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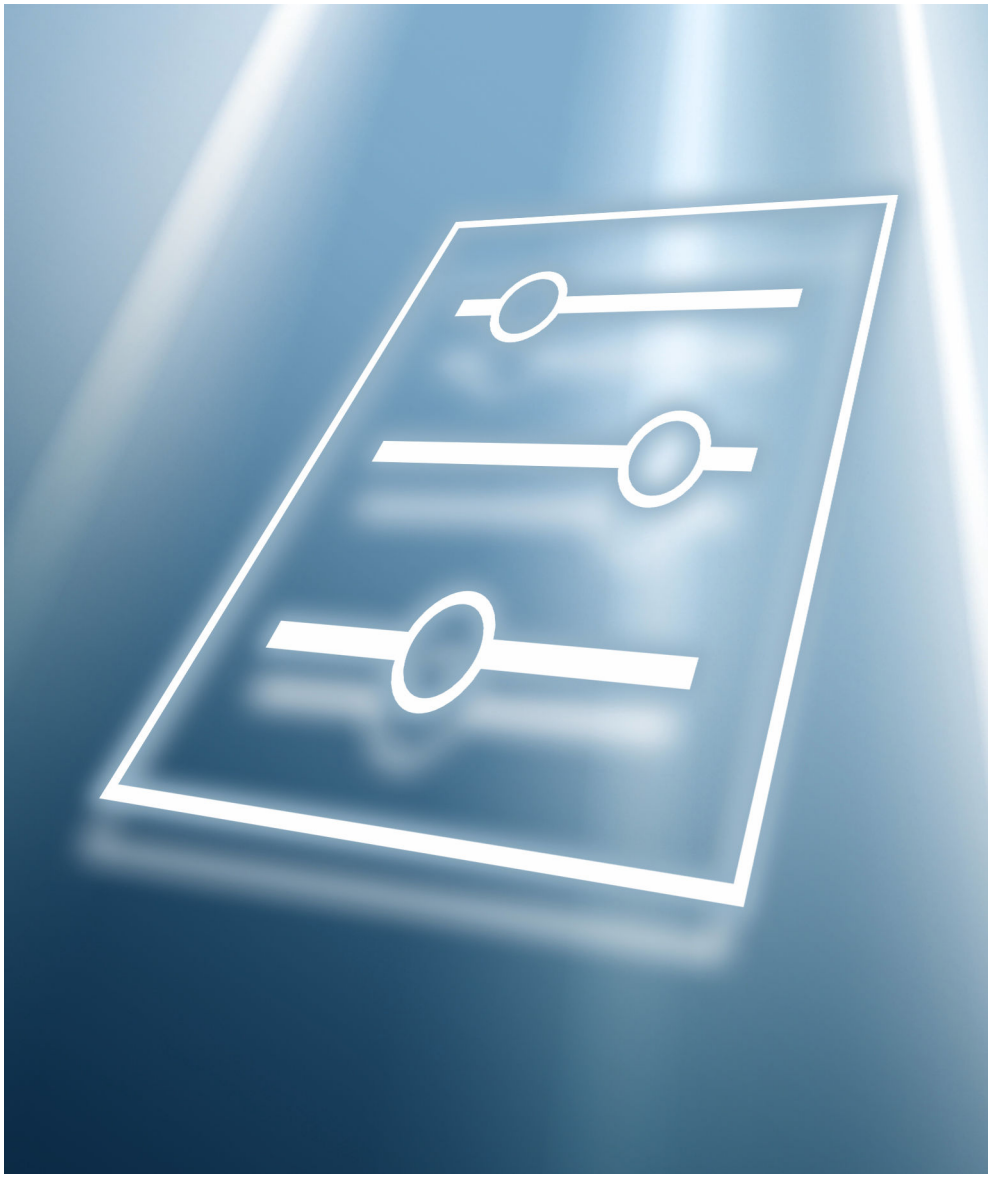
2025-09-30

01.00.zz (Device firmware)

Description of Device Parameters
Liquiphant FTL63

Vibronic
PROFINET over Ethernet-APL

ethernet-apl™
advanced physical layer



Endress+Hauser
People for Process Automation

1 About this document

1.1 Document function

The document is part of the Operating Instructions and serves as a reference for parameters.

Tasks that require detailed knowledge of the function of the device:
- Starting up measurements under difficult conditions
- Optimal adjustment of measurements to difficult conditions
- Detailed configuration of communication interface
- Fault diagnosis in difficult cases

1.2 Target group

This document is aimed at specialists who work with the device over the entire life cycle and perform specific configurations.

1.3 Document structure

The document consists of a general part and a specific part.

The structure of the document and its components are explained in the general part (section 1).

The specific part starts with an overview of the device operating menu, which is the focus of this manual.

The description of the device parameters follows the overview of the operating menu. The description is divided into 4 main menus and their submenus.

The 4 main menus:
- Guidance
- Diagnostics
- Application
- System

In the "Description of device parameters" section, the menus, submenus and parameters are displayed in the same way as they are laid out in the menu structure for the **operating tool**.

An operating tool is software, such as FieldCare, which can be used to display and edit the data and parameters stored in the device on a PC or laptop. Compared to operation via the local display, an operating tool offers more options. It provides additional information, such as graphics and help texts, which explain the properties of the parameters.

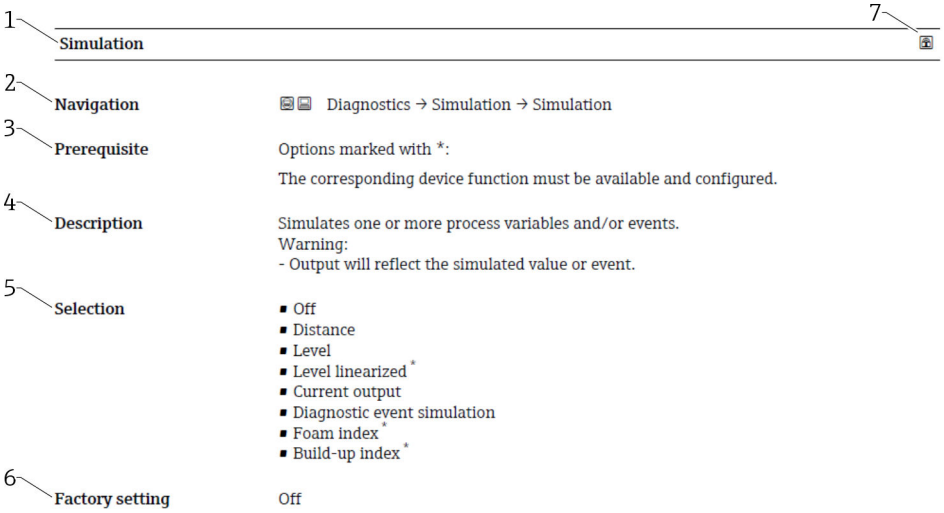
The submenus visible to a user depend on the **User role (→ 50)** they are logged in with. This document lists the submenus and their parameters that are available to the User role **Maintenance**.

The operating menu is dynamic and adapts the choice of parameters to the selected options.

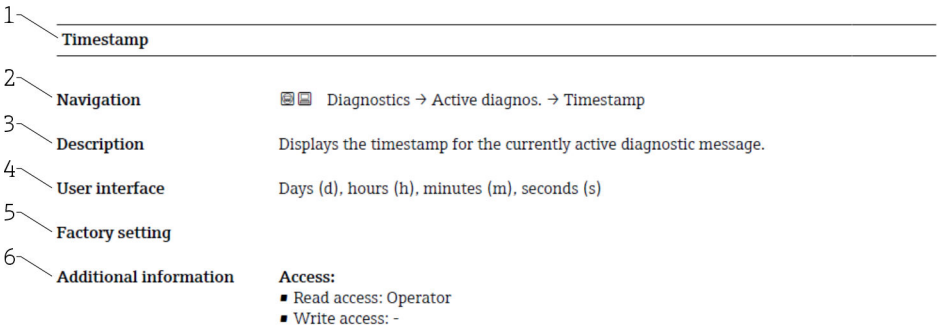
For information on operating options, see the Operating Instructions.

1.4 Elements of parameter descriptions

Parameter descriptions are structured and made up of a number of elements. Depending on the parameter, more or fewer elements may be available. Below are 2 examples of different parameters:



1 *Name: Parameter designation (Label)*
2 *Navigation: Navigation path to the parameter. The graphics indicate whether the path applies to the onsite display, the operating tool or both.*
3 *Prerequisite: The marked options can only be selected under the condition specified in each case*
4 *Description: Description of the parameter function*
5 *Selection: List of the individual options for the parameter*
6 *Factory setting: Default setting on leaving the factory*
7 *The lock symbol indicates that the parameter is write-protected*



1 *Name: Parameter designation (Label)*
2 *Navigation: Navigation path to the parameter. The graphics indicate whether the path applies to the onsite display, the operating tool or both.*
3 *Description: Description of the parameter function*
4 *User interface: Display value/data of the parameter*
5 *Factory setting: Default setting on leaving the factory*
6 *Additional information:*
Read and write access: Information on access rights that users with certain roles have to the parameter

Additional information at the end of the parameter description can refer to all elements of the parameter description and expand them.

1.5 Symbols

1.5.1 Safety symbols

⚠ DANGER
This symbol alerts you to a dangerous situation. Failure to avoid this situation will result in serious or fatal injury.

