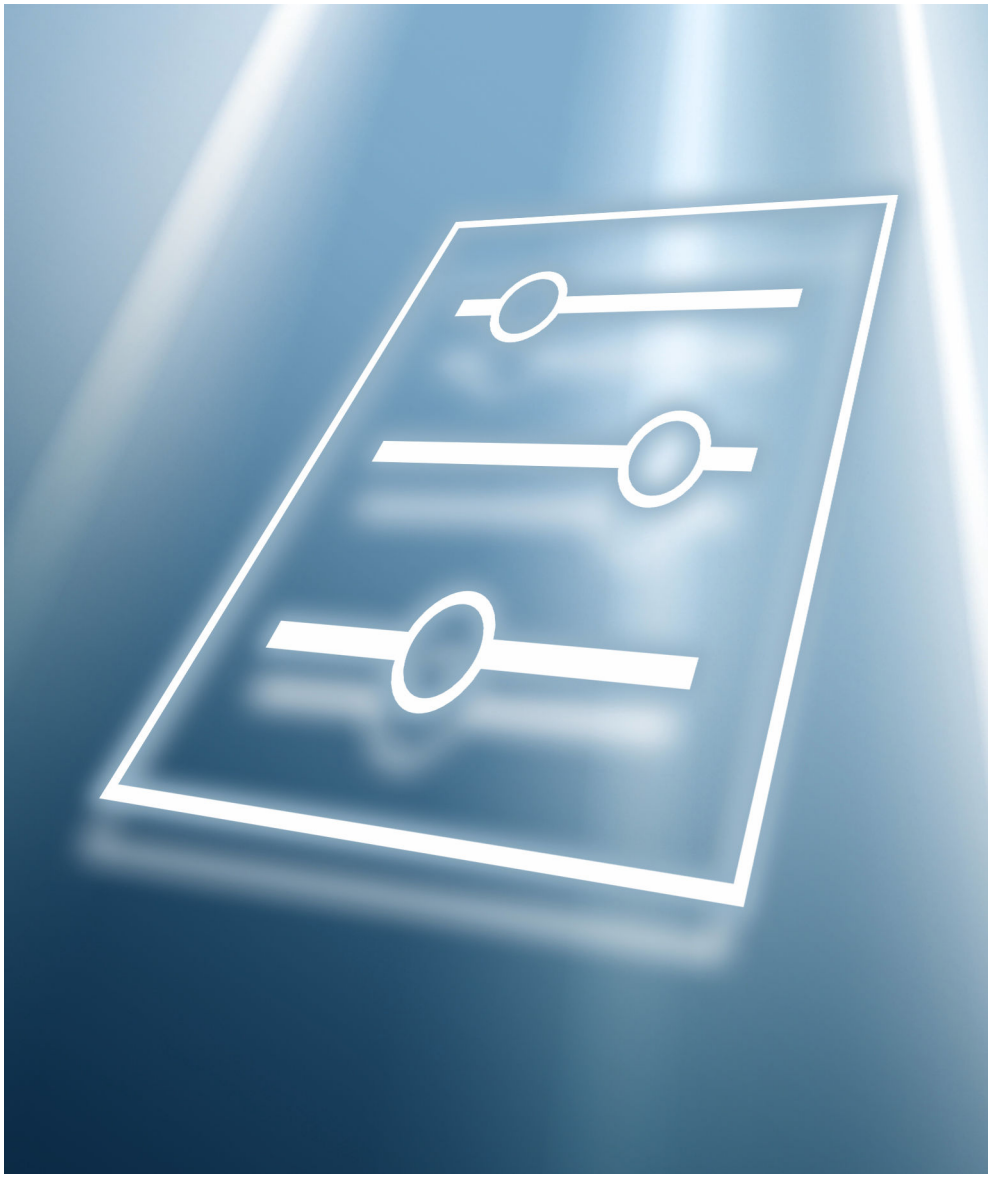
GP01257P/00/EN/01.25-00
71728237
2025-09-30

Description of Device Parameters
Deltabar PMD63B

Differential pressure measurement
HART



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.

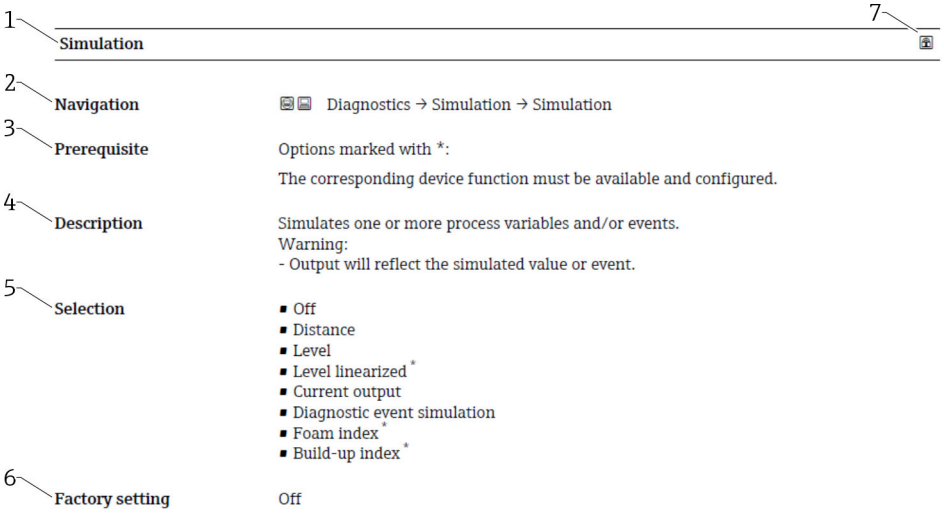
The submenus visible to a user depend on the **User role (→ 78)** they are logged in with. This document lists the submenus and their parameters that are available to the User role **Maintenance**.

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

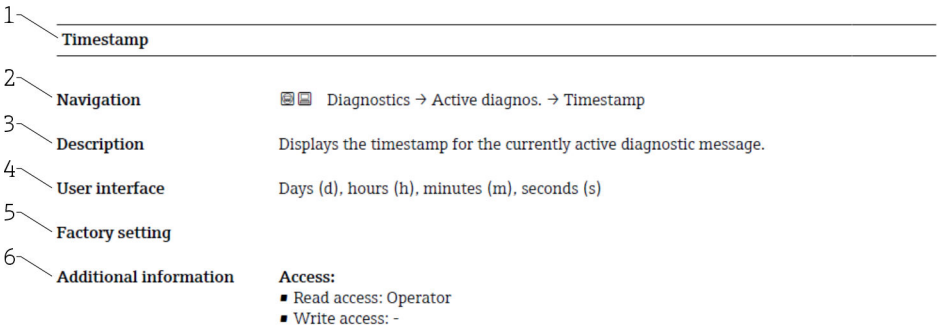
For information on operating options, see the Operating Instructions.

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

- Pressure max → 23
- Counter limit underruns sensor Pmin → 23
- Counter limit overruns sensor Pmax → 23
- Counter underruns of user limit Pmin → 23
- Counter overruns of user limit Pmax → 24
- Minimum sensor temperature → 24
- Maximum sensor temperature → 24
- Counter limit underruns sensor Tmin → 24
- Counter limit overruns sensor Tmax → 25
- Counter underruns of user limit Tmin → 25
- Counter overruns of user limit Tmax → 25
- Minimum terminal voltage → 25
- Maximum terminal voltage → 26
- Minimum electronics temperature → 26
- Maximum electronics temperature → 26
- Reset user defined counters P and T → 26

▶ Simulation → 27

- Simulation → 27
- Value pressure simulation → 27
- Diagnostic event simulation → 27

▶ Heartbeat Technology → 28

▶ Heartbeat Verification → 28

- Operating time (Verification) → 28
- Verification result → 28
- Status → 28

- ▶ **Loop diagnostics** → 29
  - Rebuild baseline → 29
  - Tolerated deviation +/- → 29
  - Baseline status → 29
  - Loop diagnostics → 30
  - Terminal voltage 1 → 30
  - Clamping voltage lower threshold → 30
  - Clamping voltage upper threshold → 30
  - 806 Event delay → 30
- ▶ **Statistical Sensor Diagnostics** → 31
  - SSD: Statistical Sensor Diagnostics → 31
  - System status → 31
  - Signal status → 31
  - Signal noise status → 32
- ▶ **Diagnostic settings** → 33
  - ▶ **Properties** → 33
    - SSD Out of range delay time → 33
    - SSD Monitoring delay time → 33
    - 500 Process alert pressure → 33
    - Low alert value → 34
    - High alert value → 34
    - 501 Process alert scaled variable → 34
    - Low alert value → 34
    - High alert value → 35
    - User temperature process alert → 35

- Low alert value → 35
- High alert value → 36
- 806 Diagnostic behavior → 36
- 806 Event category → 36
- 806 Event delay → 37

