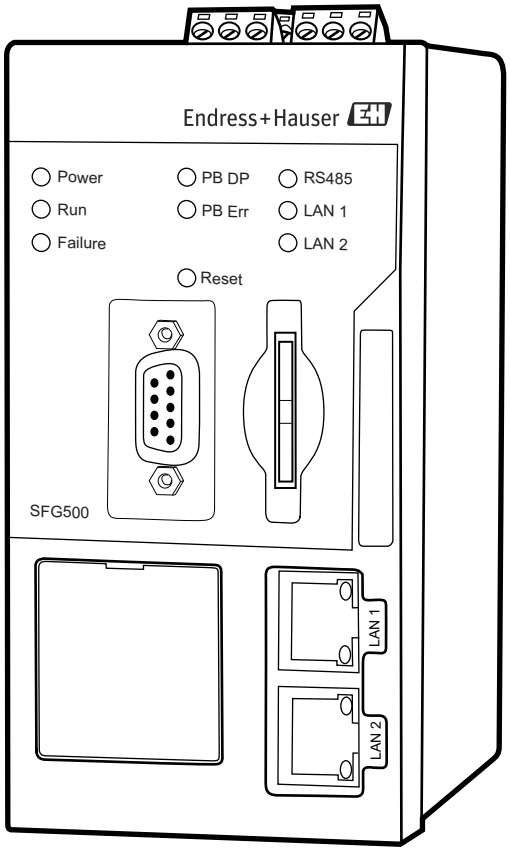
BA00072S/04/EN/07.15
Product Version 1.07.xx
71293275

Operating Instructions
Fieldgate SFG500/SFM500
Operation as Asset Monitor



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Revision History

Product version	Manual	Changes	Remarks
1.01.xx	BA00072S/04/EN/01.13	Original manual	
1.02.xx	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	BA00072S/04/EN/03.14	3.2.4 E-mail Settings 4.2 Assets	Options for e-mail messaging Grid view
1.04.xx	BA00072S/04/EN/04.14	4.2 Assets	Additionally supported HART Remote IOs
1.05.xx	BA00072S/04/EN/05.14	3.2.4 E-Mail setup 4.2 Assets 4.2.2 Asset library	Additionally supported HART Remote IOs Import, export, update of asset libraries and GSD files
1.06.xx	BA00072S/04/EN/06.15	4.2 Assets 4.2.2 Asset library	Additionally supported HART Remote IOs Filter Asset Library, Print Asset Descriptions
1.07.xx	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 updated Screenshots and texts updated Screenshots and texts updated Screenshots updated Screenshots and texts updated Screenshots updated Screenshots and texts updated Screenshots and texts updated

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1 Safety

1.1 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).

With Fieldgate Module "Asset Monitor", Fieldgate SFG500 listens to PROFIBUS 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 network can also be logged, and e-mails sent if particular conditions are met. Apart from setting PROFIBUS device addresses, Asset Monitor cannot be used to configure devices. In this case Fieldgate SFG500 must be used together with FieldCare as described in Operating Instructions BA00071S/04/EN.

1.2 Installation, commissioning and operation

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. For this reason, the system must be installed, connected, configured, operated and maintained according to the instructions in this and the associated manuals: personnel must be authorised and suitably qualified.

1.3 Operational safety

When using Fieldgate SFG500 as an Asset Monitor, the instructions in Chapter 1.3 of BA0070S/04/EN, Fieldgate SFG500: Installation and Commissioning, shall be observed.

1.4 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.

1.5 Supplementary documentation

Table 1-1 indicates the documents, planned and realized, containing safety relevant information, installation, commissioning and operating instructions for 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 documentation available at the time of release is included on the Fieldgate SFG500 CD-ROM and can be installed by default in **Start=>Programs=>Endress+Hauser=Fieldgate SFG500=>Manuals** from it.

Tab. 1-1: Fieldgate SFG500 Documentation

Description	Document type	Designation	Order No.
Fieldgate SFG500; Installation and Commissioning	Operating manual	BA00070S/04/EN	71293271
Fieldgate SFG500; Operation as Access Point	Operating manual	BA00071S/04/EN	71293273
Fieldgate SFG500; Operation as Asset Monitor	Operating manual	BA00072S/04/EN	71293275
Fieldgate SFG500; Operation as Process Monitor	Operating manual	BA00074S/04/EN	–
Fieldgate SFG500; Getting Started	Operating manual	BA00073S/04/A2	71293265
PROFIBUS Guidelines	Operating manual	BA00034S/04/EN	56004242

1.6 Conventions and icons

In order to highlight safety relevant or alternative operating procedures in the manual, the following conventions have been used, each indicated by a corresponding icon in the margin.

Safety conventions

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

Explosion protection

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

Electrical symbols

Icon	Meaning
	**Direct voltage** A terminal to which or from which a direct current or voltage may be applied or supplied
	**Alternating voltage** A terminal to which or from which an alternating (sine-wave) current or voltage may be applied or supplied
	**Grounded terminal (FE)** A grounded terminal, which as far as the operator is concerned, is already grounded by means of an earth grounding system
	**Protective grounding (earth) terminal** A terminal which must be connected to earth ground prior to making any other connection to the equipment
	**Signal ground (GND)** A terminal on to which the shield of a signal cable can be connected
	**Equipotential connection (earth bonding)** A connection made to the plant grounding system which may be of type e.g. neutral star or equipotential line according to national or company practice
	**Electrostatic discharge** A terminal or location at which an electrostatic discharge might cause damage to the module circuitry

2 Function and System Design

2.1 Function

The Asset Monitor functionality of Fieldgate SFG500 is obtained when a Fieldgate Module SFM500 with corresponding software is inserted in its memory card slot. 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 all device on the bus with status information to Namur NE 107
- Audit trail of device events with type of event and time stamp
- E-mail notification of device events

When Fieldgate SFG500 is operating in Asset Monitoring mode, it can still be used together with FieldCare. The additional functions are presented in the "Embedded Web Server" feature of the SFG500 DTM, see Operation Instructions BA00071S/04/EN, Fieldgate SFG500: Operation as Access Point.

2.2 System design

Fig. 2.1 shows Fieldgate SFG500 operating as an Asset Monitor in a PROFIBUS network.

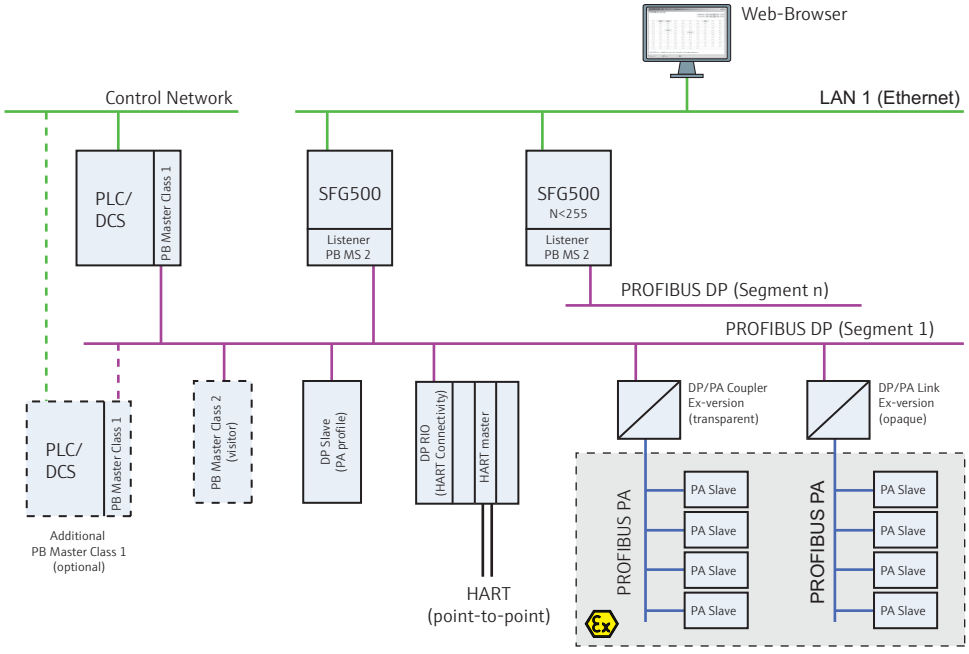


Fig. 2-1: System architecture for Fieldgate SFG500 operating as an asset monitor

The control network comprises one or more PLCs or DCSs and one or more PROFIBUS DP segments. Connected to the PROFIBUS DP segment are PROFIBUS DP slaves, Remote I/Os and segment couplers or links. Through its Ethernet port (LAN1), Fieldgate SFG500 allows a Web browser access to the information it has collected. If there is more than one segment in the PROFIBUS DP network, a separate Fieldgate SFG500 is required for each.

