Description of Device Parameters
iTEMP TMT86

Temperature transmitter
PROFINET®
# Table of contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>About this document</td>
<td>4</td>
</tr>
<tr>
<td>1.1</td>
<td>Document function</td>
<td>4</td>
</tr>
<tr>
<td>1.2</td>
<td>Target group</td>
<td>4</td>
</tr>
<tr>
<td>1.3</td>
<td>Using this document</td>
<td>4</td>
</tr>
<tr>
<td>1.3.1</td>
<td>Symbols for certain types of information</td>
<td>4</td>
</tr>
<tr>
<td>1.3.2</td>
<td>Information on the document structure</td>
<td>5</td>
</tr>
<tr>
<td>1.3.3</td>
<td>Structure of a parameter description</td>
<td>5</td>
</tr>
<tr>
<td>1.4</td>
<td>Documentation</td>
<td>6</td>
</tr>
<tr>
<td>2</td>
<td>Overview of the operating menu</td>
<td>6</td>
</tr>
<tr>
<td>3</td>
<td>&quot;Guidance&quot; menu</td>
<td>9</td>
</tr>
<tr>
<td>3.1</td>
<td>&quot;Commissioning&quot; wizard</td>
<td>9</td>
</tr>
<tr>
<td>3.1.1</td>
<td>&quot;Device identification&quot; wizard</td>
<td>10</td>
</tr>
<tr>
<td>3.1.2</td>
<td>&quot;Sensor 1&quot; wizard</td>
<td>11</td>
</tr>
<tr>
<td>3.1.3</td>
<td>&quot;Sensor 2&quot; wizard</td>
<td>17</td>
</tr>
<tr>
<td>3.1.4</td>
<td>&quot;User management&quot; wizard</td>
<td>18</td>
</tr>
<tr>
<td>3.1.5</td>
<td>&quot;Finish&quot; wizard</td>
<td>19</td>
</tr>
<tr>
<td>3.2</td>
<td>Import / Export</td>
<td>19</td>
</tr>
<tr>
<td>4</td>
<td>&quot;Diagnostics&quot; menu</td>
<td>20</td>
</tr>
<tr>
<td>4.1</td>
<td>&quot;Active diagnostics&quot; submenu</td>
<td>20</td>
</tr>
<tr>
<td>4.2</td>
<td>&quot;Diagnostic list&quot; submenu</td>
<td>22</td>
</tr>
<tr>
<td>4.3</td>
<td>&quot;Event logbook&quot; submenu</td>
<td>22</td>
</tr>
<tr>
<td>4.4</td>
<td>&quot;Minimum/maximum values&quot; submenu</td>
<td>23</td>
</tr>
<tr>
<td>4.4.1</td>
<td>&quot;Sensor 1&quot; submenu</td>
<td>23</td>
</tr>
<tr>
<td>4.4.2</td>
<td>&quot;Sensor 2&quot; submenu</td>
<td>24</td>
</tr>
<tr>
<td>4.4.3</td>
<td>&quot;Device temperature&quot; submenu</td>
<td>25</td>
</tr>
<tr>
<td>4.5</td>
<td>&quot;Simulation&quot; submenu</td>
<td>26</td>
</tr>
<tr>
<td>4.6</td>
<td>&quot;Diagnostic settings&quot; submenu</td>
<td>27</td>
</tr>
<tr>
<td>4.6.1</td>
<td>&quot;Properties&quot; submenu</td>
<td>27</td>
</tr>
<tr>
<td>4.6.2</td>
<td>&quot;Configuration&quot; submenu</td>
<td>28</td>
</tr>
<tr>
<td>5</td>
<td>&quot;Application&quot; menu</td>
<td>29</td>
</tr>
<tr>
<td>5.1</td>
<td>&quot;Measured values&quot; submenu</td>
<td>29</td>
</tr>
<tr>
<td>5.2</td>
<td>&quot;Sensors&quot; submenu</td>
<td>30</td>
</tr>
<tr>
<td>5.2.1</td>
<td>&quot;Sensor 1&quot; submenu</td>
<td>30</td>
</tr>
<tr>
<td>5.2.2</td>
<td>&quot;Sensor 2&quot; submenu</td>
<td>33</td>
</tr>
<tr>
<td>5.2.3</td>
<td>&quot;Linearization&quot; submenu</td>
<td>34</td>
</tr>
<tr>
<td>5.3</td>
<td>&quot;PROFINET&quot; submenu</td>
<td>37</td>
</tr>
<tr>
<td>5.3.1</td>
<td>&quot;Configuration&quot; submenu</td>
<td>37</td>
</tr>
<tr>
<td>5.3.2</td>
<td>&quot;Analog input 1 to 5&quot; submenu</td>
<td>38</td>
</tr>
<tr>
<td>5.3.3</td>
<td>&quot;Information&quot; submenu</td>
<td>39</td>
</tr>
<tr>
<td>5.3.4</td>
<td>&quot;Application relation&quot; submenu</td>
<td>39</td>
</tr>
<tr>
<td>6</td>
<td>&quot;System&quot; menu</td>
<td>41</td>
</tr>
<tr>
<td>6.1</td>
<td>&quot;Device management&quot; submenu</td>
<td>42</td>
</tr>
<tr>
<td>6.2</td>
<td>&quot;Software configuration&quot; submenu</td>
<td>43</td>
</tr>
<tr>
<td>6.3</td>
<td>&quot;User management&quot; submenu</td>
<td>44</td>
</tr>
<tr>
<td>6.3.1</td>
<td>&quot;Enter password&quot; submenu</td>
<td>45</td>
</tr>
<tr>
<td>6.3.2</td>
<td>&quot;Recover password&quot; submenu</td>
<td>46</td>
</tr>
<tr>
<td>6.3.3</td>
<td>&quot;Define password&quot; submenu</td>
<td>47</td>
</tr>
<tr>
<td>6.3.4</td>
<td>&quot;Change password&quot; submenu</td>
<td>48</td>
</tr>
<tr>
<td>6.3.5</td>
<td>&quot;Delete password&quot; submenu</td>
<td>49</td>
</tr>
<tr>
<td>6.4</td>
<td>&quot;Connectivity&quot; submenu</td>
<td>50</td>
</tr>
<tr>
<td>6.4.1</td>
<td>&quot;Interfaces&quot; submenu</td>
<td>50</td>
</tr>
<tr>
<td>6.4.2</td>
<td>&quot;Ethernet&quot; submenu</td>
<td>51</td>
</tr>
<tr>
<td>6.5</td>
<td>&quot;Display&quot; submenu</td>
<td>57</td>
</tr>
<tr>
<td>6.6</td>
<td>&quot;Date/time&quot; submenu</td>
<td>58</td>
</tr>
<tr>
<td>6.7</td>
<td>&quot;Geolocation&quot; submenu</td>
<td>60</td>
</tr>
<tr>
<td>6.8</td>
<td>&quot;Information&quot; submenu</td>
<td>62</td>
</tr>
</tbody>
</table>

## Index

<table>
<thead>
<tr>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>64</td>
</tr>
</tbody>
</table>
1   About this document

1.1   Document function
The document is part of the Operating Instructions and serves as a reference for parameters, providing a detailed explanation of each individual parameter of the operating menus.

It is used to perform tasks that require detailed knowledge of the function of the device:
- Optimal adaptation of the measurement to difficult conditions
- Detailed configuration of the communication interface
- Error diagnostics in difficult cases

1.2   Target group
The document is aimed at specialists who work with the device over the entire life cycle and perform specific configurations.

1.3   Using this document

1.3.1   Symbols for certain types of information

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>✔️</td>
<td>Permitted Procedures, processes or actions that are permitted.</td>
</tr>
<tr>
<td>✔️ ✔️</td>
<td>Preferred Procedures, processes or actions that are preferred.</td>
</tr>
<tr>
<td>❌</td>
<td>Forbidden Procedures, processes or actions that are forbidden.</td>
</tr>
<tr>
<td>🔄</td>
<td>Tip Indicates additional information.</td>
</tr>
<tr>
<td>📚</td>
<td>Reference to documentation</td>
</tr>
<tr>
<td>📖</td>
<td>Reference to page</td>
</tr>
<tr>
<td>🎨</td>
<td>Reference to graphic</td>
</tr>
<tr>
<td>🔴</td>
<td>Notice or individual step to be observed</td>
</tr>
<tr>
<td>⬢, ⬣, ⬤...</td>
<td>Series of steps</td>
</tr>
<tr>
<td>⬦</td>
<td>Result of a step</td>
</tr>
<tr>
<td>🎨</td>
<td>Help in the event of a problem</td>
</tr>
<tr>
<td>🕵️</td>
<td>Visual inspection</td>
</tr>
<tr>
<td>📅</td>
<td>Operation via local display</td>
</tr>
<tr>
<td>📅</td>
<td>Operation via operating tool</td>
</tr>
<tr>
<td>🗝️</td>
<td>Write-protected parameter</td>
</tr>
</tbody>
</table>
1.3.2  Information on the document structure
The parameters of all the operating menus and the commissioning wizard are described in this document.
- Guidance menu with the Commissioning wizard (→ 9), which guides the user automatically through all the device parameters that are needed for commissioning
- Diagnostics menu (→ 20)
- Application menu (→ 29)
- System menu (→ 41)

1.3.3  Structure of a parameter description
The individual parts of a parameter description are described in the following section:

