **section 5**. $\rightarrow \square 18$

2.3 Occupational safety

When using the Fieldgate SFG500 as an Access Point or an Asset Monitor, the instructions in the **BA0070S/04/EN Operating Instructions** must be followed.

2.4 Operational safety

Fieldgate SFG500 has been designed to operate safely in accordance with current technical safety and EU directives. Field devices, links, junction boxes, cables and other hardware used in conjunction with the Fieldgate SFG500 module must also be designed to operate safely in accordance with current technical safety and EU directives.

If devices are installed incorrectly or used for applications for which they are not intended, or if the Fieldgate SFG500 module is not configured correctly, it is possible that dangers may arise.

2.5 IT security

We only provide a warranty if the device is installed and used as described in the Operating Instructions. The device is equipped with security mechanisms to protect it against any inadvertent changes to the device settings.

IT security measures in line with operators' security standards and designed to provide additional protection for the device and device data transfer must be implemented by the operators themselves.

3 Function and System Design

3.1 Function

3.1.1 Access Point

Without memory card, Fieldgate SFG500 has the basic operating mode Access Point. In this mode, it functions as an Ethernet gateway with an adaptive PROFIBUS Class 2 master, and supports FDT-based plant asset management applications.

The SFGNetwork DTM is provided for use with FieldCare and offers the following functions:

- Scanning for all Fieldgate SFG500s in the same Ethernet IP address domain
- Scanning for all PROFIBUS DP/PA devices in the connected segment
- Access to the functions embedded in the web server, e.g. live list, settings etc.

The DTM is supplied as standard with FieldCare from version 2.09.xx or can be installed from the Set-up CD ROM provided with Fieldgate SFG500.

3.1.2 Asset Monitor/Process Monitor

This feature (device monitoring) is available once a Fieldgate module with the corresponding software is inserted into the memory card slot of the Fieldgate. In Asset Monitor mode, Fieldgate uses its parallel path to a PROFIBUS DP network to monitor traffic, build up a list of the bus participants and to monitor bus events.

It offers the following functions:

- Live list of the devices on the bus with status information in accordance with NAMUR NE 107
- Audit trail of device events with type of event and time stamp
- E-mail notification of bus events
- Providing cyclic and acyclic process values

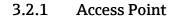
When the Fieldgate SFG500 is operating in Asset Monitor/Process Monitor mode, it can still be used together with FieldCare. Additional functions are shown in the embedded web server of the SFG500 DTM.

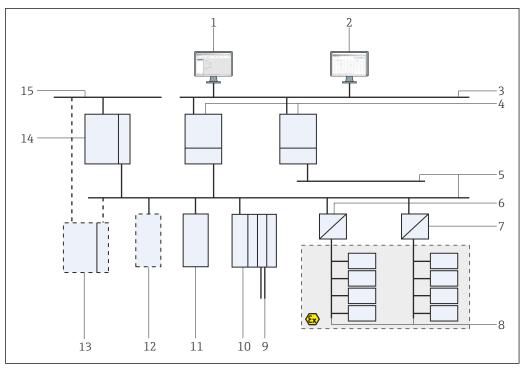
3.2 System design

A typical control network consists of a PLC or DCS system and one or more PROFIBUS DP segments. Depending on the actual circumstances, it is possible for additional Class 1 masters to be connected to the network. PROFIBUS DP slaves, remote I/Os and segment couplers or PA links are also connected to the PROFIBUS DP segment. Remote I/Os enable HART devices to be integrated into the PROFIBUS DP network, for example. Segment couplers or PA links establish a connection to PROFIBUS PA slaves and also supply them with power.

The Fieldgate SFG500 provides the Host applications with access to the data from the PROFIBUS DP segment independently of the control system via its Ethernet port. The Local Area Network (LAN) that these devices operate in can be a separate network or a part of the control network. Each Fieldgate SFG500 can establish a connection to a single PROFIBUS DP segment. If there is more than one segment in a PROFIBUS DP network, a separate SFG500 module is required for each segment.

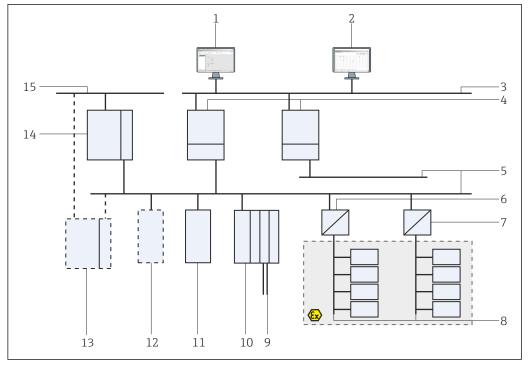
The Fieldgate SFG500 can be configured from any computer in the LAN using a web browser (e.g. Internet Explorer). LAN2 is equipped with a DHCP server, which supplies an address to a connected computer.





E 1 System architecture for Fieldgate SFG500 operating as an access point

- 1 FieldCare
- 2 Web browser
- 3 LAN1 (Ethernet)
- SFG500 PB MS2 4
- PROFIBUS DP 5
- 6
- DP/PA coupler (transparent) DP/PA coupler (not transparent) 7
- 8 PROFIBUS PA with PA slave
- HART devices downstream from remote I/O 9
- 10 DP remote I/O (HART connection)
- 11 DP slave (PA profile)
- 12 PB Class 2 master (visitor)
- PLC/DCS (additional PB Class 1 master optional) 13
- 14 PLC/DCS with PB Class 1 master
- 15 Control network



3.2.2 **Asset Monitor/Process Monitor**

€ 2 System architecture for Fieldgate SFG500 operating as an asset monitor

- 1 FieldCare
- 2 Web browser
- 3 LAN1 (Ethernet)
- 4 SFG500 PB MS2
- 5 PROFIBUS DP
- 6
- DP/PA coupler (transparent) DP/PA coupler (not transparent) 7
- 8 PROFIBUS PA with PA slave
- HART devices downstream from remote I/O 9
- 10 DP remote I/O (HART connection)
- 11 DP slave (PA profile)
- 12 PB Class 2 master (visitor)
- PLC/DCS (additional PB Class 1 master optional) 13
- 14 PLC/DCS with PB Class 1 master
- 15 Control network

4 Commissioning

- This section consists solely of information regarding physically commissioning and connecting the Fieldgate SFG500

 - For the purposes of these Operating Instructions, it is assumed that the battery has been inserted into the Fieldgate and the network is in operation.

4.1 Preparatory steps

4.1.1 Computer IP properties

The LAN1 and LAN2 interfaces of Fieldgate SFG500 allow communication with a computer via the integral Web Server.

Ensure that the following conditions are met:

- The TCP/IP Internet protocol is installed on your computer and active
- The user has administrator rights for the computer and the network
- The user has a set of IP addresses that have been authorized by the IT department
- The proxy server for the Internet browser is disabled.
- Fieldgate SFG500 is supplied with the following default:
 - LAN1: 10.126.84.100
 - LAN2: 192.168.253.1

Ensure that there is no other DHCP server in the network.

Fieldgate SFG500 acts as a DHCP server on the LAN2 service interface and will automatically assign any computer connected an IP address, provided the latter has been configured to receive it. For later use in a PROFIBUS network, the Fieldgate SFG500 normally requires a fixed address on the LAN1 operating interface. This address must be set up in the web server.



Most computers which are used in a company network will already be set up to accept an IP address from a DHCP server. If the computer is used in a control system, however, it is possible that it has a fixed address. In this case, you must set an IP address, as described in **Appendix A**. $\rightarrow \cong 51$

4.1.2 Web browser

The majority of the web browsers used in company networks operate via a proxy server. This setting must be deactivated for the computer to be able to communicate with the SFG500 web server. The procedure below applies to Windows XP and Internet Explorer 8.0.

Configuring a web server

- 1. Right-click on the icon for the **Internet browser** on the desktop and select **Properties**.
 - ← This will open the **Internet Properties** dialog window.

	Law Here		contraction of the second	ess on its own line
	nccp://en	igine, endress	.com)	4
		Jse <u>c</u> urrent	Use default	Use blank
rowsing l	history —			
5		nporary files, orm informatio	history, cookies, sa	wed passwords,
0				
	C Delete	browsing hist	ory on exit	
			Delete] <u>S</u> ettings
earch —				
earch -	Change se	arch defaults		Settings
P	Change se	arch defaults		Settings
earch -	72			
P	Change ho		are displayed in	Settings Settings
P	72			
P	Change ho tabs.			

- 2. Click on the **Connections** tab and then select **LAN Settings**.
 - └ This will open the LAN Settings dialog window.

		nfiguration may I settings, disat			gs. To ensure th ion.
Г	Automatic	ally detect sett	ings		
Г	Use autor	natic configurat	ion <u>s</u> cript		
	Address	1			1
Dro	VU CORUCE				
	xy server	vu coruor for u		e cettings	will not apply to
Г		VPN connection		e securiys	will not apply to
	Address:	proxy	Port	80	Advanced
	Runne	s proxy server	For local addr		

3. Uncheck the checkbox for the proxy server.

- └→ The x in the checkbox will be removed and the fields for the proxy server will be grayed out.
- 4. Click **OK** twice.

└ This will confirm the settings and close the Internet Properties dialog window.

The connection to the SFG500 web server can now be established.

4.2 IP address of the LAN1 interface

4.2.1 Fieldgate SFG500 IP address

1. Check to ensure that the computer is connected to the LAN1 interface via a crossover cable.



Enter and confirm the IP address 192.168.253.1. for the LAN2 interface in your Internet browser.

- ← This will open the introduction page for the web server.
- 3. Click **Login** on the menu bar.
 - ← This will disable write protection.
- 4. Enter and confirm the **user name** (admin) and the **password** (admin).

5.	Fieldgate SFG500 Ass Device Tag: PST SFG500		✓ Fieldgate status: OK	Endress+Hauser 🖽
	Start Network Assets	Process Events	Settings Information	27. Apr 2016 13:03:27 🚟 👬 Logout
	Network Settings Date and Time Tag and Location	Network Se		
	E-mail Settings Firmware Update	IP Address LAN1 Netmask LAN1 Default Gateway	255.255.255.0	
		▼DNS Settin	gs	
		Preferred DNS Alternate DNS Apply	10.126.0.10	

Click on the **Settings** tab.

- 6. Enter the required **Ethernet/IP Address**, **Network Mask** and **Default Gateway** and click **Apply**.
 - ← The changes are saved in the Fieldgate SFG500.

7. Click Log out.

← This will reactivate write protection.

4.2.2 IP address of the FieldCare computer

Before FieldCare can use Fieldgate SFG500 to connect to the PROFIBUS network, the computer on which it is running must be given an address in the same domain.

- **1.** Assign the computer an address in the same address domain as that of the Fieldgate SFG500, see **Appendix A**. $\rightarrow \cong 51$
- 2. Connect the computer to the LAN1 Ethernet interface via a crossover cable. A patch cable is required for a switch or a router.
- **3.** Test the connection using the DOS command **ping xxx.xxx.xxx**, using the address of the Fieldgate SFG500 in place of 'x'.
 - └ A FieldCare project can be started.