⚠ WARNING
This symbol alerts you to a potentially dangerous situation. Failure to avoid this situation can result in serious or fatal injury.

⚠ CAUTION
This symbol alerts you to a potentially dangerous situation. Failure to avoid this situation can result in minor or medium injury.

NOTICE
This symbol alerts you to a potentially harmful situation. Failure to avoid this situation can result in damage to the product or something in its vicinity.

1.5.2 Symbols for certain types of information

- Indicates additional information
- Reference to documentation
- Operation via local display
- Operation via operating tool
- Write-protected parameter

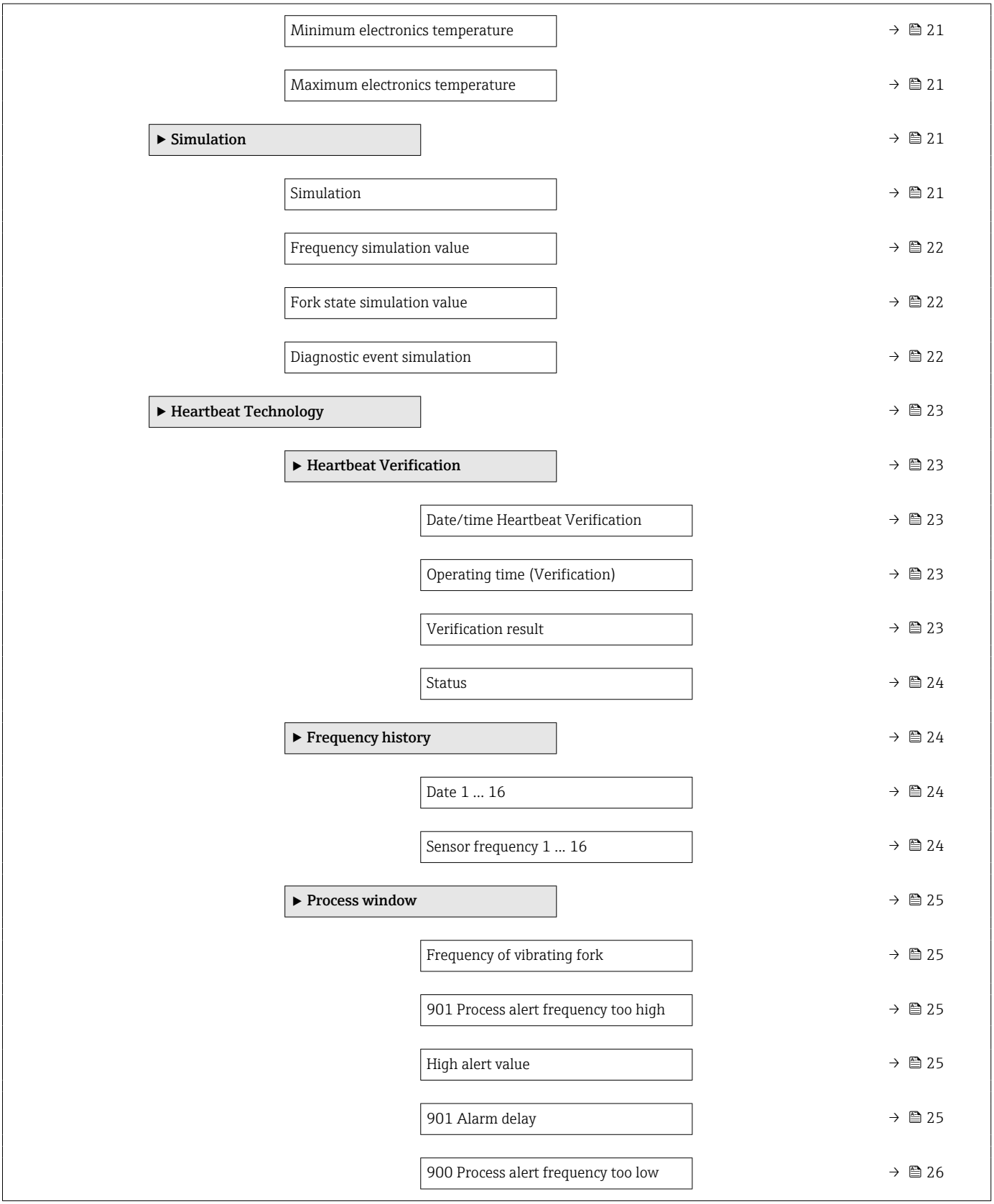
1.6 Documentation

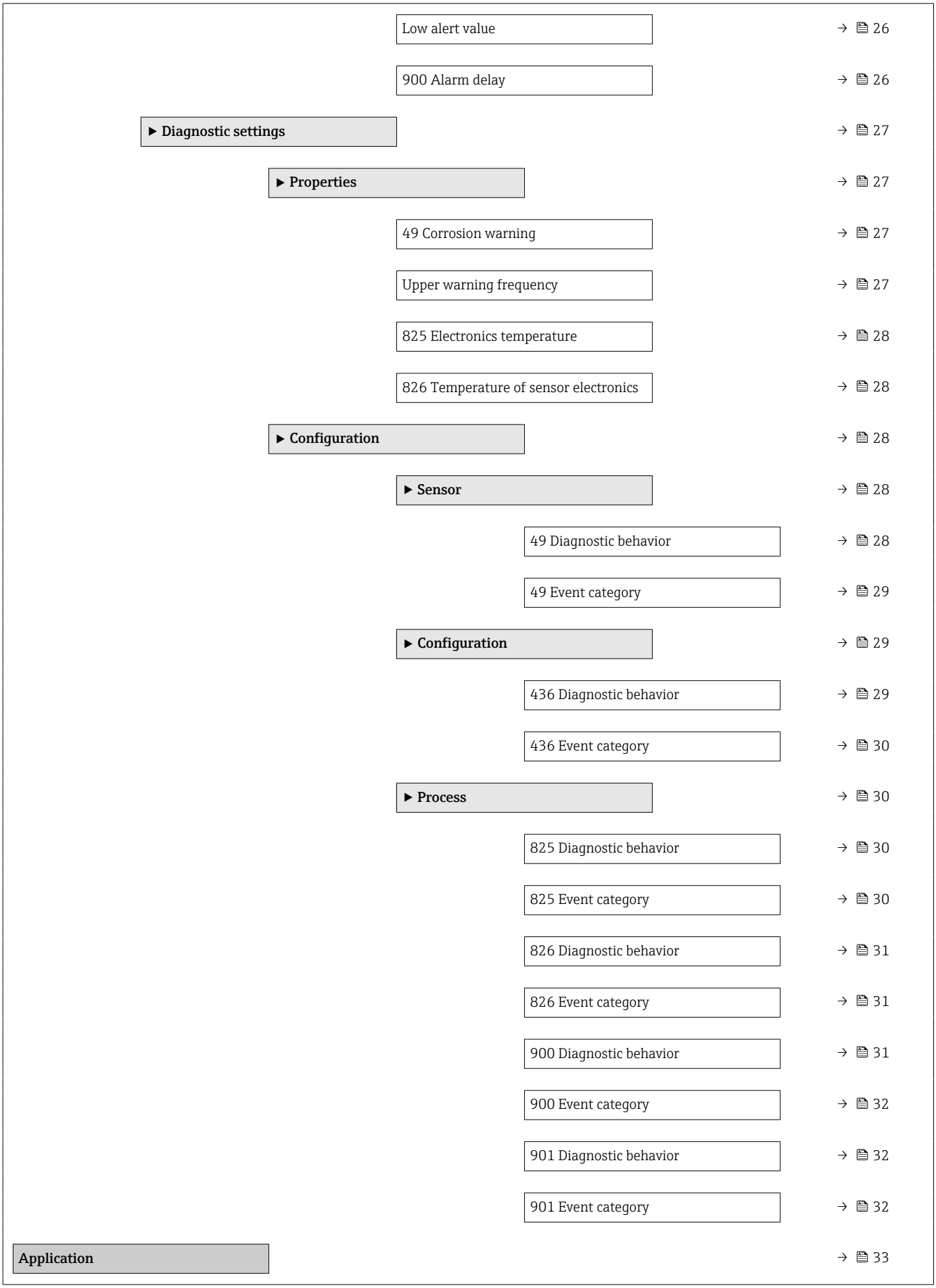
For an overview of the scope of the associated Technical Documentation, refer to the following:
- *Device Viewer* (www.endress.com/deviceviewer): Enter the serial number from the nameplate
- *Endress+Hauser Operations app*: Enter serial number from nameplate or scan matrix code on nameplate.