<table>
<thead>
<tr>
<th>Complete parameter name</th>
<th>Write-protected parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Navigation</td>
<td>! Navigation path to the parameter via the operating tool</td>
</tr>
<tr>
<td></td>
<td>The names of the menus, submenus and parameters are abbreviated to the form in which they appear on the display and in the operating tool.</td>
</tr>
<tr>
<td>Prerequisite</td>
<td>The parameter is only available under these specific conditions</td>
</tr>
<tr>
<td>Description</td>
<td>Description of the parameter function</td>
</tr>
<tr>
<td>Selection</td>
<td>List of the individual options for the parameter</td>
</tr>
<tr>
<td></td>
<td>Option 1</td>
</tr>
<tr>
<td></td>
<td>Option 2</td>
</tr>
<tr>
<td>User entry</td>
<td>Input range for the parameter</td>
</tr>
<tr>
<td>User interface</td>
<td>Display value/data for the parameter</td>
</tr>
<tr>
<td>Factory setting</td>
<td>Default setting ex works (if not explicitly selected)</td>
</tr>
<tr>
<td>Additional information</td>
<td>Additional explanations (e.g. in examples):</td>
</tr>
<tr>
<td></td>
<td>For individual options</td>
</tr>
<tr>
<td></td>
<td>For display values/data</td>
</tr>
<tr>
<td></td>
<td>For the input range</td>
</tr>
<tr>
<td></td>
<td>For the factory setting</td>
</tr>
<tr>
<td></td>
<td>For the parameter function</td>
</tr>
</tbody>
</table>
1.4 Documentation

The Description of Device Parameters is part of the following documentation:

Temperature transmitter iTMP TMT86: BA02144T

2 Overview of the operating menu

The following table provides an overview of the menu structure of the operating menu and its parameters. The page reference indicates where the associated description of the submenu or parameter can be found.

<table>
<thead>
<tr>
<th>Menu</th>
<th>Page Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Guidance</td>
<td></td>
</tr>
<tr>
<td>▸ Commissioning</td>
<td></td>
</tr>
<tr>
<td>▸ Device identification</td>
<td></td>
</tr>
<tr>
<td>▸ Sensor 1</td>
<td></td>
</tr>
<tr>
<td>▸ Sensor 2</td>
<td></td>
</tr>
<tr>
<td>▸ User management</td>
<td></td>
</tr>
<tr>
<td>▸ Finish</td>
<td></td>
</tr>
<tr>
<td>▸ Import / Export</td>
<td></td>
</tr>
<tr>
<td>Create configuration report</td>
<td></td>
</tr>
<tr>
<td>Diagnostics</td>
<td></td>
</tr>
<tr>
<td>▸ Active diagnostics</td>
<td></td>
</tr>
<tr>
<td>▸ Diagnostic list</td>
<td></td>
</tr>
<tr>
<td>▸ Event logbook</td>
<td></td>
</tr>
<tr>
<td>▸ Minimum/maximum values</td>
<td></td>
</tr>
<tr>
<td>▸ Sensor 1</td>
<td></td>
</tr>
<tr>
<td>▸ Sensor 2</td>
<td></td>
</tr>
<tr>
<td>▸ Device temperature</td>
<td></td>
</tr>
<tr>
<td>Simulation</td>
<td></td>
</tr>
<tr>
<td>Diagnostic settings</td>
<td></td>
</tr>
<tr>
<td>▸ Properties</td>
<td></td>
</tr>
<tr>
<td>▸ Configuration</td>
<td></td>
</tr>
<tr>
<td>Application</td>
<td></td>
</tr>
<tr>
<td>▸ Measured values</td>
<td></td>
</tr>
<tr>
<td>▸ Sensors</td>
<td></td>
</tr>
<tr>
<td>Menu Item</td>
<td>Page</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>◁ Sensor 1</td>
<td>30</td>
</tr>
<tr>
<td>◁ Sensor 1  →  Linearization</td>
<td>30</td>
</tr>
<tr>
<td>◁ Sensor 2</td>
<td>33</td>
</tr>
<tr>
<td>◁ Sensor 2  →  Linearization</td>
<td>33</td>
</tr>
<tr>
<td>◁ PROFINET</td>
<td>37</td>
</tr>
<tr>
<td>◁ Configuration</td>
<td>37</td>
</tr>
<tr>
<td>◁ Analog input</td>
<td>38</td>
</tr>
<tr>
<td>◁ Analog input 1 to 5</td>
<td>38</td>
</tr>
<tr>
<td>◁ Information</td>
<td>39</td>
</tr>
<tr>
<td>◁ Application relation</td>
<td>39</td>
</tr>
<tr>
<td>◁ System</td>
<td>41</td>
</tr>
<tr>
<td>◁ Device management</td>
<td>42</td>
</tr>
<tr>
<td>◁ Software configuration</td>
<td>43</td>
</tr>
<tr>
<td>◁ User management</td>
<td>44</td>
</tr>
<tr>
<td>◁ User management</td>
<td>44</td>
</tr>
<tr>
<td>◁ Enter password</td>
<td>45</td>
</tr>
<tr>
<td>◁ Define password</td>
<td>47</td>
</tr>
<tr>
<td>◁ Change password</td>
<td>48</td>
</tr>
<tr>
<td>◁ Delete password</td>
<td>49</td>
</tr>
<tr>
<td>◁ Connectivity</td>
<td>50</td>
</tr>
<tr>
<td>◁ Interfaces</td>
<td>50</td>
</tr>
<tr>
<td>◁ Ethernet</td>
<td>51</td>
</tr>
<tr>
<td>◁ Properties</td>
<td>51</td>
</tr>
<tr>
<td>◁ Port information</td>
<td>52</td>
</tr>
<tr>
<td>◁ APL information</td>
<td>54</td>
</tr>
<tr>
<td>◁ TCP information</td>
<td>55</td>
</tr>
<tr>
<td>◁ UDP information</td>
<td>56</td>
</tr>
<tr>
<td>◁ Display</td>
<td>57</td>
</tr>
<tr>
<td>◁ Date/time</td>
<td>58</td>
</tr>
</tbody>
</table>
## Overview of the operating menu

**iTEMP TMT86 PROFINET®**

<table>
<thead>
<tr>
<th>Item</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Geolocation</td>
<td>60</td>
</tr>
<tr>
<td>Information</td>
<td>62</td>
</tr>
</tbody>
</table>
3 "Guidance" menu

**Navigation**  ➤ Guidance

- **Guidance**
  - **Commissioning** ➔  ➤ 9
    - **Device identification** ➔ 10
    - **Sensor 1** ➔ 11
    - **Sensor 2** ➔ 17
    - **User management** ➔ 18
    - **Finish** ➔ 19

- **Import / Export** ➔ 19
  - Create configuration report ➔ 19

3.1 "Commissioning" wizard

**Navigation**  ➤ Guidance ➔ Commissioning

**Start**

**Navigation**  ➤ Guidance ➔ Commissioning ➔ Start

**Description**

Click the **Start** button to run this wizard. Enter the appropriate value in each parameter or select the appropriate option.

**Tip**

If the wizard is canceled before all the necessary parameters have been configured, any settings already made are saved. For this reason, the device may then be in an undefined state! In such situations, it is advisable to reset the device to the factory default settings.
### 3.1.1 "Device identification" wizard

**Navigation**  
Guidance → Commissioning → Device identification

#### Device tag

<table>
<thead>
<tr>
<th><strong>Navigation</strong></th>
<th>Guidance → Commissioning → Device identification → Device tag</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Description</strong></td>
<td>Enter a name for the measuring point to identify the measuring device in the plant</td>
</tr>
<tr>
<td><strong>User entry</strong></td>
<td>Character string comprising numbers, letters and special characters (32)</td>
</tr>
</tbody>
</table>

#### Descriptor

<table>
<thead>
<tr>
<th><strong>Navigation</strong></th>
<th>Guidance → Commissioning → Device identification → Descriptor</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Description</strong></td>
<td>Enter a description for the measuring point</td>
</tr>
<tr>
<td><strong>User entry</strong></td>
<td>Character string comprising numbers, letters and special characters (54)</td>
</tr>
</tbody>
</table>

#### Device name

<table>
<thead>
<tr>
<th><strong>Navigation</strong></th>
<th>Guidance → Commissioning → Device identification → Device name</th>
</tr>
</thead>
</table>
| **Description** | Displays the name of the transmitter.  
Additional information:  
The name can also be found on the transmitter's nameplate. |
| **User interface** | Character string comprising numbers, letters and special characters |
| **Factory setting** | iTMP TMT86 |
Serial number

**Navigation**

Guidance → Commissioning → Device identification → Serial number

**Description**

Displays the serial number of the measuring device. The serial number can be used to identify the measuring device and to retrieve further information via the Device Viewer or Operations app, such as the related documentation.

Additional information:
The serial number can also be found on the nameplate of the sensor and transmitter.

**User interface**

Character string comprising numbers, letters and special characters

Extended order code 1 to 3

**Navigation**

Guidance → Commissioning → Device identification → Extended order code 1

**Description**

Displays the first, second and/or third part of the extended order code. Due to character length restrictions, the extended order code is split into a maximum of 3 parameters. The extended order code indicates for each feature in the product structure the selected option, thereby uniquely identifying the device model.

Additional information:
The extended order code can also be found on the nameplate.

**User interface**

Character string comprising numbers, letters and special characters

### 3.1.2 "Sensor 1" wizard

**Navigation**

Guidance → Commissioning → Sensor 1

**Unit**

**Navigation**

Guidance → Commissioning → Sensor 1 → Unit

**Description**

Selection of the unit for all measured values.
Selection

SI units
- °C
- K
- Ohm

Custom-specific units
- °F
- °R
- mV

Factory setting
- °C

Sensor type

Navigation
Guidance → Commissioning → Sensor 1 → Sensor type

Description
Use this function to select the sensor type for the sensor input in question.
- Sensor type 1: settings for sensor input 1
- Sensor type 2: settings for sensor input 2

Info:
Please observe the terminal assignment when connecting the individual sensors. In the case of 2-channel operation, the possible connection options also have to be observed.