3 Commissioning

NOTICE

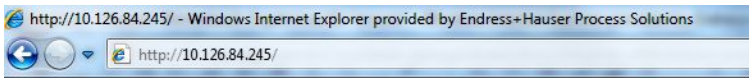
NOTE!

- This section describes the steps to physically commission Fieldgate SFG500 for use as a asset monitor only.
- General commissioning for use is described in BA00070S/04/EN, Fieldgate SFG500: Installation and Commissioning, commissioning for other modes in the associated manual, see Chapter 1.4.
- The manual assumes that the Fieldgate battery has been inserted and the network is up and running.

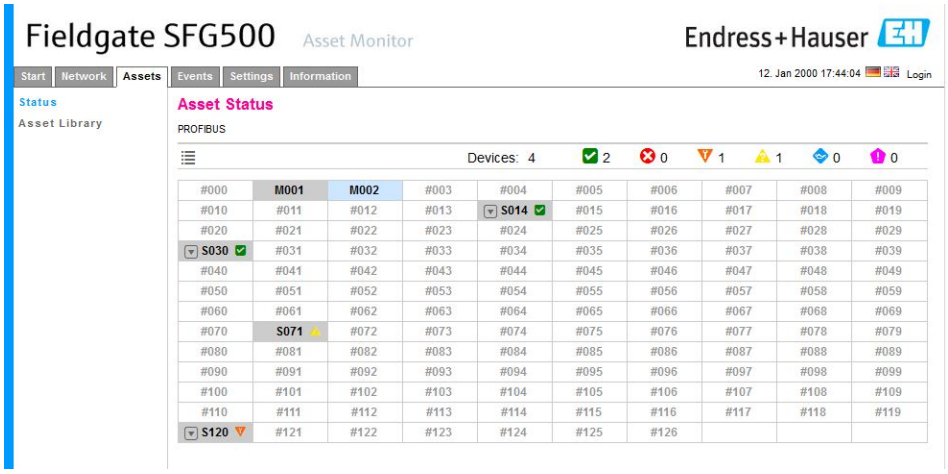
3.1 Preliminaries

Install and commission Fieldgate SFG500 as described in Operating Instructions BA00070/04/EN, Fieldgate SFG500: Installation and Commissioning.

1. Install/wire up Fieldgate SFG500 as described in Chapters 4/5 of the above manual
2. Commission Fieldgate SFG500 as described in Chapter 7.2 of the above manual
   - Ensure that Fieldgate Module SFM500 is correctly inserted into the card slot
3. Connect the laptop to the LAN2 port of Fieldgate SFG500
   - If appropriate disable the proxy server used by your internet browser as described in Chapter 7.1.2 of the above manual
   - Connect to Fieldgate using the address 192.168.253.1
   - Change the address of the LAN1 port of Fieldgate SFG500 to the one you require
4. Complete the commissioning of Fieldgate as described in Chapter 7.2.5 to 7.2.7.
5. When commissioning is complete, Fieldgate SFG500 can be accessed thorough its LAN1 using the address set up in Step 3



6. On the start page, press **Login** in the top right hand corner to disable write protection:
   - Enter a **User Name** (default = admin) and **Password** (default = admin)
   - Write protection remains disabled until **Logout** is pressed or the Web browser is closed



7. You can now commission the asset monitor

3.2 Settings

3.2.1 Network Settings

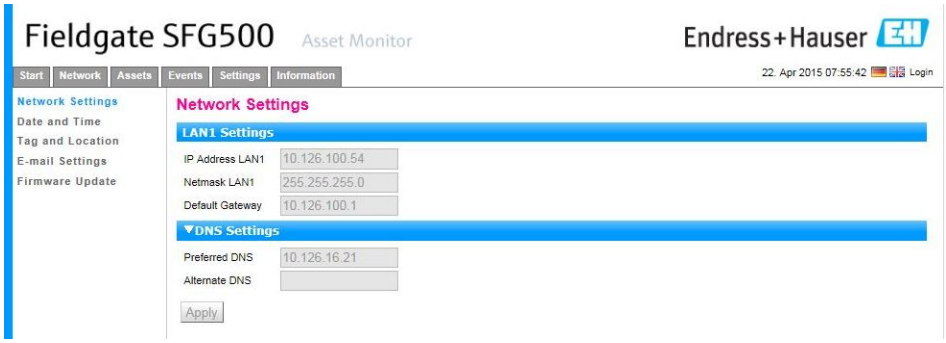
NOTE!

NOTICE

- If you have commissioned Fieldgate SFG500 in accordance with Operating Instructions BA00070S/04/EN, Fieldgate SFG500: Installation and Commissioning, the IP address of the LAN1 will be already set.

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

1. Open the **Settings** menu by clicking on the **Settings** tab of the Web Server
   – Select **Network Settings**



2. Enter the desired **IP Address**, **Network Mask** and **Default Gateway**
   – Press **Apply** to apply the changes to Fieldgate SFG500

Network Setting parameters

Parameter	Description
IP Address LAN1	IP address to be used for Fieldgate SFG500 LAN1 port
Network Mask	IP address of the sub network in which the Fieldgate is integrated
Default Gateway	IP address of the default gateway of the sub network in which the Fieldgate is integrated
Preferred DNS	IP address of the preferred name server
Alternative DNS	IP address of the alternative name server
Button	
Apply	Press to apply the changes to Fieldgate SFG500

3.2.2 Date and Time

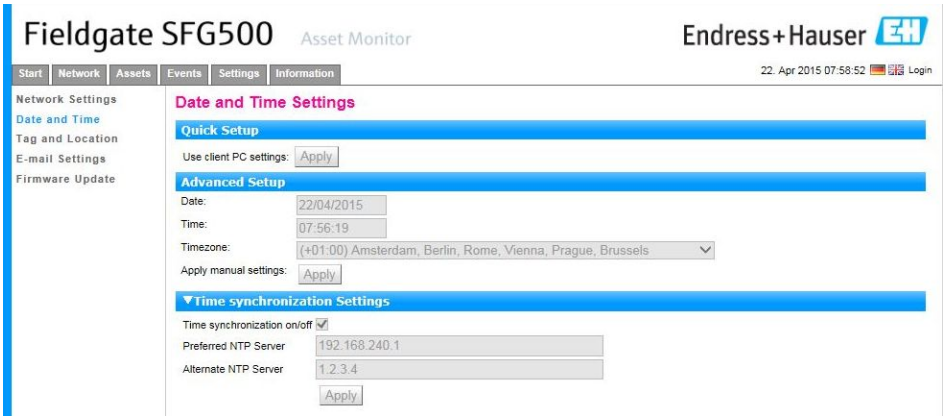
NOTE!

NOTICE

- If you have commissioned Fieldgate SFG500 in accordance with Operating Instructions BA00070S/04/EN, Fieldgate SFG500: Installation and Commissioning, the time and date will be already set.
- It is recommended to initially adjust the system time manually, e.g. via implementation of PC settings. Subsequently activate the automatic time synchronization.

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

1. Open the Settings menu by clicking on the **Settings** tab of the Web Server
   – Select **Date and Time**



2. Either in **Quick Setup**, press **Apply** to apply the settings of the connected computer to Fieldgate SFG500 or
   in **Advanced Setup**, enter a **Time, Date** and **Timezone** and press **Apply** to apply the changes to Fieldgate SFG500