▶ Configuration → 37

▶ Configuration → 37

- 500 Diagnostic behavior → 37
- 500 Event category → 38
- 501 Diagnostic behavior → 38
- 501 Event category → 38
- 502 Diagnostic behavior → 39
- 502 Event category → 39

▶ Process → 40

- 806 Diagnostic behavior → 40
- 806 Event category → 40
- 822 Diagnostic behavior → 40
- 822 Event category → 41
- Sensor pressure range behavior → 41
- 841 Event category → 41
- 900 Event category → 42
- 900 Diagnostic behavior → 42
- 906 Diagnostic behavior → 42
- 906 Event category → 43

Application → 44

- Lower sensor trim → 49
- Upper sensor trim → 50
- ▶ **Sensor limits** → 52
  - Lower Range Limit → 52
  - Upper Range Limit → 52
  - Minimum span → 53
  - Sensor temperature lower range limit → 53
  - Sensor temperature upper range limit → 53
- ▶ **Scaled variable** → 53
  - Assign PV → 53
  - Scaled variable unit → 54
  - Free text → 55
  - Pressure → 55
  - Scaled variable transfer function → 55
  - Lower range value output → 55
  - Upper range value output → 56
  - Pressure value 1 → 56
  - Scaled variable value 1 → 56
  - Pressure value 2 → 56
  - Scaled variable value 2 → 57
  - Low flow cut off → 57
- ▶ **Wet calibration** → 57
  - Zero → 57
  - Pressure value 1 → 58
  - Span → 58

- Pressure value 2 → 58
- Zero → 57
- Lower range value output → 58
- Span → 58
- Upper range value output → 59

▶ **Current output** → 59

- Assign PV → 59
- Measuring mode current output → 59
- Current range output → 60
- Lower range value output → 60
- Upper range value output → 60
- Failure behavior current output → 61
- Failure current → 61
- Output current → 61
- Terminal current → 61

▶ **HART output** → 63

▶ **Configuration** → 63

- HART address → 63
- HART short tag → 63
- Device tag → 63
- No. of preambles → 64
- Loop current mode → 64

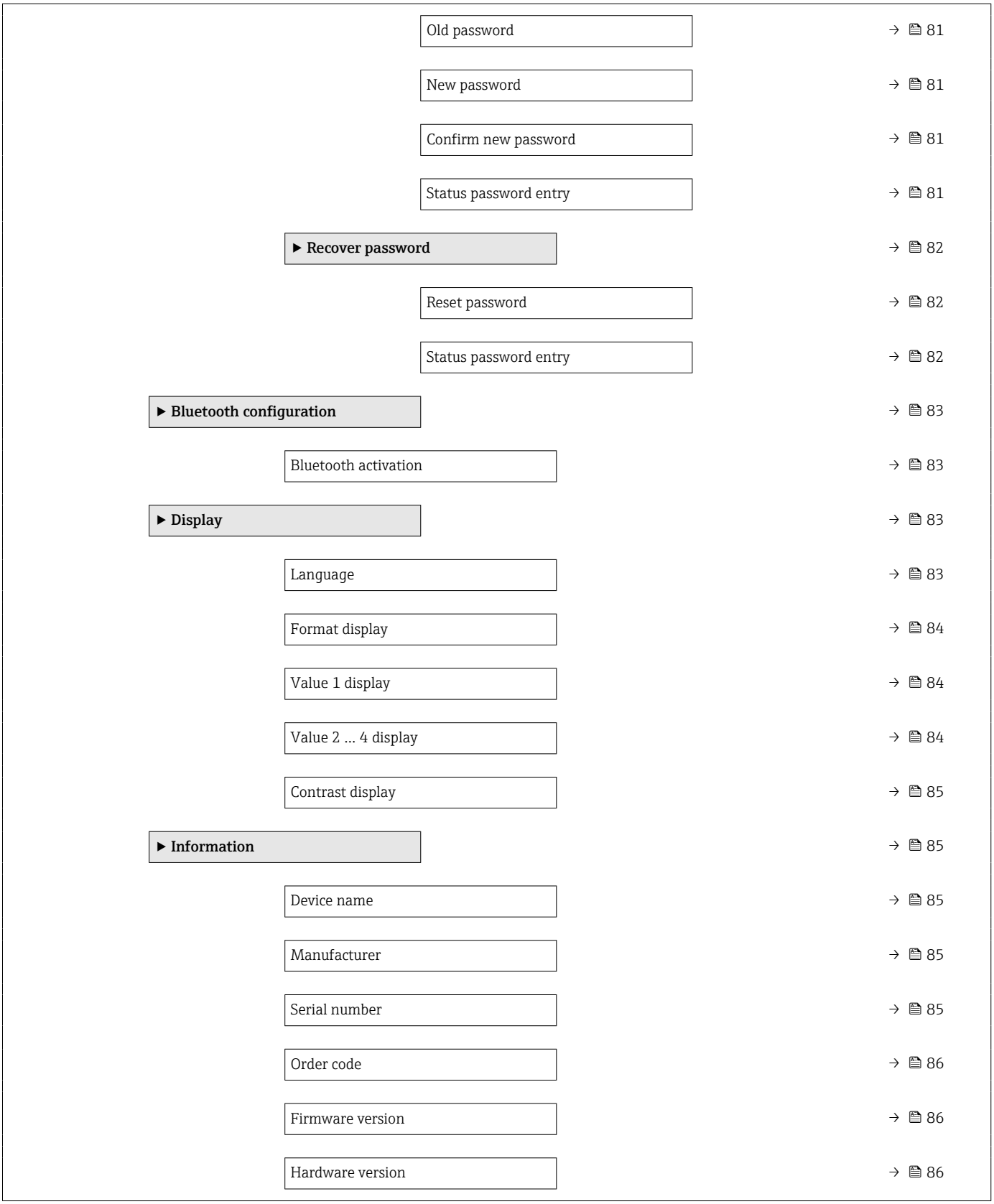
▶ **HART output** → 64

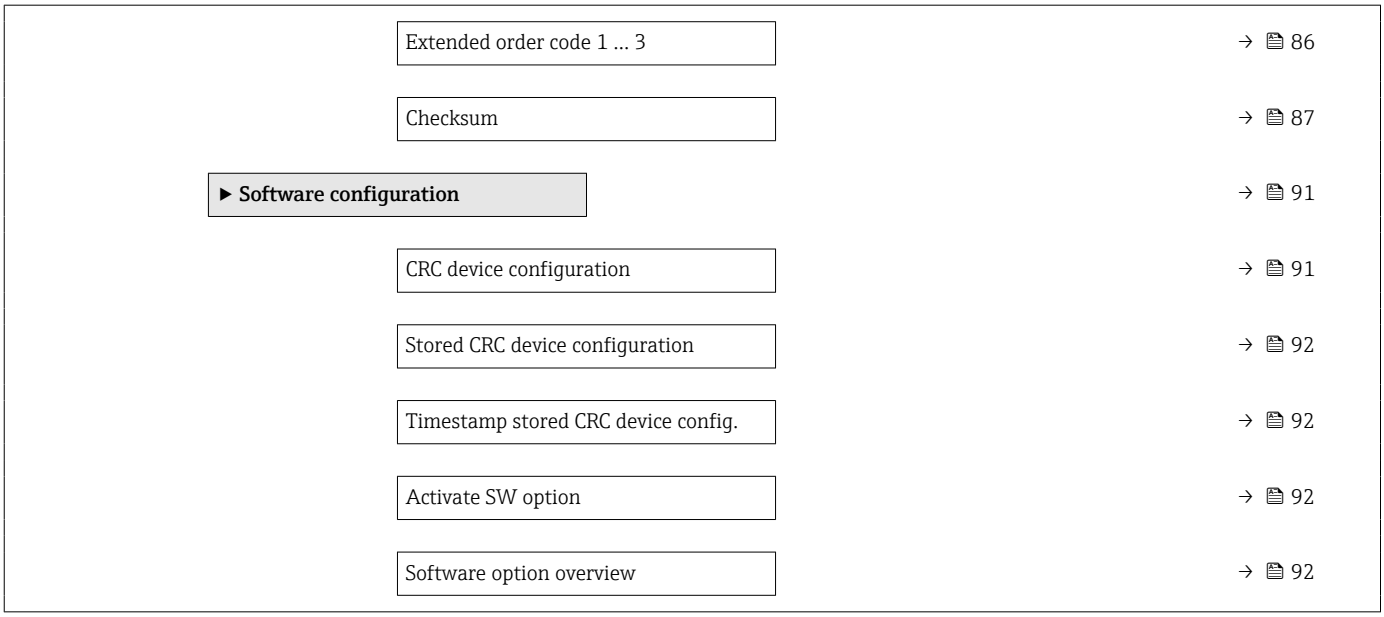
- Assign PV → 64
- Primary variable (PV) → 65

- HART short tag → 74
- HART revision → 74
- HART descriptor → 75
- HART message → 75
- HART date code → 75