Selection
- Pt100 IEC60751, a=0.00385 (1)
- Pt200 IEC60751, a=0.00385 (2)
- Pt500 IEC60751, a=0.00385 (3)
- Pt1000 IEC60751, a=0.00385 (4)
- Pt100 JIS C1604, a=0.003916 (5)
- Type A (W5Re-W20Re) IEC60584 (30)
- Type B (PtRh30-PtRh6) IEC60584 (31)
- Type C (W5Re-W26Re) IEC60584 (32)
- Type D (W3Re-W25Re) ASTM E988-96 (33)
- Type E (NiCr-CuNi) IEC60584 (34)
- Type J (Fe-CuNi) IEC60584 (35)
- Type K (NiCr-Ni) IEC60584 (36)
- Type N (NiCrSi-NiSi) IEC60584 (37)
- Type R (PtRh13-Pt) IEC60584 (38)
- Type S (PtRh10-Pt) IEC60584 (39)
- Type T (Cu-CuNi) IEC60584 (40)
- Type L (Fe-CuNi) DIN43710 (41)
- Type L (NiCr-CuNi) GOST R8.585-01 (43)
- Type U (Cu-CuNi) DIN43710 (42)
- Pt50 GOST 6651-94, a=0.00391 (8)
- Pt100 GOST 6651-94, a=0.00391 (9)
- Cu100 OIML/GOST 6651-94, a=0.00391 (10)
- Cu50 OIML/R84:2003, a=0.00426 (14)
- RTD Platinium (Callendar/van Dusen)
- RTD Poly Nickel (OIML R84, GOST 6651-94)
- RTD Polynomial Copper (OIML R84:2003)
- 10...400 Ohm
- 10...2850 Ohm
- -20...100 mV
Factory setting Pt100 IEC60751, a=0.00385 (1)

Connection type

Navigation Guidance → Commissioning → Sensor 1 → Connection type

Prerequisite An RTD sensor or a resistance transmitter must be specified as the sensor type.

Description Use this function to select the connection type for the sensor.

Selection
- 2-wire
- 3-wire
- 4-wire

Factory setting 4-wire

2-wire compensation

Navigation Guidance → Commissioning → Sensor 1 → 2-wire compensation

Prerequisite An RTD sensor or a resistance transmitter with a 2-wire connection type must be specified as the sensor type.

Description Use this function to specify the resistance value for two-wire compensation in RTDs.

User entry 0.0 to 30.0 Ohm

Factory setting 0.0 Ohm

Cold junction

Navigation Guidance → Commissioning → Sensor 1 → Cold junction

Prerequisite A thermocouple (TC) sensor must be selected as the sensor type.

Description Use this function to select cold junction measurement for temperature compensation of thermocouples (TC).

Info:
- If 'Fixed value' is selected, the compensation value is specified via the CJ preset value parameter.
- If 'Measured value ext. sensor' is selected, an RTD must also be connected in accordance with the specifications in the operating manual.
**Selection**

- No compensation
- Internal measurement
- Fixed Value
- Measured value ext. sensor

**Factory setting**

Internal measurement

---

**CJ preset value 1**

**Navigation**

Guidance → Commissioning → Sensor 1 → CJ preset value 1

**Prerequisite**

The CJ preset value parameter must be set if the Cold junction option is selected.

**Description**

The Fixed value parameter must be set if the cold junction option is selected.

Recommended value range: -50°C to 87°C (-58°F to 188.6°F)

**User entry**

-50000.0 to 50000.0

**Factory setting**

0.0

---

**Call./v. Dusen coeff. R0**

**Navigation**

Guidance → Commissioning → Sensor 1 → Call./v. Dusen coeff. R0

**Prerequisite**

The RTD platinum (Callendar/Van Dusen) option is enabled in the Sensor type parameter.

**Description**

Use this function to set the R0 value for sensor linearization with the Callendar/Van Dusen polynomial.

**User entry**

10.0 to 2000.0 Ohm

**Factory setting**

100.0 Ohm

---

**Call./v. Dusen coeff. A**

**Navigation**

Guidance → Commissioning → Sensor 1 → Call./v. Dusen coeff. A

**Prerequisite**

The RTD platinum (Callendar/Van Dusen) option is enabled in the Sensor type parameter.

**Description**

Use this function to set the coefficients for sensor linearization with the Callendar/Van Dusen polynomial.

**User entry**

0.003 to 0.004

**Factory setting**

0.0039083
Call./v. Dusen coeff. B

Navigation
Guidance → Commissioning → Sensor 1 → Call./v. Dusen coeff. B

Prerequisite
The RTD platinum (Callendar/Van Dusen) option is enabled in the Sensor type parameter.

Description
Use this function to set the coefficients for sensor linearization with the Callendar/Van Dusen polynomial.

User entry
$-4.0 \cdot 10^{-06}$ to $4.0 \cdot 10^{-06}$

Factory setting
$-5.775E-07$

Call./v. Dusen coeff. C

Navigation
Guidance → Commissioning → Sensor 1 → Call./v. Dusen coeff. C

Prerequisite
The RTD platinum (Callendar/Van Dusen) option is enabled in the Sensor type parameter.

Description
Use this function to set the coefficients for sensor linearization with the Callendar/Van Dusen polynomial.

User entry
$-1.0 \cdot 10^{-09}$ to $1.0 \cdot 10^{-09}$

Factory setting
$-4.183E-12$

Polynomial coeff. R0

Navigation
Guidance → Commissioning → Sensor 1 → Polynomial coeff. R0

Prerequisite
The RTD poly nickel or RTD copper polynomial option is enabled in the Sensor type parameter.

Description
Use this function to set the R0 value for linearization of nickel/copper sensors.

User entry
10.0 to 2 000.0 Ohm

Factory setting
100.0 Ohm

Polynomial coeff. A

Navigation
Guidance → Commissioning → Sensor 1 → Polynomial coeff. A

Prerequisite
The RTD poly nickel or RTD copper polynomial option is enabled in the Sensor type parameter.
### Polynomial coeff. B

<table>
<thead>
<tr>
<th>Description</th>
<th>Use this function to set the coefficients for sensor linearization of copper/nickel resistance thermometers.</th>
</tr>
</thead>
<tbody>
<tr>
<td>User entry</td>
<td>0.004 to 0.006</td>
</tr>
<tr>
<td>Factory setting</td>
<td>0.0054963</td>
</tr>
</tbody>
</table>

**Navigation**

 Guidance → Commissioning → Sensor 1 → Polynomial coeff. B

**Prerequisite**

The RTD poly nickel or RTD copper polynomial option is enabled in the **Sensor type** parameter.

**Description**

Use this function to set the coefficients for sensor linearization of copper/nickel resistance thermometers.

**User entry**

$-2.0 \times 10^{-05}$ to $2.0 \times 10^{-05}$

**Factory setting**

6.7556E-06

### Sensor lower limit

<table>
<thead>
<tr>
<th>Description</th>
<th>Use this function to set the lower calculation limit for special sensor linearization.</th>
</tr>
</thead>
<tbody>
<tr>
<td>User entry</td>
<td>$-10000.0$ to $10000.0$</td>
</tr>
<tr>
<td>Factory setting</td>
<td>Depends on the <strong>sensor type</strong> selected.</td>
</tr>
</tbody>
</table>

**Navigation**

 Guidance → Commissioning → Sensor 1 → Sensor lower limit

**Prerequisite**

The RTD platinum, RTD poly nickel or RTD copper polynomial option is enabled in the **Sensor type** parameter.

**Description**

Use this function to set the lower calculation limit for special sensor linearization.

**User entry**

$-10000.0$ to $10000.0$

### Sensor upper limit

<table>
<thead>
<tr>
<th>Description</th>
<th>Use this function to set the upper calculation limit for special sensor linearization.</th>
</tr>
</thead>
<tbody>
<tr>
<td>User entry</td>
<td>$-10000.0$ to $10000.0$</td>
</tr>
</tbody>
</table>

**Navigation**

 Guidance → Commissioning → Sensor 1 → Sensor upper limit

**Prerequisite**

The RTD platinum, RTD poly nickel or RTD copper polynomial option is enabled in the **Sensor type** parameter.

**Description**

Use this function to set the upper calculation limit for special sensor linearization.

**User entry**

$-10000.0$ to $10000.0$
Factory setting

Depends on the sensor type selected.

3.1.3 "Sensor 2" wizard

The following parameters are identical for the configuration of sensor input 1 and sensor input 2 and are described in the Sensor 1 submenu: Sensor type, Connection type, 2-wire compensation, Cold junction, CJ preset value, Sensor offset

Two additional sensor types can be selected for sensor input 2:
- Dual seal (ModuLine)
- No sensor

Navigation Guidance → Commissioning → Sensor 2 → Sensor backup

Sensor backup

Navigation

Guidance → Commissioning → Sensor 2 → Sensor backup

Prerequisite

A sensor input must be selected for sensor 2.

Description

Sensor backup active: If sensor 1 fails, the value of sensor 2 automatically becomes the process value.

Sensor 1 (backup sensor 2).

Selection

- Disable
- Enable

Factory setting

Disable
### 3.1.4 "User management" wizard

*Navigation*  
Guidance → Commissioning → User management

#### New password

**Navigation**  
Guidance → Commissioning → User management → New password

**Description**  
If the factory setting is not changed, the device works without write-protection, using user-role 'Maintenance'. The configuration data of the device can always be modified.