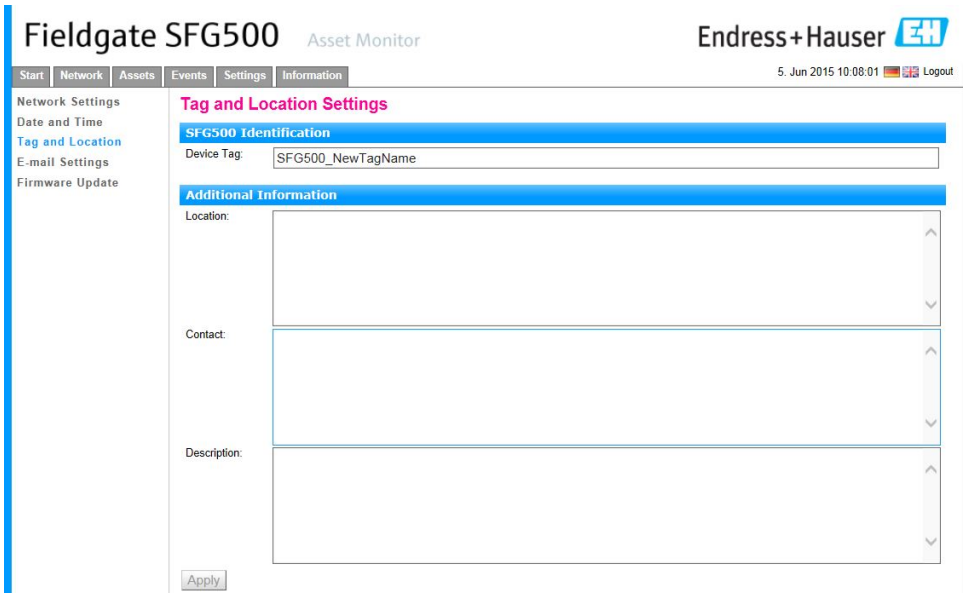
Date and Time parameters

Parameter	Description
Quick Setup	
Apply	Press Apply to apply the settings of the connected computer to Fieldgate SFG500
Advanced Setup	
Date	Enter the date in the format dd/mm/yyyy – The icon next to the entry field opens a calendar from which a date can be selected with a double click
Time	Enter the current time
Timezone	Enter the time zone in which the Fieldgate is located
Button	
Apply	Press to apply the changes to Fieldgate SFG500
Extended Configuration	
Time synchronization	Activation/Deactivation of the time synchronization service
Preferred NTP	IP address of the preferred time server
Alternative NTP	IP address of the alternative time server

3.2.3 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. Open the Settings menu by clicking on the **Settings** tab of the Web Server
   – Select **Tag and Location**



2. Enter a Fieldgate **Location**, **Contact** and **Description** as required
3. Press **Apply** to apply the changes to Fieldgate SFG500

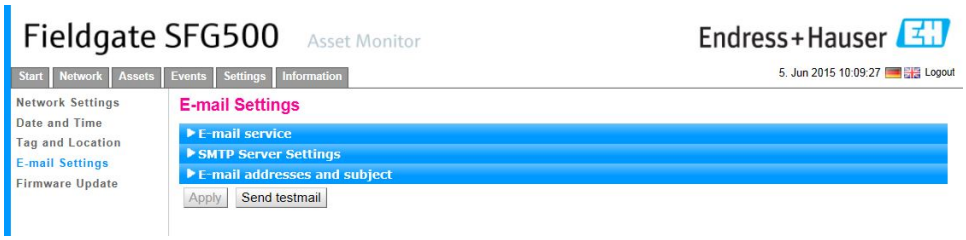
Tag and Location parameters

Parameter	Description
SFG500 Identification	
Device tag	Displays the Device Tag stored in Fieldgate SFG500
Additional Information	
Location	User information on the location of the Fieldgate Note! The following characters are permitted for the Fieldgate identification (= name of Fieldgate). – Letters "a " ... "z " and "A " ... "Z " (without taking case into account) – Numbers "0 " ... "9 " – Special characters e.g ". " (= period) and "– " (= minus), but not as the first character All other characters are not permitted. These include German umlauts, symbols such as "&" etc.
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
Button	
Apply	Press to apply the changes to Fieldgate SFG500

3.2.4 E-mail Settings

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

1. Open the Settings menu by clicking on the **Settings** tab of the Web Server
   – Select **E-mail Settings**



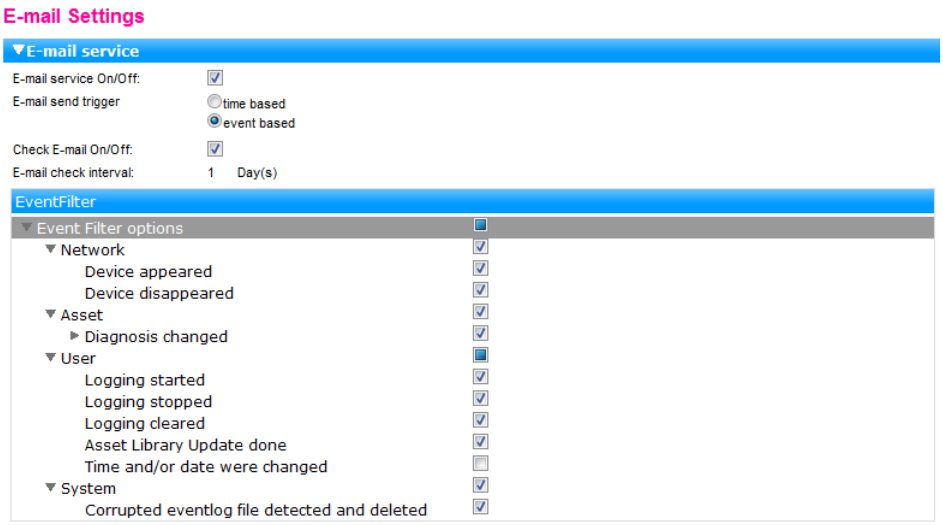
2. Enter the data for **E-mail service**.

Parameter	Description
E-mail service On/Off	Choose if e-mails are to be sent
E-mail trigger	Specify when an E-mail is to be sent **time based**: E-mail is sent at a defined time **event based**: E-mail is sent at a defined event

2.1 Options for time based e-mail messaging

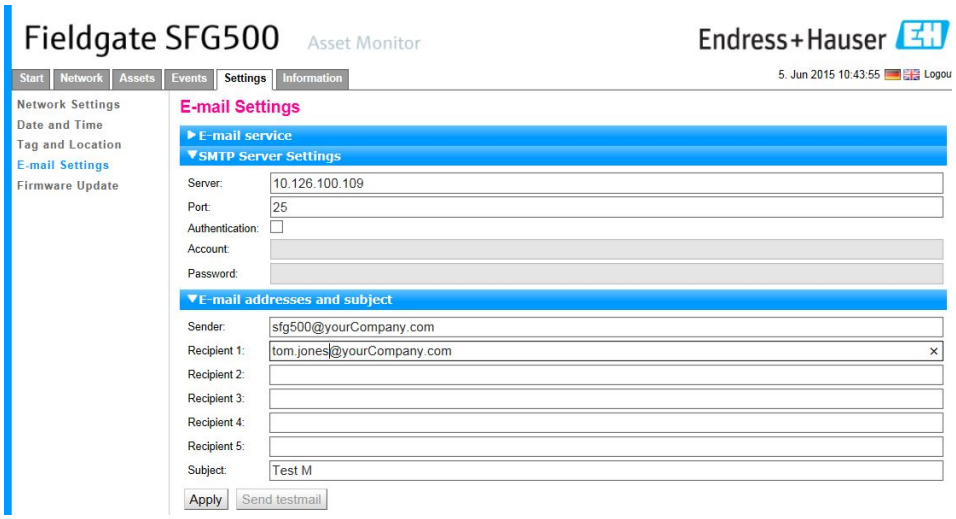
Parameter	Description
E-Mail Interval	Specify the interval for E-mails to be sent. The input is optionally in minutes, hours or days.
Check E-Mail On/Off	Choose if a Check E-Mail should be sent in case of no event triggering Emails at defined intervals.
E-Mail Check interval	See in which intervals a Check E-mail is sent. The interval depends on the interval defined, but is never less than one day.