System → 76

- **▶ Device management** → 76
  - Device tag → 76
  - Locking status → 76
  - Configuration counter → 77
  - Reset device → 77
- **▶ User management** → 78
  - **▶ User management** → 78
    - User role → 78
    - Delete password → 78
    - Forgot password? → 78
  - **▶ Enter password** → 79
    - Password → 79
    - Enter access code → 79
    - Status password entry → 79
  - **▶ Define password** → 80
    - New password → 80
    - Confirm new password → 80
    - Status password entry → 80
  - **▶ Change password** → 81


Old password → 81
New password → 81
Confirm new password → 81
Status password entry → 81
▶ Recover password → 82
Reset password → 82
Status password entry → 82
▶ Bluetooth configuration → 83
Bluetooth activation → 83
▶ Display → 83
Language → 83
Format display → 84
Value 1 display → 84
Value 2 ... 4 display → 84
Contrast display → 85
▶ Information → 85
Device name → 85
Manufacturer → 85
Serial number → 85
Order code → 86
Firmware version → 86
Hardware version → 86


Extended order code 1 ... 3
→ 86
Checksum
→ 87
▶ Software configuration
→ 91
CRC device configuration
→ 91
Stored CRC device configuration
→ 92
Timestamp stored CRC device config.
→ 92
Activate SW option
→ 92
Software option overview
→ 92

3 Description of device parameters

3.1 Guidance

In the **Guidance** menu, the user can quickly perform basic tasks, such as commissioning. These primarily consist of guided wizards and cross-thematic special functions.

Navigation Guidance

3.1.1 Overview

The **Guidance** menu contains the following submenus and wizards:
- Commissioning
- Heartbeat Technology
  - Heartbeat Verification
  - SSD: Statistical Sensor Diagnostics
  - Process window
- Safety mode
- Proof test
- Import / Export
- Compare

Commissioning

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 made 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 or displayed in this wizard:

- **Device identification**
  - Device tag
  - Device name
  - Serial number
  - Extended order code 1 ... 3
  - Locking status
  - HART short tag
  - HART date code
  - HART descriptor
  - HART message
  - HART address
- **Measurement adjustments**
  - Assign PV
  - Damping
  - Pressure unit
  - Temperature unit
  - Scaled variable unit
  - Zero adjustment
  - Pressure
- **Output settings**
  - Output current transfer function
  - Low flow cut off
  - Scaled variable transfer function
  - Lower Range Limit
  - Upper Range Limit
  - Minimum span
  - Linearization
  - Lower range value output
  - Upper range value output
  - Pressure value 1/2
  - Scaled variable value 1/2
  - Current range output
  - Failure behavior current output
  - Failure current
  - Loop current mode
  - Assign HART variables?
  - Assign PV
  - Assign SV
  - Assign TV
  - Assign QV

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.

SSD: Statistical Sensor Diagnostics

Using statistical analysis of the pressure signal, process anomalies such as plugged impulse lines can be detected. This wizard supports the settings and thresholds that should lead to a diagnostic message.

Navigation Guidance → Heartbeat Techn. → Stat. Sens. Diag

Loop diagnostics

Using this wizard, changes in the current-voltage loop characteristics (baseline) can be used to detect unwanted installation anomalies such as creep currents caused by terminal corrosion or a deteriorating power supply that can lead to an incorrect 4-20 mA measured value.

Navigation Guidance → Heartbeat Techn. → Loop diagn.

Process window

This wizard uses user-defined limits for pressure and temperature to detect unwanted installation or application anomalies.

Applications:
- Defective heat tracer or insulation
- Frozen process connections
- Dynamic pressure peaks etc.

Navigation Guidance → Heartbeat Techn. → Process window

Safety mode

The write protection guards the device settings against overwriting. In addition, it is recommended for safety applications to confirm the safety relevant device settings. This ensures that the correct values have been entered and downloaded to device.

This input can be used as the confirmation sequence instead of manual checklists.
After the safety relevant device settings have been confirmed, the device is marked with the property Safety-locked. This indicates that the safety relevant parameter settings have been checked and evaluated as correct.

To unlock the safety locking the sequence needs to be restarted. The safety locking is deactivated when the safety unlocking code (= safety locking code) is entered.

Navigation Guidance → Safety mode

Proof test

The proof test will simulate the current output.
The safety function is not guaranteed during proof test. Alternative process control in manual must be taken to ensure process safety.

Note: It is only possible to perform a proof test when the device has no alarm and the hardware write protection switch is off.

Navigation Guidance → Proof test

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 configuration report

Under Create configuration report, device documentation can be saved in PDF format. This device documentation contains the following general device information:

- Information on device parameters
- Event list
- Diagnostic list

Navigation Guidance → Import/Export

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

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

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

Filter options

Navigation Diagnostics → Event logbook → Filter options

Description Use this function to select the category whose event messages are displayed in the event list of the operating tool.

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

Factory setting All

Additional information *Description*

The status signals are categorized in accordance with VDI/VDE 2650 and NAMUR Recommendation NE 107:
- F = Failure
- C = Function Check
- S = Out of Specification
- M = Maintenance Required

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.

Pressure min

Navigation Diagnostics → Min/max val. → Pressure min

Description Minimum value measured by the device

User interface Signed floating-point number

Factory setting Positive floating-point number

Pressure max

Navigation Diagnostics → Min/max val. → Pressure max

Description Maximum value measured by the device

User interface Signed floating-point number

Factory setting Negative floating-point number

Counter limit underruns sensor Pmin

Navigation Diagnostics → Min/max val. → Counter P < Pmin

Description Counts how many times the value underruns the sensor specific minimum values. Sensor specific minimum values are shown in Application/Sensor menu.

User interface 0 to 65 535

Factory setting 0

Counter limit overruns sensor Pmax

Navigation Diagnostics → Min/max val. → Counter P > Pmax

Description Counts how many times the value overruns the sensor specific maximum values. Sensor specific maximum values are shown in Application/Sensor menu.

User interface 0 to 65 535

Factory setting 0

Counter underruns of user limit Pmin

Navigation Diagnostics → Min/max val. → Counter < P user

Description Counts how many times the value underruns the minimum values defined by the user. User defined minimum values are shown in Diagnostic/Diagnostic settings/Properties menu.

User interface 0 to 65 535

Factory setting 0

Additional information Only visible if Process window in Heartbeat Monitoring is activated.

Counter overruns of user limit Pmax

Navigation Diagnostics → Min/max val. → Counter > P user

Description Counts how many times the value overruns the maximum values defined by the user. User defined maximum values are shown in Diagnostic/Diagnostic settings/Properties menu.

User interface 0 to 65 535

Factory setting 0

Additional information Only visible if Process window in Heartbeat Monitoring is activated.

Minimum sensor temperature

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

Description Minimum value measured by the device

Users cannot reset this value.

Maximum sensor temperature

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

Description Maximum value measured by the device

Users cannot reset this value.

Counter limit underruns sensor Tmin

Navigation Diagnostics → Min/max val. → Counter T < Tmin

Description Counts how often the value falls below the sensor-specific minimum values.The sensor-specific minimum values are displayed in the Application (→ 44)/Sensor (→ 48) menu.

User interface 0 to 65 535

Factory setting 0

Counter limit overruns sensor Tmax

Navigation Diagnostics → Min/max val. → Counter T > Tmax

Description Counts how often the value exceeds the sensor-specific maximum values. The sensor-specific maximum values are displayed in the Application (→ 44)/Sensor (→ 48) menu.

User interface 0 to 65 535

Factory setting 0

Counter underruns of user limit Tmin

Navigation Diagnostics → Min/max val. → Counter < T user

User interface 0 to 65 535

Factory setting 0

Additional information Only visible if Process window in Heartbeat Monitoring is activated.

Counter overruns of user limit Tmax

Navigation Diagnostics → Min/max val. → Counter > T user

User interface 0 to 65 535

Factory setting 0

Additional information Only visible if Process window in Heartbeat Monitoring is activated.

Minimum terminal voltage

Navigation Diagnostics → Min/max val. → Min.term.volt.

Description Minimum terminal voltage measured (supply).

User interface 0.0 to 50.0 V

Maximum terminal voltage

Navigation Diagnostics → Min/max val. → Max.term.voltage

Description Maximum terminal voltage measured (supply).

User interface 0.0 to 50.0 V

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

Reset user defined counters P and T

Navigation Diagnostics → Min/max val. → Reset count. P T

Selection
- Cancel
- Confirm

Factory setting Cancel

Additional information Only visible if Process window in Heartbeat Monitoring is activated.

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
- Current output
- Diagnostic event simulation
- Pressure

Factory setting Off

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

Value pressure simulation

Navigation Diagnostics → Simulation → Pressure

User entry Signed floating-point number

Factory setting 0 mbar

3.2.6 Heartbeat Technology

Navigation Diagnostics → Heartbeat Techn.

Heartbeat Verification

Navigation Diagnostics → Heartbeat Techn. → Heartbeat Verif.

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

Loop diagnostics

Navigation Diagnostics → Heartbeat Techn. → Loop diagn.