The documentation is available via the Internet: → www.endress.com Download

2 Overview of the operating menu

Navigation Operating tool


Minimum electronics temperature → 21
Maximum electronics temperature → 21
▶ Simulation → 21
Simulation → 21
Frequency simulation value → 22
Fork state simulation value → 22
Diagnostic event simulation → 22
▶ Heartbeat Technology → 23
▶ Heartbeat Verification → 23
Date/time Heartbeat Verification → 23
Operating time (Verification) → 23
Verification result → 23
Status → 24
▶ Frequency history → 24
Date 1 … 16 → 24
Sensor frequency 1 … 16 → 24
▶ Process window → 25
Frequency of vibrating fork → 25
901 Process alert frequency too high → 25
High alert value → 25
901 Alarm delay → 25
900 Process alert frequency too low → 26


Low alert value → 26
900 Alarm delay → 26
▶ Diagnostic settings → 27
▶ Properties → 27
49 Corrosion warning → 27
Upper warning frequency → 27
825 Electronics temperature → 28
826 Temperature of sensor electronics → 28
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▶ Sensor → 28
49 Diagnostic behavior → 28
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▶ Configuration → 29
436 Diagnostic behavior → 29
436 Event category → 30
▶ Process → 30
825 Diagnostic behavior → 30
825 Event category → 30
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826 Event category → 31
900 Diagnostic behavior → 31
900 Event category → 32
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901 Event category → 32
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- Stored uncovered frequency → 38
- Stored covered frequency → 38
- ▶ **PROFINET** → 39
  - ▶ **Configuration** → 39
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    - Parameter change acknowledge mode → 39
    - Acknowledge parameter change → 39
    - Descriptor → 40
  - ▶ **Discrete input** → 40
    - ▶ **Discrete input** → 40
      - Process value → 40
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    - ▶ **Analog input 1 to 3** → 41
      - Process value → 41
      - Assign process variable → 42
      - Damping → 42
  - ▶ **Binary input** → 44
    - ▶ **Binary input 1 to 2** → 44
      - Controller input value → 44
  - ▶ **Binary output** → 45
    - Set point value → 45
    - BO block output value → 45
    - Failure behavior → 45
    - Failure behavior delay → 46
    - Fixed value → 46

- New password → 52
- Confirm new password → 52
- Status password entry → 52
- ▶ **Change password** → 53
  - Old password → 53
  - New password → 53
  - Confirm new password → 53
  - Status password entry → 54
- ▶ **Recover password** → 54
  - Reset password → 54
  - Status password entry → 54
- ▶ **Connectivity** → 55
  - ▶ **Interfaces** → 55
    - Display operation → 55
    - Web server functionality → 55
    - Bluetooth activation → 55
    - Service (UART-CDI) → 56
  - ▶ **Ethernet** → 56
    - ▶ **Properties** → 56
      - MAC address → 56
      - IP address → 56
      - Subnet mask → 56
      - Default gateway → 57
      - Service IP active → 57

- Number of TCP failed received packets → 62
- Reset Ethernet diagnostics → 62
- ▶ **UDP information** → 63
  - Available UDP ports → 63
  - Number of received UDP packets → 63
  - Number of sent UDP packets → 63
  - Number of UDP failed received packets → 63
  - Reset Ethernet diagnostics → 64
- ▶ **Display** → 64
  - Language → 64
  - Format display → 64
  - Value 1 display → 65
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  - Value 3 display → 65
  - Value 4 display → 66
  - Decimal places 1 ... 4 → 66
  - Contrast display → 66
- ▶ **Date/time** → 67
  - Date/time → 67
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  - Enable NTP → 68
  - NTP server address → 69
  - Clock synchronized → 69
- ▶ **Geolocation** → 69
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→ 69
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→ 70
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→ 70
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→ 70
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Serial number
→ 71
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→ 72
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→ 72
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→ 77
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→ 77
Activate SW option
→ 77
Software option overview
→ 77

3 Description of device parameters

3.1 Guidance

In the **Guidance** menu, the user can quickly perform basic tasks, such as commissioning. This menu primarily consists of guided wizards and special functions covering multiple areas.

Navigation Guidance

3.1.1 Overview

The **Guidance** menu contains the following submenus and wizards:
- Commissioning
- Heartbeat Technology
  - Heartbeat Verification
  - Process window
- WHG mode
- Import / Export
- Compare

3.1.2 "Commissioning" wizard

Run the **Commissioning** wizard to commission the device. Enter the appropriate value in each parameter or select the appropriate option.

⚠ WARNING

If the wizard is aborted before all the necessary parameters have been configured, any settings already set are saved.
The device may be in an undefined state!
▶ Reset the device to factory settings.

Navigation Guidance → Commissioning

Parameters for the "Commissioning" wizard

The following parameters are configured in this wizard:
- **Device identification**
  - Device tag
  - Device name
  - Serial number
  - Extended order code 1 ... 3
  - Locking status
  - Time zone
  - Date/time
  - PROFINET device name
  - IP address
  - Descriptor
  - MAC address
  - Device ID
  - Manufacturer ID
- **Measurement adjustments**
  - Temperature unit
  - Density setting
  - Switching delay covered to uncovered
  - Customer delay to uncovered
  - Switching delay uncovered to covered
  - Customer delay to covered
  - 49 Corrosion warning
  - State of vibrating fork
  - Frequency of vibrating fork
  - Stored covered frequency
  - Frequency at delivery status
  - Stored uncovered frequency
- **Output settings**
  Assign process variable

3.1.3 Heartbeat Technology

Heartbeat Technology offers the following functions:
- Diagnostics through continuous self-monitoring
- Additional measured variables output to an external condition monitoring system
- In situ verification of measuring instruments in the application

Special Documentation on Heartbeat Technology is available via the Internet:
www.endress.com → Download

Navigation Guidance → Heartbeat Techn.

Heartbeat Verification

This wizard is used to start an automatic verification of the device functionality.
The results can be documented as a verification report.

Navigation Guidance → Heartbeat Techn. → Heartbeat Verif.

Process window

This wizard can be used to monitor the sensor frequency for frequencies that are too low or too high. This can be used for early detection of buildup or corrosion.

Navigation Guidance → Heartbeat Techn. → Process window

3.1.4 WHG mode

For WHG applications, the device can be protected against manipulation using the WHG wizard. After using this confirmation, the device is marked as WHG locked to indicate the device mode.

To unlock the WHG locking the sequence needs to be restarted. After entering the safety unlocking code (= Safety locking code) the device is unlocked.

Navigation Guidance → WHG mode

3.1.5 Import / Export

Save / Restore
- The device settings can be saved in a .deh file.
- The device settings saved in a .deh file can be written to the device.

Create documentation
Device documentation can be saved in PDF format under Create documentation. This device documentation contains the following general device information:
- Information on device parameters
- Diagnostic list

Navigation Guidance → Import / Export

3.1.6 Compare

Compare datasets
This function can be used to compare the following datasets:
- Data records in the .deh file format from the function Import / Export
- Datasets with the configuration currently in the device

Navigation Guidance → Compare

3.2 Diagnostics

Navigation Diagnostics

3.2.1 Active diagnostics

Navigation Diagnostics → Active diagnos.

Active diagnostics

Navigation Diagnostics → Active diagnos. → Active diagnos.

Description Displays the currently active diagnostic message.

If there is more than one pending diagnostic event, the message for the diagnostic event with the highest priority is displayed.

User interface
- Operating time of the device until the event occurs
- Symbol for diagnostic behavior
- Code for diagnostic behavior
- Event text
- Corrective measure

Timestamp

Navigation Diagnostics → Active diagnos. → Timestamp

Description Displays the timestamp for the currently active diagnostic message.

User interface Date, time

Previous diagnostics

Navigation Diagnostics → Active diagnos. → Prev.diagnostics

Description Displays the diagnostic message for the last diagnostic event that has ended.

User interface
- Operating time of the device until the event occurs
- Symbol for diagnostic behavior
- Code for diagnostic behavior
- Event text
- Corrective measure

Timestamp

Navigation Diagnostics → Active diagnos. → Timestamp

Description Displays the timestamp of the diagnostic message generated for the last diagnostic event that has ended.

User interface Date, time

Operating time from restart

Navigation Diagnostics → Active diagnos. → Time fr. restart

Description Indicates how long the device has been in operation since the last time the device was restarted.

User interface Days (d), hours (h), minutes (m), seconds (s)

Operating time

Navigation Diagnostics → Active diagnos. → Operating time

Description Indicates how long the device has been in operation.

User interface Days (d), hours (h), minutes (m), seconds (s)

3.2.2 Diagnostic list

Navigation Diagnostics → Diagnostic list

3.2.3 Event logbook

Navigation Diagnostics → Event logbook

Clear event list

Navigation Diagnostics → Event logbook → Clear event list

Description Delete all entries of the event list.

Selection
- Cancel
- Clear data

Factory setting Cancel

Additional information **Access:**
- Read access: Expert
- Write access: Expert

3.2.4 Minimum/maximum values

Navigation Diagnostics → Min/max val.

Minimum fork frequency

Navigation Diagnostics → Min/max val. → Min. frequency

Description Minimum measured frequency of the vibrating fork.

User interface Signed floating-point number

Maximum fork frequency

Navigation Diagnostics → Min/max val. → Max. frequency

Description Maximum measured frequency of the vibrating fork.

User interface Signed floating-point number

Minimum temp. of sensor electronics

Navigation Diagnostics → Min/max val. → Min.TSensElectr.

Description Minimum measured temperature of the sensor electronics.

User interface Signed floating-point number

Maximum temp. of sensor electronics

Navigation Diagnostics → Min/max val. → Max.TSensElectr.

Description Maximum measured temperature of the sensor electronics.

User interface Signed floating-point number

Minimum electronics temperature

Navigation Diagnostics → Min/max val. → Min.electr.temp.

Description Minimum measured temperature of the main electronics.

User interface Signed floating-point number

Maximum electronics temperature

Navigation Diagnostics → Min/max val. → Max.electr.temp.