2.2 Options for event based E-Mail messaging



Parameter	Description
EventFilter	Define events triggering the dispatch of E-Mails
Check E-Mail On/Off	Choose if a Check E-Mail should be sent in case of no event triggering E-mails at defined intervals
E-Mail Check interval	See in which intervals a Check E-mail is sent. The interval depends on the interval defined, but is never less than one day

3. Enter the **SMTP Server Settings** and the **E-mail addresses and subject**, see below



4. Press **Apply** to apply the changes to Fieldgate SFG500
5. Press **Send testmail** to check whether the settings are correct
   - If necessary change the settings and confirm with **Apply**

E-mail Setting parameters

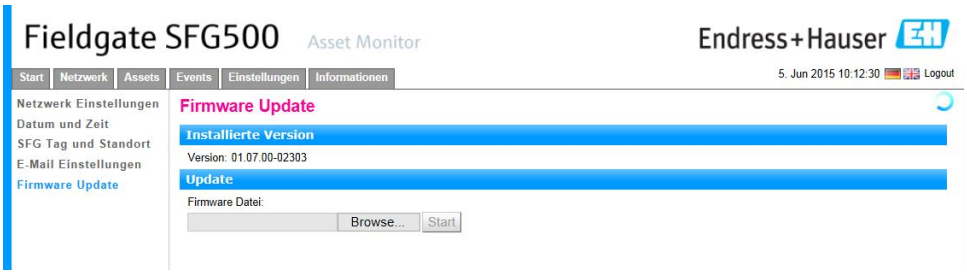
Parameter	Description
STMP Server Settings	
Address	Enter the e-mail server url or the IP address of the SMTP server (e-mail server) here
Port	Enter the number of the port used to access the e-mail server

Parameter	Description
Authentication	Check the box if authentication is required by your e-mail server
User Name	If authentication is required for the specified SMTP Gateway, enter the user name here: – Leave blank if no authentication is requested or no SMTP Gateway is used
Password	If authentication is required for the specified SMTP Gateway, enter the password here: – Leave blank if no authentication is requested or no SMTP Gateway is used
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 mail here, e.g. name@company.com
Subject	Enter the subject which will appear in the subject box of the e-mail
Button	
Apply	Press to apply the changes to Fieldgate SFG500
Send testmail	Press to send a mail to all recipients in order to test the setup

3.2.5 Firmware Update

The latest firmware version can be supplied as a file must be downloaded through the Web browser as follows.

1. Open the **Settings** menu by clicking on the **Settings** tab of the Web Server
   – Select **Firmware Update.**



2. Press **Browse** and navigate to the folder where the firmware file has been saved
   – Select the file then press **Open** to place it in the entry field.
3. Press **Start** to download the firmware to Fieldgate SFG500.
4. After download Fieldgate SFG500 will automatically shut down and reboot with the new firmware.

4 Asset Monitor

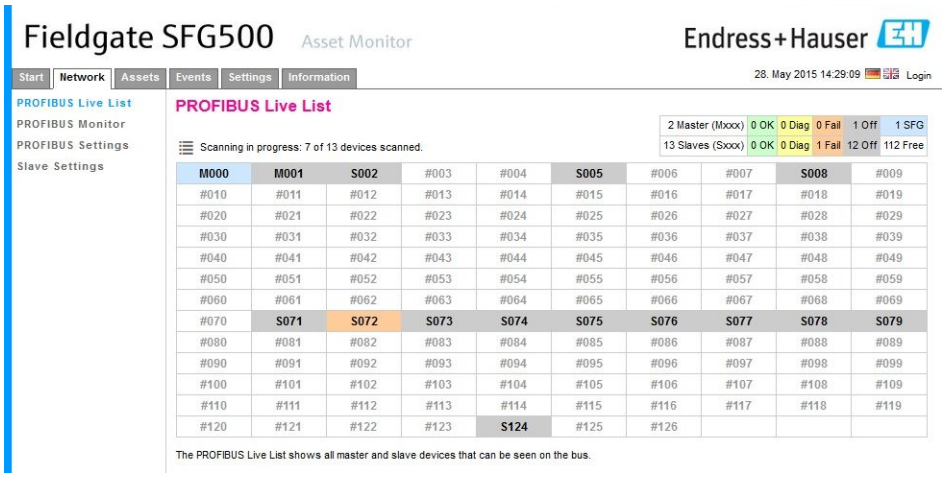
4.1 Network

4.1.1 PROFIBUS live list

The PROFIBUS live list shows all devices that can be seen by the selected Fieldgate SFG500 when it is listening to the bus. If the listener was active during the initialization of the slaves, the slave ID is shown.

Grid View

1. Open the Network menu by clicking on the **Network** tab.
2. Click on **PROFIBUS live list**
   – The SFG500 PROFIBUS Live List window opens:

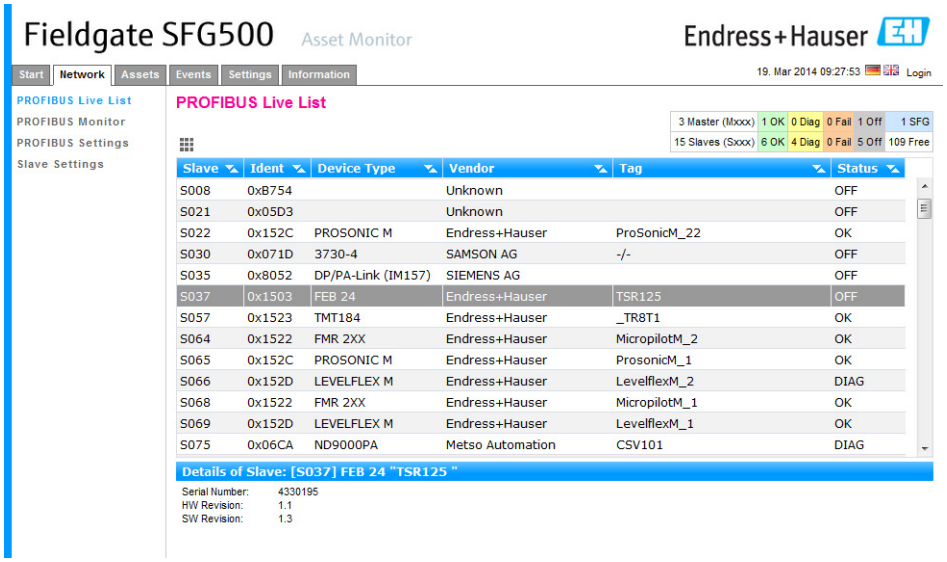


3. The various elements have the following significance:

Element	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
Scanning state	Shows the number of devices the extended information (tag, diagnosis, etc.) has been read from. If all devices have been scanned "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	Indicates the type and PROFIBUS address of the slave ▪ Mxxx: master with PROFIBUS address xxx ▪ Syyy: slave with PROFIBUS address yyy ▪ Colour code: as in overview

List View

4. Click the button **List View** to display a list of connected devices
   - Click on a device to show its details
   - Click the button **Table View** to return to the view above

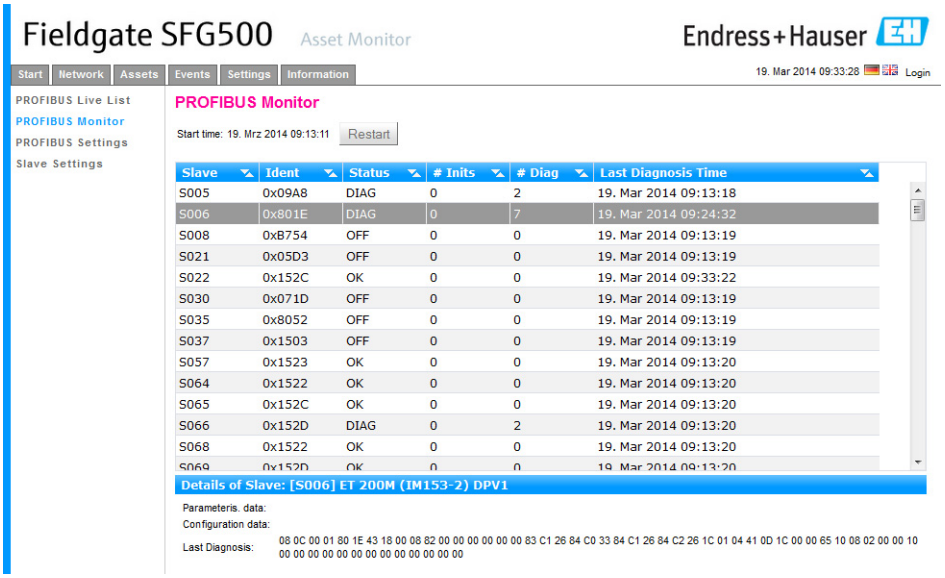


5. The various elements have the following significance:

Element	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 PROFIBUS live list (Saaa, aaa = PROFIBUS address)
Ident	PROFIBUS identification code for 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	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	
Vendor	Manufacturer or vendor of the selected slave
HW Revision	Hardware revision of the selected slave
SW Revision	Software revision of the selected slave

4.1.2 PROFIBUS Monitor

1. Open the Network menu by clicking on the **Network** tab
2. Click on **PROFIBUS Monitor**
   – The PROFIBUS Monitor window opens:



3. The parameters have the following significance:

Parameter	**Meaning**
Restart	Restarts the PROFIBUS Monitor
Diagnostic table	
Slave	
Ident	PROFIBUS identification code for slave device type
Status	Status ▪ OK: No events since last restart of monitor ▪ DIAG: Device has issued a diagnostic message since last restart of monitor ▪ FAIL: Device has failed since last restart of monitor
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	Indicates 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 String	Parameter string of selected slave (shown only after an initialization)
Config String	Configuration string of selected slave (shown only after an initialization)
Last Diagnosis	Diagnosis string of selected slave (shown only after an diagnostic message)