If there is no connection, proceed as described in the **BA00070S/04/DE Operating Instructions**.

4.3 Fieldgate SFGNetwork DTM

When Fieldgate SFG500 is used with FieldCare, it operates exclusively as a pure Access Point. For this purpose, a CD-ROM containing the DTMs and the documentation is included with the system. These DTMs must first be installed in FieldCare before FieldCare SFG500 can be used.

Installation of the SFGNetwork DTM is not necessary for FieldCare Version 2.09.xx or higher: For these versions, the SFGNetwork DTM is installed as part of the DTM library. An update is recommended, because it is possible for the Fieldgate SFG500 to be supplied with a more recent version of the SFG500 DTMs.

4.3.1 Installing the SFGNetwork DTM

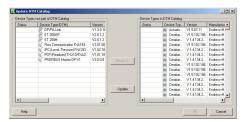
- 1. Insert the **CD-ROM** into the disk drive.
 - └ The **Setup program** will start automatically.
- 2. Click on **CommDTM** and follow the subsequent instructions.

4.3.2 Updating the FieldCare DTM catalog

- The FieldCare DTM catalog must be updated if a new DTM is installed. You require administrator rights to update the FieldCare DTM catalog.
 - If a SFGNetwork DTM was already in the catalog, it is automatically updated and does not appear as "New" in the left-hand panel.

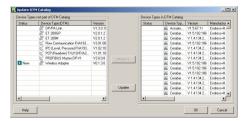
Updating the DTM catalog

- 1. Start **FieldCare** and log in as the administrator.
- 2. In the startup screen click **Continue** and in the FieldCare dialog click **Open**.
- 3. Open **DTM Catalog** and click **Update**.
 - ← The **Update DTM Catalog** dialog appears. The left-hand pane is initially empty.



4. Click Update.

➡ The search for DTMs is started. This can take a few minutes. When the search is finished, the new **DTM catalog** appears.



5. Select new **DTMs** and click **Move>>** and **OK**.

└ The **Update DTM Catalog** dialog closes and the changes are accepted.

The DTM catalog is updated.

5 DTM for Fieldgate SFG500

This chapter contains a short description of the functions obtainable via the Fieldgate SFG500 Device DTM. All functions are called by right-clicking on a connected DTM and selecting the appropriate context menu. This procedure is not illustrated by screenshots.

5.1 Configuration

5.1.1 Fieldgate SFG500 CommDTM

- ► Right-click on the **Configuration** entry in the **Network** dialog window.
 - └ The Fieldgate SFG500 Device DTM will open.

1 SFG500_DB000	01240A0 (Configuration)	
	Device Name: SFG500	(EI)
1		
Identification:	Serial Number	
Serial Number: 🍃	DB0001240A0	
و ،IP Address	10.126.84.201	
Device Tag: 🌶	/ SFG500_DB0001240A0	
Connected	💿 🚺 Database	\$ //

Meaning of the individual parameters:

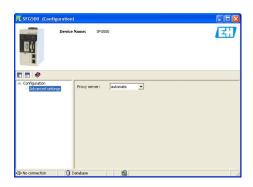
Parameters	Meaning
Identification	 If the Fieldgate SFG500 Device DTM is manually added to a network, the menu provides three options for identifying the device that the DTM is to be connected to. The Serial Number entry field is enabled: Enter the serial number of the device and press the Enter key. The connection is made and the IP address and Device Tag are displayed The IP Address entry field is enabled: Enter the IP address of the device and press the Enter key. The connection will be established and the serial number and device tag will be displayed The Device Tag entry field is enabled: Enter the device tag of the device and press the Enter key. The connection is made and the serial number and device tag will be displayed
Serial Number	Displays the serial number of the connected device. When offline, the box can also be used to reconnect to a different device, see above
IP Address	Displays the IP address of the connected device. When offline, the box can also be used to reconnect to a different device, see above
Device Tag	Displays the device tag of the connected device.When offline, the box can also be used to reconnect to a different device, see aboveIf the DTM is online, the field can also be used to change the tag of the connected device.
Start Address	The lowest address scanned during searching for participants on the bus system
End Address	The highest address scanned during searching for participants on the bus system

5.1.2 Proxy Server Configuration

The SFG500 DTM must be offline before changes can be made to settings for the proxy server.

Some dialogs of the SFG500 CommDTM are Web pages provided by the connected Fieldgate SFG500. In order to connect to the Web server, it may be necessary to configure the proxy server.

- The proxy server is configured in **Advanced Settings** in the Configuration dialog. Click on the left-hand button on the toolbar in the tree view of the **Configuration** dialog window and select **Advanced Settings**.
 - └ The proxy server can be configured.



The following options are available in the drop-down menu:

Parameters	Meaning
automatic (default)	First the system settings are used. If it is not possible to establish a connection, the no proxy server option will be used
system settings	The settings defined in the web browser will be used
no proxy	The proxy server is disabled

6 Embedded web server

From version 1.09.xx, the Fieldgate SFG500 TAG and the Fieldgate SFG500 status are displayed in the header of the web server.



Image: Book of the server o

1 Fieldgate SFG500 TAG

2 Fieldgate SFG500 status

Symbol	Description
2	Fieldgate status: OK
Ø	Internal error, please restart SFG
*	E-mail cannot be sent Test e-mail cannot be sent Time synchronization failed Baudrate not consistent No data transfer, check PROFIBUS settings A free PROFIBUS address could not be found

6.1 Embedded web server

The **Embedded Web Server** displays all of the functions of the Fieldgate web server in a DTM environment.

1. The SFG500 DTM must first be connected, as otherwise the entry will not appear in the menu.

Right-click on the SFG500 entry.

- 2. Right-click on the Additional Functions → Embedded Web Server entry.
- 3. Select the **Network** tab.
 - ← The **PROFIBUS Live List** will open.

Device Tag: SFG500 F9-2 PST PROFIBUS RACK2												
Start Network Assets	Process Even	ts Settings	Information					27.)	Apr 2016 13:11:	.40 💻 👬 Lo		
PROFIBUS Live List	PROFIBU	PROFIBUS Live List										
PROFIBUS Monitor									K 0 Diag 0 Fail	0 Off 1 SF		
PROFIBUS Settings	E Scanning of	ompleted.		46 Slav	16 Slaves (Sxxx) 35 OK 7 Diag 2 Fail 2 Off 79 Fr							
Slave Settings	#000	M001	M002	#003	#004	\$005	#006	#007	#008	\$009		
	#010	#011	S012	S013	#014	#015	S016	#017	S018	\$019		
	#020	S021	\$022	#023	S024	#025	S026	\$027	S028	\$029		
	\$030	#031	\$032	\$033	\$034	\$035	\$036	\$037	#038	\$039		
	S040	#041	S042	S043	#044	S045	S046	S047	S048	S049		
	\$050	#051	#052	#053	#054	#055	#056	#057	\$058	\$059		
	S060	S061	#062	\$063	#064	#065	S066	#067	#068	#069		
	#070	#071	#072	#073	#074	#075	#076	#077	#078	#079		
	#080	#081	#082	#083	#084	#085	#086	#087	#088	#089		
	#090	#091	\$092	#093	#094	#095	#096	#097	#098	#099		
	\$100	S101	S102	\$103	S104	\$105	#106	#107	#108	#109		
	#110	#111	#112	#113	#114	#115	#116	#117	\$118	#119		
	#120	#121	#122	\$123	#124	#125	#126					

6.1.1 PROFIBUS live list

The PROFIBUS Live List displays all devices that can be seen through the selected Fieldgate SFG500.

Table view

1. Right-click on the **Additional Functions** → **Embedded Web Server** entry.

2. Select the **Network** tab.

└ The **PROFIBUS Live List** will open.

Start Network Assets	Process Even	ts Settings	Information					27.	Apr 2016 13:11:4	40 💻 👬 Log		
PROFIBUS Live List PROFIBUS Monitor	PROFIBU	S Live Lis	t				2 Mast	er (Moox) 1 O	K O Diag O Fail	0 Off 1 SF		
PROFIBUS Settings	Scanning	completed.					46 Slav	es (Sxxx) 35 O	K 7 Diag 2 Fail	Diag 2 Fail 2 Off 79 Fre		
Slave Settings	#000	M001	M002	#003	#004	S005	#006	#007	#008	S009		
	#010	#011	S012	S013	#014	#015	S016	#017	S018	\$019		
	#020	S021	\$022	#023	S024	#025	S026	S027	S028	\$029		
	\$030	#031	\$032	\$033	\$034	\$035	\$036	\$037	#038	\$039		
	S040	#041	S042	S043	#044	S045	S046	S047	S048	S049		
	\$050	#051	#052	#053	#054	#055	#056	#057	\$058	\$059		
	S060	\$061	#062	S063	#064	#065	\$066	#067	#068	#069		
	#070	#071	#072	#073	#074	#075	#076	#077	#078	#079		
	#080	#081	#082	#083	#084	#085	#086	#087	#088	#089		
	#090	#091	\$092	#093	#094	#095	#096	#097	#098	#099		
	\$100	S101	S102	S103	S104	S105	#106	#107	#108	#109		
	#110	#111	#112	#113	#114	#115	#116	#117	S118	#119		
	#120	#121	#122	\$123	#124	#125	#126					

Meaning of the individual parameters:

Parameters	Meaning
Overview table	 Indicates the number of devices on the bus, together with their type and status Green: Device in cyclic data exchange, status OK Yellow: Device in cyclic data exchange, has diagnostic message Orange: Device failed to enter into cyclic data exchange Grey: Device is present, but not in cyclic data exchange Blue: Fieldgate SFG500
i	Shows the connected devices in a list view
	Shows the connected devices in a table view
Scanning state	Shows the number of devices the extended information (tag, diagnosis, etc.) has been read from. If the extended information has been read from all devices, Scanning completed will be displayed. In case of connecting new devices later on, only these additional devices will be displayed in the scanning state.
Live list matrix	 Displays the type and PROFIBUS address of the device. Mxxx: master with PROFIBUS address xxx Syyy: slave with PROFIBUS address yyy Color code: as in overview

List View

- 1. Click on **Show List View**.
 - └ The list of all connected devices will be displayed.