Once the password has been defined, write-protected devices can only be set to maintenance mode if a correct password is entered in the parameter 'Password'.

A new password is valid, after it has been confirmed within the parameter 'Confirm new password'.

Any new password must consist of at least 4 and a maximum of 16 characters and can contain letters and numbers.

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

#### Confirm new password

**Navigation**  
Guidance → Commissioning → User management → Confirm new password

**Description**  
Enter the new password again to confirm.

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

#### Status password entry

**Navigation**  
Guidance → Commissioning → User management → Status password 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
3.1.5 "Finish" wizard

*Navigation*  
Guidance → Commissioning → Finish

**Description**  
You have run the wizard successfully. All steps have been completed. Click the **Finish** button to confirm your entries in the Guidance menu.

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

3.2 Import / Export

*Navigation*  
Guidance → Import / Export

**Prerequisite**  
Web server, DTM

**Description**  
Generates the configuration report in the PDF format. This report documents the device configuration.

**User entry**  
Clicking the **Create configuration report** button enables a configuration report to be generated. This report can be printed out or saved in PDF format.
4 "Diagnostics" menu

Settings and information concerning diagnostics as well as help for troubleshooting

4.1 "Active diagnostics" submenu

Navigation  ➠ Diagnostics → Active diagnostics

Active diagnostics

<table>
<thead>
<tr>
<th>Description</th>
<th>Displays the currently active diagnostic message.</th>
</tr>
</thead>
<tbody>
<tr>
<td>User interface</td>
<td>Symbol for diagnostic behavior, diagnostic code and short message.</td>
</tr>
</tbody>
</table>

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

#### Timestamp

**Navigation**

- Diagnostics → Active diagnostics → Timestamp

**Description**

Displays the timestamp for the currently active diagnostic message.

**User interface**

YYYY-MM-DD hh:mm:ss

#### Previous diagnostics

**Navigation**

- Diagnostics → Active diagnostics → Previous diagnostics

**Description**

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

**User interface**

Symbol for diagnostic behavior, diagnostic code and short message.

#### Operating time from restart

**Navigation**

- Diagnostics → Active diagnostics → Operating time from 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 diagnostics → Operating time

**Description**

Indicates how long the device has been in operation.
4.2 "Diagnostic list" submenu

All the diagnostic messages that are currently queued can be displayed in the Diagnostic list submenu. Detailed information on the possible diagnostic messages can be found in the Operating Instructions for the device.

Navigation  
Diagnostics → Diagnostic list

4.3 "Event logbook" submenu

Viewing event messages

Event messages are displayed in chronological order. The event history includes both diagnostic events and information events. The symbol in front of the timestamp indicates whether the event has started or ended.

Navigation  
Diagnostics → Event logbook

Filter options

Description
Select the category of event notification to display in the event list.

Additional information:
The status signals F, C, S and M are categorized in accordance with VDI/VDE 2650 and NAMUR Recommendation NE 107.

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

All

4.4 "Minimum/maximum values" submenu

Navigation

Diagnostics → Minimum/maximum values

4.4.1 "Sensor 1" submenu

Navigation

Diagnostics → Minimum/maximum values → Sensor 1

Sensor 1 min value

Navigation

Diagnostics → Minimum/maximum values → Sensor 1 → Sensor 1 min value

Description
Displays the minimum temperature measured in the past at the sensor input 1 (minimum indicator).

User interface
Signed floating-point number

Factory setting
Positive floating-point number

Sensor 1 max value

Navigation

Diagnostics → Minimum/maximum values → Sensor 1 → Sensor 1 max value

Description
Displays the maximum temperature measured in the past at the sensor input 1 (maximum indicator).

User interface
Signed floating-point number

Factory setting
Negative floating-point number

Reset sensor min/max values

Navigation

Diagnostics → Minimum/maximum values → Sensor 1 → Reset sensor min/max values

Description
Reset the min/max values at sensor input 1 to the default values.

Selection

• No
• Yes
"Diagnostics" menu

Factory setting

No

4.4.2 "Sensor 2" submenu

Navigation Diagnostics → Minimum/maximum values → Sensor 2

Sensor 2 max value

Navigation Diagnostics → Minimum/maximum values → Sensor 2 → Sensor 2 max value

Description Displays the maximum temperature measured in the past at the sensor input 2 (maximum indicator).

User interface Signed floating-point number

Factory setting Negative floating-point number

Sensor 2 min value

Navigation Diagnostics → Minimum/maximum values → Sensor 2 → Sensor 2 min value

Description Displays the minimum temperature measured in the past at the sensor input 2 (minimum indicator).

User interface Signed floating-point number

Factory setting Positive floating-point number

Reset sensor min/max values

Navigation Diagnostics → Minimum/maximum values → Sensor 2 → Reset sensor min/max values

Description Reset the min/max values at sensor input 2 to the default values.

Selection

- No
- Yes

Factory setting No
4.4.3 "Device temperature" submenu

Device temperature min value

**Navigation**
Diagnostics → Minimum/maximum values → Device temperature → Device temperature min value

**Description**
Displays the minimum electronics temperature measured in the past (minimum indicator).

**User interface**
Signed floating-point number

Device temperature max value

**Navigation**
Diagnostics → Minimum/maximum values → Device temperature → Device temperature max value

**Description**
Use this function to display the maximum electronics temperature measured in the past (maximum indicator).

**User interface**
Signed floating-point number

Reset device temp. min/max values

**Navigation**
Diagnostics → Minimum/maximum values → Device temperature → Reset device temp. min/max values

**Description**
Resets the maximum indicators for the minimum and maximum electronic temperatures measured.

**Selection**
- No
- Yes

**Factory setting**
No
### 4.5 "Simulation" submenu

*Navigation*  
Diagnostics → Simulation

---

#### Sensor 1 to 2 simulation

*Navigation*  
Diagnostics → Simulation → Sensor 1 to 2 simulation

*Description*  
Use this function to activate the simulation of the process variable. The simulated value can be set with parameter "Sensor simulation".

*Selection*  
- Off
- On

*Factory setting*  
Off

---

#### Sensor 1 to 2 simulation value

*Navigation*  
Diagnostics → Simulation → Sensor 1 to 2 simulation value

*Description*  
Use this function to enter a simulation value of the process variable. Subsequent measured value processing and the signal output use this simulation value. In this way, users can verify whether the measuring device has been configured correctly.

*User entry*  
Signed floating-point number

*Factory setting*  
0.0

---

#### Diagnostic event simulation

*Navigation*  
Diagnostics → Simulation → Diagnostic event simulation

*Description*  
Select the diagnostic event to be simulated.

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

*Selection*  
- Diagnostic event picklist
- Off

*Factory setting*  
Off
4.6 "Diagnostic settings" submenu

**Navigation**

Diagnostics → Diagnostic settings

4.6.1 "Properties" submenu

**Navigation**

Diagnostics → Diagnostic settings → Properties

---

**Corrosion limit sensor 1 to 2**

**Navigation**

Diagnostics → Diagnostic settings → Properties → Corrosion limit sensor 1 to 2

**Prerequisite**

A 4-wire RTD or TC must be selected as the sensor type or connection type. Only the high Ohm ranges can be selected at sensor input 2.

**Description**

Use this function to enter the limit value for corrosion detection. If this value is exceeded, the device behaves as specified in the diagnostic settings.

**Selection**

- 50 Ohm (RTD)
- 100 Ohm (RTD)
- 5000 Ohm (TC)
- 10000 Ohm (TC)

**Factory setting**

- 50.0 Ohm for 4-wire RTD connection type
- 5000 Ohm for TC connection type

---

**Alarm delay**

**Navigation**

Diagnostics → Diagnostic settings → Properties → Alarm delay

**Description**

Use this function to set the delay time during which a diagnostics signal is suppressed before it is output.

**User entry**

0.0 to 60.0 s

**Factory setting**

0.0 s
Drift/difference mode

Navigation
Diagnósticos → Diagnostic settings → Properties → Drift/difference mode

Description
Use this function to choose whether the device reacts to the value exceeding or dropping below the drift/difference set point.

Info:
Can only be selected for 2-channel operation.

Selection
- Off
- Out band (drift)
- In band

Drift/difference set point

Navigation
Diagnósticos → Diagnostic settings → Properties → Drift/difference set point

Prerequisite
Drift/difference monitoring must be enabled.

Description
Use this function to configure the maximum permissible measured value deviation between sensor 1 and sensor 2 which results in drift/difference detection.

User entry
0.1 to 999.0

Drift/difference alarm delay

Navigation
Diagnósticos → Diagnostic settings → Properties → Drift/difference alarm delay

Prerequisite
Drift/difference monitoring must be enabled.

Description
Alarm delay for Drift/Differenz monitoring. Useful when sensors have different thermal masses.

User entry
5 to 255 s

4.6.2 'Configuration' submenu

Each diagnostic event is assigned a certain diagnostic behavior. The user can change this assignment for certain diagnostic events. This configuration is described in detail in the Operating Instructions pertaining to the device.

Navigation
Diagnósticos → Diagnostic settings → Configuration
5  "Application" menu
Targeted optimization to the application – comprehensive device settings from sensor technology to system integration for optimum application adaptation.

Navigation  Application

| Application | → 29 |
|------------------------------------------------|
| ▶ Measured values | → 29 |
| ▶ Sensors | → 30 |
| ▶ Sensor 1 | → 30 |
| ▶ Sensor 2 | → 33 |
| ▶ PROFINET | → 37 |
| ▶ Configuration | → 37 |
| ▶ Analog input | → 38 |
| ▶ Information | → 39 |
| ▶ Application relation | → 39 |

5.1  "Measured values" submenu

Navigation  Application → Measured values

Sensor 1 to 2 value

Navigation  Application → Measured values → Sensor 1 to 2 value

Description  Use this function to display the current measured value at the sensor input.