4.1.3 PROFIBUS Settings

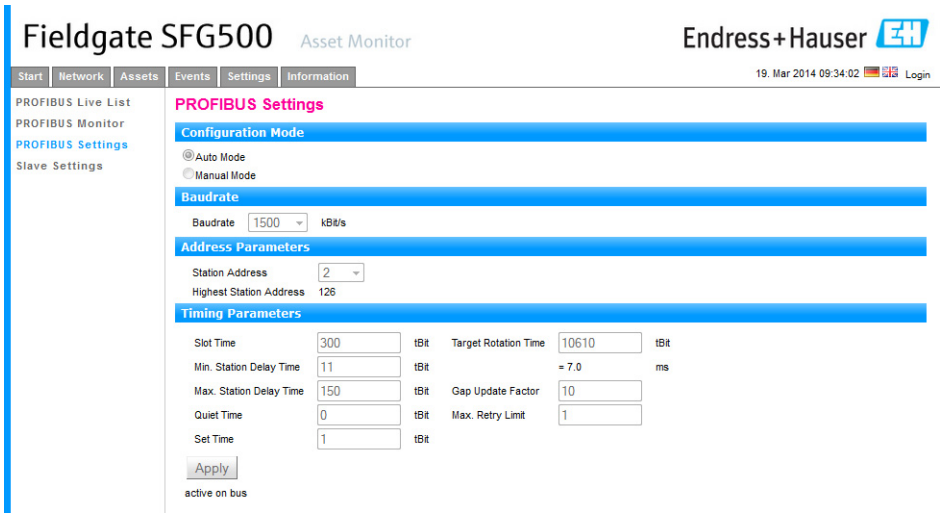
NOTE!

NOTICE

- The set up of Fieldgate SFG500 is described in Chapter 7.2.7 of Operating Instructions BA00070S/04/EN, Fieldgate SFG500 Installation and Commissioning

The PROFIBUS settings list shows the detected baudrate, the PROFIBUS address of the selected Fieldgate and detected bus parameters used by the Class 1 master. The window can be used to change the bus parameters, however, it is important to note that all the PROFIBUS DP devices, including couplers and links, connected to a particular network must have the same communication settings

1. Open the Network menu by clicking on the **Network** tab
2. Click on **PROFIBUS Settings**
   – The SFG500 PROFIBUS Settings window opens:



3. The parameters have the following significance:

Parameter	Description
Configuration Mode	
Auto Mode	Fieldgate SFG500 detects the PROFIBUS parameters and sets its own address – The detected PROFIBUS parameters are displayed – Overwriting is disabled
Manual Mode	Writing is enabled and the user can set the PROFIBUS parameters – Fieldgate must use the same parameters as all other PROFIBUS equipment otherwise communication will fail – A return to manual mode will cause all changes to be lost and Fieldgate will detect the PROFIBUS parameter and set its own address
Baudrate	
Baudrate	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 baudrate is in conflict with the one used by the master, a message appears – Selecting **Auto mode** will cause all changes to be lost

Parameter	Description
Address Parameters	
Station Address	Fieldgate SFG500 PROFIBUS DP address (Master Class 2) that it has assigned automatically to itself after listening to the bus ▪ To force a new address (0 – 126): – Select **Manual mode** – Enter a new unoccupied address press **Apply** – Selecting **Auto mode** will cause all changes to be lost
Highest Station Address	Indicates the address range that is scanned for token passing
Timing Parameters	
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	Shortest time period that must elapse before a remote recipient (Responder) may send an acknowledgement of a received query telegram. The shortest time period between receipt of the last Bit of a telegram to the sending of the first Bit of a following telegram.
Max. Station Delay Time	Longest time period that must elapse before a Sender (Requestor) may send a further query telegram. Greatest time period between receipt of the last Bit of a telegram to the sending of the first Bit of a following telegram. The Sender (Requestor, Master) must wait at least for this time period after the sending of an unacknowledged telegram (e.g. Broadcast only) before a new telegram is sent.
Quiet Time	Time delay that occurs for modulators (Modulator-trip time) and Repeaters (Repeater-switch time) for the change over from sending to receiving.
Setup Time	Minimum period "reaction time" between the receipt of an acknowledgement to the sending of a new query telegram (Reaction) by the Sender (Requestor).
Token Rotation Time	Pre-set nominal Token cycling time within which the Sender authorization (Token) will cycle around the ring. How much time the Master still has available for sending data telegrams to the Slaves is dependent on the difference between the nominal and the actual token cycling time.
Gap Update Factor	Factor for determining after how many Token cycles an added participant is accepted into the Token ring. After expiry of the time period G*TTR, the Station searches to see whether a further participant wishes to be accepted into the logical ring.
Max Retries Limit	Number of times the Fieldgate will try to establish communication with a device before it flags it as faulty
Button	
Apply	Applies any changes to Fieldgate SFG500

4.1.4 Slave Settings

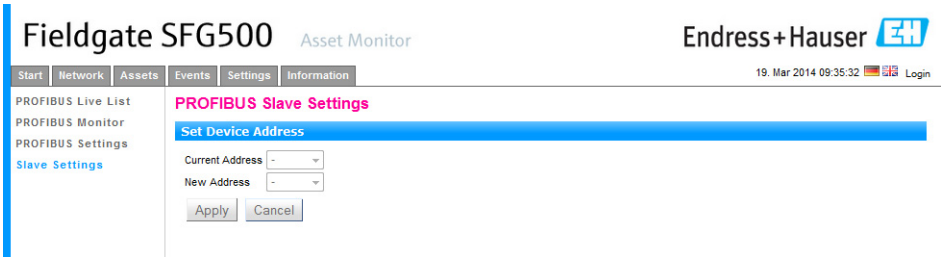
NOTE!

NOTICE

- For a fully operational system, an address change may result in a host application "losing" the device concerned. In this case, the application must be reconfigured with the new address to ensure that it functions correctly.

Slave Settings allows the user to change the address of the selected PROFIBUS device, e.g. during commissioning of the network.

1. Open the Network menu by clicking on the **Network** tab
2. Click on **Slave Settings**
   - The PROFIBUS slave settings window opens:



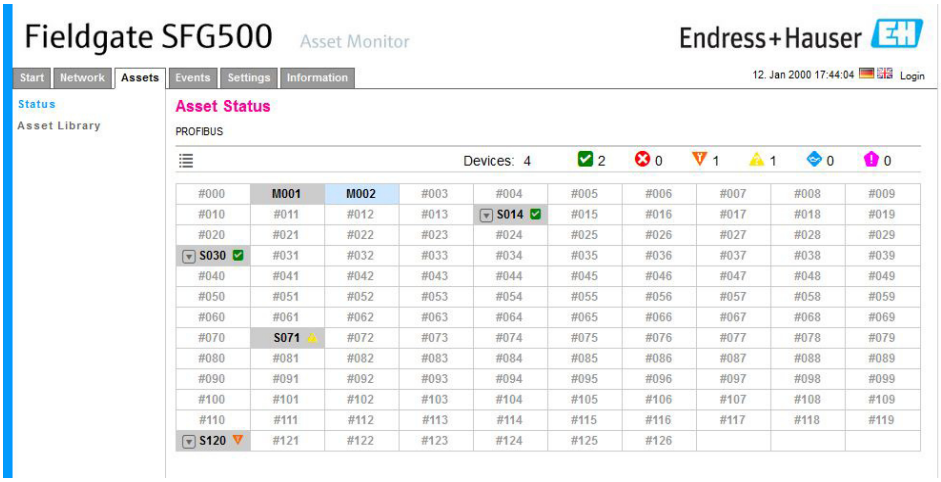
3. Select the address of the device whose address must be changed from the **Current Address** drop-down menu
4. Select the address the device should be given in the **New Address** drop-down menu
5. Press **Apply** to write the change of address to the device
   - Pressing **Cancel** will discard all changes and leave the device with its old address
   - A possible reason for a failure to change an address is that the device is locked

4.2 Assets

4.2.1 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.