Fieldgate SFG500 Asset Device Tag: SFG500 F9-2 P		_	Fieldgate status: OK			Endr	ess+Hauser	E
Start Network Assets	Process Eve	ents Setting	gs Information				27. Apr 2016 13:22:23 🥅	Logout
PROFIBUS Live List PROFIBUS Monitor PROFIBUS Settings			ist				1 OK 0 Diag 0 Fail 0 Off 35 OK 7 Diag 2 Fail 2 Off	
Slave Settings	Slave 🔽	Ident 🔽	Device Type 🛛 🔩	Vendor	🐁 Tag		🔨 Status	*
	S005	0x8052	DP/PA-Link (IM157)	SIEMENS AG			DIAG	
	S009	0x09A8	HD2-GTR-4PA	PEPPERL+FUCHS GmbH	PB_9_5	SK3	DIAG	^
	S012	0x1551	ITEMP TMT84	Endress+Hauser	PB 12	TMT84	OK	
	S013	0x1551	ITEMP TMT84	Endress+Hauser	PB 13	TMT84	FAIL	
	S016	0x1503	FEB 24	Endress+Hauser			FAIL	
	S018	0x1541	Cerabar S	Endress+Hauser	PB 18	CERABAR S	ок	
	S019	0x1551	ITEMP TMT84	Endress+Hauser	PB 19	TMT84	OK	
	S021	0x1501	CERABAR S	Endress+Hauser	PB 21	CERABARS	DIAG	
	S022	0×1551	ITEMP TMT84	Endress+Hauser	PB 22	TMT84	OK	
	S024	0x1551	ITEMP TMT84	Endress+Hauser	PB 24	TMT84	OK	
	S026	0×1551	ITEMP TMT84	Endress+Hauser	PB 26	TMT84	OK	
	S027	0x1551	ITEMP TMT84	Endress+Hauser	PB 27	TMT84	OK	
	S028	0x1551	ITEMP TMT84	Endress+Hauser	PB 28	TMT84	OK	~
	Details of Serial Numb HW Revision SW Revision	er: AA086		L8 CERABAR S "				

2. Click on a **device**.

└ The device details will be displayed.

3. Click on **Show Grid View**.

← The **table view** will be displayed again.

Meaning of the individual parameters:

Parameters	Meaning
Overview table	 Indicates the number of devices on the bus, together with their type and status Green: Device in cyclic data exchange, status OK Yellow: Device in cyclic data exchange, has diagnostic message Orange: Device failed to enter into cyclic data exchange Grey: Device is present, but not in cyclic data exchange Blue: Fieldgate SFG500
≣	Shows the connected devices in a list view
	Shows the connected devices in a table view
Live list	
Slave	Slave ID in the PROFIBUS live list (Saaa, aaa = PROFIBUS address)
Ident	Slave device type
Device type	Manufacturer's device type identification
Serial No.	Manufacturer's serial number of the slave
Tag	Tag No. of the slave
Status	 OK: No events since last restart of live list DIAG: Device has issued a diagnostic message since last restart of live list FAIL: Device has failed since last restart of live list
Details of Slave	
Manufacturer	Manufacturer of the device
HW Revision	Revision of the installed hardware
SW Revision	Revision of the installed software

6.1.2 **PROFIBUS Monitor**

Table view

- **1.** Right-click on the **Additional Functions** → **Embedded Web Server** entry.
- 2. Select the **Network** tab.

3. Select **PROFIBUS monitor**.

└ The **PROFIBUS Live List** will open.

rt Network Assets	Process Ev	rents Settings	Information				27. Apr 2016 13:27:59 🥅 👬 Log
ROFIBUS Live List ROFIBUS Monitor ROFIBUS Settings		US Monitor 9. Apr 2016 08:14:21	Restart				(
ve Settings	Slave	🐁 Ident 👘	🛚 Status	🔽 # Inits	🛣 # Diag	🔽 Last Diagnosis Time	X
	S005	0x8052	DIAG	0	1	19. Apr 2016 08:14:42	
	S009	0x09A8	DIAG	0	1	19. Apr 2016 08:14:42	· · · · · · · · · · · · · · · · · · ·
	S012						
	S013	0x1551	FAIL	430243	0	27. Apr 2016 13:27:43	
	S016	0x1503	FAIL	0	0	19. Apr 2016 08:14:42	
	S018	0x1541	ок	0	0	19. Apr 2016 08:14:43	
	S019	0x1551	OK	0	0	19. Apr 2016 08:14:43	
	S021	0x1501	DIAG	0	1	19. Apr 2016 08:14:43	
	S022	0x1551	ОК	0	0	19. Apr 2016 08:14:43	
	S024	0×1551	ОК	0	0	19. Apr 2016 08:14:43	
	S026	0x1551	OK	0	0	19. Apr 2016 08:14:43	
	S027	0×1551	ОК	0	0	19. Apr 2016 08:14:43	
	S028	0x1551	OK	0	0	19. Apr 2016 08:14:43	
		A 4554	017	~	~		

Parameters	Meaning
Resetting	Restarts the PROFIBUS Monitor
Diagnostic table	
Slave	Slave ID in the PROFIBUS live list (Saaa, aaa = PROFIBUS address)
Ident	Slave device type
Status	 Indicates the number of devices on the bus, together with their type and status Green: Device in cyclic data exchange, status OK Yellow: Device in cyclic data exchange, has diagnostic message Orange: Device failed to enter into cyclic data exchange Grey: Device is present, but not in cyclic data exchange Blue: Fieldgate SFG500
Init	Indicates the number of device initializations since the last restart of monitor
Diag	Indicates the number of diagnostic messages since the last restart of monitor
Last Diagnosis Time	Displays the time of the last diagnostic message issued by the device: If there has been no message, the time of the last monitor restart is shown
Details of Slave	
Parameter data	Parameter string of selected slave (shown only after an initialization)
Configuration data	Configuration string of selected slave (shown only after an initialization)
Last diagnostics	Diagnosis string of selected slave (shown only after an diagnostic message)

Meaning of the individual parameters:

6.1.3 **PROFIBUS Settings**

The commissioning of the Fieldgate SFG500 is described in the **BA00070S/04/EN Operating Instructions** , Fieldgate SFG500: Installation and Commissioning.

The list of PROFIBUS settings shows the baudrate detected, the PROFIBUS address of the selected Fieldgate as well as the bus parameters identified for master class 1. The dialog window can also be used to set the bus parameters, in which case all masters in the network must be synchronized.

1. Right-click on the **Additional Functions** → **Embedded Web Server** entry.

2. Select the **Network** tab and the **PROFIBUS Settings** entry.

└ The **PROFIBUS Settings** will open.

Fieldgate SFG500 Asset Device Tag: SFG500 F9-2 P		ieldgate status: OK				Endress+Hauser 💷
Start Network Assets	Process Events Settings	Information				27. Apr 2016 13:42:21 🥅 🏭 Logout
PROFIBUS Live List	PROFIBUS Setting	js				
PROFIBUS Monitor PROFIBUS Settings	Configuration Mode					
Slave Settings	Auto Mode Manual Mode					
	Baudrate					
	Baudrate 1500 V	kBit/s				
	Address Parameters					
	Station Address Highest Station Address	2 🗸				
	Timing Parameters					
	Slot Time	1500 kB//s Parameters 40000 Stoin Address 2 Arrameters 40000 solo 158				
	Min. Station Delay Time	11	tBit		= 33.2	ms
	Max. Station Delay Time	150	tBit	Gap Update Factor	10	
	Quiet Time	0	tBit	Max. Retry Limit	1	
	Set Time	1	tBit			
	Apply active on bus					

Parameters	Meaning
Configuration M	iode
Auto Mode	The Fieldgate SFG500 determines the PROFIBUS parameters and sets its own address: The PROFIBUS parameters are displayed. Overwriting is disabled
	 The Fieldgate SFG500 sets the baudrate and its own address: The Target Rotation Time is calculated. All other parameters are recommendations, in accordance with the identified baudrate. If the parameters of the cyclical master are known, the relevant settings should be made in Manual mode.
Manual Mode	 Writing is enabled and the user can set the PROFIBUS parameters: If the data transfer rate or the PROFIBUS parameters of the Fieldgate SFG500 are changed, the same settings must be configured in all masters in the PROFIBUS network. Otherwise, communication errors will occur. When returning to Auto mode, all parameter changes of the Fieldgate SFG500 are lost: Fieldgate SFG500 determines the PROFIBUS parameters and sets its own address. The baudrate can be changed only if there is no cyclical master on the bus.
Baud rate	
Baud rate	 Indicates the baudrate detected by Fieldgate SFG500. To change the baudrate: Select Manual Mode Select a new baudrate from the pull-down menu and press Apply If the baud rate does not match the baud rate of the master, an error message will appear Returning to Auto Mode will cause all parameter changes to the Fieldgate SFG500 to be lost: Fieldgate SFG500 will determine the PROFIBUS parameters and configure its own address.
Address Parame	ters
Station Address	 This displays the PROFIBUS DP address for the Fieldgate SFG500 (Class 2 master) that the Fieldgate has selected for itself. To force a new address (0 - 126): Select Manual Mode Enter a new address and click Apply Returning to Auto Mode will cause all parameter changes to the Fieldgate SFG500 to be lost
Highest Station Address	The highest station address scanned during searching for participants on the bus system.
Timing Paramet	ers
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 Time	Minimum response time of a slave. This defines the minimum amount of time that elapses before a slave responds to a query from the master. The value in this field should be matched to the value in Quiet Time.
Max. Station Delay 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	Fade time or switching time for self-controlled repeaters. Sending and receiving telegrams must be blocked during this time.
Set 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	Token rotation time. Defines the maximum amount of time that the DP master is permitted to hold a token before relaying it. 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.

Meaning of the individual parameters:

Parameters	Meaning
Gap Update Factor	Defines a number of token cycles after which active bus participants will check for newly added participants in their GAP range. The GAP range is the range of addresses from the address of a given bus participant (TS) to the station address of the next participant (NS). Each bus participant carries out a check of this range to determine whether new participants have been added to the PROFIBUS ring after the interval defined in the GAP Update Factor has elapsed.
Max Retry Limit	Limit for repeating the data exchange. This defines how many times a slave can fail to respond to a query by a master before an error is reported.
Button	
Confirm	Applies any changes to Fieldgate SFG500

6.1.4 Slave Settings

PROFIBUS slave settings enable the user to change the address of the selected PROFIBUS device, e.g. while the network is being commissioned, see **section 11.2** $\rightarrow \Rightarrow 47$.

1. Right-click on the **Additional Functions** \rightarrow **Embedded Web Server** entry.

2. Select the **Network** tab and the **PROFIBUS Slave Settings** entry.

└ The **PROFIBUS Slave Settings** will open.

Fieldgate SFG500 Asset Device Tag: SFG500 F9-2 F		Endress+Hauser 🖽
Start Network Assets PROFIBUS Live List PROFIBUS Monitor	Process Events Settings Information PROFIBUS Slave Settings	27. Apr 2016 13:47:11 📟 🏭 Legeut
PROFIBUS Monitor PROFIBUS Settings Slave Settings	Set Device Address Current Address New Address Apply Cancel	

- **3.** In the **Current Address** field, select the device that needs to have its address changed.
- 4. In the **New Address** field, select the new address for the device.

5. Click **Apply**.

└ The changes will be saved for that device.

• If **Cancel** is selected, all changes will be discarded and the device will retain its old address.

• If it is not possible to change an address, it may be the case that the selected PROFIBUS slave device is locked.