Rebuild baseline

Navigation Diagnostics → Heartbeat Techn. → Loop diagn. → Reb. baseline

Description

Notice
The current output is simulated.
Bridge the PLC or take other appropriate measures to prevent an erroneous triggering of alarm messages or changes in the control loop behavior.

The baseline should be rebuilt if planned changes have been made in the loop.

Selection

- No
- Yes

Factory setting No

Tolerated deviation +/-

Navigation Diagnostics → Heartbeat Techn. → Loop diagn. → Toler. deviation

Description

A value should be chosen to ensure that normal voltage deviations do not lead to unwanted messages.

Default
1.5 V DC

User entry 0.5 to 3.0 V

Baseline status

Navigation Diagnostics → Heartbeat Techn. → Loop diagn. → Baseline status

Description

"Failed"
Means, baseline is not available or creation not possible.

"Success"
Baseline is available.

User interface

- Failed
- Success

Factory setting Failed

Loop diagnostics

Navigation Diagnostics → Heartbeat Techn. → Loop diagn. → Loop diagn.

Description Enable/disable loop diagnostics.

Note:
If the function is disabled, there is no analysis and no event message.

Selection
- Disable
- Enable

Factory setting Disable

Additional information The parameter is visible if the baseline has been created.

Terminal voltage 1

Navigation Diagnostics → Heartbeat Techn. → Loop diagn. → Terminal volt. 1

Description Shows the current terminal voltage that is applied at the output

User interface 0.0 to 50.0 V

Clamping voltage lower threshold

Navigation Diagnostics → Heartbeat Techn. → Loop diagn. → Lower threshold

User interface 0.0 to 50.0 V

Clamping voltage upper threshold

Navigation Diagnostics → Heartbeat Techn. → Loop diagn. → Upper threshold

User interface 0.0 to 50.0 V

806 Event delay

Navigation Diagnostics → Heartbeat Techn. → Loop diagn. → 806 Event delay

Description Displays how long the triggering status must be present until an event message is issued. Used to filter out short-term signal interference.

User entry 0 to 60 s

Factory setting 1 s

Statistical Sensor Diagnostics

Navigation Diagnostics → Heartbeat Techn. → SSD

SSD: Statistical Sensor Diagnostics

Navigation Diagnostics → Heartbeat Techn. → SSD → Stat. Sens. Diag

Description Enable or disable SSD.

After selecting "Disable", no statistical sensor diagnosis takes place. No diagnostic messages are output.

Selection
- Disable
- Enable

Factory setting Disable

System status

Navigation Diagnostics → Heartbeat Techn. → SSD → System status

User interface
- Idle
- No sufficient signal noise
- Stable
- Not stable
- Verify System Dynamics
- Process dynamic too high

Factory setting Idle

Signal status

Navigation Diagnostics → Heartbeat Techn. → SSD → Signal status

User interface
- Idle
- Building Baseline
- Verifying Baseline
- Verifying baseline failed

- Monitoring
- Out of range
- Monitoring inactive

Factory setting Idle

Signal noise status

Navigation Diagnostics → Heartbeat Techn. → SSD → Noise status

User interface
- Idle
- Building Baseline
- Verifying Baseline
- Verifying baseline failed
- Monitoring
- Out of range
- Monitoring inactive

Factory setting Idle

Counter Baseline creation SSD

Navigation Diagnostics → Heartbeat Techn. → SSD → Counter Baseline

Description Specifies how often the baseline has been rebuilt.

User interface Positive integer

Factory setting 0

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

3.2.7 Diagnostic settings

Navigation Diagnostics → Diag. settings

Properties

Navigation Diagnostics → Diag. settings → Properties

SSD Out of range delay time

Navigation Diagnostics → Diag. settings → Properties → SSD Delay time

User entry 0 to 604 800 s

Factory setting 600 s

SSD Monitoring delay time

Navigation Diagnostics → Diag. settings → Properties → SSD Verz. Zeit

User entry 0 to 86 400 s

Factory setting 60 s

500 Process alert pressure

Navigation Diagnostics → Diag. settings → Properties → 500 Pressure

Description Define whether user-defined pressure limits should be set.
If "Off" is selected, no analysis will take place and no event message will be generated.

Selection
- Off
- On

Factory setting Off

Low alert value

Navigation Diagnostics → Diag. settings → Properties → Low alert value

Description Set range.
If this limit value is exceeded or undercut, a diagnostic event is generated. There is no hysteresis.

User entry Signed floating-point number

Factory setting 0 mbar

High alert value

Navigation Diagnostics → Diag. settings → Properties → High alert value

Description Set range.
If this limit value is exceeded or undercut, a diagnostic event is generated. There is no hysteresis.

User entry Signed floating-point number

Factory setting 500 mbar

501 Process alert scaled variable

Navigation Diagnostics → Diag. settings → Properties → 501 Scaled var.

Description Define whether user-defined limits should be set.
If "Off" is selected, no analysis will take place and no event message will be generated.

Selection
- Off
- On

Factory setting Off

Low alert value

Navigation Diagnostics → Diag. settings → Properties → Low alert value

Description Set range.
If this limit value is exceeded or undercut, a diagnostic event is generated. There is no hysteresis.

User entry Signed floating-point number

Factory setting 0 %

High alert value

Navigation Diagnostics → Diag. settings → Properties → High alert value

Description Set range.
If this limit value is exceeded or undercut, a diagnostic event is generated. There is no hysteresis.

User entry Signed floating-point number

Factory setting 100 %

User temperature process alert

Navigation Diagnostics → Diag. settings → Properties → UserTemp alert

Description Define whether the user-defined sensor temperature limits should be set. If "Off" no analysis and therefore no event message will take place.

Selection
- Off
- On

Factory setting Off

Low alert value

Navigation Diagnostics → Diag. settings → Properties → Low alert value

Description Set range.
If this limit value is exceeded or undercut, a diagnostic event is generated. There is no hysteresis.

User entry −50 to 150 °C

Factory setting −35 °C

High alert value

Navigation Diagnostics → Diag. settings → Properties → High alert value

Description Set range.
If this limit value is exceeded or undercut, a diagnostic event is generated. There is no hysteresis.

User entry −50 to 150 °C

Factory setting 85 °C

806 Diagnostic behavior

Navigation Diagnostics → Diag. settings → Properties → 806 Diag. behav.

Description Select event behavior

"Logbook entry only": no digital or analog transmission of the message.

"Warning": Current output unchanged. Message is output digitally (default).

If the permissible conditions are reached again, the warning is no longer available in the instrument.

Selection
- Warning
- Logbook entry only

Factory setting Warning

806 Event category

Navigation Diagnostics → Diag. settings → Properties → 806Event category

Description Select category for diagnostic message.

Selection
- Failure (F)
- Function check (C)
- Out of specification (S)
- Maintenance required (M)
- No effect (N)

Factory setting Maintenance required (M)

806 Event delay

Navigation Diagnostics → Diag. settings → Properties → 806 Event delay

Description Displays how long the triggering status must be present until an event message is issued. Used to filter out short-term signal interference.

User entry 0 to 60 s

Factory setting 1 s

Configuration

Navigation Diagnostics → Diag. settings → Configuration

Configuration

Navigation Diagnostics → Diag. settings → Configuration → Configuration

500 Diagnostic behavior

Navigation Diagnostics → Diag. settings → Configuration → Configuration → 500 Diag. behav.

Description Select event behavior

"Logbook entry only":
no digital or analog transmission of the message

"Warning": Current output unchanged. Message is output digitally (default).

"Alarm": Current output assumes the set alarm current.

Regardless of the setting, the message appears on the display. If the permissible conditions are reached again, the warning is no longer available in the instrument.

Selection
- Off
- Alarm
- Warning
- Logbook entry only

Factory setting Off

500 Event category

Navigation Diagnostics → Diag. settings → Configuration → Configuration → 500Event category

Selection
- Failure (F)
- Function check (C)
- Out of specification (S)
- Maintenance required (M)
- No effect (N)

Factory setting Out of specification (S)

501 Diagnostic behavior

Navigation Diagnostics → Diag. settings → Configuration → Configuration → 501 Diag. behav.

Description Select event behavior

"Logbook entry only":
no digital or analog transmission of the message

"Warning": Current output unchanged. Message is output digitally (default).

"Alarm": Current output assumes the set alarm current.

Regardless of the setting, the message appears on the display. If the permissible conditions are reached again, the warning is no longer available in the instrument.

Selection
- Off
- Alarm
- Warning
- Logbook entry only

Factory setting Off

501 Event category

Navigation Diagnostics → Diag. settings → Configuration → Configuration → 501Event category

Selection
- Failure (F)
- Function check (C)
- Out of specification (S)
- Maintenance required (M)
- No effect (N)

Factory setting Out of specification (S)

502 Diagnostic behavior

Navigation Diagnostics → Diag. settings → Configuration → Configuration → 502 Diag. behav.

Description Select event behavior

"Logbook entry only":
no digital or analog transmission of the message

"Warning": Current output unchanged. Message is output digitally (default).