1. Open the Asset menu by clicking on the **Asset** tab
2. Click on **Asset Status List**
   – The Asset Status List window opens

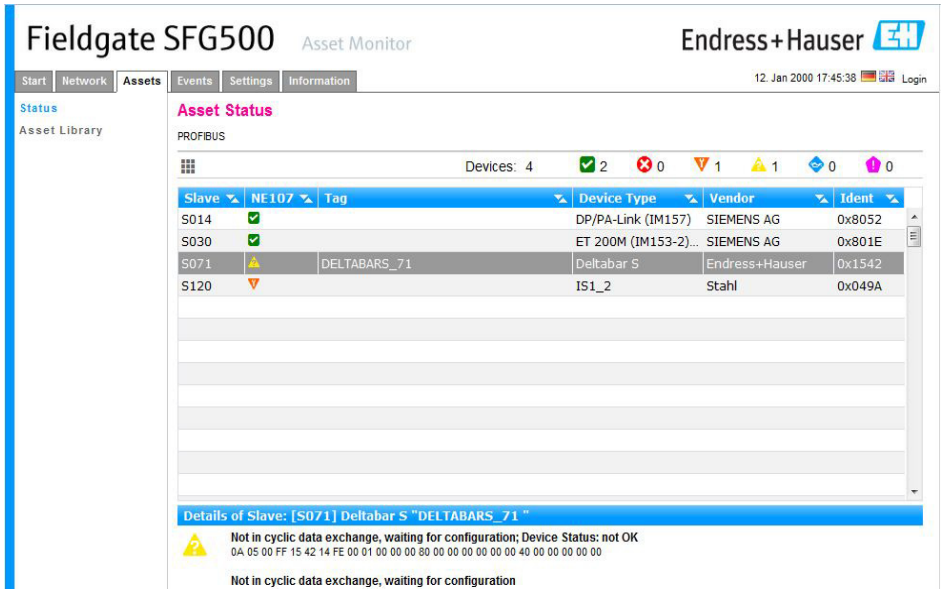


3. The various elements have the following significance:

Element	Meaning
Overview table	Indicates the number of devices in the various NAMUR NE 107 categories
NAMUR NE 107 symbols	▪ : Status OK ▪ : Failure - device has failed ▪ : Check Function - device is being checked, e.g. in simulation mode ▪ : Out of Specification - the current value output by the device is beyond its configured limits ▪ : Maintenance Required - the device requires maintenance, e.g. cleaning in the case of build-up on a Liquiphant limit switch ▪ : Not OK, Unknown - the device has a diagnostic message which cannot be categorized to NAMUR NE 107 as the required information is not in the library
	Shows the connected devices in a list view
	Shows the connected devices in a table view
Live list matrix	Indicates the type and PROFIBUS address of the slave ▪ Mxxx: master with PROFIBUS address xxx ▪ Syyy: slave with PROFIBUS address yyy ▪ Colour code and symbols: as in overview and NAMUR NE 107 symbols
	If a supported HART Remote IO is connected to an address, the subordinate live list of devices behind the Remote IO can be opened via the button **Open Sub Live List**. Currently the following Remote IOs are supported ▪ Siemens ET200M ▪ Siemens ET200iSP ▪ Turck excom ▪ Siemens DP/PA Link ▪ ABB S900 ▪ Stahl IS1/IS1+

List View

1. Click the button **List View** to display a list of connected devices
   - Click on a device to show its details
   - Click the button **Table View** to return to the view above

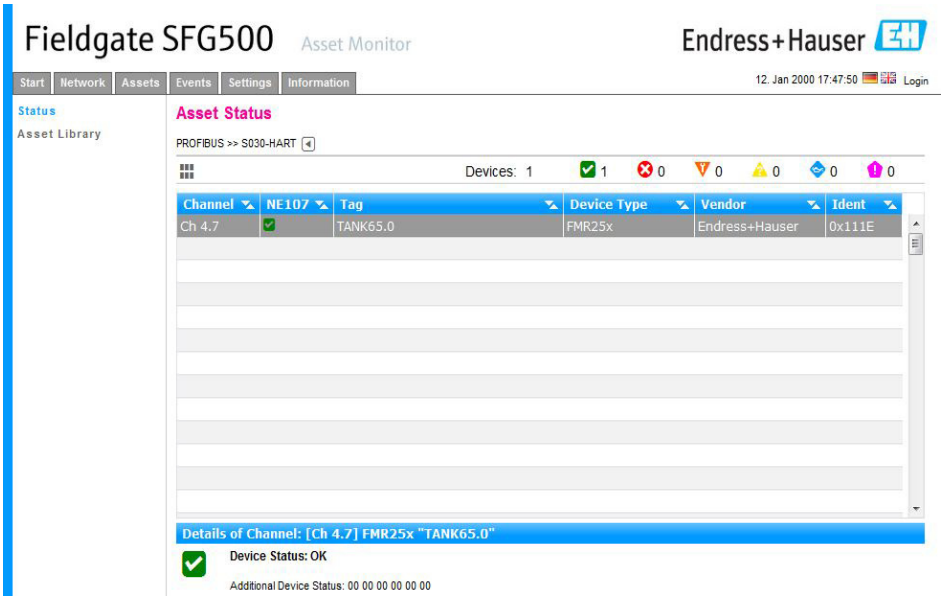


2. The various elements have the following significance:

Element	**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	Slave ID in PROFIBUS live list (Saaa, aaa = PROFIBUS address)
NE107	▪  : Status OK ▪  : Failure - device has failed ▪ : Check Function - device is being checked, e.g. in simulation mode ▪  : Out of Specification - the current value output by the device is beyond its configured limits ▪ : Maintenance Required - the device requires maintenance, e.g. cleaning in the case of build-up on a Liquiphant limit switch ▪  : Not OK, Unknown - the device has a diagnostic message which cannot be categorized to NAMUR NE 107 as the required information is not in the library
Tag	Tag No. of the slave
Device Type	Manufacturer's device type identification
Vendor	Manufacturer's serial number of the slave
Ident	PROFIBUS identification code for slave device type
Details of Slave	
Device Status	Detailed diagnostic message of device according to NAMUR NE107

Open Sub Live List

1. Click the button **Open Sub Live List**, to view the subordinate live list.
   – List View.

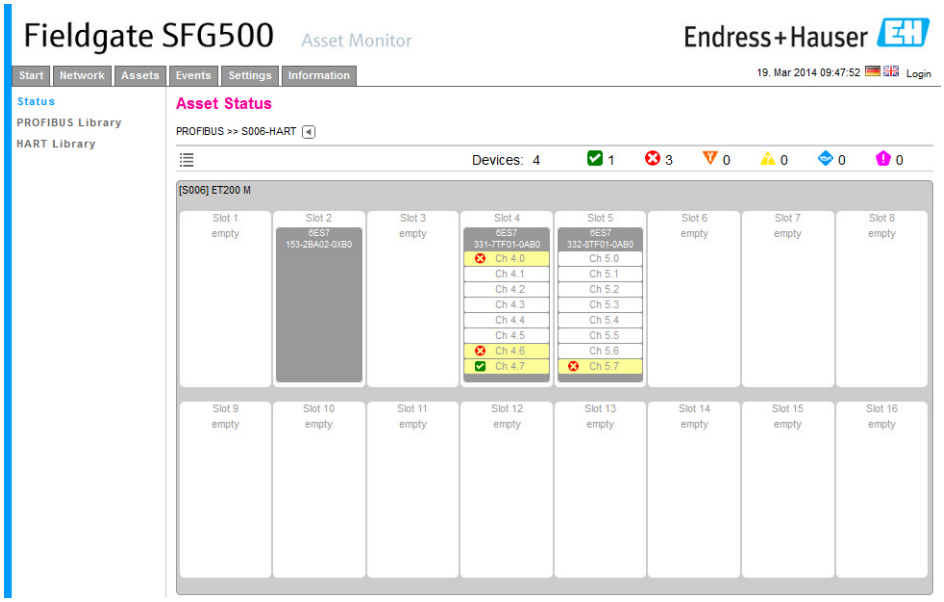


2. The various elements have the following significance:

Element	**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
	Shows the connected devices in a list view
	Grid view: Shows the connected devices in a grid table (only Siemens DP/PA Link)
	Shows the connected devices as module
Live List	
Slave	RIO address of the relevant device connected
NAMUR NE 107 Symbole	▪ : Status OK ▪ : Failure - device has failed ▪ : Check Function - device is being checked, e.g. in simulation mode ▪ : Out of Specification - the current value output by the device is beyond its configured limits ▪ : Maintenance Required - the device requires maintenance, e.g. cleaning in the case of build-up on a Liquiphant limit switch ▪ : Not OK, Unknown - the device has a diagnostic message which cannot be categorized to NAMUR NE 107 as the required information is not in the library
Tag	Tag No. of the slave
Device Type	Manufacturer's device type identification
Vendor	Manufacturer's serial number of the slave
Ident	PROFIBUS identification code for slave device type
Details of Slave	
Device Status	Detailed diagnostic message of device according to NAMUR NE107

Open Sub Live List

1. Click the button **Module**, to view the subordinate live list as module.
   – Module View.



This view shows the usually modular composition of a Remote IO. The supported HART modules are depicted in the corresponding slots. A module with connected HART device is color marked in the relevant channel.