User interface  Signed floating-point number

Device temperature

Navigation  Application → Measured values → Device temperature

Description  Use this function to display the current electronics temperature.
User interface

Signed floating-point number

5.2 "Sensors" submenu

Navigation

Application → Sensors

5.2.1 "Sensor 1" submenu

Navigation

Application → Sensors → Sensor 1 → Sensor 1

Unit

Description
Selection

SI units
- °C
- K
- Ohm

Custom-specific units
- °F
- °R
- mV

Factory setting

°C

Sensor type 1 to 2

Navigation

Application → Sensors → Sensor 1 → Sensor 1 → Sensor type 1 to 2

Description
Use this function to select the sensor type for the sensor input in question.

- Sensor type 1: settings for sensor input 1
- Sensor type 2: settings for sensor input 2

Info:
Please observe the terminal assignment when connecting the individual sensors. In the case of 2-channel operation, the possible connection options also have to be observed.

Selection

- Pt100 IEC60751, a=0.00385 (1)
- Pt200 IEC60751, a=0.00385 (2)
- Pt500 IEC60751, a=0.00385 (3)
- Pt1000 IEC60751, a=0.00385 (4)
- Pt100 JIS C1604, a=0.003916 (5)
- Type A (W5Re-W20Re) IEC60584 (30)
- Type B (PtRh30-PtRh6) IEC60584 (31)
- Type C (W5Re-W26Re) IEC60584 (32)
- Type D (W3Re-W25Re) ASTM E988-96 (33)
- Type E (NiCr-CuNi) IEC60584 (34)
- Type F (Fe-CuNi) IEC60584 (35)
- Type K (NiCr-Ni) IEC60584 (36)
- Type N (NiCrSi-NiSi) IEC60584 (37)
- Type R (PtRh13-Pt) IEC60584 (38)
- Type S (PtRh10-Pt) IEC60584 (39)
- Type T (Cu-CuNi) IEC60584 (40)
- Type L (Fe-CuNi) DIN43710 (41)
- Type L (NiCr-CuNi) GOST R8.585-01 (43)
- Type U (Cu-CuNi) DIN43710 (42)
- Pt50 GOST 6651-94, a=0.00391 (8)
- Pt100 GOST 6651-94, a=0.00391 (9)
- Cu100 OIML/GOST 6651-09, a=0.00428 (11)
- Cu50 OIML R84:2003, a=0.00426 (10)
- Cu50 OIML/GOST 6651-94, a=0.00426 (14)
- RTD Platinium (Callendar/van Dusen)
- RTD Poly Nickel (OIML R84, GOST 6651-94)
- RTD Polynomial Copper (OIML R84:2003)
- 10...400 Ohm
- 10...2850 Ohm
- -20...100 mV

Factory setting
Pt100 IEC60751, a=0.00385 (1)

---

**Connection type 1 to 2**

**Navigation**
Application → Sensors → Sensor 1 → Sensor 1 → Connection type 1 to 2

**Prerequisite**
An RTD sensor or a resistance transmitter must be specified as the sensor type.

**Description**
Use this function to select the connection type for the sensor.

**Selection**
- 2- wire
- 3- wire
- 4- wire

**Factory setting**
4-wire

**Additional information**
The 4-wire connection type is not available for sensor input 2.

When a factory reset is performed, the device is reset to the sensor type Pt100, 3-wire in both channels. This is also saved in the offline data record of the drivers (FDI-Package, DTM).
2-wire compensation 1 to 2

Navigation  
Application → Sensors → Sensor 1 → Sensor 1 → 2-wire compensation 1 to 2

Prerequisite  
An RTD sensor or a resistance transmitter with a 2-wire connection type must be specified as the sensor type.

Description  
Use this function to specify the resistance value for two-wire compensation in RTDs.

User entry  
0.0 to 30.0 Ohm

Factory setting  
0.0 Ohm

Cold junction 1 to 2

Navigation  
Application → Sensors → Sensor 1 → Sensor 1 → Cold junction 1 to 2

Prerequisite  
A thermocouple (TC) sensor must be selected as the sensor type.

Description  
Use this function to select cold junction measurement for temperature compensation of thermocouples (TC).

Info:  
- If 'Fixed value' is selected, the compensation value is specified via the CJ preset value parameter.  
- If 'Measured value ext. sensor' is selected, an RTD must also be connected in accordance with the specifications in the operating manual.

Selection  
- No compensation  
- Internal measurement  
- Fixed Value  
- Measured value ext. sensor

Factory setting  
Internal measurement

CJ preset value 1 to 2

Navigation  
Application → Sensors → Sensor 1 → Sensor 1 → CJ preset value 1 to 2

Prerequisite  
The CJ preset value parameter must be set if the Cold junction option is selected.

Description  
The Fixed value parameter must be set if the cold junction option is selected.  
Recommended value range: -50°C to 87°C (-58°F to 188.6°F)

User entry  
-50 000.0 to 50 000.0

Factory setting  
0.0
Sensor 1 to 2 offset

Navigation
Application → Sensors → Sensor 1 → Sensor 1 → Sensor 1 to 2 offset

Description
Use this function to set the zero point correction (offset) of the sensor measured value. The value indicated is added to the measured value. Recommended value range: -10°C to 10°C (-18°F to 18°F)

User entry
-50 000.0 to 50 000.0

Factory setting
0.0

5.2.2 "Sensor 2" submenu

The following parameters are identical for the configuration of sensor input 1 and sensor input 2 and are described in the Sensor 1 submenu: Sensor type, Connection type, 2-wire compensation, Cold junction, CJ preset value, Sensor offset

Two additional sensor types can be selected for sensor input 2:
- Dual seal (ModuLine)
- No sensor

Sensor backup

Navigation
Application → Sensors → Sensor 2 → Sensor 2 → Sensor backup

Prerequisite
A sensor type must be selected for sensor input 2.

Description
Sensor backup active: If sensor 1 fails, the value of sensor 2 automatically becomes the process value.
Sensor 1 (backup sensor 2).

Selection
- Disable
- Enable

Factory setting
Disable
## 5.2.3 "Linearization" submenu

Navigation: Application → Sensors → Sensor 1 → Linearization

### Call./v. Dusen coeff. R0

**Prerequisite:** The RTD platinum (Callendar/Van Dusen) option is enabled in the **Sensor type** parameter.

**Description:** Use this function to set the R0 value for sensor linearization with the Callendar/Van Dusen polynomial.

**User entry:** 10.0 to 2000.0 Ohm

**Factory setting:** 100.0 Ohm

### Call./v. Dusen coeff. A

**Prerequisite:** The RTD platinum (Callendar/Van Dusen) option is enabled in the **Sensor type** parameter.

**Description:** Use this function to set the coefficients for sensor linearization with the Callendar/Van Dusen polynomial.

**User entry:** 0.003 to 0.004

**Factory setting:** 0.0039083

### Call./v. Dusen coeff. B

**Prerequisite:** The RTD platinum (Callendar/Van Dusen) option is enabled in the **Sensor type** parameter.

**Description:** Use this function to set the coefficients for sensor linearization with the Callendar/Van Dusen polynomial.

**User entry:** $-4.0 \cdot 10^{-6}$ to $4.0 \cdot 10^{-6}$

**Factory setting:** $-5.775E-07$
Call./v. Dusen coeff. C

Navigation
Application → Sensors → Sensor 1 → Linearization → Call./v. Dusen coeff. C

Prerequisite
The RTD platinum (Callendar/Van Dusen) option is enabled in the Sensor type parameter.

Description
Use this function to set the coefficients for sensor linearization with the Callendar/Van Dusen polynomial.

User entry
\[-1.0 \cdot 10^{-09} \text{ to } 1.0 \cdot 10^{-09}\]

Factory setting
\[-4.183E-12\]

Polynomial coeff. R0

Navigation
Application → Sensors → Sensor 1 → Linearization → Polynomial coeff. R0

Prerequisite
The RTD poly nickel or RTD copper polynomial option is enabled in the Sensor type parameter.

Description
Use this function to set the R0 value for linearization of nickel/copper sensors.

User entry
10.0 to 2 000.0 Ohm

Factory setting
100.0 Ohm

Polynomial coeff. A

Navigation
Application → Sensors → Sensor 1 → Linearization → Polynomial coeff. A

Prerequisite
The RTD poly nickel or RTD copper polynomial option is enabled in the Sensor type parameter.

Description
Use this function to set the coefficients for sensor linearization of copper/nickel resistance thermometers.

User entry
0.004 to 0.006

Factory setting
0.0054963
**Polynomial coeff. B**

**Navigation**
- Application → Sensors → Sensor 1 → Linearization → Polynomial coeff. B

**Prerequisite**
The RTD poly nickel or RTD copper polynomial option is enabled in the **Sensor type** parameter.

**Description**
Use this function to set the coefficients for sensor linearization of copper/nickel resistance thermometers.

**User entry**
\(-2.0 \cdot 10^{-05}\) to \(2.0 \cdot 10^{-05}\)

**Factory setting**
6.7556E-06

---

**Sensor 1 to 2 lower limit**

**Navigation**
- Application → Sensors → Sensor 1 → Linearization → Sensor lower limit

**Prerequisite**
The RTD platinum, RTD poly nickel or RTD copper polynomial option is enabled in the **Sensor type** parameter.