Description Maximum measured temperature of the main electronics.

User interface Signed floating-point number

3.2.5 Simulation

Navigation Diagnostics → Simulation

Simulation

Navigation Diagnostics → Simulation → Simulation

Description Simulates one or more process variables and/or events.

Warning:
Output will reflect the simulated value or event.

Selection
- Off
- State of vibrating fork
- Sensor frequency
- Diagnostic event simulation

Factory setting Off

Frequency simulation value

Navigation Diagnostics → Simulation → Freq. simulation

Description Enter the frequency value to be simulated.

Note:
Prerequisite for the simulation to have an effect on the output:
Select "Sensor frequency " in the "Mode of operation" parameter in the Application > Sensor > Basic settings menu.
The simulated frequency value has no affect on the displayed state of the vibrating fork ("Fork uncovered", "Fork covered").

User entry 0 to 10 000 Hz

Factory setting 0 Hz

Fork state simulation value

Navigation Diagnostics → Simulation → Fork. simul.val.

Description Select the state of the vibrating fork to be simulated.

Note:
Prerequisite for the simulation to have an effect on the output:
Select "Level limit detection" in the "Mode of operation" parameter in the Application > Sensor > Basic settings menu.
The simulated state of the vibrating fork has no affect on the displayed sensor frequency.

Selection
- Fork covered
- Fork uncovered

Factory setting Fork uncovered

Diagnostic event simulation

Navigation Diagnostics → Simulation → Diagnostic event

Description Select the diagnostic event to be simulated.

Note:
To terminate the simulation, select "Off".

Selection
- Off
- Drop-down list of diagnostic events

Factory setting Off

3.2.6 Heartbeat Technology

Navigation Diagnostics → Heartbeat Techn.

Heartbeat Verification

Navigation Diagnostics → Heartbeat Techn. → Heartbeat Verif.

Date/time Heartbeat Verification

Navigation Diagnostics → Heartbeat Techn. → Heartbeat Verif. → Date/time Heartbeat Verification

Description Date and time of last Heartbeat Verification.

This value is updated with every Heartbeat verification.

Note:
If time information is not available, e.g. Heartbeat verification is started from display, "--------" is shown.

User interface Character string comprising numbers, letters and special characters

Factory setting 01.01.1970 00:00:00

Operating time (Verification)

Navigation Diagnostics → Heartbeat Techn. → Heartbeat Verif. → Operating time

Description Value of the operating hours counter at the time of verification.

User interface Days (d), hours (h), minutes (m), seconds (s)

Verification result

Navigation Diagnostics → Heartbeat Techn. → Heartbeat Verif. → Verific. result

Description Result of Heartbeat Verification.

User interface
- Not done
- Passed
- Not done
- Failed

Factory setting Not done

Status

Navigation Diagnostics → Heartbeat Techn. → Heartbeat Verif. → Status

Description Shows the actual status.

User interface
- Done
- Busy
- Failed
- Not done

Factory setting Not done

Frequency history

List of the last 16 sensor frequencies saved in the previous Heartbeat Verification.

Navigation Diagnostics → Heartbeat Techn. → Freq. history

Date 1 … 16

Navigation Diagnostics → Heartbeat Techn. → Freq. history → Date 1 … 16

User interface Character string comprising numbers, letters and special characters

Factory setting 1970-01-01 00:00:00

Sensor frequency 1 … 16

Navigation Diagnostics → Heartbeat Techn. → Freq. history → Frequency 1 … 16

User interface Floating-point number

Factory setting 0 Hz

Process window

Navigation Diagnostics → Heartbeat Techn. → Process window

Frequency of vibrating fork

Navigation Diagnostics → Heartbeat Techn. → Process window → Fork frequency

Description Displays the actual frequency of the vibrating fork.

User interface 0 to 10 000 Hz

901 Process alert frequency too high

Navigation Diagnostics → Heartbeat Techn. → Process window → 901Freq. high

Description Note:
If the device is used for minimum detection no event for "901 Process alert frequency too high" is triggered if the fork is not covered.

Selection
- Disable
- Enable

Factory setting Disable

High alert value

Navigation Diagnostics → Heartbeat Techn. → Process window → High alert value

Prerequisite Only visible if 901 Process alert frequency too high is enabled.

Description Enter the upper limit value.
If this limit value is exceeded, an event is generated. There is no hysteresis.

User entry 0 to 2 000 Hz

Factory setting 2 000 Hz

901 Alarm delay

Navigation Diagnostics → Heartbeat Techn. → Process window → 901Alarm delay

Prerequisite Only visible if 901 Process alert frequency too high is enabled.

Description Enter the duration (integer) that the triggering status must be active before the alarm is generated.
A warning is generated.

User entry 0 to 300 s

Factory setting 60 s

900 Process alert frequency too low

Navigation Diagnostics → Heartbeat Techn. → Process window → 900Freq. too low

Description Note:
If the device is used for maximum detection no event for "900 Process alert frequency too low" is triggered if the fork is covered.

Selection
- Disable
- Enable

Factory setting Disable

Low alert value

Navigation Diagnostics → Heartbeat Techn. → Process window → Low alert value

Prerequisite Only visible if 900 Process alert frequency too low is enabled.

Description Enter the lower limit value.
If this limit value is undercut, an event is generated. There is no hysteresis.

User entry 0 to 2 000 Hz

Factory setting 0 Hz

900 Alarm delay

Navigation Diagnostics → Heartbeat Techn. → Process window → 900Alarm delay

Prerequisite Only visible if 900 Process alert frequency too low is enabled.

Description Enter the duration (integer) that the triggering status must be active before the alarm is generated.
A warning is generated.

User entry 0 to 300 s

Factory setting 60 s

3.2.7 Diagnostic settings

Navigation Diagnostics → Diag. settings

Properties

Navigation Diagnostics → Diag. settings → Properties

49 Corrosion warning

Navigation Diagnostics → Diag. settings → Properties → 49Corr. warning

Description Enable or disable the corrosion warning.
The corrosion warning is set if the sensor frequency exceeds frequency at delivery status by 5 %.
If turned on, the event category can be set in menu -> Diagnostics -> Diagnostic settings -> Configuration
The diagnostic behaviour can be changed to "Logbook entry only" in the same menu.

Selection
- Off
- On

Factory setting On

Upper warning frequency

Navigation Diagnostics → Diag. settings → Properties → U. warning freq.

Description If the actual sensor frequency is higher than the upper warning frequency, then a warning is generated.
The process value for the actual status of the vibrating fork remains unchanged.
--> Remove the sensor and check it for corrosion.

User interface 0 to 10 000 Hz

Factory setting 0 Hz

825 Electronics temperature

Navigation Diagnostics → Diag. settings → Properties → 825Electr. temp

Description Activates the monitoring of the temperature of the main electronics.
The limit values are fixed.

Selection
- Off
- On

Factory setting On

826 Temperature of sensor electronics

Navigation Diagnostics → Diag. settings → Properties → 826TSensElectr.

Description Activates the monitoring of the temperature of the sensor electronics.
The limit values are fixed.

Selection
- Off
- On

Factory setting On

Configuration

Navigation Diagnostics → Diag. settings → Configuration

Sensor

Navigation Diagnostics → Diag. settings → Configuration → Sensor

49 Diagnostic behavior

Navigation Diagnostics → Diag. settings → Configuration → Sensor → 49Diag. behav.

Description Select diagnostic behavior.

Logbook entry only: Message not communicated via the fieldbus.

Warning: Warning message is output via the fieldbus (factory setting).

The warning is no longer available in the device once the permissible conditions are met again.

Selection
- Warning
- Logbook entry only

Factory setting Warning

49 Event category

Navigation Diagnostics → Diag. settings → Configuration → Sensor → 49Event categ.

User interface
- Failure (F)
- Function check (C)
- Out of specification (S)
- Maintenance required (M)
- Not categorized

Factory setting Maintenance required (M)

Configuration

Navigation Diagnostics → Diag. settings → Configuration → Configuration

436 Diagnostic behavior

Navigation Diagnostics → Diag. settings → Configuration → Configuration → 436Diag. behav.

Description
Select diagnostic behavior.

Logbook entry only: Message not communicated via the fieldbus.

Warning: Warning message is output via the fieldbus (factory setting).

The warning is no longer available in the device once the permissible conditions are met again.

Selection
- Warning
- Logbook entry only

Factory setting Warning

436 Event category

Navigation Diagnostics → Diag. settings → Configuration → Configuration → 436 Event categ.

User interface
- Failure (F)
- Function check (C)
- Out of specification (S)
- Maintenance required (M)
- Not categorized

Factory setting Maintenance required (M)

Process

Navigation Diagnostics → Diag. settings → Configuration → Process

825 Diagnostic behavior

Navigation Diagnostics → Diag. settings → Configuration → Process → 825Diag. behav.

Description
Select diagnostic behavior.

Logbook entry only: Message not communicated via the fieldbus.

Warning: Warning message is output via the fieldbus (factory setting).

The warning is no longer available in the device once the permissible conditions are met again.

Selection
- Warning
- Logbook entry only

Factory setting Warning

825 Event category

Navigation Diagnostics → Diag. settings → Configuration → Process → 825Event categ.