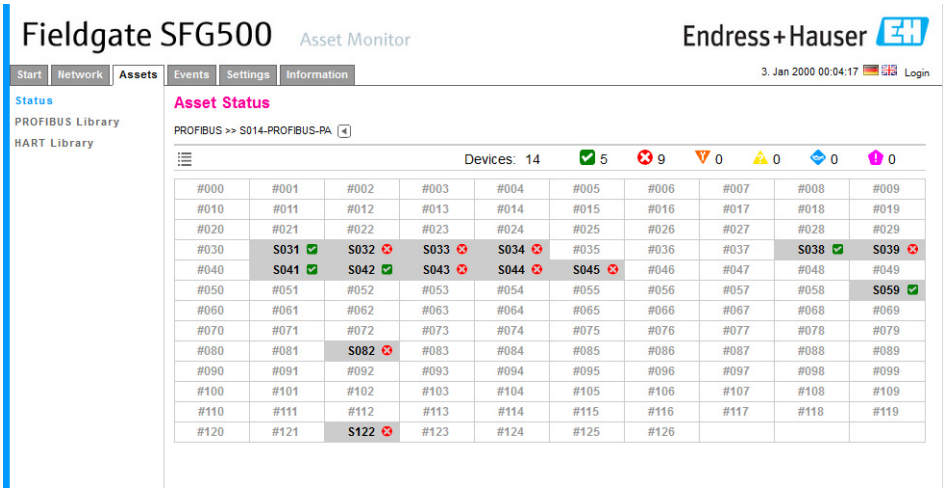
The following color states are possible:
– Green: device is in cyclic data exchange; status OK.
– Yellow: device is in cyclic data exchange; diagnostic message pending.
– Orange: device could not join cyclic data exchange.
– White: no device connected.

Additionally the device condition per channel is shown as NAMUR NE 107 symbol:

NAMUR NE 107 Symbole	▪ : Status OK ▪ : Failure - device has failed ▪ : Check Function - device is being checked, e.g. in simulation mode ▪ : Out of Specification - the current value output by the device is beyond its configured limits ▪ : Maintenance Required - the device requires maintenance, e.g. cleaning in the case of build-up on a Liquiphant limit switch ▪ : Not OK, Unknown - the device has a diagnostic message which cannot be categorized to NAMUR NE 107 as the required information is not in the library

Open Sub Live List

2. Siemens DP/PA Link: Click the button **Grid View**, to changeover to grid table.
   – Grid View.



The table comprises all devices behind the Siemens DP/PA Link chosen. Depening on the link conguration 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.

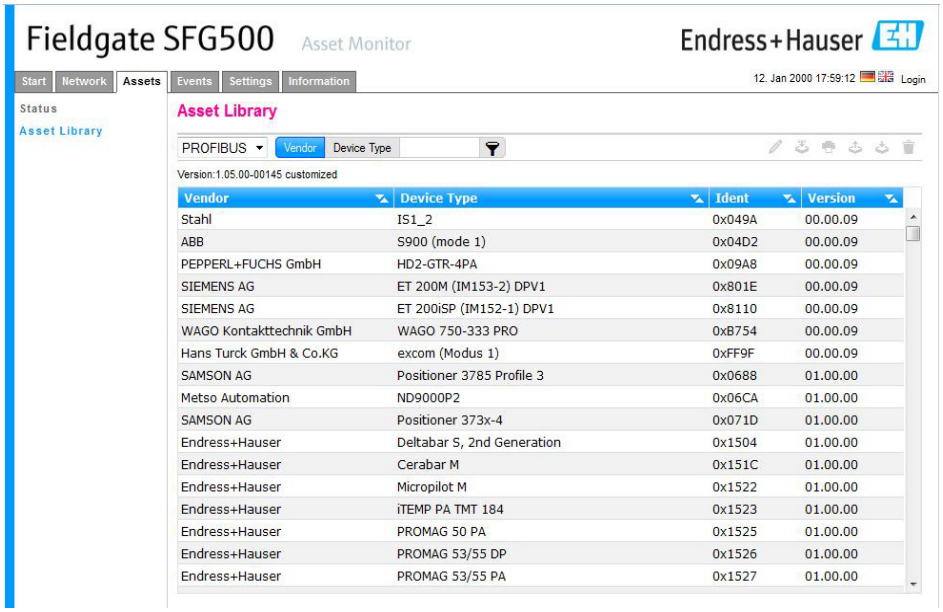
Additionally the device condition per slave is shown as NAMUR NE 107 symbol:

NAMUR NE 107 Symbole	▪ : Status OK ▪ : Failure - device has failed ▪ : Check Function - device is being checked, e.g. in simulation mode ▪ : Out of Specification - the current value output by the device is beyond its configured limits ▪ : Maintenance Required - the device requires maintenance, e.g. cleaning in the case of build-up on a Liquiphant limit switch ▪ : Not OK, Unknown - the device has a diagnostic message which cannot be categorized to NAMUR NE 107 as the required information is not in the library

4.2.2 Asset Library

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

1. Open the Asset menu by clicking on the **Asset** tab
2. Click **Asset Library**
   – The content of the relevant library will be displayed as a list.



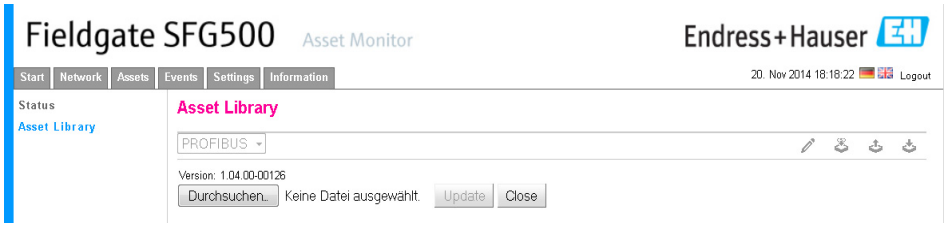
3. Use the drop-down menu to select either the PROFIBUS or the HART library view.
4. The various elements have the following significance:

Element	Meaning
	Update Asset Library: Uploads a library file to the Fieldgate SFG500
	Export Asset Library: Exports a library file from the Fieldgate SFG500
	Import GSD: Imports a GSD file with additional NAMUR NE107 information
	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
Vendor	Indicates the manufacturer of the device
Device Type	Manufacturer's device type identification
Ident	PROFIBUS identification code for slave device type
Version	Version of the asset description

Update Asset Library

The asset library comprises a list of devices that can present diagnosis information in accordance with NAMUR NE 107. Every new version of Fieldgate Asset Monitor automatically contains the latest library. For projects that contain third-party devices, e.g. valves, Endress+Hauser provides a library file which can be uploaded to Fieldgate SFG500 using the Web server as described in the following. The same procedure is used for uploading a library file that has been previously exported from another Fieldgate SFG500.

1. Click on the **Update Asset Library** icon.



2. Click on **Browse ...** and navigate to the folder in which the library file is to be found
   - Select the file and click on **Open**.
3. Click on **Update**.
   - The selected file is uploaded to Fieldgate SFG500.

NOTE!

NOTICE

- After the file has been uploaded, the Web server must be restarted.

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 **Export Asset Library** icon.
   - Select the folder in which the file is to be save.
2. Click on **OK**.
   - The library is saved.

Import GSD

In order to add new PROFIBUS devices to a library, GSD files can be uploaded by using the "Import GSD" function. The information is transferred from the GSD file to the library.

1. Click on the **Import GSD** icon.
2. Click on **Browse ...** and navigate to the folder in which the library file is to be found.
   - Select the file and click on **Open**.
3. Click on **Start Import.**
   - The selected GSD file is uploaded to Fieldgate SFG500.

NOTE!