After an address change the device concerned will no longer be connected to its DTM:

- For this reason, either change the DTM address to the address of the new device, or
- Delete all devices under the SFG500 and scan or verify the entire network again.
- Only addresses of devices that are not in cyclic data exchange can be changed.

7 Asset Monitor

7.1 Status

Asset Status List displays the current status of the PROFIBUS devices on the bus segment connected to Fieldgate SFG500. The status is categorized according to NAMUR NE 107.

Table view

- Click on the **Assets** tab and then click on **Status**.
 - └ The **Asset Status** dialog window will be displayed.

Start Network Asset	s Process Event	s Settings	Information					27. Ap	r 2016 13:52:0	6 💻 👬 Log
tatus	Asset Stat	us								
sset Library	PROFIBUS									2 5009 A 5019 2 5029 2 5039 2 5039 2 5049 2 5059 3 #069 #079
	=			Ge	eräte: 46	37	8 5	♥ 1 ▲1	🗢 0	1 2
	#000	M001	M002	#003	#004	🗑 \$005 🖾	#006	#007	#008	C000
	#010	#011	S012	\$013 Q	#004	#015	\$016 f		S018	
	#020	S021 Q	S022	#023	S024 M	#025	S026		S028 🖬	
	S030 🖬	#031	S032	S033 🖬	S034 🖬	\$035 M	\$036 E		#038	
	S040 S	#041	S042 M	\$043	#044	\$045	S046		S048 🖬	
	S050 🖬	#051	#052	#053	#054	#055	#056	#057	\$058 ▼	
	S060 🖾	S061 😳	#062	S063 😳	#064	#065	S066	#067	#068	
	#070	#071	#072	#073	#074	#075	#076	#077	#078	#079
	#080	#081	#082	#083	#084	#085	#086	#087	#088	#089
	#090	#091	S092 🖾	#093	#094	#095	#096	#097	#098	#099
	S100 🗳	S101 🖬	S102 🖬	S103 🜌	S104 🗳	S105 🔽	#106	#107	#108	#109
	#110	#111	#112	#113	#114	#115	#116	#117	S118 😳	#119
	#120	#121	#122	S123 🖬	#124	#125	#126			

Meaning of the individual parameters:

Parameters	Meaning
Overview table	Indicates the number of devices in the various NAMUR NE 107 categories
i	Shows the connected devices in a list view
	Shows the connected devices in a table view
Live list matrix	 Displays the type and PROFIBUS address of the device. Mxxx: master with PROFIBUS address xxx Syyy: slave with PROFIBUS address yyy Color: as on the PROFIBUS live list
	If a supported HART remote I/O is connected at an address, the subordinate live list of devices behind the remote I/O can be opened using the Subordinate Live List button. The following remote I/Os are currently supported: • Siemens ET200M • Siemens ET200iSP • Turck excom • Siemens DP/PA Link • ABB S900 • Stahl IS1/IS1+

List View

1. Click on the **List View** button.

└ A list of all connected devices will be displayed.

Start Network As:	ets Process Ev	rents Setti	ngs Information					27. Apr 20	16 14:03:	09 💻 👬
Status Asset Library	Asset S	tatus								
				Geräte: 46	37	8 5	V 1	<u> </u>	0	1 2
	Slave 🔽	NE107	🔽 Tag		Device	Туре	Vend	lor	~ I	dent 🔽
	S005				DP/PA-Li	ink (IM157)	SIEME	INS AG	0:	×8052
	S009	<u> </u>	PB_9_SK3		HD2-GT	R-4PA	PEPPE	RL+FUCHS	G 0	x09A8
	S012	~	PB 12 TMT84		ITEMP T	MT84	Endre	ss+Hauser	0	x1551
	S013	9	PB 13 TMT84		ITEMP T	MT84	Endre	ss+Hauser	0:	×1551
	S016	9			FEB 24		Endre	ss+Hauser	0:	×1503
	S018	2	PB 18 CERABAR S		Cerabar	S	Endre	ss+Hauser	0:	×1541
	S019	~	PB 19 TMT84		ITEMP T	MT84	Endre	ss+Hauser	0:	×1551
	S021	0	PB 21 CERABARS		CERABA	RS	Endre	ss+Hauser	0:	×1501
	S022	✓	PB 22 TMT84		ITEMP T	MT84	Endre	ss+Hauser	0	×1551
	S024	✓	PB 24 TMT84		ITEMP T	MT84	Endre	ss+Hauser	0	×1551
	S026	✓	PB 26 TMT84		ITEMP T	MT84	Endre	ss+Hauser	0	×1551
	S027		PB 27 TMT84		ITEMP T	MT84	Endre	ss+Hauser	0	x1551
	S028	2	PB 28 TMT84		ITEMP T	MT84	Endre	ss+Hauser	0	x1551
	Details o	f Slave: [5009] HD2-GTR-4PA							
			s: Out of Specification							

2. Click on a device.

└ The details will be displayed.

3. Click on the **Table View** button.

└ The devices will be displayed in the **table view** again.

Meaning of the individual parameters:

Parameters	Meaning
Overview table	Indicates the number of devices in the various NAMUR NE 107 categories
	Shows the connected devices in a list view
	Shows the connected devices in a table view
Live list	·
Slave	Device ID on the PROFIBUS live list (Saaa, aaa = PROFIBUS address)
NE 107	Device status in accordance with NAMUR NE 107
Tag	Tag number of device
Device type	Manufacturer's device type identification
Manufacturer	Manufacturer serial number of device
Ident	Device type of device
Device details	
Device status	Detailed diagnostic message of device according to NAMUR NE107

Subordinate Live List (list view)

- Click on the **Subordinate Live List** button.
 - └ The Subordinate Live List will be displayed in a list view.

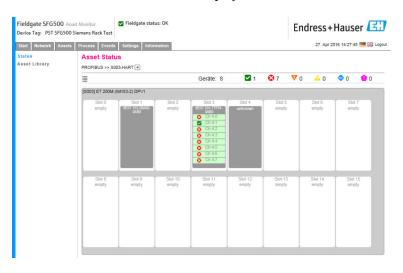
Fieldgate SFG500 Ass Device Tag: SFG500 F9-2			Fieldgate status: OK				Enc	ress+	Haus	ser 🕻	<u>41</u>
Start Network Assets	Process E	vents Se	tings Information					27. Apr 20	16 14:19:	07 💻 👬	Logout
Status	Asset S	tatus									
Asset Library	PROFIBUS	>> S005-PR	OFIBUS-PA								
				Geräte: 8	7	6 0	0 🔻	<u> </u>	0	1	
	Slave 7	NE107	🔽 Tag		The Device	Туре	🔨 Ven	dor	N 1	(dent 🥆	
	S011		PB 11 TMT84		ITEMP T				0		
	S015		PB 15 TMT84		ITEMP T	MT84	Endr	ess+Hauser	0	x1551	
	S017		PB 17 TMT84		ITEMP T	MT84	Endr	ess+Hauser	0	x1551	- 10
	S023		PB 23 TMT84		ITEMP T	MT84	Endr	ess+Hauser	0	x1551	
	S025				PROWIE	RL 73 PA	Endr	ess+Hauser	0	x153C	
	S031		PB 31 TMT84		ITEMP T	MT84	Endr	ess+Hauser	0	x1551	
	5041		PB 41 TMT84		ITEMP T	MT84	Endr	ess+Hauser	0	x1551	
	S065		PB 65 TMT84		ITEMP T	MT84	Endr	ess+Hauser	0	x1551	
											~
	Details	of Slave:	[S011] iTEMP TMT84 "	PB 11 TMT84 "							
		Device Stat									
	_		ta exchange with Master Di								

Meaning of the individual parameters:

Parameters	Meaning
Overview table	Indicates the number of devices in the various NAMUR NE 107 categories
▼	Back to overview: Returns to the superordinate list resp. table view
i	Shows the connected devices in a list view
	Shows the connected devices in a table view
:::	Shows the connected devices as module
Live list	
Slave	The remote I/O address at which the relevant device is connected
NE 107	Device status in accordance with NAMUR NE 107
Tag	Tag number of device
Device type	Manufacturer's device type identification
Manufacturer	Manufacturer serial number of device
Ident	Type of device
Details of the char	nnel
Device status	Detailed diagnostic message of device according to NAMUR NE107

Subordinate Live List (module view)

- ► Click on the **Module View** button.
 - └ The Subordinate Live List will be displayed in a module view.



This view shows the usually modular composition of a Remote IO. The supported HART modules are depicted in the corresponding slots. If a HART device is connected to a module, the corresponding channel will be highlighted in color.

The following color states are possible:

- Green: Device in cyclic data exchange, status OK
- Yellow: Device in cyclic data exchange, has diagnostic message
- Orange: Device failed to enter into cyclic data exchange
- White: No HART device connected

In addition, the device status is shown for each channel using NAMUR NE 107 symbols, see Section 1.3.2 $\rightarrow \cong 8$

Subordinate Live List (table view)

- Click on the **Table View** button.
 - └ The table view will be displayed.

Fieldgate SFG500 Asset Monitor Teledgate status: OK Device Tag: SFG500 F9-2 PST PROFIBUS RACK2							End	ress	+Haus	er 🖪	
Start Network Asset:	s Process Ever	ts Settings	Information						27. Ap	2016 15:14:	24 💻 👬 Logi
Status Asset Library	Asset Sta PROFIBUS >>	I tus S005-PROFIBUS-	PA 🖪								
	=			G	eräte: 8	7	🕴 0	V 0	<u></u> 0	0	1
	#000	#001	#002	#003	#004	#005	#006	#0	07	#008	#009
	#010	S011 🖬	#012	#013	#014	S015 🖬	#016	\$0	17 🖬	#018	#019
	#020	#021	#022	S023 🔒	#024	S025 🖬	#026	#0	27	#028	#029
	#030	S031 🗹	#032	#033	#034	#035	#036	#0	37	#038	#039
	#040	S041 🗹	#042	#043	#044	#045	#046	#0	17	#048	#049
	#050	#051	#052	#053	#054	#055	#056	#0	57	#058	#059
	#060	#061	#062	#063	#064	S065 🜌	#066	#0	57	#068	#069
	#070	#071	#072	#073	#074	#075	#076	#0	77	#078	#079
	#080	#081	#082	#083	#084	#085	#086	#0	37	#088	#089
	#090	#091	#092	#093	#094	#095	#096	#0	97	#098	#099
	#100	#101	#102	#103	#104	#105	#106	#1	07	#108	#109
	#110	#111	#112	#113	#114	#115	#116	#1	17	#118	#119
	#120	#121	#122	#123	#124	#125	#126				

The table comprises all devices behind the Siemens DP/PA Link chosen. Depening on the link configuration it is possible it shows up itself. The details of the individual parameters are to be found in the table for the Asset Status Grid.

In addition, the device status is shown for each device using NAMUR NE 107 symbols, see Section 1.3.2 $\rightarrow \cong 8$

7.2 Asset Library

Asset Library displays a list of the devices that are stored in the library and which have NAMUR NE 107 capabilities.