User interface
- Failure (F)
- Function check (C)
- Out of specification (S)
- Maintenance required (M)
- Not categorized

Factory setting Out of specification (S)

826 Diagnostic behavior

Navigation Diagnostics → Diag. settings → Configuration → Process → 826Diag. behav.

Description

Select diagnostic behavior.

Logbook entry only: Message not communicated via the fieldbus.

Warning: Warning message is output via the fieldbus (factory setting).

The warning is no longer available in the device once the permissible conditions are met again.

Selection

- Warning
- Logbook entry only

Factory setting Warning

826 Event category

Navigation Diagnostics → Diag. settings → Configuration → Process → 826Event categ.

User interface

- Failure (F)
- Function check (C)
- Out of specification (S)
- Maintenance required (M)
- Not categorized

Factory setting Out of specification (S)

900 Diagnostic behavior

Navigation Diagnostics → Diag. settings → Configuration → Process → 900Diag. behav.

Description

Select diagnostic behavior.

Logbook entry only: Message not communicated via the fieldbus.

Warning: Warning message is output via the fieldbus (factory setting).

The warning is no longer available in the device once the permissible conditions are met again.

Selection

- Warning
- Logbook entry only

Factory setting Warning

900 Event category

Navigation Diagnostics → Diag. settings → Configuration → Process → 900Event categ.

User interface
- Failure (F)
- Function check (C)
- Out of specification (S)
- Maintenance required (M)
- Not categorized

Factory setting Out of specification (S)

901 Diagnostic behavior

Navigation Diagnostics → Diag. settings → Configuration → Process → 901Diag. behav.

Description
Select diagnostic behavior.

Logbook entry only: Message not communicated via the fieldbus.

Warning: Warning message is output via the fieldbus (factory setting).

The warning is no longer available in the device once the permissible conditions are met again.

Selection
- Warning
- Logbook entry only

Factory setting Warning

901 Event category

Navigation Diagnostics → Diag. settings → Configuration → Process → 901Event categ.

User interface
- Failure (F)
- Function check (C)
- Out of specification (S)
- Maintenance required (M)
- Not categorized

Factory setting Out of specification (S)

3.3 Application

Navigation Application

3.3.1 Measuring units

Navigation Application → Measuring units

Temperature unit

Navigation Application → Measuring units → Temperature unit

Description Select the temperature unit.

Selection

SI units	*US units*
▪ ℃	℉
▪ K	

Factory setting ℃

3.3.2 Measured values

Navigation Application → Measured values

Frequency of vibrating fork

Navigation Application → Measured values → Fork frequency

Description Displays the actual frequency of the vibrating fork.

User interface 0 to 10 000 Hz

State of vibrating fork

Navigation Application → Measured values → Fork state

Description Displays the actual status of the vibrating fork.

User interface
- Fork covered
- Fork uncovered

Temperature of sensor electronics

Navigation Application → Measured values → T sens.electr.

Description Displays the actual temperature of the sensor electronics.

User interface Signed floating-point number

Factory setting 0 °C

Electronics temperature

Navigation Application → Measured values → Electronics temp

Description Displays the current temperature of the main electronics.

User interface Signed floating-point number

Factory setting 0 °C

3.3.3 Sensor

Navigation Application → Sensor

Basic settings

Navigation Application → Sensor → Basic settings

Density setting

Navigation Application → Sensor → Basic settings → Density setting

Description Select the density of the medium.

Selection
- > 0.4 g/cm³ (> 25.0 lb/ft³) *
- > 0.4 g/cm³ (> 25.0 lb/ft³) *
- > 0.5 g/cm³ (> 31.2 lb/ft³)
- > 0.7 g/cm³ (> 43.7 lb/ft³)

Factory setting > 0.7 g/cm³ (> 43.7 lb/ft³)

* Visibility depends on order options or device settings

Switching delay uncovered to covered

Navigation Application → Sensor → Basic settings → Delay to covered

Description Select the delay time for switching from "Fork uncovered" to "Fork covered".
The value determines the delay time until the switching output switches after a change of state is detected.

Choose between predefined values or select "Customer specific" to enter an integer between 1 s and 60 s.

Selection
- 0.25 s
- 0.50 s
- 1.00 s
- 1.50 s
- 5.00 s
- Customer specific

Factory setting 0.50 s

Customer delay to covered

Navigation Application → Sensor → Basic settings → Cust. delay cov.

Description Enter the delay time for switching from "Fork uncovered" to "Fork covered".
The value determines the delay time until the switching output switches after a change of state is detected.
Enter an integer between 1 s and 60 s.

User entry 1 to 60 s

Factory setting 1 s

Switching delay covered to uncovered

Navigation Application → Sensor → Basic settings → Delay to uncov.

Description Select the delay time for switching from "Fork covered" to "Fork uncovered".
The value determines the delay time until the switching output switches after a change of state is detected.

Choose between predefined values or select "Customer specific" to enter an integer between 1 s and 60 s.

Selection
- 0.25 s
- 0.50 s
- 1.00 s
- 1.50 s
- 5.00 s
- Customer specific

Factory setting 1.00 s

Customer delay to uncovered

Navigation Application → Sensor → Basic settings → Cust. delay unc.

Description Enter the delay time for switching from "Fork covered" to "Fork uncovered".
The value determines the delay time until the switching output switches after a change of state is detected.
Enter an integer between 1 s and 60 s.

User entry 1 to 60 s

Factory setting 1 s

Sensor calibration

Navigation Application → Sensor → Sensor cal.

Lower switching point at density

Navigation Application → Sensor → Sensor cal. → Lower sw. point

Description Displays the sensor frequency at which the status of the vibrating fork changes to "Fork covered" (depending on the density selected).

User interface 0 to 2 000 Hz

Factory setting Depends on density setting

Upper switching point at density

Navigation Application → Sensor → Sensor cal. → Upper sw. point

Description Displays the sensor frequency at which the status of the vibrating fork changes to "Fork uncovered" (depending on the density selected).

User interface 0 to 2 000 Hz

Factory setting Depends on density setting

Frequency at delivery status

Navigation Application → Sensor → Sensor cal. → Freq. delivery

Description Sensor frequency at delivery status. The individually determined oscillation frequency in air is in the range of 900 to 1 200 Hz.

User interface 0 to 10 000 Hz

Factory setting Device-specific

Upper warning frequency

Navigation Application → Sensor → Sensor cal. → U. warning freq.

Description If the actual sensor frequency is higher than the upper warning frequency, then a warning is generated.
The process value for the actual status of the vibrating fork remains unchanged.
--> Remove the sensor and check it for corrosion.

User interface 0 to 10 000 Hz

Factory setting 0 Hz

Upper alarm frequency

Navigation Application → Sensor → Sensor cal. → Upper alarm f.

Description If the actual sensor frequency is higher than the upper alarm frequency, the process value status switches to "bad".
The process value status displays "good" as long as the fork oscillates freely.

User interface 0 to 10 000 Hz

Factory setting Device-specific

Stored frequency

Navigation Application → Sensor → Stored frequency

State of vibrating fork

Navigation Application → Sensor → Stored frequency → Fork state

Description Displays the actual status of the vibrating fork.

User interface
- Fork covered
- Fork uncovered

Stored uncovered frequency

Navigation Application → Sensor → Stored frequency → Stored uncov. f.

Description The actual sensor frequency can be saved in this parameter.
This is only possible when the fork is uncovered.
The value is displayed in the Heartbeat Technology verification report.

Note:
Save the frequency in a reproducible state in order to use it as a reference for further/ future analyses.

User interface 0 to 10 000 Hz

Stored covered frequency

Navigation Application → Sensor → Stored frequency → Stored cov. f.

Description The actual sensor frequency can be saved in this parameter.
This is only possible when the fork is covered.
The value is displayed in the Heartbeat Technology verification report.

Note:
Save the frequency in a reproducible state in order to use it as a reference for further/ future analyses.

User interface 0 to 10 000 Hz

3.3.4 PROFINET

Navigation Application → PROFINET

Configuration

Navigation Application → PROFINET → Configuration

PROFINET device name

Navigation Application → PROFINET → Configuration → PROFINET DevName

Description Up to 240 characters are allowed.
The following syntax must be used:
- 1 or more identifiers, separated with [.]
- Identifier length is 1 to 63 characters
- Identifier consists of [a-z 0-9] only lowercase letters and numbers allowed.

Parameter change acknowledge mode

Navigation Application → PROFINET → Configuration → ParaChngAcknMode

Description Select how to acknowledge the displayed flag when changing the device configuration:
- "Acknowledge automatically": the flag disappears automatically after 20 seconds.
- "Acknowledge manually": the flag must be acknowledged manually.

Selection
- Acknowledge automatically
- Acknowledge manually

Factory setting Acknowledge automatically

Acknowledge parameter change

Navigation Application → PROFINET → Configuration → AcknParaChange

Description If the Option "Manual acknowledge" is selected as the acknowledgement type, then a parameter change must be acknowledged with the "Reset update event flag" option.

Selection
- No acknowledge
- Reset update event flag

Factory setting No acknowledge

Descriptor

Navigation Application → PROFINET → Configuration → Descriptor

Description Enter a description for the measuring point

User entry Character string comprising numbers, letters and special characters (54)

Discrete input

Navigation Application → PROFINET → Discrete inp. → Discrete inp.