"Alarm": Current output assumes the set alarm current.

Regardless of the setting, the message appears on the display. If the permissible conditions are reached again, the warning is no longer available in the instrument.

Selection
- Off
- Alarm
- Warning
- Logbook entry only

Factory setting Off

502 Event category

Navigation Diagnostics → Diag. settings → Configuration → Configuration → 502Event category

Selection
- Failure (F)
- Function check (C)
- Out of specification (S)
- Maintenance required (M)
- No effect (N)

Factory setting Out of specification (S)

Process

Navigation Diagnostics → Diag. settings → Configuration → Process

806 Diagnostic behavior

Navigation Diagnostics → Diag. settings → Configuration → Process → 806 Diag. behav.

Description Select event behavior

"Logbook entry only": no digital or analog transmission of the message.

"Warning": Current output unchanged. Message is output digitally (default).

If the permissible conditions are reached again, the warning is no longer available in the instrument.

Selection
- Warning
- Logbook entry only

Factory setting Warning

806 Event category

Navigation Diagnostics → Diag. settings → Configuration → Process → 806Event category

Description Select category for diagnostic message.

Selection
- Failure (F)
- Function check (C)
- Out of specification (S)
- Maintenance required (M)
- No effect (N)

Factory setting Maintenance required (M)

822 Diagnostic behavior

Navigation Diagnostics → Diag. settings → Configuration → Process → 822 Diag. behav.

User interface
- Alarm
- Warning
- Logbook entry only

Factory setting Warning

822 Event category

Navigation Diagnostics → Diag. settings → Configuration → Process → 822 Event category

Selection
- Failure (F)
- Function check (C)
- Out of specification (S)
- Maintenance required (M)
- No effect (N)

Factory setting Out of specification (S)

Sensor pressure range behavior

Navigation Diagnostics → Diag. settings → Configuration → Process → P-range behavior

Description Select event behavior

"Alarm":
Current output adopts the set alarm current.

"Warning":
Current output unchanged. Message is displayed digitally (factory setting).

"Logbook entry only":
No digital or analog forwarding of the message.

"Special":
– Lower sensor limit undercut: Current output < 3.6 mA.
– Upper sensor limit exceeded: Current output 21 to 23 mA, depending on the setting.

Regardless of the setting, the message appears on the display. If the permissible conditions are reached again, the warning message disappears.

Selection
- Alarm
- Warning
- Logbook entry only
- Special

Factory setting Warning

841 Event category

Navigation Diagnostics → Diag. settings → Configuration → Process → 841 Event category

Selection
- Failure (F)
- Function check (C)
- Out of specification (S)
- Maintenance required (M)
- No effect (N)

Factory setting Out of specification (S)

900 Diagnostic behavior

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

Description Select event behavior

"Logbook entry only": no digital or analog transmission of the message.

"Warning": Current output unchanged. Message is output digitally (default).

If the permissible conditions are reached again, the warning is no longer available in the instrument.

Selection
- Warning
- Logbook entry only

Factory setting Warning

900 Event category

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

Description Select category for diagnostic message.

Selection
- Failure (F)
- Function check (C)
- Out of specification (S)
- Maintenance required (M)
- No effect (N)

Factory setting Maintenance required (M)

906 Diagnostic behavior

Navigation Diagnostics → Diag. settings → Configuration → Process → 906 Diag. behav.

Description Select event behavior

"Logbook entry only": no digital or analog transmission of the message.

"Warning": Current output unchanged. Message is output digitally (default).

If the permissible conditions are reached again, the warning is no longer available in the instrument.

Selection
- Off
- Warning
- Logbook entry only

Factory setting Off

906 Event category

Navigation Diagnostics → Diag. settings → Configuration → Process → 906Event category

Description Select category for diagnostic message.

Selection
- Failure (F)
- Function check (C)
- Out of specification (S)
- Maintenance required (M)
- No effect (N)

Factory setting Out of specification (S)

3.3 Application

Navigation Application

3.3.1 Measured values

Navigation Application → Measured values

Sensor pressure

Navigation Application → Measured values → Sensor pressure

User interface Signed floating-point number

Factory setting 0 mbar

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

Pressure

Navigation Application → Measured values → Pressure

Factory setting 0 mbar

Scaled variable

Navigation Application → Measured values → Scaled variable

User interface Signed floating-point number

Factory setting 0 %

Sensor temperature

Navigation Application → Measured values → Sensor temp.

Description Displays the current temperature of the sensor.

User interface Floating point number with sign

Terminal voltage 1

Navigation Application → Measured values → Terminal volt. 1

Description Shows the current terminal voltage that is applied at the output

User interface 0.0 to 50.0 V

Terminal current

Navigation Application → Measured values → Terminal curr.

Description Shows the current value of the current output which is currently measured

User interface 0 to 30 mA

Factory setting 0 mA

Electronics temperature

Navigation Application → Measured values → Electronics temp

Description Displays the current temperature of the main electronics.

User interface Signed floating-point number

3.3.2 Measuring units

Navigation Application → Measuring units

Pressure unit

Navigation Application → Measuring units → Pressure unit

Selection
- MPa
- kPa
- Pa
- bar
- mbar
- torr
- atm
- psi

- kgf/cm²
- gf/cm²
- inH2O
- inH2O (4°C)
- mmH2O
- mmH2O (4°C)
- mH2O
- mH2O (4°C)
- ftH2O
- inHg
- mmHg

Factory setting Depends on the order option

Decimal places pressure

Navigation Application → Measuring units → Decimal pressure

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

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

Factory setting Automatic

Temperature unit

Navigation Application → Measuring units → Temperature unit

Description Select the temperature unit.

Selection

SI units	*US units*
▪ °C	°F
▪ K	

Factory setting °C

Scaled variable unit

Navigation Application → Measuring units → Scaled Unit

Description Use "Free text", first selection, if the desired unit is not available in the selection list. It is possible to define a customer specific unit with another parameter.

Selection

SI units
- %
- mm
- cm
- m
- l
- hl
- m^3
- g
- kg
- t
- g/s
- kg/s
- kg/min
- kg/h
- t/min
- t/h
- t/d
- m^3/s
- m^3/min
- m^3/h
- m^3/d
- l/s
- l/min
- l/h
- Nm^3/h
- Nl/h
- Sm^3/s
- Sm^3/min
- Sm^3/h
- Sm^3/d
- Nm^3/s
- g/cm^3
- kg/m^3
- Nm^3/min
- Nm^3/d

US units
- ft
- in
- ft^3
- gal (us)
- bbl (us;oil)
- oz
- lb
- STon
- lb/s
- lb/min
- lb/h
- STon/min
- STon/h
- STon/d
- ft^3/s
- ft^3/min
- ft^3/h
- ft^3/d
- gal/s (us)
- gal/min (us)
- gal/h (us)
- gal/d (us)
- bbl/s (us;oil)
- bbl/min (us;oil)
- bbl/h (us;oil)
- bbl/d (us;oil)
- Sft^3/min
- Sft^3/h
- Sft^3/d

Imperial units
- gal (imp)
- gal/s (imp)
- gal/min (imp)
- gal/h (imp)

Custom-specific units
Free text

Factory setting

%

Free text

Navigation

Application → Measuring units → Free text

User entry

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

Factory setting

Free text

Decimal places scaled variable

Navigation Application → Measuring units → Decimal scaled

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.xx

3.3.3 Sensor

Navigation Application → Sensor

Sensor calibration

Navigation Application → Sensor → Sensor cal.

Zero adjustment

Navigation Application → Sensor → Sensor cal. → Zero adjustment

Description Due to the mounting position of the measuring instrument, a pressure shift may occur. The pressure shift can be corrected with the zero adjustment.

Selection
- No
- Confirm

Factory setting No

Calibration offset

Navigation Application → Sensor → Sensor cal. → Calibr offset

Description Enter the value by which the measured value should be corrected, e.g., a position adjustment for absolute pressure sensors.

User entry Signed floating-point number

Factory setting 0 mbar

Additional information Parameters only available for absolute pressure sensors.

Zero adjustment offset

Navigation Application → Sensor → Sensor cal. → Zero offset

User entry Signed floating-point number

Factory setting 0 mbar

Sensor Trim Reset

Navigation Application → Sensor → Sensor cal. → Sen. Trim Reset

Selection
- No
- Confirm

Factory setting No

Lower sensor trim

Navigation Application → Sensor → Sensor cal. → LowerSensor trim

Description Using the Lower sensor trim and Upper sensor trim parameters, a sensor can be recalibrated, e.g. if the sensor is to be precisely calibrated to the measuring range. Maximum measurement accuracy of the sensor is achieved when the value for the Lower sensor trim parameter is as close as possible to the lower measuring range, and the value for the Upper sensor trim parameter is as close as possible to the upper measuring range.

There must be a known reference pressure when setting a new lower or upper sensor characteristic curve value.