- 1. Click on the Assets tab and then click on Asset Library.
 - ← The **Asset Library** will be displayed.

Device Tag: SFG500 F	9-2 PST PROFIBUS RACK2							
Start Network Ass	ets Process Events Settings Information	•	27. A	pr 2016 15:20:21 🧮	Logo			
Status	Asset Library							
Asset Library	PROFIBUS V Vendor Device Type	Ŷ		130	\$\$			
	Version:1.07.01-00184 customized							
	Vendor 🍡	Device Type	🔨 Ident	🔽 Version	*			
	AUMA Riester GmbH & Co.KG	(VARIO)MATIC AUMA	0x0732	Basic				
	Lumberg Automation - Belden Deu	0940PSL001	0x04DA	Basic	^			
	BARTEC GmbH	16 x digital in Ex i	0x2903	Basic				
	BARTEC GmbH	16 x digital out	0x2901	Basic				
	Rockwell Automation	1790P-T8BV8B	0x05FB	Basic				
	Rockwell Automation	1794-APBDPV1	0x0A9A	Basic				
	Klay Instruments	2000L PA KLAY	0x04AF	Basic				
	Klay Instruments	2000P PA KLAY	0x04AE	Basic				
	Klay Instruments	2000PA Level KLAY	0x0A29	Basic				
	Klay Instruments	2000PA Pressure KLAY	0x0A2A	Basic				
	ABB	2000T ABB	0x04C2	Basic				
	Lenze	2130(4900/8600/9200)	0x0082	Basic				
	Lenze	2131(8200/9300)	0x00AA	Basic				
	Lenze	2133 (8200/9300)	0x2133	Basic				
	Eurotherm Automation	2400 Eurotherm	0x2400	Basic				
	ABB	2600T Press. Transm. 262/264	0x052B	Basic				
	SAMSON AG	3785 SAMSON	0x3785	Basic	~			

2. The drop-down menu can be used to switch between the PROFIBUS library view and the HART library view.

Parameters	Meaning
Manufacturer	Manufacturer serial number of device
Device type	Manufacturer's device type identification
Ident	Type of device
Version	Version of the asset description

7.2.1 Update Asset Library

The Asset Library consists of a list of devices that can display diagnostic information in accordance with NAMUR NE 107. Every new version of Fieldgate Asset Monitor automatically contains the latest library. For projects that require third-party devices, e.g. valves, Endress+Hauser will provide a library file that can be uploaded to the Fieldgate SFG500 via the web server as follows, or the user can upload a library file from another Fieldgate SFG500 that has been previously exported.

- 1. Click on the **Asset Library** button.
 - └ The **Asset Library** will be displayed.
- 2. Click the **Update icon**.
 - ← The **Asset Library** will be displayed.

Fieldgate SFG500 Asset Device Tag: SFG500 F9-2 F		Endress+Hauser 🖽
Start Network Assets	Process Events Settings Information	27. Apr 2016 15:28:12 🚟 🚟 Logout
Status Asset Library	Asset Library	
Asset Library	PROFIBUS Vendor Device Type	13935
	Version: 1.07.01-00184 customized Browse Update Close	

- 3. Click **Browse** and navigate to the folder in which the Asset Library is located.
- 4. Click on the file and then click **Open**.
- 5. Click Update.

The selected file will be uploaded to the Fieldgate SFG500.

🖪 A red button appears above the table.

7.2.2 Export Asset Library

In order to copy edited library contents from one Fieldgate SFG500 to another, a library can be exported.

1. Click on the Asset Library button and then click on the Export icon.

2. Select a location to save the file and click OK.

The library will be saved.

7.2.3 Import GSD

In order to add new PROFIBUS devices to a library, the **Import GSD** function can be used to upload a GSD file. The information is transferred from the GSD file to the library.

1. Click on the **Asset Library** button and then click on the **Import GSD** icon.

2. Click **Browse** and navigate to the folder in which the GSD file is located.

3. Click on the file and then click **Open**.

4. Click on **Start Import**.

The selected GSD file will be uploaded to the Fieldgate SFG500.

A red button appears above the table.

7.2.4 Filter Asset Library

Asset descriptions can be filtered to vendor or device type.

1. Click on the **Asset Library** button.

← The **Asset Library** will be displayed.

Fieldgate SFG500 Ass Device Tag: SFG500 F9-2		status: OK	Endress	+Hauser	E
Start Network Assets	Process Events Settings Inform	nation	27. A	pr 2016 15:20:21 🧮	Logout
Status	Asset Library				
Asset Library	PROFIBUS Vendor Device	Туре		130	赤赤
	Version:1.07.01-00184 customized	T		100	~~
					_
	Vendor	The Device Type	🏊 Ident	🔨 Version	
	AUMA Riester GmbH & Co.KG	(VARIO)MATIC AUMA	0x0732	Basic	~
	Lumberg Automation - Belden I		0x04DA	Basic	
	BARTEC GmbH	16 x digital in Ex i	0x2903	Basic	
	BARTEC GmbH	16 x digital out	0x2901	Basic	
	Rockwell Automation	1790P-T8BV8B	0x05FB	Basic	
	Rockwell Automation	1794-APBDPV1	0x0A9A	Basic	
	Klay Instruments	2000L PA KLAY	0x04AF	Basic	
	Klay Instruments	2000P PA KLAY	0x04AE	Basic	
	Klay Instruments	2000PA Level KLAY	0x0A29	Basic	
	Klay Instruments	2000PA Pressure KLAY	0x0A2A	Basic	
	ABB	2000T ABB	0x04C2	Basic	
	Lenze	2130(4900/8600/9200)	0x0082	Basic	
	Lenze	2131(8200/9300)	0x00AA	Basic	
	Lenze	2133 (8200/9300)	0x2133	Basic	
	Eurotherm Automation	2400 Eurotherm	0x2400	Basic	
	ABB	2600T Press, Transm, 262/264	0x052B	Basic	
	SAMSON AG	3785 SAMSON	0x3785	Basic	V

2. Click on the **Manufacturer** or **Device Type** button.

3. Enter the manufacturer or device type that is to be filtered for in the text field and click on the **Filter the Asset Library** button.

The filtered list will appear.

Fieldgate SFG500 Asset Monitor Fieldgate status: OK Device Tag: SFG500 F9-2 PST PROFIBUS RACK2		Endress+Hauser 🖪			E		
Start Network Ass	ets Process Events Settin	ngs Information		27	Apr 20	16 15:38:54 📕	Logou
Status	Asset Library						
Asset Library	PROFIBUS V	dor Device Type Stahl				130	33
	Version:1.07.01-00184 cus	tomized					
	Vendor	🔽 Device Type	*	Ident	-	Version	-
	Stahl	IS1_2		0x049A		00.00.09	

A red button appears above the table.

7.2.5 Edit Asset Descriptions

Existing asset descriptions can be changed using the editor function.

- 1. Select the file that is to be changed from the list and click on the **Open Asset Description in Editor** button.
 - └ The editor will open and display the contents of the selected asset description.
- 2. Make the necessary changes to the file and click **Apply**.

The changes are saved.

A red button appears above the table.

7.2.6 Print Asset Descriptions

Prints existing asset descriptions.

- 1. Select the file that is to be printed from the list and click on the **Print Selected Asset Description** button.
 - A new browser window will open and display the contents of the selected asset description.
 - The **Print** dialog window will open.

2. Select a printer and click **Print**.

The selected file will be printed.

8 Process Monitor

The Process Monitor enables the Fieldgate SFG500 to monitor the cyclic and acyclic process values. A configured cyclic PROFIBUS master is required for the cyclic process values. The acyclic process values do not require an additional master. The user must be logged in to make changes to the monitoring process.

- Up to four process values can be displayed in one tile
 - The background color indicates the following statuses:
 - Green: Device in cyclic data exchange, status OK
 - Yellow: Device in cyclic data exchange, has diagnostic message
 - Orange: Device failed to enter into cyclic data exchange
 - Gray: Device is not in cyclic data exchange
 - At the top right of the **tile**, the device status from the device is displayed in accordance with NAMUR NE 107.

Meaning	of the	individual	parameters:
---------	--------	------------	-------------

Parameters	Meaning
Device address	This is applied from the selection made in the drop-down menu.
Device tag	Tag number of device.
Displayed device tag	Apply or re-enter device tag.
Unit	Measuring unit of the displayed value.
Data type	This is entered automatically. However, it can also be changed by the user.
	For analog values this is DS101, and for digital values DS102, see also the operating instructions for the connected device.
Name	Designation of the value to be monitored. This can be chosen individually by the user.
Slot	See slot/index lists from the relevant device manufacturer
Index	See slot/index lists from the relevant device manufacturer
Offset	This is automatically applied following device selection. However, it can also be changed by the user. Further information can be found in the operating instructions from the relevant device manufacturer.
Length	This is automatically applied following device selection. However, it can also be changed by the user. Further information can be found in the operating instructions from the relevant device manufacturer.

8.1 **PROFIBUS DP/PA monitoring**

Monitoring cyclical process values

- 1. Click on the **Process** tab and then click on **Monitoring**.
 - └ The **Monitoring** window will be displayed.



- 2. Click on the + in the tile.
 - └ The configuration window for the tile will open.

Start Network Assets	Process Events Settings Information		27. Apr 2016 15:50:28 🥅 🟭 Logou
Monitoring	S005 V Device Address S005 Device Tag Snow Tag Monitored Value 1	Monitored Value 2	•
	Monifored Value 3	Monitored Value 4	+

- **3.** Select the device that is to be monitored from the drop-down menu and click on the **+** in the **Monitored Value** window.
 - ← The input window for **Monitored Value** will be displayed.

Fieldgate SFG500 Asset Device Tag: SFG500 F9-2 PS		Fieldgate status: OK			Endress+Hauser 🖽
Start Network Assets I Monitoring	S104 PB 10 Device Address Device Tag				27. Apr 2016 15:55:17 📟 🔡 Logout
	Monitored Valu Prozesswert Unit: Nor Datatype: DS1 Name:	1 V	×	Monitored Value 2	+
	Monitored Value	-	•	Monitored Value 4	*

4. Select the **Process Value, Unit and Data Type**, enter the **Name** and click **Apply**. The values to be monitored will be displayed.

Fieldgate SFG500 Asset Device Tag: SFG500 F9-2 F			ieldgate	e status: OK					Er	dress	s+H	auser	E
	Process Eve	nts Settings	Infor	mation						27.4	Apr 2016	16:00:18	Log
Monitoring	Pressure ou	let SD18	×	F9.2_Rack2.6	S026	×	F7.1	S005 -> S011	×	F7.1	1	S005 -> S025	×
		Pa 27.73 http://www.commune.com/page/27.73		-46.51 ^{'C} RoomTemp 0x80	nan DeviceTemp	Dx80	44.00 ^{*F} ProcessTe 0x03			0.00 Flow	m2 0x80		_
	room pressu	ire SD33	×	PB 104 TMT84	S104	×		_					
		bar 28.92	*C 0x80	-180.63		-	-	-					

Monitoring acyclical process values via Expert Mode

1. Repeat steps 1 and 2 as described above (under Monitoring cyclical process values)

- 2. Select the device that is to be monitored from the drop-down menu and click on the + in the **Monitored Value** window. Then select **Expert Mode**.