Process value

Navigation Application → PROFINET → Discrete inp. → Discrete inp. → Process value

Description Shows the process value reported to the controller for further processing

User interface 0 to 255

Factory setting 0

Additional information Vibrating fork state:
- 0: Vibrating fork not covered
- 1: Vibrating fork covered

Simulation value

Navigation Application → PROFINET → Discrete inp. → Discrete inp. → Simulation value

Description Use this function to enter a simulation value of the process variable.

User entry 0 to 255

Factory setting 0

Additional information **Access:**
- Read access: Expert
- Write access: Maintenance

Simulated status

Navigation Application → PROFINET → Discrete inp. → Discrete inp. → Simulated status

Description Specify the status of the simulated process value (Hex)

User entry 0 to 255

Factory setting 60

Additional information **Access:**
- Read access: Expert
- Write access: Maintenance

Simulation

Navigation Application → PROFINET → Discrete inp. → Discrete inp. → Simulation

Description Switch discrete input simulation on or off (Off = 0, On <> 0).

User entry 0 to 255

Factory setting 0

Additional information **Access:**
- Read access: Expert
- Write access: Maintenance

Analog input

Navigation Application → PROFINET → Analog input

Analog input 1 to 3

Navigation Application → PROFINET → Analog input → Analog input 1 to 3

Process value

Navigation Application → PROFINET → Analog input → Analog input 1 to 3 → Process value

Description Shows the process value reported to the controller for further processing

User interface Signed floating-point number

Factory setting 0 Hertz

Assign process variable

Navigation Application → PROFINET → Analog input → Analog input 1 to 3 → Assign variable

Description

User interface
- Fork frequency
- Sensor temperature
- Electronics temperature

Factory setting Fork frequency

Damping

Navigation Application → PROFINET → Analog input → Analog input 1 to 3 → Damping

Description Enter time constant for input damping (PT1 element). Damping reduces the effect of fluctuations in the measured value on the output signal.

User entry 0 to 999 s

Factory setting 1.0 s

Simulation value

Navigation Application → PROFINET → Analog input → Analog input 1 to 3 → Simulation value

Description Enter the simulation value for the selected process variable. Processing of measured values downstream as well as the signal ouput follow this value. In this way, it is possibe to verify whether the measuring device has been configured correctly.

Additional information:
The applicable unit of measure is specified in the "System units" submenu.

User entry Signed floating-point number

Factory setting 0 Hertz

Additional information **Access:**
- Read access: Expert
- Write access: Maintenance

Simulated status

Navigation Application → PROFINET → Analog input → Analog input 1 to 3 → Simulated status

Description To simulate a process status for this block. Possible input values can be taken from the PA profile used, see there under the chapter "Process variable status and diagnosis".

Examples for status values are:

0x80 (decimal 128) for status "GOOD"
0x24 (decimal 36) for status "BAD

User entry 0 to 255

Factory setting 60

Additional information **Access:**
- Read access: Expert
- Write access: Maintenance

Simulation

Navigation Application → PROFINET → Analog input → Analog input 1 to 3 → Simulation

Description Switch simulation of the analog input on or off (Off = 0, On <> 0)

User entry 0 to 255

Factory setting 0

Additional information **Access:**
- Read access: Expert
- Write access: Maintenance

Binary input

Navigation Application → PROFINET → Binary input

Binary input 1 to 2

Navigation Application → PROFINET → Binary input → Binary input 1 to 2

Controller input value

Navigation Application → PROFINET → Binary input → Binary input 1 to 2 → ControllInputVal

Description Shows for each device function the state reported to the controller for further processing

User interface 0 to 255

Factory setting 0

Simulation value

Navigation Application → PROFINET → Binary input → Binary input 1 to 2 → Simulation value

Description Enter the simulated state for each device function

User entry 0 to 255

Factory setting 0

Additional information **Access:**
- Read access: Expert
- Write access: Maintenance

Simulated status

Navigation Application → PROFINET → Binary input → Binary input 1 to 2 → Simulated status

Description Specify the status of the simulated state for each device function (Hex)

User entry 0 to 255

Factory setting 60

Additional information **Access:**
- Read access: Expert
- Write access: Maintenance

Simulation

Navigation Application → PROFINET → Binary input → Binary input 1 to 2 → Simulation

Description Switch simulation of the binary input on or off (Off = 0; On <> 0)

User entry 0 to 255

Factory setting 0

Additional information **Access:**
- Read access: Expert
- Write access: Maintenance

Binary output

Navigation Application → PROFINET → Binary output

Set point value

Navigation Application → PROFINET → Binary output → Set point value

User entry 0 to 255

Factory setting 0

BO block output value

Navigation Application → PROFINET → Binary output → BOBlockOutValue

Description Shows for each device function the state reported to the measuring device for further processing

User entry 0 to 255

Factory setting 0

Failure behavior

Navigation Application → PROFINET → Binary output → Failure behavior

Description Select failure behavior in the event of a failure (value with status 'Bad')

Selection
- Fixed value
- Last valid value
- Actual value

Factory setting Fixed value

Failure behavior delay

Navigation Application → PROFINET → Binary output → FailBehavDelay

Description Enter a delay until in the event of a failure (value with status 'Bad') the failure behavior specified applies

User entry Positive floating-point number

Factory setting 0 s

Fixed value

Navigation Application → PROFINET → Binary output → Fixed value

Description Enter value to report in the event of a failure (value with status 'Bad')

User entry 0 to 255

Factory setting 0

Information

Navigation Application → PROFINET → Information

Device ID

Navigation Application → PROFINET → Information → Device ID

User interface 0 to 65 535

Factory setting 41 412

PA profile version

Navigation Application → PROFINET → Information → PA profile vers.

User interface 0 to 65 535

Factory setting 0x402

Application relation

Navigation Application → PROFINET → Applicat. relat.

AR state

Navigation Application → PROFINET → Applicat. relat. → AR state

Description Shows whether an AR connection and a system redundancy have been established

User interface
- Active
- Not active
- Redundancy 1AR active
- Redundancy 2AR active

Factory setting Not active

MAC address IO controller

Navigation Application → PROFINET → Applicat. relat. → MAC IO contr.

Description Shows the MAC address of the only or of the primary IO controller

User interface Character string comprising numbers, letters and special characters

Factory setting 0x00

MAC address backup IO controller

Navigation Application → PROFINET → Applicat. relat. → MAC backup IO c.

Description Shows the MAC adress of the backup IO controller

User interface Character string comprising numbers, letters and special characters

Factory setting 0x00

IP address IO controller

Navigation Application → PROFINET → Applicat. relat. → IP IO controller

Description Shows the IP address of the only or of the primary IO controller

User interface Character string comprising numbers, letters and special characters

Factory setting 0x00

IP address backup IO controller

Navigation Application → PROFINET → Applicat. relat. → IP backup IO c.

Description Shows the IP adress of the backup IO controller

User interface Character string comprising numbers, letters and special characters

Factory setting 0x00

3.4 System

Navigation System

3.4.1 Device management

Navigation System → Device manag.

Device tag

Navigation System → Device manag. → Device tag

Description Enter a name for the measuring point to identify the measuring device in the plant

User entry Character string comprising numbers, letters and special characters (32)

Locking status

Navigation System → Device manag. → Locking status

Description Indicates the type of locking.

"Hardware locked" (HW)
The device is locked by the "WP" switch on the main electronics module. To unlock, set the switch into the OFF position.

"WHG locked" (SW)
Unlock the device by entering the appropriate access code in "Enter safety unlocking code".

"Temporarily locked" (SW)
The device is temporarily locked by processes in the device (e.g. data upload/download, reset). The device will automatically be unlocked after completion of these processes.

User interface
- Hardware locked
- WHG locked
- Temporarily locked

Configuration counter

Navigation System → Device manag. → Config. counter

Description Shows the number of changes made to static parameters (e.g. configuration parameters)

User interface 0 to 65 535

Factory setting 0

Reset device

Navigation System → Device manag. → Reset device

Description Reset the device configuration - either entirely or in part - to a defined state

Selection
- Cancel
- To factory defaults *
- To delivery settings *
- Restart device

Factory setting Cancel

3.4.2 User management

Navigation System → User manag.

User management

Navigation System → User manag. → User manag.

User role

Navigation System → User manag. → User manag. → User role

Description Shows the access authorization to the parameters via the operating tool

User interface
- Operator
- Maintenance
- Expert

Factory setting Maintenance

Delete password

Navigation System → User manag. → User manag. → Delete password

Description Deletes the 'Maintenance' password.
After deleting, the 'Operator' role will be no more available.
All users have read/write access rights.

* Visibility depends on order options or device settings

User entry Character string comprising numbers, letters and special characters (1)

Forgot password?

Navigation System → User manag. → User manag. → Forgot password?

User entry Character string comprising numbers, letters and special characters (1)

Enter password

Navigation System → User manag. → Enter password

Password

Navigation System → User manag. → Enter password → Password

Description Enter the password for the "Maintenance" user role to get access to the functionality of this role.

User entry Character string comprising numbers, letters and special characters (16)

Enter access code

Navigation System → User manag. → Enter password → Ent. access code

Description For authorized service personnel only.

User entry 0 to 9 999

Factory setting 0

Status password entry

Navigation System → User manag. → Enter password → Status pw entry

Description Use this function to display the status of the password verification.

