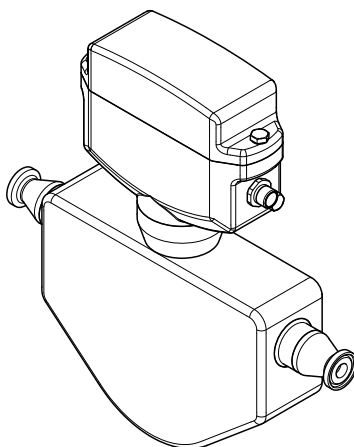


# Brief Operating Instructions

## Dosimass

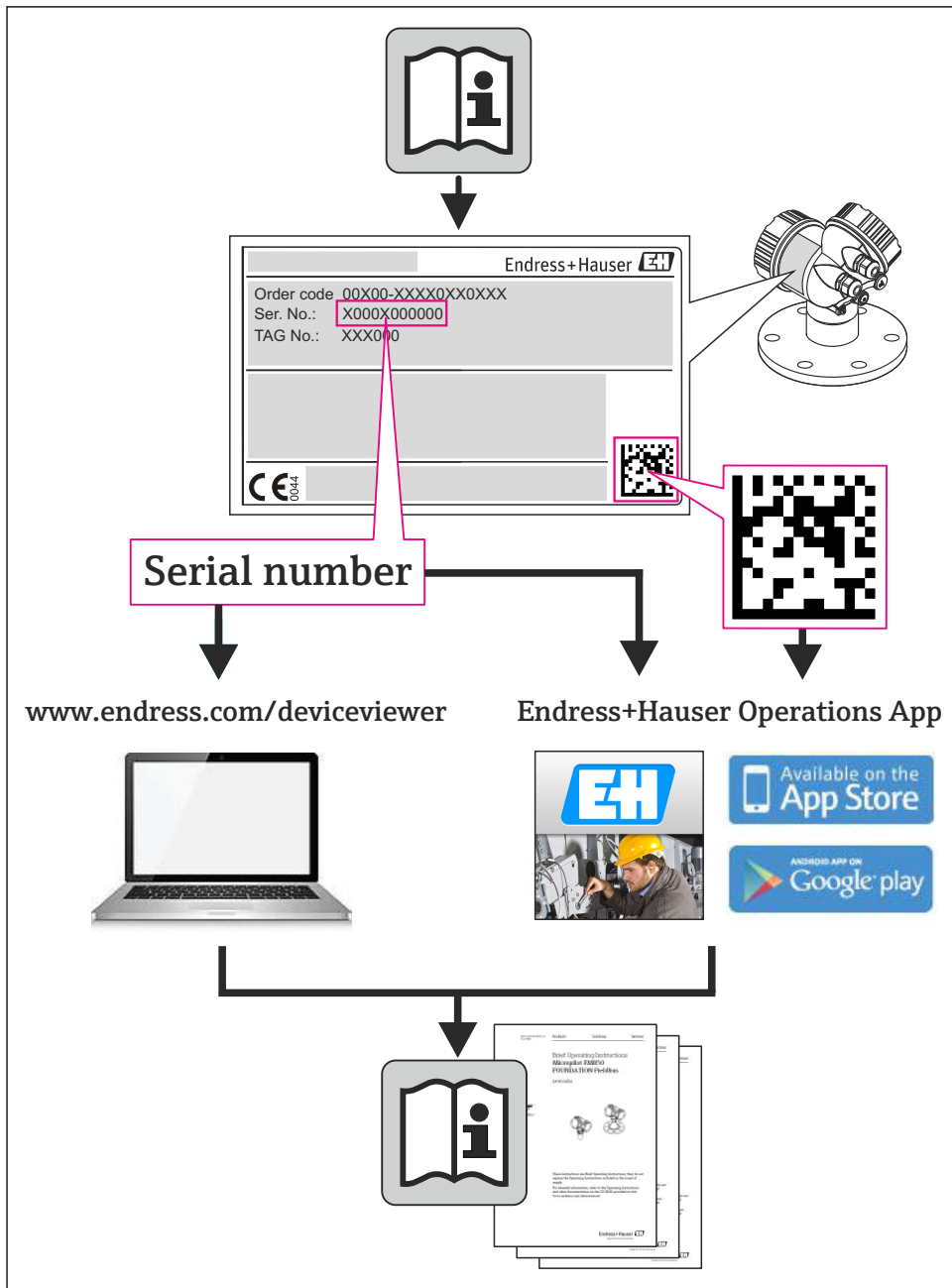
Coriolis flowmeter



These Instructions are Brief Operating Instructions; they are not a substitute for the Operating Instructions pertaining to the device.