Device Tag: SFG500 F9-2	PST PROFIBUS RACK2			Endress+Hauser	
Start Network Assets	Process Events Settings Information			27. Apr 2016 16:11:25	Logout
Monitoring	S024 PB 24 TMT84 V Device Address 9034 PB 24 TMT84 Device Tag PB 24 TMT84 Shown Tag PB 24 TMT84 Monitored Value 1	×	Monitored Value 2	•	
	Expert Mode	~			
	Monitored Value 3	+	Monitored Value 4	+	

3. Select the **Slot, Index, Unit and Data Type**, enter the **Name** and click **Apply**. The values to be monitored will be displayed.

Fieldgate SFG500 Asset Device Tag: SFG500 F9-2 P		-	lgate status: OK				End	ress+	Hauser	E
Start Network Assets	Process Events	Settings	Information					27. Apr 20	16 16:17:56 📕	- 312 L
Monitoring	Pressure oulet	S018	¥ F9.2_Rack2.6	S026 ×	F7.1	\$005 -> \$011	×	F7.1	\$005 -> \$025	×
		21.10	*C -46.52 *C RoomTemp 0x80		44.00 *F ProcessTe 0x03).00 m low Dx8		
	room pressure	S033	× PB 24 TMT84	S024 ×						
		20.02	Not ava		-					

8.2 Monitoring PROFIBUS devices behind Siemens link

All process values from PROFIBUS PA devices that are configured behind the Siemens link can be monitored cyclically and acyclically.

The user must know the configuration of the cyclic master in order to be able to select the correct cyclically transferred process value in step 3. The user must also know how many process values are communicated cyclically by each device.

It is assumed that each device cyclically communicates one process value. This means that:

Addresses 1-4 exist, with a device with one process value connected to each of them. If the process value from the device with address 5 is to be monitored, process value 5 must be selected.

Monitoring cyclical process	ess values
-----------------------------	------------

- 1. Click on the **Process** tab and then click on **Monitoring**.
 - └ The **Monitoring** window will be displayed.

Fieldgate SFG500 Asset Device Tag: SFG500 F9-2 P Start Network Assets	к2	gate status: OK				En		auser 🖪
Monitoring		 F9.2_Rack2 G -46.52 RcomTemp 0 		F7.1 44.00 'F ProcessTe 0x03	S005-> S011		F7.1 0.00 m2 Flow 0x80	\$005.>> X \$025
	28.89	× c @0	÷					

- 2. Click on the + in the tile.
 - └ The configuration window for the tile will open.

Fieldgate SFG500 Asset Monitor Device Tag: SFG500 F9-2 PST PROFIBUS RACK2	Fieldgate status: OK		Endress+Hauser 🖽
Start Network Assets Process Events Monitoring S005 Device Address	Settings Information		27. Apr 2016 15:50:28 🚾 🔛 Legeut
Device Tag Shown Tag Monitored Vali		+ Monitored Value 2	+
Monitored Vali	ю 3	Monitored Value 4	+
Apply Canc.	al		

3. Select the device that is to be monitored from the drop-down menu and click on the **+** in the **Monitored Value** window.

← The input window for **Monitored Value** will be displayed.

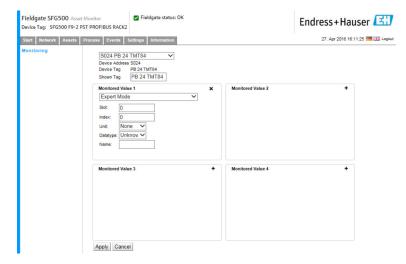
Fieldgate SFG500 Asset Monitor Device Tag: SFG500 F9-2 PST PROFIBUS RACK2	Fieldgate status: OK			Endress+Hauser	E
Monitoring	Cettings Information			27. Apr 2016 15:55:17	Logout
S104 PB 10 Device Address Device Tag Shown Tag					
Montored Wull Prozesswert Unit Nor Datatype [DS] Name:	iii v	×	Monitored Value 2	*	
Apply Cance		+	Monitored Value 4	•	

4. Select the **Process Value, Unit and Data Type**, enter the **Name** and click **Apply**. The values to be monitored will be displayed.



Monitoring acyclical process values via Expert Mode

- 1. Repeat steps 1 and 2 as described above (under Monitoring cyclical process values)
- 2. Select the device that is to be monitored from the drop-down menu and click on the + in the **Monitored Value** window. Then select **Expert Mode**.
 - ← The input window for **Monitored Value** will be displayed.



3. Select the **Slot, Index, Unit and Data Type**, enter the **Name** and click **Apply**. The values to be monitored will be displayed.



8.3 HART devices behind remote I/O

All analog process values from HART devices that are configured behind the remote I/O can be monitored cyclically.

Monitoring cyclical process values

- 1. Click on the **Process** tab and then click on **Monitoring**.
 - └ The **Monitoring** window will be displayed.

ieldgate SFG500 Asset Monitor Fieldgate status: OK evice Tag: SFG500 F9-2 PST PROFIBUS RACK2			Endress+Hauser						
Start Network Assets Monitoring	Pressure out		×	F9.2_Rack2.6 S026 ×	F7.1	S005 -> S011	×	F7.1	S005 -> × S025
		Pa 27.70 x1F Pressure T.		-46.52 *C nan RoomTemp 0x80 DeviceTemp 0x80	44.00 'F ProcessTe 0x03		-	0.00 m2 Flow 0x80	
	room pressu	re S033	×	_					
		bar 28.89 x80 seat temp	*C 0x80	+					

- 2. Click on the + in the tile.
 - └ The configuration window for the tile will open.

Fieldgate SFG500 Asset Monitor Device Tag: SFG500 F9-2 PST PROFIBUS RAG	Fieldgate status: OK			Endress+Hauser	E
Start Network Assets Process Events	Settings Information			27. Apr 2016 15:50:28	Logout
Monitoring SODS Device Add Device Tag Shown Tag Monitored		t	Monitored Value 2	•	
Monitored	value 3	+	Monitored Value 4	•	

- **3.** Select the device that is to be monitored from the drop-down menu and click on the **+** in the **Monitored Value** window.
 - ← The input window for **Monitored Value** will be displayed.

Fieldgate SFG500 Asset Monitor Device Tag: PST SFG500 Siemens Rack Test	Fieldgate status: OK		Endress+Hauser 🖾
Start Network Assets Process Events	Settings Information		27. Apr 2016 16:41:49 🧮 🔠 Logout
Device Add Device Tag Shown Tag	H4 TMT82 H4 TMT82	V	
4 mA Datatype:		X Monitored Value 2	•
Apply C		Monifored Value 4	•

The **Data Type, Offset** and **Length** are automatically entered following device selection. However, these can be changed.

4. Enter the **Unit, Measuring Range** and **Name** and click **Apply**.

The values to be monitored will be displayed.



9 Events

Event logging keeps a record of all system and device events generated on the bus.

- Click on the **Event** tab and then click on **Event Logging**.
 - └ The **Event Logging** window will be displayed.

Start Network Assets	Process Events Settings	Information		28	Apr 2016 08	:09:00 💻 🔠	100
		Information		20	Apr 2010 00		, cog
Event Logging	Event Logging						
	Event Logging: Started Refre	esh 🔀			Start	Stop CI	lear
	Timestamp	Category	Message	🛣 Addr 🛛 🛰	Ident 🐾	NE107 7	
	12. Apr 2016 12:43:15	Asset	Diagnosis changed	S100	0x1552	9	
	12. Apr 2016 12:43:14	Asset	Diagnosis changed	S004	0x8052		
	12. Apr 2016 12:43:13						
	12. Apr 2016 12:43:12	Network	Device appeared	S004 -> S026			
	12. Apr 2016 12:43:12	Network	Device appeared	S004 -> S025			
	12. Apr 2016 12:43:12	Network	Device appeared	S004 -> S024			
	12. Apr 2016 12:43:12	Network	Device appeared	S004 -> S021			
	12. Apr 2016 12:43:12	Network	Device appeared	S004 -> S020			
	12. Apr 2016 12:43:12	Network	Device appeared	S004 -> S019			
	12. Apr 2016 12:43:12	Network	Device appeared	S004 -> S018			
	12. Apr 2016 12:43:12	Network	Device appeared	S004 -> S017			
	12. Apr 2016 12:43:12	Network	Device appeared	S004 -> S016			
	12. Apr 2016 12:43:12	Network	Device appeared	S004 -> S015			`
	Event Details: [12. Apr	2016 12:43:1	3] S003 ET 200M (IM153-2) DPV1				
	Device Status: OF	(3 00 00 08 82 00 00					

Parameters	Meaning			
Start	Starts the event logging			
Stop button	Stops the event logging			
Delete	Deletes all logging events			
Update	Updates the web page with the latest logged events			
X	 The events logged can be exported into an Excel file. Depending on the number of events, the export process may take some time. The exported Excel file format is supported from Excel 2007 (Windows) and Excel 2008 (Macintosh) by default. A compatibility pack for older Excel versions (Microsoft Office 2003, Microsoft Office XP, Microsoft Office 2000) is available for download from Microsoft. 			

10 Settings and information

10.1 Settings

The time and date, e-mail settings as well as the IP address of the Fieldgate SFG500 can be changed in the Settings tab. These parameters are usually configured during the commissioning process. The firmware update is described in the same manual, see the **BA00070S/04/EN Operating Instructions**.

10.1.1 Network Settings

For all operating modes, the IP address of LAN1 must be set to one reachable by the other system components.

1. Select the **Settings** tab.

└ The **Network Settings** will open.

Fieldgate SFG500 A Device Tag: PST SFG500		Fieldgate status: OK	Endress+Hauser
Start Network Asset	s Process Events	Settings Information	27. Apr 2016 13:03:27 🔤 🔯 Logout
Network Settings	Network Set	tings	
Date and Time Tag and Location	LAN1 Setting		
E-mail Settings	IP Address LAN1	10.126.100.11	
Firmware Update	Netmask LAN1	255.255.255.0	
	Default Gateway	10.126.100.1	
	▼DNS Setting	5	
	Preferred DNS	10.126.0.10	
	Alternate DNS		
	Apply		

2. Enter the **Ethernet IP Address**, **Network Mask** and **Default Gateway** and click **Apply**.

The changes are saved in the Fieldgate SFG500.

A restart is then necessary.