User interface
- --------
- Wrong password
- Password rule violated

- Password accepted
- Permission denied
- Confirm PW mismatch
- Reset password accepted
- Invalid user role
- Wrong sequence of entry

Factory setting --------

Define password

Navigation System → User manag. → Define password

New password

Navigation System → User manag. → Define password → New password

Description Define the new "Maintenance" password.
A new password is valid after it has been confirmed within the "Confirm new password" parameter.
Any valid password consists of 4 to 16 characters and can contain letters and numbers.

User entry Character string comprising numbers, letters and special characters (16)

Confirm new password

Navigation System → User manag. → Define password → Confirm password

Description Enter the new password again to confirm.

User entry Character string comprising numbers, letters and special characters (16)

Status password entry

Navigation System → User manag. → Define password → Status pw entry

Description Use this function to display the status of the password verification.

User interface
- --------
- Wrong password
- Password rule violated
- Password accepted
- Permission denied

- Confirm PW mismatch
- Reset password accepted
- Invalid user role
- Wrong sequence of entry

Factory setting --------

Change password

Navigation System → User manag. → Change password

Old password

Navigation System → User manag. → Change password → Old password

Description Enter the current password, to subsequently change the existing password.

User entry Character string comprising numbers, letters and special characters (16)

New password

Navigation System → User manag. → Change password → New password

Description Define the new "Maintenance" password.
A new password is valid after it has been confirmed within the "Confirm new password" parameter.
Any valid password consists of 4 to 16 characters and can contain letters and numbers.

User entry Character string comprising numbers, letters and special characters (16)

Confirm new password

Navigation System → User manag. → Change password → Confirm password

Description Enter the new password again to confirm.

User entry Character string comprising numbers, letters and special characters (16)

Status password entry

Navigation System → User manag. → Change password → Status pw entry

Description Use this function to display the status of the password verification.

User interface
- --------
- Wrong password
- Password rule violated
- Password accepted
- Permission denied
- Confirm PW mismatch
- Reset password accepted
- Invalid user role
- Wrong sequence of entry

Factory setting --------

Recover password

Navigation System → User manag. → Recover password

Reset password

Navigation System → User manag. → Recover password → Reset password

Description Enter a code to reset the current "Maintenance" password.
The code is delivered by your local support.

User entry Character string comprising numbers, letters and special characters (16)

Status password entry

Navigation System → User manag. → Recover password → Status pw entry

Description Use this function to display the status of the password verification.

User interface
- --------
- Wrong password
- Password rule violated
- Password accepted
- Permission denied
- Confirm PW mismatch
- Reset password accepted
- Invalid user role
- Wrong sequence of entry

Factory setting --------

3.4.3 Connectivity

Navigation System → Connectivity

Interfaces

Navigation System → Connectivity → Interfaces

Display operation

Navigation System → Connectivity → Interfaces → DisplayOperation

Selection
- Disable
- Enable

Factory setting Enable

Web server functionality

Navigation System → Connectivity → Interfaces → Webserver funct.

Description Switch the Web server on and off.

Selection
- Disable
- Enable

Factory setting Enable

Bluetooth activation

Navigation System → Connectivity → Interfaces → Bluetooth active

Description If Bluetooth is deactivated, it can only be reactivated via the display or the operating tool. Reactivating via the SmartBlue app is not possible.

Selection
- Disable
- Enable

Factory setting Enable

Service (UART-CDI)

Navigation System → Connectivity → Interfaces → Service (CDI)

Selection
- Disable
- Enable

Factory setting Enable

Ethernet

Navigation System → Connectivity → Ethernet

Properties

Navigation System → Connectivity → Ethernet → Properties

MAC address

Navigation System → Connectivity → Ethernet → Properties → MAC Address

Description Shows the MAC address of the measuring device

User interface Character string comprising numbers, letters and special characters

IP address

Navigation System → Connectivity → Ethernet → Properties → IP address

Description Enter the IP address of the device. Then accept the change with "Apply ".

User entry Character string comprising numbers, letters and special characters (15)

Factory setting 192.168.1.212

Subnet mask

Navigation System → Connectivity → Ethernet → Properties → Subnet mask

Description Enter subnet mask of the device. Then accept the change with "Apply ".

User entry Character string comprising numbers, letters and special characters (15)

Factory setting 255.255.255.0

Default gateway

Navigation System → Connectivity → Ethernet → Properties → Default gateway

Description Enter IP address for the default gateway of the device.. Then accept the change with "Apply ".

User entry Character string comprising numbers, letters and special characters (15)

Factory setting 0.0.0.0

Service IP active

Navigation System → Connectivity → Ethernet → Properties → Service IP act.

User interface
- No
- Yes

Factory setting No

Port information

Navigation System → Connectivity → Ethernet → Port info

Interface connection status

Navigation System → Connectivity → Ethernet → Port info → Interface status

User interface
- Connected
- Not connected

Factory setting Not connected

Interface speed

Navigation System → Connectivity → Ethernet → Port info → Interface speed

User interface Positive integer

Factory setting 0 MBit/s

Duplex status

Navigation System → Connectivity → Ethernet → Port info → Duplex status

User interface
- Full duplex
- Half duplex
- Unknown

Factory setting Unknown

Auto negotiation status

Navigation System → Connectivity → Ethernet → Port info → Auto negot.stat.

User interface
- Idle
- In progress
- Completed
- Failed
- Speed detection failed

Factory setting Idle

Number of received packets

Navigation System → Connectivity → Ethernet → Port info → RX packet no.

User interface Positive integer

Factory setting 0

Number of sent packets

Navigation System → Connectivity → Ethernet → Port info → TX packet number

User interface Positive integer

Factory setting 0

Number of failed received packets

Navigation System → Connectivity → Ethernet → Port info → FailRcvdPackets

User interface Positive integer

Factory setting 0

Number of failed sent packets

Navigation System → Connectivity → Ethernet → Port info → No.FailTXPackets

User interface Positive integer

Factory setting 0

Reset Ethernet diagnostics

Navigation System → Connectivity → Ethernet → Port info → ResetEthernDiag.

Selection
- Cancel
- Reset

Factory setting Cancel

APL information

Navigation System → Connectivity → Ethernet → APL information

Signal to noise ratio

Navigation System → Connectivity → Ethernet → APL information → SNR

Description Shows the signal to noise ratio of the Ethernet-APL connection. A value >21dB is good and >23dB is excellent.

User interface Signed floating-point number

Factory setting 0 dB

Number of failed received packets

Navigation System → Connectivity → Ethernet → APL information → FailRXPacketsNo.

Description Shows the number of failed received packets (PHY).

User interface 0 to 65 535

Factory setting 0

Reset Ethernet diagnostics

Navigation System → Connectivity → Ethernet → APL information → ResetEthernDiag.

Selection
- Cancel
- Reset

Factory setting Cancel

TCP information

Navigation System → Connectivity → Ethernet → TCP information

Active TCP connections

Navigation System → Connectivity → Ethernet → TCP information → Act. TCP connec.

User interface 0 to 65 535

Factory setting 0

Supported TCP connections

Navigation System → Connectivity → Ethernet → TCP information → Supported TCP

User interface 0 to 65 535

Factory setting 0

TCP connection requests

Navigation System → Connectivity → Ethernet → TCP information → TCPConnecRequest

User interface 0 to 65 535

Factory setting 0

TCP connection timeouts

Navigation System → Connectivity → Ethernet → TCP information → TCPConnecTimeout

User interface 0 to 255

Factory setting 0

Number of TCP connections closed

Navigation System → Connectivity → Ethernet → TCP information → TCPConnect.close

User interface 0 to 255

Factory setting 0

Number of received TCP packets

Navigation System → Connectivity → Ethernet → TCP information → No.RX TCP Packet

User interface Positive integer

Factory setting 0

Number of sent TCP packets

Navigation System → Connectivity → Ethernet → TCP information → No.TX TCP packet

User interface Positive integer

Factory setting 0

Number of TCP failed received packets

Navigation System → Connectivity → Ethernet → TCP information → TCPFailRXPackets

User interface Positive integer

Factory setting 0

Reset Ethernet diagnostics

Navigation System → Connectivity → Ethernet → TCP information → ResetEthernDiag.

Selection
- Cancel
- Reset

Factory setting Cancel

UDP information

Navigation System → Connectivity → Ethernet → UDP information

Available UDP ports

Navigation System → Connectivity → Ethernet → UDP information → Avail. UDP ports

User interface Positive integer

Factory setting 0

Number of received UDP packets

Navigation System → Connectivity → Ethernet → UDP information → No.RX UDP Packet

User interface Positive integer

Factory setting 0

Number of sent UDP packets

Navigation System → Connectivity → Ethernet → UDP information → No.TX UDP packet

User interface Positive integer

Factory setting 0

Number of UDP failed received packets

Navigation System → Connectivity → Ethernet → UDP information → UDPFailRXPackets

User interface Positive integer

Factory setting 0

Reset Ethernet diagnostics

Navigation System → Connectivity → Ethernet → UDP information → ResetEthernDiag.