The more accurate the reference device used for sensor calibration, the higher the measurement accuracy of the pressure transmitter will be later.

Using the Lower sensor trim and Upper sensor trim parameters, a new value is then assigned to the applied pressure.

The entered value must not exceed **Sensor pressure** +/- 10 % of the permissible maximum pressure (URL).

Input as follows:
- Apply reference pressure for the lower measuring range.
- Enter and confirm the reference pressure in the Lower sensor trim field.
- Apply reference pressure for the upper measuring range.
- Enter and confirm the reference pressure in the Upper sensor trim field.
- The sensor calibration is now complete.

User entry Signed floating-point number

Factory setting 0 mbar

Upper sensor trim

Navigation Application → Sensor → Sensor cal. → UpperSensor trim

Description Using the Lower sensor trim and Upper sensor trim parameters, a sensor can be recalibrated, e.g. if the sensor is to be precisely calibrated to the measuring range. Maximum measurement accuracy of the sensor is achieved when the value for the Lower sensor trim parameter is as close as possible to the lower measuring range, and the value for the Upper sensor trim parameter is as close as possible to the upper measuring range.

There must be a known reference pressure when setting a new lower or upper sensor characteristic curve value.

The more accurate the reference device used for sensor calibration, the higher the measurement accuracy of the pressure transmitter will be later.

Using the Lower sensor trim and Upper sensor trim parameters, a new value is then assigned to the applied pressure.

The entered value must not exceed **Sensor pressure** +/- 10 % of the permissible maximum pressure (URL).

Input as follows:
- Apply reference pressure for the lower measuring range.
- Enter and confirm the reference pressure in the Lower sensor trim field.
- Apply reference pressure for the upper measuring range.
- Enter and confirm the reference pressure in the Upper sensor trim field.
- The sensor calibration is now complete.

User entry Signed floating-point number

Factory setting 500 mbar

Basic settings

Navigation Application → Sensor → Basic settings

Output current transfer function

Navigation Application → Sensor → Basic settings → Curr. trans.func

Description

Linear
The linear pressure signal is used for the current output. The flow must be calculated in the evaluation unit.

Square root - differential pressure only
The root flow signal is used for the current output. The 'Flow (square root)' current signal is indicated on the on-site display with a root symbol.

User interface

- Linear
- Square root *

Factory setting Linear

Damping

Navigation Application → Sensor → Basic settings → Damping

Description

The damping is effective before the measured value is further processed, i.e., before the following processes:
- Scaling
- Limit value monitoring
- Forwarding to display
- Forwarding to Analog Input Block

Note:
The Analog Input Block has its own “Damping” parameter. In the measurement chain, only one of the two attenuation parameters shall have a value other than 0.
Otherwise, the signal will be attenuated several times.

User entry 0 to 999.0 s

Factory setting 1 s

* Visibility depends on order options or device settings

HP/LP swap

Navigation Application → Sensor → Basic settings → HP/LP swap

Description With this parameter the high and low pressure side of the differential pressure transmitter can be interchanged.

Selection
- No
- Yes

Factory setting No

Low flow cut off

Navigation Application → Sensor → Basic settings → Low flow cut off

Description When activated, this function suppresses small flows which can lead to large fluctuations in the measured value.

User entry 0.0 to 50.0 %

Factory setting 5 %

Sensor limits

Navigation Application → Sensor → Sensor limits

Lower Range Limit

Navigation Application → Sensor → Sensor limits → LRL

Description Indicates the lower measuring limit of the sensor.

User interface Signed floating-point number

Factory setting Depends on the order option

Upper Range Limit

Navigation Application → Sensor → Sensor limits → URL

Description Indicates the upper measuring limit of the sensor.

User interface Signed floating-point number

Factory setting Depends on the order option

Minimum span

Navigation Application → Sensor → Sensor limits → Minimum span

Description Specifies the smallest possible measuring span of the sensor.

User interface Signed floating-point number

Factory setting 0.498504 mbar

Sensor temperature lower range limit

Navigation Application → Sensor → Sensor limits → Sens.temp.lo.lim

Factory setting −35 °C

Sensor temperature upper range limit

Navigation Application → Sensor → Sensor limits → Sens.temp.up.lim

Factory setting 85 °C

Scaled variable

Navigation Application → Sensor → Scaled variable

Assign PV

Navigation Application → Sensor → Scaled variable → Assign PV

Description Use this function to select a measured variable (HART device variable) for the primary dynamic variable (PV).

Selection
- Pressure
- Scaled variable

Factory setting Pressure

Scaled variable unit

Navigation Application → Sensor → Scaled variable → Scaled Unit

Description Use "Free text", first selection, if the desired unit is not available in the selection list. It is possible to define a customer specific unit with another parameter.

Selection

SI units
- %
- mm
- cm
- m
- l
- hl
- m^3
- g
- kg
- t
- g/s
- kg/s
- kg/min
- kg/h
- t/min
- t/h
- t/d
- m^3/s
- m^3/min
- m^3/h
- m^3/d
- l/s
- l/min
- l/h
- Nm^3/h
- Nl/h
- Sm^3/s
- Sm^3/min
- Sm^3/h
- Sm^3/d
- Nm^3/s
- g/cm^3
- kg/m^3
- Nm^3/min
- Nm^3/d

US units
- ft
- in
- ft^3
- gal (us)
- bbl (us;oil)
- oz
- lb
- STon
- lb/s
- lb/min
- lb/h
- STon/min
- STon/h
- STon/d
- ft^3/s
- ft^3/min
- ft^3/h
- ft^3/d
- gal/s (us)
- gal/min (us)
- gal/h (us)
- gal/d (us)
- bbl/s (us;oil)
- bbl/min (us;oil)
- bbl/h (us;oil)
- bbl/d (us;oil)
- Sft^3/min
- Sft^3/h
- Sft^3/d

Imperial units
- gal (imp)
- gal/s (imp)
- gal/min (imp)
- gal/h (imp)

Custom-specific units
Free text

Factory setting %

Free text

Navigation Application → Sensor → Scaled variable → Free text

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

Factory setting Free text

Pressure

Navigation Application → Sensor → Scaled variable → Pressure

Factory setting 0 mbar

Scaled variable transfer function

Navigation Application → Sensor → Scaled variable → Scaled function

Description

"Linear'
The linear pressure signal is used for the output signal. The flow must be calculated in the evaluation unit.

"Square root" (Deltabar)
The root flow signal is used for the output signal. The "Flow (square root)' output signal is indicated on the on-site display with a root symbol.

'Table'
The output is defined according to the scaled variable / pressure table entered.

Selection

- Linear
- Square root *
- Table

Factory setting Linear

Lower range value output

Navigation Application → Sensor → Scaled variable → Low.range outp

Description Depending on which variable has been selected as "Process variable output current ", define the related lower (4 mA) and upper range values (20 mA).

User entry Signed floating-point number

* Visibility depends on order options or device settings

Factory setting 0 mbar

Upper range value output

Navigation Application → Sensor → Scaled variable → Upp.range outp

Description Depending on which variable has been selected as "Process variable output current ", define the related lower (4 mA) and upper range values (20 mA).

User entry Signed floating-point number

Factory setting 50 000 mbar

Pressure value 1

Navigation Application → Sensor → Scaled variable → Pressure 1

Description Enter pressure for the first scaling point. "Scaled variable value 1" will be allocated to this pressure.

User entry Signed floating-point number

Factory setting 0 mbar

Scaled variable value 1

Navigation Application → Sensor → Scaled variable → Scaled 1

Description Enter value for the first scaling point. This value is allocated to "Pressure value 1".

User interface Signed floating-point number

Factory setting 0 %

Pressure value 2

Navigation Application → Sensor → Scaled variable → Pressure 2

Description Enter pressure for the second scaling point. "Scaled variable value 2" will be allocated to this pressure.

User entry Signed floating-point number

Factory setting 500 mbar

Scaled variable value 2

Navigation Application → Sensor → Scaled variable → Scaled 2

Description Enter value for the second scaling point. This value is allocated to "Pressure value 2".

User entry Signed floating-point number

Factory setting 100 %

Low flow cut off

Navigation Application → Sensor → Scaled variable → Low flow cut off

Description When activated, this function suppresses small flows which can lead to large fluctuations in the measured value.

User entry 0.0 to 50.0 %

Factory setting 5 %

Wet calibration

Navigation Application → Sensor → Wet calibration

Zero

Navigation Application → Sensor → Wet calibration → Zero

Selection
- No
- Confirm

Factory setting No

Pressure value 1

Navigation Application → Sensor → Wet calibration → Pressure 1

Description Enter pressure for the first scaling point. "Scaled variable value 1" will be allocated to this pressure.

User entry Signed floating-point number

Factory setting 0 mbar

Span

Navigation Application → Sensor → Wet calibration → Span

Selection
- No
- Confirm

Factory setting No

Pressure value 2

Navigation Application → Sensor → Wet calibration → Pressure 2

Description Enter pressure for the second scaling point. "Scaled variable value 2" will be allocated to this pressure.