Meaning of the individual parameters:

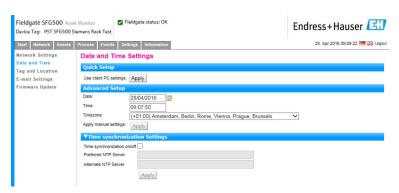
Parameters	Meaning
IP Address LAN1	IP address to be used for the LAN1 port of the Fieldgate SFG500.
Network Mask	Network mask of sub-network in which the Fieldgate SFG500 is integrated.
Default Gateway	IP address of the default gateway of the sub-network in which the Fieldgate SFG500 is integrated.
Preferred DNS	IP address of the preferred name server.
Alternative DNS	IP address of the alternative name server.

10.1.2 Date and Time

The date and time stored in the Fieldgate can also be changed in the Settings tab.

1. Select the **Settings** tab, then select **Date and Time**.

└ The **Date and Time** settings will open.



2. Under Advanced Setup, enter the date and time as well as a timezone and click **Apply**. Alternatively, click **Apply** under Quick Setup.

The changes are saved in the Fieldgate SFG500.

Meaning of the individual parameters:

Parameters	Meaning				
Quick Setup					
Confirm	Click Apply to apply the settings of the connected computer to the Fieldgate SFG500.				
Advanced Setup					
Date	Enter the current time.				
Time	Enter the time where the Fieldgate SFG500 is located.				
Timezone	Enter the time zone in which the Fieldgate is located.				
Time Synchronization	Settings				
Time synchronization	Activation/deactivation of the time synchronization function.				
Preferred NTP	IP address of the preferred time server.				
Alternative NTP	IP address of the alternative time server.				

10.1.3 SFG Tag and Location

Tag and Location displays the Fieldgate Device Tag and allows user information on its location etc. to be stored in the Fieldgate.

- 1. Select the **Settings** tab, then select **SFG Tag and Location**.
 - ← The **Tag and Location Settings** will open.

Fieldgate SFG500 Ass Device Tag: PST SFG500 S		Fieldgate status: OK	Endress+Hauser 🖾
Start Network Assets	Process Event	s Settings Information	28. Apr 2016 09:23:15 📑 🔛 Logout
Network Settings Date and Time Tag and Location E-mail Settings	Tag and L SFG500 Ide Device Tag:	ocation Settings stiffication PST SFG500 Siemens Rack Test	
Firmware Update	Additional	Information	
	Location: Contact:	F9-2-2 PST Lab Test Arno Schueler Test	^
	Description:	Test SFG for development, not released firmwar Test	e!
	Apply		*

2. Enter the Location, Contact and Description and click Apply.

The changes are saved in the Fieldgate SFG500.

Meaning of the individual parameters:

Parameters	Meaning					
SG500 Identi	SG500 Identification					
Tag	Displays the device tag of the Fieldgate SFG500.					
Additional in	Iformation					
Location	User information on the location of the Fieldgate.					
	 The following characters are permitted for the Fieldgate identification (= name of Fieldgate): Letters from a to z and A to Z (regardless of capitalization) Numbers from 0 to 9 Special characters, e.g. (= period) and - (= minus), but never as the first character 					
	All other characters are not permitted. This includes German umlauts and symbols such as & .					
Contact	User data on the person responsible for Fieldgate SFG500, e.g. name, e-mail address					
Description	User description of the Fieldgate SFG500, e.g. position in network					

10.1.4 E-mail Settings

E-mail service

E-mail Settings allows setting the messaging services for device and bus incidences.

Select the Settings tab and then select E-mail Settings → E-mail service.
 The E-mail service will open.

Fieldgate SFG500 As Device Tag: PST SFG500		gate status: OK	Endress+Hauser 🖽
Start Network Assets	s Process Events Setting	Information	28. Apr 2016 09:28:49 🥅 🔡 Logout
Network Settings Date and Time	E-mail Settings		
Tag and Location E-mail Settings Firmware Update	E-mail service On/Off: E-mail send trigger	Ctime based Sevent based	
	Check E-mail On/Off: E-mail check interval:	1 Day	

The user must be logged in to apply changes.
 Make the necessary changes to the settings and click **Apply**.

The changes are saved in the Fieldgate SFG500.

Parameters	Meaning
E-mail service On/Off	Select whether e-mails are to be sent.
E-mail trigger	Specify when e-mails are to be sent: Time-based: E-mails are to be sent at defined times. Event-based: E-mails are sent following defined events.
E-Mail Interval	Specify an interval after which an e-mail is to be sent. The input is optionally in minutes, hours or days.
Check E-Mail On/Off	Select whether a test e-mail is to be sent if no events that would cause an e-mail to be sent occur over the course of an interval as specified above.
E-Mail Check interval	This displays the interval after which a check e-mail will be sent. This interval depends on the defined e-mail interval, but is never less than one day.

Event filter

E-mail Settings allows setting the messaging services for device and bus incidences.

Select the Settings tab and then select E-mail Settings → Event Filter.
 The Event Filter will open.

Start Network Asset	ts Process Events Settings Information	28. Apr 2016 09:34:22 🚟 👬 Log
Network Settings	E-mail Settings	
Date and Time Tag and Location	▼E-mail service	
E-mail Settings Firmware Update	E-mail service On/Off: E-mail send trigger ©event based	
	Check E-mail On/Off: E-mail check interval: 1 Day (5)	
	EventFilter	
	▼ Event Filter options ► Network ► Asset ► User ► System	^ ~

2. Make any necessary changes.

Meaning of the individual parameters:

Parameters	Meaning
EventFilter	Select the events that will trigger an e-mail to be sent when they occur.

SMTP Server Settings, E-mail addresses and subject

- Select the Settings tab and then select E-mail Settings → SMTP Server Settings/Email addresses and subject.
 - SMTP Server Settings/E-mail addresses and subject will open.

Fieldgate SFG500 As Device Tag: PST SFG500		Fieldgate status: OK	Endress+Hauser 🖽
Start Network Assets	Process Events	Settings Information	28. Apr 2016 09:45:54 🔜 📷 Logout
Network Settings	E-mail Sett	ings	
Date and Time	► E-mail ser	vice	
Tag and Location E-mail Settings	▼SMTP Serv	ver Settings	
Firmware Update	Server:	10.126.100.16	
	Port:	587	
	Authentication:		
	Account:		
	Password:		
	▼E-mail add	resses and subject	
	Sender:	sfgtestuser1@sfgdev.local	
	Recipient 1:	sfgtestuser1@sfgdev.local	
	Recipient 2:	sfgtestuser2@sfgdev.local	
	Recipient 3:		
	Recipient 4:		
	Recipient 5:		
	Subject:	saf	
	Apply Sen	d testmail	

2. Make the necessary changes to the settings and click **Apply**. **Send testmail** can be used to test the settings.

The changes are saved in the Fieldgate SFG500.

Parameters	Meaning	
STMP Server Settings		
Address	Specify the URL of the e-mail server or the IP address of the SMTP server (e-mail server). A DBS server must be set for the URL.	
Port	Enter the number of the port that provides access to the e-mail server.	

Parameters	Meaning			
Authentication	Check this box if the SMTP gateway requires authentication.			
User Name	If authentication is required for the specified SMTP gateway, enter the user name here. If authentication is not required, leave this field blank.			
Password	If authentication is required for the specified SMTP gateway, enter the password here. If authentication is not required, leave this field blank.			
E-mail addresses and subject				
Sender	Enter the sender address of the Fieldgate here, e.g. fieldgate@company.com. 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. Where the sender address is freely selectable, choose a serious address to avoid trouble with spam filters.			
Recipient 1 - Recipient 5	Enter the recipients of the e-mails here, e.g. name@company.com.			
Subject	Enter the text for the subject line of the e-mails here.			

10.1.5 Firmware update and restart

Fieldgate SFG500 Asser Device Tag: PST SFG500 Si		Endress+Hauser 🖽
Start Network Assets	Process Events Settings Information	28. Apr 2016 09:47:50 🥅 识 Logout
Network Settings	Firmware Update	
Date and Time Tag and Location	Current Installed Version	
E-mail Settings	Version: 01.09.00-03200	
Firmware Update	Update	
	Browse Start	
	Restart of SFG	
	Restart	

10.2 Information

The Information tab displays the information stored on the Electronic nameplate of Fieldgate SFG500 and where of Fieldgate Module SFM500.

Fieldgate SFG500 Asset M Device Tag: PST SFG500 Siem		Endress+Hauser 🖾
Start Network Assets Pro	cess Events Settings Information	28. Apr 2016 09:52:37 💻 👯 Logout
Device Identification	evice Identification	
	Fieldgate SFG500	
	Device Tag: PST SFG500 Siemens Rack Test Order Code: 71116672 Serial Number: 160049240A0 Software Version: 01.09.00 ENP Version: 2.02.00	
	Fieldgate Module SFM500	
	Operation Mode: Asset Monitor Order Codes: SPMS00-A1 Senis Number: EB0001240A0 Senis Number: EB0001240A0 Senis Version: 2.02.00	
e	Endress+Hauser Credits	

11 Additional functions

11.1 Communication dialog

The communication log provides a record of all transactions on the PROFIBUS network and can be used for diagnosing communication faults. It starts automatically on call up.

1. Right-click on the **Additional Functions** → **Communication Dialog** entry.

← The **Communication log** dialog window will open.

	Stop	Clear	Enable log file
Logging Settings			
Log started Pfresponse (01.10) PBresponse (01.10)			

2. Click on the **Settings** tab.

└ The **Settings** tab will open.

	Stop	Clear	Enable log file
Logging Settings			
Filter settings			
Information			
✓ Warning			
Error			
Comment			
✓ Status			

3. Changes to the settings can now be made.

Parameters	Meaning
Protocol	Shows the communication log Starts automatically on call up After a log has been cleared, press the Start button to restart logging
Settings	Sets the filters for the events to be logged Information: logs all information messages Warning: logs all warning messages Error: logs all error messages Comment: Logs all comments Status: logs all status messages
Start	Starts the log again after it has been cleared
Delete	Deletes the current log and stops logging
Save	 Saves all new log events. The Save as page will open: From there, navigate to the required directory Enter a File name and then click Save.

11.2 Set Device Address (PB Address)

The **Set Device Address** function enables the user to change the address of the selected PROFIBUS device, e.g. during commissioning of the network.

Right-click on the Additional Functions → Set Device Address entry. The PROFIBUS Slave Settings will open.

Fieldgate SFG500 Asso Device Tag: SFG500 F9-2		Fieldgate status: OK	Endress+Hauser 🖽
Start Network Assets PROFIBUS Live List PROFIBUS Monitor	Process Events So PROFIBUS Sizes Set Device Addr	ave Settings	27. Apr 2016 13:47;11 💻 🔀 Logout
PROFIBUS Settings Slave Settings	Current Address - New Address - Apply Cancel		

2. In the **Current Address** field, select the device that needs to have its address changed.

3. In the **New Address** field, select the new address for the device.

4. Click Apply.

└ The changes will be saved for that device.