**Description**
Use this function to set the lower calculation limit for special sensor linearization.

**User entry**
\(-10000.0\) to \(10000.0\)

**Factory setting**
Depends on the **sensor type** selected.

---

**Sensor 1 to 2 upper limit**

**Navigation**
- Application → Sensors → Sensor 1 → Linearization → Sensor upper limit

**Prerequisite**
The RTD platinum, RTD poly nickel or RTD copper polynomial option is enabled in the **Sensor type** parameter.

**Description**
Use this function to set the upper calculation limit for special sensor linearization.

**User entry**
\(-10000.0\) to \(10000.0\)

**Factory setting**
Depends on the **sensor type** selected.
5.3 "PROFINET" submenu

Navigation  
Application → PROFINET

5.3.1 "Configuration" submenu

Navigation  
Application → PROFINET → Configuration

PROFINET device name

Navigation  
Application → PROFINET → Configuration → PROFINET device name

Description  
Enter the PROFINET device name of the measuring point.
Up to 240 characters are permitted. The following syntax must be used:
- 1 or more identifiers, separated by [.]
- The identifier length is 1 to 63 characters
- The identifier consists of [a-z 0-9]. Only lower case letters and numbers are permitted.

User entry  
Character string comprising numbers, letters and special characters (240)

Parameter change acknowledge mode

Navigation  
Application → PROFINET → Configuration → Parameter change acknowledge mode

Selection  
- Auto acknowledge
- Manual acknowledge

Factory setting  
Auto acknowledge

Acknowledge parameter change

Navigation  
Application → PROFINET → Configuration → Acknowledge parameter change

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)

5.3.2 "Analog input 1 to 5" submenu

Navigation
Application → PROFINET → Analog input → Analog input 1 to 5

Process value

Navigation
Application → PROFINET → Analog input → Analog input 1 to 5 → Process value

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

User interface
to

Assign process variable

Navigation
Application → PROFINET → Analog input → Analog input 1 to 5 → Assign process variable

Description
Assigned process variable

Selection
• Temperature
• Temperature difference
• Temperature average
• Electronics temperature

Damping

Navigation
Application → PROFINET → Analog input → Analog input 1 to 5 → 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
Positive floating-point number
5.3.3 "Information" submenu

Navigation  
Application → PROFINET → Information

Device ID

Navigation  
Application → PROFINET → Information → Device ID

User interface  
0xA3FF

Factory setting  
0xA3FF

PA profile version

Navigation  
Application → PROFINET → Information → PA profile version

User interface  
0x402

Factory setting  
0x402

5.3.4 "Application relation" submenu

Navigation  
Application → PROFINET → Application relation

AR state

Navigation  
Application → PROFINET → Application relation → 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 → Application relation → MAC address IO controller

**Prerequisite**

Display is only visible if the AR status is active

**Description**

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

**User interface**

Character string comprising numbers, letters and special characters

---

**MAC address backup IO controller**

**Navigation**

Application → PROFINET → Application relation → MAC address backup IO controller

**Prerequisite**

Display is only visible if the redundancy AR status is active

**Description**

Shows the MAC address of the backup IO controller

**User interface**

Character string comprising numbers, letters and special characters

---

**IP address IO controller**

**Navigation**

Application → PROFINET → Application relation → IP address IO controller

**Prerequisite**

Display is only visible if the AR status is active

**Description**

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

**User interface**

Character string comprising numbers, letters and special characters

---

**IP address backup IO controller**

**Navigation**

Application → PROFINET → Application relation → IP address backup IO controller

**Prerequisite**

Display is only visible if the redundancy AR status is active

**Description**

Shows the IP address of the backup IO controller

**User interface**

Character string comprising numbers, letters and special characters
6  "System" menu

System settings concerning device management, user administration or safety

Navigation  System

- Device management  → 42
- Software configuration  → 43
- User management  → 44
  - User management  → 44
  - Enter password  → 45
  - Define password  → 47
  - Change password  → 48
  - Delete password  → 49
- Connectivity  → 50
  - Interfaces  → 50
  - Ethernet  → 51
    - Properties  → 51
    - Port information  → 52
    - APL information  → 54
    - TCP information  → 55
    - UDP information  → 56
- Display  → 57
- Date/time  → 58
- Geolocation  → 60
- Information  → 62
6.1 "Device management" submenu

**Navigation**

System → Device management

**Device tag**

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

**User entry**
Maximum length: 32 characters; permitted characters: A-Z, 0-9, certain special characters.

**Locking status**

**Description**
Use this function to view the device locking status. The DIP switch for hardware locking is fitted on the display module. When write protection is activated, write access to the parameters is disabled.

**User interface**
- Write protected by software
- Write protected by hardware

**Configuration counter**

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

**User interface**
0 to 65535

**Factory setting**
0

**Device reset**

**Description**
Use this function to reset the device configuration - either entirely or in part - to a defined state.
6.2 "Software configuration" submenu

Navigation
System → Software configuration

CRC device configuration

Navigation
System → Software configuration → CRC device configuration

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 65535

Factory setting
65535

Activate SW option

Navigation
System → Software configuration → Activate SW option

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

User entry
Positive integer

Factory setting
0

Software option overview

Navigation
System → Software configuration → Software option overview

Description
Shows all enabled software options
User interface

- SIL
- Heartbeat Verification
- Heartbeat Monitoring

6.3 "User management" submenu

<table>
<thead>
<tr>
<th>Operation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Logout → Maintenance</td>
<td>Switch to 'Operator' access authorization</td>
</tr>
<tr>
<td>Enter password / change user role → Operator</td>
<td>Enter password</td>
</tr>
<tr>
<td>Reset password → Operator</td>
<td>Reset password</td>
</tr>
<tr>
<td>Change password → Maintenance</td>
<td>Old password</td>
</tr>
<tr>
<td></td>
<td>New password</td>
</tr>
<tr>
<td></td>
<td>Confirm new password</td>
</tr>
<tr>
<td>Delete password → Maintenance</td>
<td>Old password</td>
</tr>
<tr>
<td>Define password → Maintenance</td>
<td>New password</td>
</tr>
<tr>
<td></td>
<td>Confirm new password</td>
</tr>
</tbody>
</table>

Navigation in the submenu is supported by the following operating elements:

- **Back**
  - Return to the previous page
- **Cancel**
  - If Cancel is selected, the status before the submenu was started is restored

Navigation:

System → User management → User management → User role

User role

Navigation:

- System → User management → User management → User role

Description:

If additional write protection is active, this restricts the current access authorization even further.

User interface:

- Operator
- Maintenance
6.3.1 "Enter password" submenu

Navigation

System → User management → Enter 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 management → Enter password → Enter access code

Description

For users logged on in the Operator role, enter the Maintenance code to change the access status to Maintenance and disable write protection of parameters. For users logged on in the Maintenance role, enter the Service code to change the access status to Service and enable read and write access to Service parameters.

User entry

0 to 9999

Factory setting

0

Status password entry

Navigation

System → User management → Enter password → Status password 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
6.3.2 "Recover password" submenu

The menu is only visible via DTM operation.

**Navigation**

System → User management → Recover password

---

**Reset password**

**Navigation**

System → User management → Recover password → Reset password

**Description**

Enter a code to reset the current password.

CAUTION: Use this function only if the current password is lost. Contact your Endress + Hauser Sales Center.

**User entry**

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

---

**Status password entry**

**Navigation**

System → User management → Recover password → Status password 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**

--------
6.3.3 "Define password" submenu

**Navigation**

System → User management → Define password

**Description**

If the factory setting is not changed, the device works without write-protection, using user-role 'Maintenance'. The configuration data of the device can always be modified.

Once the password has been defined, write-protected devices can only be set to maintenance mode if a correct password is entered in the parameter 'Password'.

A new password is valid, after it has been confirmed within the parameter 'Confirm new password'.

Any new password must consist of at least 4 and a maximum of 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 management → Define password → Confirm new 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 management → Define password → Status password 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**

--------
6.3.4  "Change password" submenu

Navigation  System → User management → 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

Description
If the factory setting is not changed, the device works without write-protection, using user-role 'Maintenance'. The configuration data of the device can always be modified. Once the password has been defined, write-protected devices can only be set to maintenance mode if a correct password is entered in the parameter 'Password'. A new password is valid, after it has been confirmed within the parameter 'Confirm new password'. Any new password must consist of at least 4 and a maximum of 16 characters and can contain letters and numbers.

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

Confirm new password

Description
Enter the new password again to confirm.