User entry Signed floating-point number

Factory setting 500 mbar

Lower range value output

Navigation Application → Sensor → Wet calibration → Low.range outp

Description Depending on which variable has been selected as "Process variable output current ", define the related lower (4 mA) and upper range values (20 mA).

User entry Signed floating-point number

Factory setting 0 mbar

Upper range value output

Navigation Application → Sensor → Wet calibration → Upp.range outp

Description Depending on which variable has been selected as "Process variable output current ", define the related lower (4 mA) and upper range values (20 mA).

User entry Signed floating-point number

Factory setting 50 000 mbar

3.3.4 Current output

Navigation Application → Curr.output

Assign PV

Navigation Application → Curr.output → Assign PV

Description Assign measured variable to the first dynamic variable (PV). This value can only be output via the HART interface.

Scaled variable:
In flow or level applications, a scaled variable can be assigned to a pressure value.

Selection
- Pressure
- Scaled variable

Factory setting Pressure

Measuring mode current output

Navigation Application → Curr.output → Output mode

Description Select curve of current output.

Selection
- Standard
- Inverse
- Bi-directional

Factory setting Standard

Current range output

Navigation Application → Curr.output → Current range

Description Defines the current range used to transmit the measured or calculated value.
In brackets are indicated the “low saturation value” and the “high saturation value”.
If Measured value ≤ “low saturation”, the output current is set to “low saturation”.
If Measured value ≥ “high saturation”, the output current is set to ”high saturation”.

Note:
Currents below 3.6 mA or above 21.5 mA can be used to signal an alarm.

Selection
- 4...20 mA (4...20.5 mA)
- 4...20 mA NE (3.8...20.5 mA)
- 4...20 mA US (3.9...20.8 mA)

Factory setting 4...20 mA NE (3.8...20.5 mA)

Lower range value output

Navigation Application → Curr.output → Low.range outp

Description Depending on which variable has been selected as Process variable output current, specify the relevant start of the measuring range (4 mA).

User entry Signed floating-point number

Factory setting Depends on the device setting

Upper range value output

Navigation Application → Curr.output → Upp.range outp

Description Depending on which variable has been selected as Process variable output current, specify the relevant end of the measuring range (20 mA).

User entry Signed floating-point number

Factory setting Depends on the device setting

Failure behavior current output

Navigation Application → Curr.output → Failure behav.

Description Defines which current the output assumes in the case of an error.
Min: < 3.6 mA
Max: >21.5 mA

Note: The hardware DIP Switch for alarm current has priority over software setting.

Selection
- Min.
- Max.

Factory setting Min.

Failure current

Navigation Application → Curr.output → Failure current

Description Enter current output value in alarm condition.

Applies to failure mode current output = max.

User entry 21.5 to 23 mA

Factory setting 22.5 mA

Output current

Navigation Application → Curr.output → Output curr.

Description Shows the value currently calculated for the current output

User interface 3.59 to 23 mA

Terminal current

Navigation Application → Curr.output → Terminal curr.

Description Shows the current value of the current output which is currently measured

User interface 3.6 to 23 mA

Factory setting 0 mA

4 mA trim value

Navigation Application → Curr.output → 4 mA trim value

Description Enter the trim value for the 4 mA current output.

Note:
Simulation must be active.

User entry 3 to 5 mA

Factory setting 4 mA

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

20 mA trim value

Navigation Application → Curr.output → 20 mA trim value

Description Enter the trim value for the 20 mA current output.

Note:
Simulation must be active.

User entry 18 to 22 mA

Factory setting 20 mA

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

3.3.5 HART output

Navigation Application → HART output

Configuration

Navigation Application → HART output → Configuration

HART address

Navigation Application → HART output → Configuration → HART address

Description Enter the address to exchange data via the HART protocol.

User entry 0 to 63

Factory setting 0

HART short tag

Navigation Application → HART output → Configuration → HART short tag

Description Defines the short tag for the measuring point.

Maximum length: 8 characters
Allowed characters: A-Z, 0-9, certain special characters

User entry Character string comprising numbers, letters and special characters (8)

Factory setting SHORTTAG

Device tag

Navigation Application → HART output → Configuration → Device tag

Description Enter a unique name for the measuring point to identify the device quickly within the plant.

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

Factory setting Customized

No. of preambles

Navigation Application → HART output → Configuration → No. of preambles

Description Defines the number of preambles in the HART telegram

User entry 5 to 20

Factory setting 5

Loop current mode

Navigation Application → HART output → Configuration → Loop curr mode

Description If Loop current mode is disabled, Multi-drop communication mode is activated. Multi-drop is a HART digital communication mode where multiple devices may share the same pair of wires for power and communications.
In this mode the output current is fixed.

Selection
- Disable
- Enable

Factory setting Enable

HART output

Navigation Application → HART output → HART output

Assign PV

Navigation Application → HART output → HART output → Assign PV

Description Assign measured variable to the first dynamic variable (PV). This value can only be output via the HART interface.

Scaled variable:
In flow or level applications, a scaled variable can be assigned to a pressure value.

Selection
- Pressure
- Scaled variable

Factory setting Pressure

Primary variable (PV)

Navigation Application → HART output → HART output → Primary var (PV)

Description Shows the current measured value of the primary dynamic variable (PV)

User interface Signed floating-point number

Factory setting 0 mbar

Assign SV

Navigation Application → HART output → HART output → Assign SV

Description Assign a measured variable to the second dynamic variable (SV).

Selection
- Pressure
- Scaled variable
- Sensor temperature
- Sensor pressure
- Electronics temperature
- Terminal current *
- Terminal voltage *
- Median of pressure signal *
- Noise of pressure signal *
- Signal noise detected *
- Percent of range
- Loop current
- Not used

Factory setting Sensor temperature

Secondary variable (SV)

Navigation Application → HART output → HART output → Second.var(SV)

Description Shows the current measured value of the secondary dynamic variable (SV)

User interface Signed floating-point number

Factory setting 0 °C

* Visibility depends on order options or device settings

Assign TV

Navigation Application → HART output → HART output → Assign TV

Description Assign a measured variable to the tertiary dynamic variable (TV).

Selection
- Pressure
- Scaled variable
- Sensor temperature
- Sensor pressure
- Electronics temperature
- Terminal current *
- Terminal voltage *
- Median of pressure signal *
- Noise of pressure signal *
- Signal noise detected *
- Percent of range
- Loop current
- Not used

Factory setting Electronics temperature

Tertiary variable (TV)

Navigation Application → HART output → HART output → Tertiary var(TV)

Description Shows the current measured value of the tertiary (third) dynamic variable (TV)

User interface Signed floating-point number

Factory setting 0 °C

Assign QV

Navigation Application → HART output → HART output → Assign QV

Description Assign a measured variable to the quaternary dynamic variable (QV).

Selection
- Pressure
- Scaled variable
- Sensor temperature
- Sensor pressure
- Electronics temperature
- Terminal current *
- Terminal voltage *
- Median of pressure signal *
- Noise of pressure signal *

* Visibility depends on order options or device settings

- Signal noise detected *
- Percent of range
- Loop current
- Not used

Factory setting Sensor pressure

Quaternary variable (QV)

Navigation Application → HART output → HART output → Quaterna.var(QV)

Description Shows the current measured value of the quaternary (fourth) dynamic variable (QV)

User interface Signed floating-point number

Factory setting 0 mbar

Burst configuration 1

Navigation Application → HART output → Burst config. 1

Burst mode

Navigation Application → HART output → Burst config. 1 → Burst mode 1

Description Switch HART burst mode for burst message on

Selection
- Off
- On

Factory setting Off

Burst command

Navigation Application → HART output → Burst config. 1 → Burst command 1

Description Select the HART command that is sent to the HART master

* Visibility depends on order options or device settings

Selection
- Primary variable (PV)
- Loop Current and Percent of Range
- Dynamic Variables
- Device variables with status
- Device variables
- Additional device status

Factory setting Loop Current and Percent of Range

Burst variable 0

Navigation Application → HART output → Burst config. 1 → Burst variable 0

Description For HART command 9 and 33, assign a HART device variable or process variable to burst variable

Selection
- Pressure
- Scaled variable
- Sensor temperature
- Sensor pressure
- Electronics temperature
- Measured current *
- Terminal voltage 1 *
- Median of pressure signal *
- Noise of pressure signal *
- Signal noise detected *
- Percent of range
- Measured current
- Primary variable (PV)
- Secondary variable (SV)
- Tertiary variable (TV)
- Quaternary variable (QV)
- Not used

Factory setting Pressure

Burst variable 1

Navigation Application → HART output → Burst config. 1 → Burst variable 1

Description For HART command 9 and 33, assign a HART device variable or process variable to burst variable

Selection
- Pressure
- Scaled variable
- Sensor temperature
- Sensor pressure
- Electronics temperature