Selection
- Cancel
- Reset

Factory setting Cancel

3.4.4 Display

Navigation System → Display

Language

Navigation System → Display → Language

Description Set display language

Selection
- English
- Deutsch *
- Français *
- Español *
- Italiano *
- Nederlands *
- Portuguesa *
- Polski *
- русский язык (Russian) *
- Svenska *
- Türkçe *
- 中文 (Chinese) *
- 日本語 (Japanese) *
- 한국어 (Korean) *
- čeština (Czech) *

Factory setting English

Format display

Navigation System → Display → Format display

Description Select how measured values are shown on the display

* Visibility depends on order options or device settings

Selection
- 1 value, max. size
- 2 values

Factory setting 1 value, max. size

Value 1 display

Navigation System → Display → Value 1 display

Description Select the measured value that is shown on the local display

Selection
- Sensor frequency
- State of vibrating fork
- Sensor temperature

Factory setting State of vibrating fork

Value 2 display

Navigation System → Display → Value 2 display

Description Select the measured value that is shown on the local display

Selection
- None
- Sensor frequency
- State of vibrating fork
- Sensor temperature

Factory setting None

Value 3 display

Navigation System → Display → Value 3 display

Description Select the measured value that is shown on the local display

Selection
- None
- Sensor frequency
- State of vibrating fork
- Sensor temperature

Factory setting None

Value 4 display

Navigation System → Display → Value 4 display

Description Select the measured value that is shown on the local display

Selection
- None
- Sensor frequency
- State of vibrating fork
- Sensor temperature

Factory setting None

Decimal places 1 ... 4

Navigation System → Display → Decimal places 1

Description This selection does not affect the measurement and calculation accuracy of the device.

Selection
- x
- x.x
- x.xx
- x.xxx
- x.xxxx

Factory setting x.x

Contrast display

Navigation System → Display → Contrast display

Description Adjust local display contrast setting to ambient conditions (e.g. lighting or reading angle)

User entry 20 to 80 %

Factory setting 30 %

3.4.5 Date/time

Navigation System → Date/time

Date/time

Navigation System → Date/time → Date/time

Description Displays the date and time entered.

User interface Character string comprising numbers, letters and special characters

Factory setting 2025-01-01 00:00:00

Time zone

Navigation System → Date/time → Time zone

Description Select the time zone. Every time the time zone is changed, a logbook entry is created.

Selection

Other units
- UTC-12:00
- UTC-11:00
- UTC-10:00
- UTC-09:30
- UTC-09:00
- UTC-08:00
- UTC-07:00
- UTC-06:00
- UTC-05:00
- UTC-04:00
- UTC-03:30
- UTC-03:00
- UTC-02:30
- UTC-02:00
- UTC-01:00
- UTC 00:00
- UTC+01:00
- UTC+02:00
- UTC+03:00
- UTC+03:30
- UTC+04:00
- UTC+04:30
- UTC+05:00
- UTC+05:30
- UTC+05:45
- UTC+06:00
- UTC+06:30
- UTC+07:00
- UTC+08:00
- UTC+08:45
- UTC+09:00
- UTC+09:30
- UTC+10:00
- UTC+10:30
- UTC+11:00
- UTC+12:00
- UTC+12:45
- UTC+13:00
- UTC+13:45
- UTC+14:00

Factory setting UTC 00:00

Enable NTP

Navigation System → Date/time → Enable NTP

Selection
- No
- Yes

Factory setting No

NTP server address

Navigation System → Date/time → NTP server add.

Description IP address of the NTP server.

User entry Character string comprising numbers, letters and special characters (64)

Factory setting 192.168.1.1

Clock synchronized

Navigation System → Date/time → Clock synch.

Description Timestamp of last synchronization with an NTP server.

User interface Character string comprising numbers, letters and special characters

Factory setting ----------

3.4.6 Geolocation

Navigation System → Geolocation

Location description

Navigation System → Geolocation → Location descr.

Description Enter a description for the location

User entry Character string comprising numbers, letters and special characters (32)

Factory setting somewhere

Longitude

Navigation System → Geolocation → Longitude

Description Enter the longitude.

User entry −180 to 180 °

Factory setting 0 °

Latitude

Navigation System → Geolocation → Latitude

Description Enter latitude

User entry –90 to 90 °

Factory setting 0 °

Altitude

Navigation System → Geolocation → Altitude

Description Enter altitude

User entry Signed floating-point number

Factory setting 0 m

3.4.7 Information

Navigation System → Information

Device name

Navigation System → Information → Device name

Description Use this function to display the device name. It can also be found on the nameplate.

User interface Character string comprising numbers, letters and special characters

Factory setting Liquiphant

Manufacturer

Navigation System → Information → Manufacturer

Description Displays the manufacturer.

User interface Character string comprising numbers, letters and special characters

Factory setting Endress+Hauser

Serial number

Navigation System → Information → Serial number

Description The serial number is a unique alphanumerical code identifying the device.
It is printed on the nameplate.
In combination with the Operations app it allows to access all device related documentation.

User interface Character string comprising numbers, letters and special characters

Order code

Navigation System → Information → Order code

Description Shows the device order code.

User interface Character string comprising numbers, letters and special characters

Factory setting - none -

Additional information **Access:**
- Read access: Operator
- Write access: Expert

Firmware version

Navigation System → Information → Firmware version

Description Displays the device firmware version installed.

User interface Character string comprising numbers, letters and special characters

Hardware version

Navigation System → Information → Hardware version

User interface Character string comprising numbers, letters and special characters

Extended order code 1 ... 3

Navigation System → Information → Ext. order cd. 1

Description The extended order code is an alphanumeric code containing all information to identify the device and its options.

User interface Character string comprising numbers, letters and special characters

Additional information **Access:**
- Read access: Operator
- Write access: Expert

XML build number

Navigation System → Information → XML build no.

User interface Positive integer

Additional information **Access:**
- Read access: Expert
- Write access: -

Checksum

Navigation System → Information → Checksum

Description Checksum for Firmware version.

User interface Positive integer

3.4.8 Additional information

Navigation System → Additional info

Sensor

Navigation System → Additional info → Sensor

Serial number

Navigation System → Additional info → Sensor → Serial number

Description Shows the serial number of the module

User interface Character string comprising numbers, letters and special characters

Additional information **Access:**
- Read access: Expert
- Write access: -

Firmware version

Navigation System → Additional info → Sensor → Firmware version

Description Displays the firmware version of the module.

User interface Positive integer

Additional information **Access:**
- Read access: Expert
- Write access: -

Build no. software

Navigation System → Additional info → Sensor → Build no. softw.

Description Shows the build number of the module firmware

User interface 0 to 65 535

Additional information **Access:**
- Read access: Expert
- Write access: -

Hardware version

Navigation System → Additional info → Sensor → Hardware version

Description Displays the hardware version of the module.

User interface Character string comprising numbers, letters and special characters

Additional information **Access:**
- Read access: Expert
- Write access: -

Checksum

Navigation System → Additional info → Sensor → Checksum

Description Checksum for Firmware version.

User interface Positive integer

Factory setting 0

Additional information **Access:**
- Read access: Expert
- Write access: -

Electronics

Navigation System → Additional info → Electronics

Serial number

Navigation System → Additional info → Electronics → Serial number

Description Shows the serial number of the module

User interface Character string comprising numbers, letters and special characters

Additional information **Access:**
- Read access: Expert
- Write access: -

Firmware version

Navigation System → Additional info → Electronics → Firmware version

Description Displays the firmware version of the module.

User interface Positive integer

Additional information **Access:**
- Read access: Expert
- Write access: -

Build no. software

Navigation System → Additional info → Electronics → Build no. softw.

Description Shows the build number of the module firmware

User interface 0 to 65 535

Additional information **Access:**
- Read access: Expert
- Write access: -

Hardware version

Navigation System → Additional info → Electronics → Hardware version

Description Displays the hardware version of the module.

User interface Character string comprising numbers, letters and special characters

Additional information **Access:**
- Read access: Expert
- Write access: -

Display/Bluetooth

Navigation System → Additional info → Displ./Bluetooth

Serial number

Navigation System → Additional info → Displ./Bluetooth → Serial number

Description Shows the serial number of the module

User interface Character string comprising numbers, letters and special characters

Additional information **Access:**
- Read access: Expert
- Write access: -

Firmware version

Navigation System → Additional info → Displ./Bluetooth → Firmware version

Description Displays the firmware version of the module.

User interface Positive integer

Additional information **Access:**
- Read access: Expert
- Write access: -

Build no. software

Navigation System → Additional info → Displ./Bluetooth → Build no. softw.

Description Shows the build number of the module firmware

User interface 0 to 65 535

Additional information **Access:**
- Read access: Expert
- Write access: -

Hardware version

Navigation System → Additional info → Displ./Bluetooth → Hardware version

Description Displays the hardware version of the module.

User interface Character string comprising numbers, letters and special characters

Additional information **Access:**
- Read access: Expert
- Write access: -

3.4.9 Software configuration

Navigation System → Softw. config.

CRC device configuration

Navigation System → Softw. config. → CRC device conf.

Description CRC device configuration based on current settings of safety relevant parameters. The CRC device configuration is unique and can be used to detect changes in safety relevant parameter settings.

User interface 0 to 65 535

Factory setting 65 535

Activate SW option

Navigation System → Softw. config. → Activate SW opt.

Description Enter the application package code or code of another re-ordered functionality to enable it

User entry Positive integer

Software option overview

Navigation System → Softw. config. → SW option overv.

Description Shows all enabled software options

User interface

- WHG
- Heartbeat Verification
- Heartbeat Monitoring

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