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

Status password 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

--------

6.3.5 "Delete password" submenu

Navigation  System → User management → Delete 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)

Status password entry

Navigation  System → User management → Delete password → Status password 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

--------
6.4 "Connectivity" submenu

Navigation 🔄 System → Connectivity

6.4.1 "Interfaces" submenu

Navigation 🔄 System → Connectivity → Interfaces

Web server functionality

<table>
<thead>
<tr>
<th>Navigation</th>
<th>System → Connectivity → Interfaces → Web server functionality</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Switch web server on and off, switch off HTML.</td>
</tr>
</tbody>
</table>
| Selection | • Disable  
   • Enable |
| Factory setting | Enable |

Service (UART-CDI)

<table>
<thead>
<tr>
<th>Navigation</th>
<th>System → Connectivity → Interfaces → Service (UART-CDI)</th>
</tr>
</thead>
</table>
| Selection  | • Disable  
   • Enable |
| Factory setting | Enable |
6.4.2 "Ethernet" submenu

Navigation  
System → Connectivity → Ethernet

"Properties" submenu

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 measuring device

**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 measuring device

**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 measuring device
### 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 active
- **User interface**
  - No
  - Yes
- **Factory setting**: No

### "Port information" submenu
- **Navigation**: System → Connectivity → Ethernet → Port information

### Interface connection status
- **Navigation**: System → Connectivity → Ethernet → Port information → Interface connection status
- **User interface**
  - Connected
  - Not connected
- **Factory setting**: Not connected

### Interface speed
- **Navigation**: System → Connectivity → Ethernet → Port information → Interface speed
- **User interface**: Positive integer
- **Factory setting**: 0 MBaud
### Duplex status

**Navigation**
- System → Connectivity → Ethernet → Port information → Duplex status

**User interface**
- Full duplex
- Half duplex
- Unknown

**Factory setting**
Unknown

### Auto negotiation status

**Navigation**
- System → Connectivity → Ethernet → Port information → Auto negotiation status

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

**Factory setting**
Idle

### Number of received packets

**Navigation**
- System → Connectivity → Ethernet → Port information → Number of received packets

**User interface**
Positive integer

### Number of sent packets

**Navigation**
- System → Connectivity → Ethernet → Port information → Number of sent packets

**User interface**
Positive integer

### Number of failed received packets

**Navigation**
- System → Connectivity → Ethernet → Port information → Number of failed received packets

**User interface**
Positive integer
### Number of failed sent packets

**Navigation**
- System → Connectivity → Ethernet → Port information → Number of failed sent packets

**User interface**
Positive integer

### "APL information" submenu

**Navigation**
- System → Connectivity → Ethernet → APL information

### Signal to noise ratio

**Navigation**
- System → Connectivity → Ethernet → APL information → Signal to noise ratio

**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**
0.0 dB

### Number of failed received packets

**Navigation**
- System → Connectivity → Ethernet → APL information → Number of failed received packets

**Description**
Shows the number of failed received packets.

**User interface**
0 to 65535

**Factory setting**
0
### "TCP information" submenu

*Navigation*  
System → Connectivity → Ethernet → TCP information

<table>
<thead>
<tr>
<th><strong>Active TCP connections</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Navigation</strong></td>
</tr>
<tr>
<td><strong>User interface</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Supported TCP connections</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Navigation</strong></td>
</tr>
<tr>
<td><strong>User interface</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>TCP connection requests</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Navigation</strong></td>
</tr>
<tr>
<td><strong>User interface</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>TCP connection timeouts</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Navigation</strong></td>
</tr>
<tr>
<td><strong>User interface</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Number of TCP connections closed</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Navigation</strong></td>
</tr>
<tr>
<td><strong>User interface</strong></td>
</tr>
</tbody>
</table>
### Number of received TCP packets

**Navigation**

System → Connectivity → Ethernet → TCP information → Number of received TCP packets

**User interface**

Positive integer

### Number of sent TCP packets

**Navigation**

System → Connectivity → Ethernet → TCP information → Number of sent TCP packets

**User interface**

Positive integer

### Number of TCP failed received packets

**Navigation**

System → Connectivity → Ethernet → TCP information → Number of TCP failed received packets

**User interface**

Positive integer

### "UDP information" submenu

**Navigation**

System → Connectivity → Ethernet → UDP information

### Available UDP ports

**Navigation**

System → Connectivity → Ethernet → UDP information → Available UDP ports

**User interface**

Positive integer

### Number of received UDP packets

**Navigation**

System → Connectivity → Ethernet → UDP information → Number of received UDP packets

**User interface**

Positive integer
**Number of sent UDP packets**

**Navigation**
- System → Connectivity → Ethernet → UDP information → Number of sent UDP packets

**User interface**
- Positive integer

**Number of UDP failed received packets**

**Navigation**
- System → Connectivity → Ethernet → UDP information → Number of UDP failed received packets

**User interface**
- Positive integer

### 6.5 "Display" submenu

The settings for displaying the measured value on the optional plug-in display are made in the "Display" menu.

These settings do not affect the output values of the transmitter, and are only used to specify the display format on the screen.

**Navigation**
- System → Display

**Display interval**

**Navigation**
- System → Display → Display interval

**Description**
Set time measured values are shown on display if display alternates between values.

**User entry**
- 4.0 to 20.0 s

**Factory setting**
- 4.0 s

**Value 1 to 3 display**

**Navigation**
- System → Display → Value 1 display

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

**Selection**
- Sensor 1
- Sensor 2
- Device temperature
Factory setting  Sensor 1...3

Decimal places 1 to 3

Navigation  System → Display → Decimal places 1 to 3

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

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

Factory setting  x.xx

6.6  "Date/time" submenu

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  01.01.1970 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

Custom-specific 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

Set system time

Navigation

System → Date/time → Set system time

User entry

Clicking the 'Set system time' button sets the system time of the operating tool for the transmitter.
Enable NTP

Navigation   System → Date/time → Enable NTP
Selection    • No
• Yes
Factory setting  No

NTP server address

Navigation   System → Date/time → NTP server address
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 synchronized
Description  Timestamp of last synchronization with an NTP server.
User interface  Character string comprising numbers, letters and special characters
Factory setting  ------------

6.7 "Geolocation" submenu

Navigation   System → Geolocation

Location description

Navigation   System → Geolocation → Location description
Description  Enter a description for the location
User entry   Character string comprising numbers, letters and special characters (32)
## Factory setting

*somewhere*

<table>
<thead>
<tr>
<th><strong>Longitude</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Navigation</strong></td>
<td>System → Geolocation → Longitude</td>
</tr>
<tr>
<td><strong>Description</strong></td>
<td>Enter the longitude.</td>
</tr>
<tr>
<td><strong>User entry</strong></td>
<td>−180.0 to 180.0 °</td>
</tr>
<tr>
<td><strong>Factory setting</strong></td>
<td>0.0 °</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Latitude</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Navigation</strong></td>
<td>System → Geolocation → Latitude</td>
</tr>
<tr>
<td><strong>Description</strong></td>
<td>Enter latitude</td>
</tr>
<tr>
<td><strong>User entry</strong></td>
<td>−90.0 to 90.0 °</td>
</tr>
<tr>
<td><strong>Factory setting</strong></td>
<td>0.0 °</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Altitude</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Navigation</strong></td>
<td>System → Geolocation → Altitude</td>
</tr>
<tr>
<td><strong>Description</strong></td>
<td>Enter altitude</td>
</tr>
<tr>
<td><strong>User entry</strong></td>
<td>Signed floating-point number</td>
</tr>
<tr>
<td><strong>Factory setting</strong></td>
<td>0.0 m</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Location method</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Navigation</strong></td>
<td>System → Geolocation → Location method</td>
</tr>
<tr>
<td><strong>Description</strong></td>
<td>Select the location method.</td>
</tr>
</tbody>
</table>
| **Selection** | • No fix  
• GPS or Standard Positioning Service fix  
• Differential GPS fix  
• Precise positioning service (PPS) fix  
• Real Time Kinetic (RTK) fixed solution |
● Real Time Kinetic (RTK) float solution
● Estimated dead reckoning
● Manual input mode
● Simulation Mode

Factory setting
No fix

6.8 "Information" submenu

*Navigation*  
System → Information

**Serial number**

*Navigation*  
System → Information → Serial number

*Description*  
Displays the serial number of the measuring device. The serial number can be used to identify the measuring device and to retrieve further information via the Device Viewer or Operations app, such as the related documentation.

*Additional information*:
The serial number can also be found on the nameplate of the sensor and transmitter.

*User interface*  
Character string comprising numbers, letters and special characters

**Firmware version**

*Navigation*  
System → Information → Firmware version

*Description*  
Displays the device firmware version installed.

*User interface*  
Character string comprising numbers, letters and special characters

**Device name**

*Navigation*  
System → Information → Device name

*Description*  
Displays the name of the transmitter.

*Additional information*:
The name can also be found on the transmitter's nameplate.

*User interface*  
Character string comprising numbers, letters and special characters
Factory setting

iTEMP TMT86

Hardware revision

Navigation

System → Information → Hardware revision

Description

Use this function to display the hardware revision of the device.

User interface

Character string comprising numbers, letters and special characters

Order code

Navigation

System → Information → Order code

Description

Displays the device order code.

Additional information:
The order code can be used for instance to order a replacement or spare device or to verify that the device features specified on the order form match the shipping note.

User interface

Character string comprising numbers, letters and special characters

Extended order code 1 to 3

Navigation

System → Information → Extended order code 1 to 3

Description

Displays the first, second and/or third part of the extended order code. Due to character length restrictions, the extended order code is split into a maximum of 3 parameters. The extended order code indicates for each feature in the product structure the selected option, thereby uniquely identifying the device model.

Additional information:
The extended order code can also be found on the nameplate.