11.3 Set DTM Address

The **Set DTM Address** function enables the user to change the address in the DTM to match the physical device, e.g. the tag in PROFIBUS networks. The function is not relevant to FieldCare as this is done during a network scan but might be required for other FDT frames.

- ▶ Right-click on the SFG500 entry, then select Additional Functions → Set DTM Address.
 - ← The Set DTM Address dialog window will open.

Device Name:	SPG500	13
1 🗃 🤣		Update
Device Name	Device Tag	Address
Temp / TMT 184 / PA / V1.01.1	TT1001	3
Deltapilot S / FEB 24 / PA / V2.0V2.2	LT1002	5
Prosonic M / FMU4x / PA / V4.xx	LT1003	6
	PT1004	8
Cerabar 5 / PMx x3x / PA / ¥2.0¥2.2		

Parameters	Meaning
Device name	Shows the device and firmware version associated with the DTM
Device Tag	Shows the device tag of each device connected to the selected Fieldgate SFG500: To change the device tag, enter the new designation and then click Update .
Address	Shows the PROFIBUS address of each device connected to the selected Fieldgate SFG500: To change the device tag, enter the new designation and then click Update .
Update	Downloads the any changes in device tag or address to the DTM

11.4 Help

The Help function displays the Operating Instructions for the Fieldgate SFG500.

- ► Right-click on the **SFG500** and select **Additional Functions** → **Help**.
 - ← The **BA01579S/04/DE Operating Instructions** will be opened as a PDF.

11.5 About

The **About** function displays information about the Fieldgate SFG500 and the DTM.

- ► Right-click on the **SFG500** and select **Additional Functions** → **About**.
 - └ The **About** dialog window will open.

3500 (About)	
Manufacturer:	Endress+Hauser
Device:	SFG500
Classification:	DTM_SPECIFIC
DTM:	01.00.05
Device type:	V91
Compiled:	02.10.2012 00:00:00
This DTM (was developed by CodeWrights (c) 2012
	Close

12 Troubleshooting

12.1 FieldCare

Problem	Cause/Remedy
SFGNetwork DTM not available in DTM library	The FieldCare version does not support Fieldgate SFG500: Install Fieldgate DTMs from CD-ROM supplied Updating the DTM catalog
SFGNetwork DTM cannot find Fieldgate SFG500	 No connection (general) Check all Ethernet connections Check to ensure that the Fieldgate SFG500 is switched on Check to ensure that the IP address ranges of the computer and the Fieldgate SFG500 match (a simple test is to use the web browser or a ping) Check to ensure that communication is not blocked by a firewall Check to ensure that the Microsoft SQL server is running No connection after network scan (additional remedies) Check to ensure that the PC and the Fieldgate SFG500 are in the same logical network (ping) If not, check to ensure that the following router ports are activated (see also Appendix B) UDP 60020: From the SFG500 network to the computer TCP 60010: In both directions No connection after manual connect (additional remedies) Check whether there are any pending error messages in FieldCare Check to ensure that the CommDTM configuration is correct – is the entered parameter correct (IP address, tag, serial number)?
SFG500 DTM cannot find PROFIBUS device(s)	No connection - Is the device on the live list? - Check all PROFIBUS connections - Check to ensure that the device is switched on - Check to ensure that the device has a unique PROFIBUS address - Check to ensure that the bus has the correct terminations - Has the scanning process been completed?
Device(s) connected to link cannot be seen	No connection - Check to ensure that the link CommDTM is in place and property configured - Check all PROFIBUS connections - Check to ensure that the device is switched on - Check to ensure that the device has a unique PROFIBUS address - Check to ensure that the bus has the correct terminations
Device(s) connected to a Remote I/O cannot be seen	 No connection Check to ensure that the Remote I/O CommDTM is available, licensed and properly configured Check all HART connections Check to ensure that the device is switched on

12.2 Faults indicated by the LEDs on the SFG500

Problem	Cause/Remedy
The Power LED is not lit.	 No power: Check to ensure that the power cable is correctly wired Check to ensure that the supply voltage corresponds to the voltage indicated on the nameplate Check to ensure that the power is switched on Application of a supply voltage that is too high for the device causes the internal fuse to blow Return the Fieldgate SFG500 to Endress+Hauser for repair
The Failure LED is lit or flashing.	 There is a serious problem in the CPU or the device is unable to start up Switch off the power supply, wait 30 seconds, then switch it back on again If the Failure LED is still lit: Return the Fieldgate SFG500 to Endress+Hauser for repair

Problem	Cause/Remedy
The PB Err LED is lit.	 PROFIBUS network has malfunctioned: Check to ensure that the bus has the correct terminations (on both ends) Verify that all master bus parameters are identical. Check to ensure that the bus is wired correctly
The LED LAN1 or LAN2 is not flashing even though the interface is wired.	 Wiring or link error: Check the wiring Check to ensure that the communication partner is switched on Check to ensure that the IP address has been set properly: LAN1: Fixed IP address in the network domain LAN2: Address is assigned by DHCP

12.3 PROFIBUS communication faults

Problem	Cause/Remedy
The Fieldgate SFG500 cannot establish a connection to the PROFIBUS DP segment.	 Wiring or link error: Check to ensure that the PROFIBUS DP segment has the correct terminations (at both ends). Check the wiring Check to ensure that there are not two instances of the same station address Check to ensure that all of the master bus parameters are identical If necessary, adjust the Token Rotation Time
A device does not appear in the live list.	 Communication error: Another device has the same address The device was not started up The device does not support automatic detection of the baud rate Set the correct baud rate The device is connected to a link that is not transparent (normal behavior)

12.4 Faults displayed by the web server

Problem	Cause/Remedy
A0028391	Internal error: Restart the Fieldgate SFG500, see section $10.1.5 \rightarrow \square 45$
A0028394	 E-mail cannot be sent: Check e-mail settings, see section 10.1.4 → ⁽¹⁾ 43 Check e-mail settings with the internal system administrator
	 Test e-mail cannot be sent: Check e-mail settings, see section 10.1.4 → ⁽¹⁾ 43 Check e-mail settings with the internal system administrator
	 Time synchronization failed: Check date and time settings, see section 10.1.2 →
	 Baudrate not consistent: Check baudrate setting, see section 6.1.3 → ^B 23 If no cyclical master is present, change the configuration type from Auto mode to Manual mode. In the case of a cyclical master, verify that all master bus parameters are identical.
	 No data transfer, check PROFIBUS settings: Check PROFIBUS settings, see section 6.1.3. → ⁽¹⁾ 23 Check the wiring
	A free PROFIBUS address could not be found. Extend the Highest Station Address parameter in the cyclical master, see section 6.1.3. $\rightarrow \square$ 23

13 Appendix

13.1 Appendix A - Computer IP settings

• Administrator rights might be needed to be able to change the IP settings of the computer. If this is the case, please contact your system administrator.

• The procedure described in this chapter refers to Windows XP. Please contact your system administrator for other Windows systems.

Most computers which are used in a company network will already be set up to accept an IP address from a DHCP server. If the computer is used in a control system, however, it is possible that it has a fixed address. If this is the case, please proceed as follows:

Procedure for Windows XP

1. Click Start → Settings → Control Panel → Network Connections.

← The **Network Connections** dialog will open.

<u>File Edit View Favorites Iools Adv</u>	anced Help			1
🔇 Back 🔹 🕥 🔹 🎓 🖉 Search [🔁 Folders 🛛 🔝 🎲 🗙 🖡	9 💷 -		
Address 🔕 Network Connections			- E	Go
Name	Туре	Status	Device Name	Phone
LAN or High-Speed Internet	LAN or High-Speed Inter	Connected, Firewalled	Broadcom NetXtreme 57	
Wizard				

- 2. Right-click the **LAN Connection** \rightarrow **Properties** tab.
 - └ This will open the Local Area Connection Properties dialog.

onnect using:		
📴 Broadcom NetX	treme 57xx Gigabit C	<u>C</u> onfigure
nis connection uses I	the following items:	
🗹 📙 QoS Packet :		-
Network Mon Internet Proto		
1		
Install	Uninstall	Properties
Description Transmission Contro	ol Protocol/Internet Pro	
Description Transmission Contro wide area network p		
Description Transmission Contro wide area network p across diverse inter	ol Protocol/Internet Pro protocol that provides connected networks.	communication
Description Transmission Contro wide area network p across diverse inter Sho <u>w</u> icon in notifi	ol Protocol/Internet Pro protocol that provides	communication nected

- 3. Double-click Internet Protocol (TCP/IP).
 - → This will open the Internet Protocol Properties (TCP/IP) dialog.

	d automatically if your network supports eed to ask your network administrator fo
Obtain an IP address auto	matically
Use the following IP addre	988:
[P address:	
Subnet mask:	
Default gateway:	
Obtain DNS server addres	ss automatically
C Use the following DNS ser	rver addresses:
Ereferred DNS server	· · · · · ·
Alternate DNS server:	
	Ad⊻anced

- 4. Note the addresses that have been assigned to the computer. You will need them later if the computer is reset after commissioning the SFG500.
- 5. Click Obtain an IP Address Automatically.
- 6. Click OK.
 - Your selection is confirmed and the Internet Protocol Properties (TCP/IP) dialog is closed.
- 7. Click OK.
 - ➡ This will close the Local Area Connection Properties dialog.

Once the Fieldgate SFG500 has been set up, the computer can be reset to its original IP address as described below:

Resetting the fixed IP address

- 1. Repeat steps 1-3 of the procedure above.
- 2. In the **Internet Protocol Properties (TCP/IP)** dialog, select the **Use the Following IP** Address option.
- 3. Enter the settings you noted down in step 4.
- 4. Click OK.
 - Your selection is confirmed and the Internet Protocol Properties (TCP/IP) dialog is closed.

5. Click **OK**.

← This will close the **Local Area Connection Properties** dialog.

13.2 Appendix B - Windows firewall

If firewalls are used on the computers on which FieldCare is installed, they must be configured to allow mutual access. As firewall configuration is often a matter of company IT security policy, ask the system administrator before changing the settings. In addition, administrator rights are needed to be able to configure the firewall.

1. Click Start \rightarrow Settings \rightarrow Control Panel \rightarrow Windows Firewall.

- 2. Select the **Exceptions** tab and specify the exceptions at two levels.
- 3. For **Add Program**, specify which applications are able to respond to voluntary requests.

4. For **Add Port**, specify that the firewall should allow TCP traffic at the ports used by the server.

5. Select the **General** tab and click **On** to activate the firewall.

Communication ports

Ports available for Fieldgate SFG500:

Port No.	ID	Meaning
TCP 60010	TCP_PCPS2_SFG500_PORT	-
UDP 60015	UDP_IDENTIFY_PORT	-
UDP 60020	UDP_ANNUNC_PORT	-

Index

A

Asset Library
Date and Time
E 43 Electrical symbols 6 Events 40
F FieldCare
I IP address
L LAN1 port
PProcess MonitorPROFIBUS Monitor22
R Restart
S Safety instructions
Web browser

www.addresses.endress.com