* Visibility depends on order options or device settings

- Measured current *
- Terminal voltage 1 *
- Median of pressure signal *
- Noise of pressure signal *
- Signal noise detected *
- Percent of range
- Measured current
- Primary variable (PV)
- Secondary variable (SV)
- Tertiary variable (TV)
- Quaternary variable (QV)
- Not used

Factory setting Scaled variable

Burst variable 2

Navigation Application → HART output → Burst config. 1 → Burst variable 2

Description For HART command 9 and 33, assign a HART device variable or process variable to burst variable

Selection

- Pressure
- Scaled variable
- Sensor temperature
- Sensor pressure
- Electronics temperature
- Measured current *
- Terminal voltage 1 *
- Median of pressure signal *
- Noise of pressure signal *
- Signal noise detected *
- Percent of range
- Measured current
- Primary variable (PV)
- Secondary variable (SV)
- Tertiary variable (TV)
- Quaternary variable (QV)
- Not used

Factory setting Sensor temperature

Burst variable 3

Navigation Application → HART output → Burst config. 1 → Burst variable 3

Description For HART command 9 and 33, assign a HART device variable or process variable to burst variable

* Visibility depends on order options or device settings

Selection
- Pressure
- Scaled variable
- Sensor temperature
- Sensor pressure
- Electronics temperature
- Measured current *
- Terminal voltage 1 *
- Median of pressure signal *
- Noise of pressure signal *
- Signal noise detected *
- Percent of range
- Measured current
- Primary variable (PV)
- Secondary variable (SV)
- Tertiary variable (TV)
- Quaternary variable (QV)
- Not used

Factory setting Sensor pressure

Burst variable 4

Navigation Application → HART output → Burst config. 1 → Burst variable 4

Description For HART command 33, assign a HART device variable or process variable to burst variable

Selection
- Pressure
- Scaled variable
- Sensor temperature
- Sensor pressure
- Electronics temperature
- Measured current *
- Terminal voltage 1 *
- Median of pressure signal *
- Noise of pressure signal *
- Signal noise detected *
- Percent of range
- Measured current
- Primary variable (PV)
- Secondary variable (SV)
- Tertiary variable (TV)
- Quaternary variable (QV)
- Not used

Factory setting Percent of range

* Visibility depends on order options or device settings

Burst variable 5

Navigation Application → HART output → Burst config. 1 → Burst variable 5

Description For HART command 33, assign a HART device variable or process variable to burst variable

Selection
- Pressure
- Scaled variable
- Sensor temperature
- Sensor pressure
- Electronics temperature
- Measured current *
- Terminal voltage 1 *
- Median of pressure signal *
- Noise of pressure signal *
- Signal noise detected *
- Percent of range
- Measured current
- Primary variable (PV)
- Secondary variable (SV)
- Tertiary variable (TV)
- Quaternary variable (QV)
- Not used

Factory setting Measured current

Burst variable 6

Navigation Application → HART output → Burst config. 1 → Burst variable 6

Description For HART command 33, assign a HART device variable or process variable to burst variable

Selection
- Pressure
- Scaled variable
- Sensor temperature
- Sensor pressure
- Electronics temperature
- Measured current *
- Terminal voltage 1 *
- Median of pressure signal *
- Noise of pressure signal *
- Signal noise detected *
- Percent of range
- Measured current
- Primary variable (PV)
- Secondary variable (SV)
- Tertiary variable (TV)
- Quaternary variable (QV)
- Not used

Factory setting Not used

* Visibility depends on order options or device settings

Burst variable 7

Navigation Application → HART output → Burst config. 1 → Burst variable 7

Description For HART command 33, assign a HART device variable or process variable to burst variable

Selection
- Pressure
- Scaled variable
- Sensor temperature
- Sensor pressure
- Electronics temperature
- Measured current *
- Terminal voltage 1 *
- Median of pressure signal *
- Noise of pressure signal *
- Signal noise detected *
- Percent of range
- Measured current
- Primary variable (PV)
- Secondary variable (SV)
- Tertiary variable (TV)
- Quaternary variable (QV)
- Not used

Factory setting Not used

Burst trigger mode

Navigation Application → HART output → Burst config. 1 → Trigger mode

Description Select the event that triggers the burst message

Selection
- Continuous
- Window *
- Rising *
- Falling *
- On change

Factory setting Continuous

Burst trigger level

Navigation Application → HART output → Burst config. 1 → Trigger level

Description Enter the burst trigger value that determines together with the option selected in "Burst trigger mode" parameter the time of burst message

* Visibility depends on order options or device settings

User entry Signed floating-point number

Factory setting 2.0E-38

Min. update period

Navigation Application → HART output → Burst config. 1 → Min. upd. per.

Description Enter the minimum time span between two burst responses of one burst message

User entry Positive integer

Factory setting 1 000 ms

Max. update period

Navigation Application → HART output → Burst config. 1 → Max. upd. per.

Description Enter the maximum time span between two burst responses of one burst message

User entry Positive integer

Factory setting 2 000 ms

Information

Navigation Application → HART output → Information

Device ID

Navigation Application → HART output → Information → Device ID

Description Shows the device ID for identifying the device in a HART network

User interface Positive integer

Factory setting 123 456

Device type

Navigation Application → HART output → Information → Device type

Description Displays the device type with which the device is registered with the HART FieldComm Group.

User interface 0 to 65 535

Factory setting 4 394

Device revision

Navigation Application → HART output → Information → Device revision

Description Displays the device revision with which the device is registered with the HART FieldComm Group.

User interface 0 to 255

Factory setting 2

HART short tag

Navigation Application → HART output → Information → HART short tag

Description Defines the short tag for the measuring point.

Maximum length: 8 characters
Allowed characters: A-Z, 0-9, certain special characters

User entry Character string comprising numbers, letters and special characters (8)

Factory setting SHORTTAG

HART revision

Navigation Application → HART output → Information → HART revision

Description Displays the revision of the HART protocol for the device.

User interface 5 to 7

Factory setting 7

HART descriptor

Navigation Application → HART output → Information → HART descriptor

Description Use this function to define a description for the measuring point.

Maximum length: 16 characters
Allowed characters: A-Z, 0-9, certain special characters

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

Factory setting 5xB/7xB

HART message

Navigation Application → HART output → Information → HART message

Description Use this function to define a HART message which is sent via the HART protocol when requested by the master.

Maximum length: 32 characters
Allowed characters: A-Z, 0-9, certain special characters

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

Factory setting 5xB/7xB

HART date code

Navigation Application → HART output → Information → HART date code

Description Enter date of the last configuration change. Use this format yyyy-mm-dd

User entry Character string comprising numbers, letters and special characters (10)

Factory setting 2009-07-20

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 unique name for the measuring point to identify the device quickly within the plant.

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

Factory setting 5xB/7xB

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.

"Safety 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
- Safety locked
- Temporarily locked

Configuration counter

Navigation System → Device manag. → Config. counter

Description Displays the counter for changes to the device parameters.

Additional information:
- If the value for a static parameter is changed when optimizing or configuring the parameter, the counter is incremented by 1. This is to enable tracking different parameter versions.
- When multiple parameters are changed simultaneously, e.g. when loading parameters into the device from an external source such as FieldCare, the counter may display a higher value. The counter cannot be reset, nor is it reset to a default value on performing a device reset.
- Once the counter has reached the value 65535, it restarts at 0.

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

* Visibility depends on order options or device settings

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
- Production
- Development

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.

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 Bluetooth configuration

Navigation System → Bluetooth conf.

Bluetooth activation

Navigation System → Bluetooth conf. → 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 Depends on the order option

3.4.4 Display

Navigation System → Display

Language

Navigation System → Display → Language

Prerequisite A local display is provided.

Description Use this function to select the configured language on the local display.

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

Factory setting English (alternatively, the ordered language is preset in the device)

Format display

Navigation System → Display → Format display

Description Select how measured values are shown on the display

Selection
- 1 value, max. size
- 1 bargraph + 1 value
- 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
- Pressure
- Scaled variable
- Current output
- Sensor temperature
- Percent of range

Factory setting Pressure

Value 2 ... 4 display

Navigation System → Display → Value 2 ... 4 display

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

Selection
- None
- Pressure
- Scaled variable
- Current output
- Sensor temperature
- Percent of range

Factory setting None

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 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 5xB/7xB

Manufacturer

Navigation System → Information → 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

3.4.6 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: -

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: -

3.4.7 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

Stored CRC device configuration

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

Description Stored CRC after the last safety lock. Factory delivery is 65535 means that the device has not yet been safety locked.

User interface 0 to 65 535

Factory setting 65 535

Timestamp stored CRC device config.

Navigation System → Softw. config. → Time stored CRC

Description Gives the time stamp when the CRC was last stored following completion of the safety lock wizard.

User interface Character string comprising numbers, letters and special characters

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
- SIL
- WHG
- Heartbeat Verification
- Heartbeat Monitoring

Factory setting T_SILT_WHGT_HeartbeatVerificationT_HeartbeatMonitoring

www.addresses.endress.com

Endress+Hauser

People for Process Automation