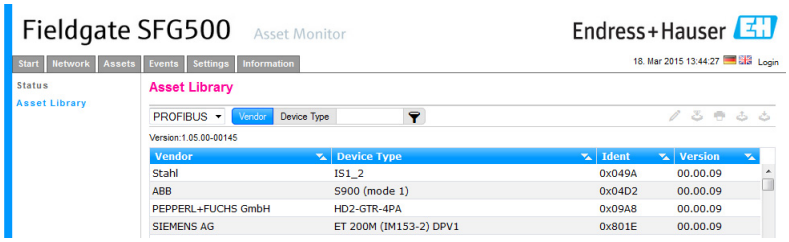
NOTICE

- After the file has been uploaded, the Web server must be restarted.

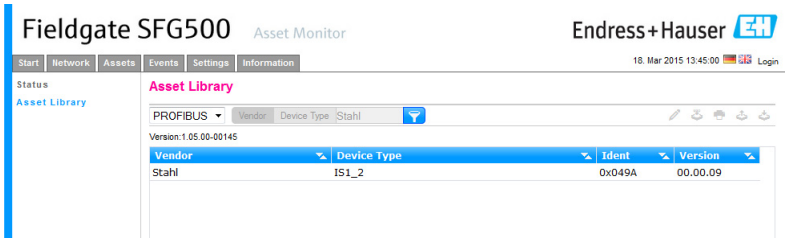
Filter Asset Library

Asset descriptions can be filtered to vendor or device type.

1. Click on **Vendor** or **Device type**.



2. Type the vendor or device type into the description field to be filtered and click on **Filter Asset Library**.
   – Filtered list will appear.



NOTE!

NOTICE

- To reset the filter, click **Filter Asset Library.**

Edit Asset Descriptions

Existing asset descriptions can be changed using the editor function.

1. Select the file to be edited from the list and click on the **Edit Asset Description** icon.
   – The editor opens and displays the contents of the selected asset description.
2. Make the desired changes.
3. Click on **Update**.
   – The changes are saved.

NOTE!

NOTICE

- After the asset descriptions have been edited, the Web server must be restarted.

Print Asset Descriptions

Prints existing asset descriptions.

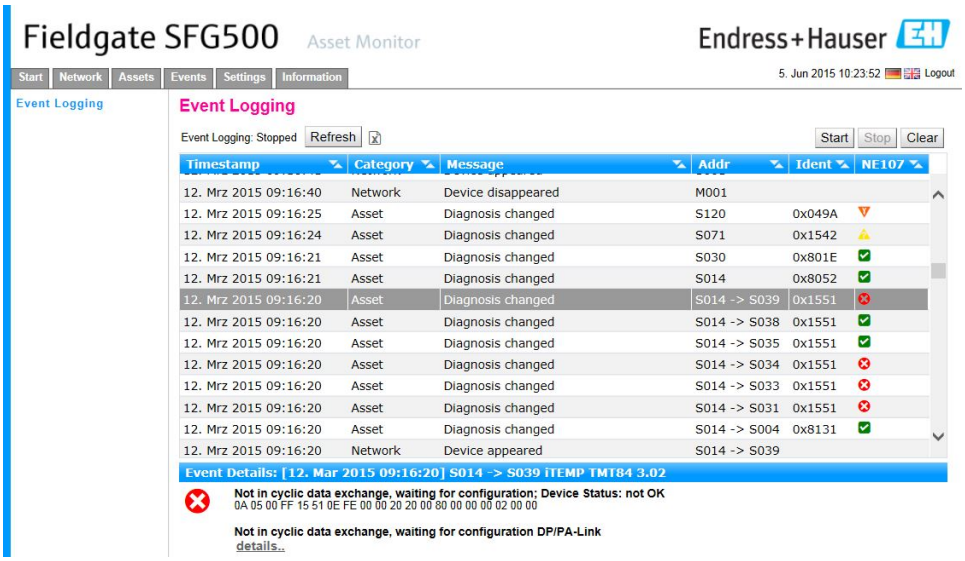
1. From the list, choose the file to be printed and click **Print Asset Descriptions**.
   - A new window opens and shows the content of the selected asset description.
   - The print dialog opens.
2. Choose a printer.
3. Click **Print.**
   - The selected asset description will be printed.
   - Close the window after printing.

4.3 Events

4.3.1 Event Logging

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

1. Open the Event menu by clicking on the **Event** tab
   – The **Event Logging** window opens



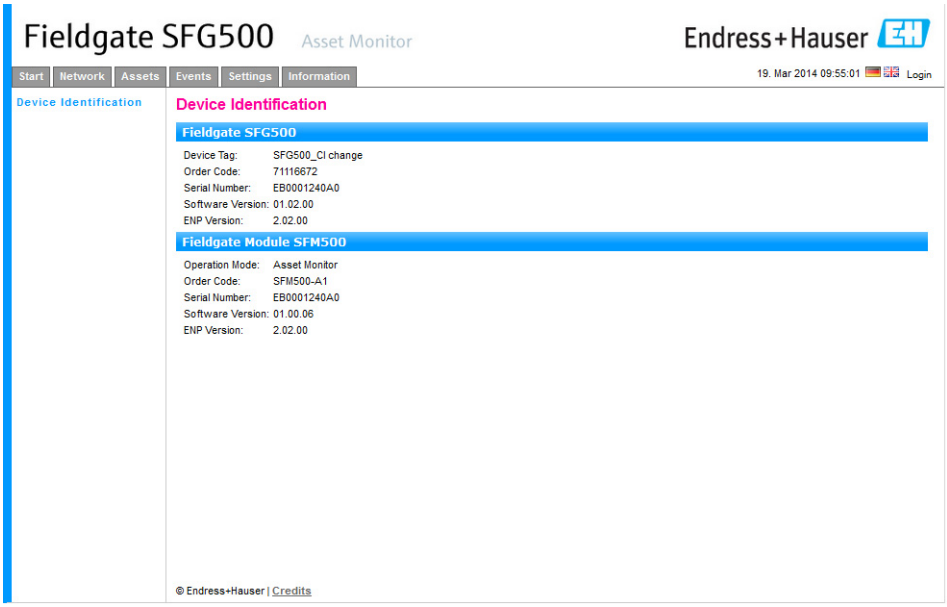
1. The various elements have the following significance:

Element	Meaning
Start button	Starts the event logging
Stop button	Stops the event logging
Clear button	Deletes all logging events
Refresh button	Updates the web page with the latest logged events
	The events logged can be exported into an Excel file. NOTE! – Depending on the number of events, the export may take some time. – The exported Excel file format is supported from Excel 2007 (Windows) and Excel 2008 (Macintosh) by default. For older Excel versions (Microsoft Office 2003, Microsoft Office XP, Microsoft Office 2000) Microsoft offers a "compatibility pack" for download.

4.4 Information

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

1. Open the Information by clicking on the **Information** tab
   - The Device Information window appears
   - **Credits** opens a list of all software components used in Asset Monitor



5 Trouble-Shooting

5.1 Faults indicated by Fieldgate SFG500 LEDs

	LED indication	Cause/Remedy
1	Power LED does not light	No power ▪ Check that power line is correctly wired ▪ Check that the supply voltage corresponds to that on the nameplate ▪ Check that the power is switched on ▪ If the supply voltage was too high, the internal fuse has blown – Return the Fieldgate SFG500 to Endress+Hauser for repair
2	Failure LED lights or flashes	CPU has severe problem or device cannot boot ▪ Switch power off, wait 30 s, then switch on again ▪ If the failure LED lights again – Return the Fieldgate SFG500 to Endress+Hauser for repair
3	PB Err LED lights	PROFIBUS network has malfunctioned ▪ Check that the bus is terminated at both ends only ▪ Check that all master bus parameters are identical ▪ Check that the bus has been correctly wired
4	RS485 LED is off, although the interface is wired up	Wiring or link error ▪ Check wiring ▪ Check that the Modbus master is switched on
5	LAN1 or LAN2 LED is off, although the interface is wired up	Wiring or link error ▪ Check wiring ▪ Check that the communication partner is switched on ▪ Check that the IP address has been set properly: – LAN 1: Set as fixed address in network domain – LAN 2: Set to receive DHCP address

5.2 PROFIBUS communication faults

	Problem	Cause/Remedy
1	Fieldgate SFG500 cannot connect to PROFIBUS DP segment	Wiring or link error ▪ Check that PROFIBUS DP segment is corrected terminated (at both ends) ▪ Check wiring ▪ Check that the Station Address is not being used by another participant ▪ Check that all masters are operating with the same bus parameters – If necessary, adjust the token rotation time
2	A device does not appear in the live list	Communication error ▪ Another device has the same address ▪ The device is not powered up ▪ Device does not support autosense of baudrate – Set correct baudrate ▪ The device is connected to a link that is not transparent – This is normal behaviour

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