User interface

Character string comprising numbers, letters and special characters
# Index

## 0 .. 9
- 2-wire compensation (Parameter) .................................. 13
- 2-wire compensation 1 to 2 (Parameter) .......................... 32

## A
- Acknowledge parameter change (Parameter) ...................... 37
- Activate SW option (Parameter) ....................................... 43
- Active diagnostics (Parameter) ....................................... 20
- Active diagnostics (Submenu) ....................................... 20
- Active TCP connections (Parameter) ............................... 55
- Alarm delay (Parameter) ............................................... 27
- Altitude (Parameter) .................................................... 61
- Analog input 1 to 5 (Submenu) ....................................... 38
- APL information (Submenu) ........................................... 54
- Application (Menu) ..................................................... 29
- Application relation (Submenu) ...................................... 39
- Apply (Parameter) .................................................... 52
- AR state (Parameter) ................................................... 39
- Assign process variable (Parameter) ............................... 38
- Auto negotiation status (Parameter) ............................... 53
- Available UDP ports (Parameter) .................................... 56

## C
- Call./v. Dusen coeff. A (Parameter) ............................... 14, 34
- Call./v. Dusen coeff. B (Parameter) .................................. 15, 34
- Call./v. Dusen coeff. C (Parameter) .................................. 15, 35
- Call./v. Dusen coeff. R0 (Parameter) ................................. 14, 34
- Change password (Submenu) ........................................ 48
- CJ preset value 1 (Parameter) ........................................ 14
- CJ preset value 1 to 2 (Parameter) ................................. 32
- Clock synchronized (Parameter) .................................... 60
- Cold junction (Parameter) ............................................. 13
- Cold junction 1 to 2 (Parameter) .................................... 32
- Commissioning (Wizard) ............................................... 9
- Configuration (Submenu) ............................................. 28, 37
- Configuration counter (Parameter) ................................. 42
- Confirm new password (Parameter) ............................... 18, 47, 48
- Connection type (Parameter) ......................................... 13
- Connection type 1 to 2 (Parameter) ............................... 31
- Connectivity (Submenu) ............................................... 50
- Corrosion limit sensor 1 to 2 (Parameter) ....................... 27
- CRC device configuration (Parameter) ............................ 43
- Create configuration report (Parameter) ......................... 19

## D
- Damping (Parameter) ................................................... 38
- Date/time (Parameter) ................................................. 58
- Date/time (Submenu) .................................................. 58
- Decimal places 1 to 3 (Parameter) ................................. 58
- Default gateway (Parameter) ......................................... 51
- Define password (Submenu) .......................................... 47
- Delete password (Submenu) .......................................... 49
- Descriptor (Parameter) ................................................ 10, 38
- Device ID (Parameter) ................................................ 39
- Device identification (Wizard) ...................................... 10
- Device management (Submenu) ..................................... 42

## Device name (Parameter) ............................................. 10, 62
## Device reset (Parameter) ............................................. 42
## Device tag (Parameter) ............................................... 10, 42
## Device temperature (Parameter) ................................... 29
## Device temperature (Submenu) .................................... 25
## Device temperature max value (Parameter) ...................... 25
## Device temperature min value (Parameter) ....................... 25
## Diagnostic event simulation (Parameter) ......................... 26
## Diagnostic list (Parameter) ......................................... 22
## Diagnostic list (Submenu) .......................................... 22
## Diagnostic settings (Submenu) .................................... 27
## Diagnostics (Menu) .................................................. 20
## Display (Submenu) ................................................... 57
## Display interval (Parameter) ....................................... 57
## Document
  - Function ........................................................... 4
  - Target group ....................................................... 4
  - Using the document ................................................. 4
## Document function .................................................. 4
## Drift/difference alarm delay (Parameter) ......................... 28
## Drift/difference mode (Parameter) ................................ 28
## Drift/difference set point (Parameter) ........................... 28
## Duplex status (Parameter) .......................................... 53

## E
- Enable NTP (Parameter) ............................................. 60
- Enter access code (Parameter) ...................................... 45
- Enter password (Submenu) .......................................... 45
- Ethernet (Submenu) .................................................. 51
- Event logbook (Submenu) ............................................ 22
- Extended order code 1 (Parameter) ............................... 11
- Extended order code 1 to 3 (Parameter) ......................... 63

## F
- Filter options (Parameter) .......................................... 22
- Finish (Parameter) ................................................... 19
- Finish (Wizard) ...................................................... 19
- Firmware version (Parameter) ...................................... 62

## G
- Geolocation (Submenu) ............................................... 60
- Guidance (Menu) .................................................... 9

## H
- Hardware revision (Parameter) .................................... 63

## I
- Import / Export (Submenu) ........................................ 19
- Information (Submenu) ............................................. 39, 62
- Interface connection status (Parameter) ......................... 52
- Interface speed (Parameter) ......................................... 52
- Interfaces (Submenu) ............................................... 50
- IP address (Parameter) ............................................... 51
- IP address backup IO controller (Parameter) ................... 40
- IP address IO controller (Parameter) ............................ 40
L
Latitude (Parameter) ........................ 61
Linearization (Submenu) .................... 34
Location description (Parameter) .......... 60
Location method (Parameter) .............. 61
Locking status (Parameter) ............... 42
Longitude (Parameter) ....................... 61

M
MAC address (Parameter) .................... 51
MAC address backup IO controller (Parameter) 40
MAC address IO controller (Parameter) .... 40
Measured values (Submenu) ................ 29
Menu
Application .................................. 29
Diagnostics .................................. 20
Guidance ..................................... 9
System ......................................... 41
Minimum/maximum values (Submenu) .... 23

N
New password (Parameter) ................. 18, 47, 48
NTP server address (Parameter) ........... 60
Number of failed received packets (Parameter) 53, 54
Number of failed sent packets (Parameter) .. 54
Number of received packets (Parameter) .... 53
Number of received TCP packets (Parameter) 56
Number of received UDP packets (Parameter) 56
Number of sent packets (Parameter) ......... 53
Number of sent TCP packets (Parameter) ... 56
Number of sent UDP packets (Parameter) ... 57
Number of TCP connections closed (Parameter) 55
Number of TCP failed received packets (Parameter) 56
Number of UDP failed received packets (Parameter) 57

O
Old password (Parameter) ................... 48, 49
Operating time (Parameter) ................. 21
Operating time from restart (Parameter) ... 21
Order code (Parameter) ..................... 63

P
PA profile version (Parameter) ............. 39
Parameter change acknowledge mode (Parameter) 37
Password (Parameter) ....................... 45
Polynomial coeff. A (Parameter) .......... 15, 35
Polynomial coeff. B (Parameter) .......... 16, 36
Polynomial coeff. R0 (Parameter) ......... 15, 35
Port information (Submenu) .............. 52
Previous diagnostics (Parameter) ........ 21
Process value (Parameter) .................. 38
PROFINET (Submenu) ....................... 37
PROFINET device name (Parameter) ........ 37
Properties (Submenu) ....................... 27, 51

R
Recover password (Submenu) ............... 46
Reset device temp. min/max values (Parameter) 25
Reset password (Parameter) ............... 46
Reset sensor min/max values (Parameter) ... 23, 24

S
Sensor 1 (Submenu) ......................... 23, 30
Sensor 1 (Wizard) ........................... 11
Sensor 1 max value (Parameter) .......... 23
Sensor 1 min value (Parameter) .......... 23
Sensor 1 to 2 offset (Parameter) ......... 33
Sensor 1 to 2 simulation (Parameter) ...... 26
Sensor 1 to 2 simulation value (Parameter) 26
Sensor 1 to 2 value (Parameter) .......... 29
Sensor 2 (Submenu) ......................... 24, 33
Sensor 2 (Wizard) ........................... 17
Sensor 2 max value (Parameter) .......... 24
Sensor 2 min value (Parameter) .......... 24
Sensor backup (Parameter) ................. 17, 33
Sensor lower limit (Parameter) .......... 16, 36
Sensor type (Parameter) .................... 12
Sensor type 1 to 2 (Parameter) .......... 30
Sensor upper limit (Parameter) .......... 16, 36
Sensors (Submenu) ......................... 30
Serial number (Parameter) ................. 11, 62
Service (UART-CDI) (Parameter) ......... 50
Service IP active (Parameter) ............. 52
Set system time (Parameter) .............. 59
Signal to noise ratio (Parameter) .......... 54
Simulation (Submenu) ...................... 26
Software configuration (Submenu) ....... 43
Software option overview (Parameter) ... 43
Start (Parameter) ........................... 9
Status password entry (Parameter) ....... 18, 45, 46, 47, 48, 49

Submenu
Active diagnostics .......................... 20
Analog input 1 to 5 .......................... 38
APL information ............................. 54
Application relation ........................ 39
Change password ........................... 48
Configuration .............................. 28, 37
Connectivity ................................. 50
Date/time ..................................... 58
Define password ............................ 47
Delete password ............................. 49
Device management .......................... 42
Device temperature .......................... 25
Diagnostic list ............................... 22
Diagnostic settings .......................... 27
Display ....................................... 57
Enter password ............................. 45
Ethernet ....................................... 51
Event logbook ............................... 22
Geolocation ................................. 60
Import / Export ............................. 19
Information ................................... 39, 62
Interfaces .................................... 50
Linearization .................................. 34
Measured values ............................. 29
Minimum/maximum values ................. 23
Port information ............................. 52
Index

PROFINET .................................. 37
Properties ................................. 27, 51
Recover password ...................... 46
Sensor 1 .................................. 23, 30
Sensor 2 .................................. 24, 33
Sensors .................................. 30
Simulation ............................... 26
Software configuration ................. 43
TCP information ........................ 55
UDP information ....................... 56
User management ...................... 44
Subnet mask (Parameter) .............. 51
Supported TCP connections (Parameter) ........... 55
System (Menu) ......................... 41

T
Target group ............................ 4
TCP connection requests (Parameter) .......... 55
TCP connection timeouts (Parameter) .......... 55
TCP information (Submenu) ............. 55
Time zone (Parameter) .................. 58
Timestamp (Parameter) .................. 21

U
UDP information (Submenu) .......... 56
Unit (Parameter) ...................... 11, 30
User management (Submenu) .......... 44
User management (Wizard) ............ 18
User role (Parameter) ................. 44

V
Value 1 display (Parameter) .......... 57

W
Web server functionality (Parameter) .......... 50
Wizard
  Commissioning ....................... 9
  Device identification ............... 10
  Finish ................................ 19
  Sensor 1 ............................. 11
  Sensor 2 ............................. 17
  User management .................. 18