Detailed information about the device can be found in the Operating Instructions and the other documentation:

- On the CD-ROM supplied (not included in the delivery for all device versions).
- Available for all device versions via:
  - Internet: [www.endress.com/deviceviewer](http://www.endress.com/deviceviewer)
  - Smart phone/tablet: *Endress+Hauser Operations App*



A0023555





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


# 1 Document information

## 1.1 Symbols used





### 1.1.1 Safety symbols



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

### 1.1.2 Symbols for certain types of information






Symbol	Meaning	Symbol	Meaning
	<b>Permitted</b> Procedures, processes or actions that are permitted.		<b>Preferred</b> Procedures, processes or actions that are preferred.
	<b>Forbidden</b> Procedures, processes or actions that are forbidden.		<b>Tip</b> Indicates additional information.
	Reference to documentation		Reference to page
	Reference to graphic		Series of steps
	Result of a step		Visual inspection

### 1.1.3 Electrical symbols





Symbol	Meaning	Symbol	Meaning
	Direct current		Alternating current
	Direct current and alternating current		<b>Ground connection</b> A grounded terminal which, as far as the operator is concerned, is grounded via a grounding system.

Symbol	Meaning
	<b>Protective ground connection</b> A terminal which must be connected to ground prior to establishing any other connections.
	<b>Equipotential connection</b> A connection that has to be connected to the plant grounding system: This may be a potential equalization line or a star grounding system depending on national or company codes of practice.

#### 1.1.4 Tool symbols

Symbol	Meaning	Symbol	Meaning
	Torx screwdriver		Flat blade screwdriver
	Cross-head screwdriver		Allen key
	Open-ended wrench		

#### 1.1.5 Symbols in graphics

Symbol	Meaning	Symbol	Meaning
1, 2, 3,...	Item numbers	 1, 2, 3...	Series of steps
A, B, C, ...	Views	A-A, B-B, C-C, ...	Sections
	Hazardous area		Safe area (non-hazardous area)
	Flow direction		

## 2 Basic safety instructions

### 2.1 Requirements for the personnel

The personnel must fulfill the following requirements for its tasks:

- ▶ Trained, qualified specialists must have a relevant qualification for this specific function and task
- ▶ Are authorized by the plant owner/operator
- ▶ Are familiar with federal/national regulations
- ▶ Before beginning work, the specialist staff must have read and understood the instructions in the Operating Instructions and supplementary documentation as well as in the certificates (depending on the application)
- ▶ Following instructions and basic conditions

## 2.2 Designated use

### Application and media

The measuring device described in these Instructions is intended only for flow measurement of liquids and gases.

Depending on the version ordered, the measuring device can also measure potentially explosive, flammable, poisonous and oxidizing media.

Measuring devices for use in hazardous areas, in hygienic applications or in applications where there is an increased risk due to process pressure, are labeled accordingly on the nameplate.

To ensure that the measuring device remains in proper condition for the operation time:

- ▶ Only use the measuring device in full compliance with the data on the nameplate and the general conditions listed in the Operating Instructions and supplementary documentation.
- ▶ Check the nameplate to verify if the device ordered can be put to its intended use in the approval-related area (e.g. explosion protection, pressure vessel safety).
- ▶ Use the measuring device only for media against which the process-wetted materials are adequately resistant.
- ▶ If the measuring device is not operated at atmospheric temperature, compliance with the relevant basic conditions specified in the associated device documentation is absolutely essential.
- ▶ Protect the measuring device permanently against corrosion from environmental influences.

### Incorrect use

Non-designated use can compromise safety. The manufacturer is not liable for damage caused by improper or non-designated use.

### WARNING

#### **Danger of breakage of the measuring tube due to corrosive or abrasive fluids or from environmental conditions.**

Housing breakage due to mechanical overload possible!

- ▶ Verify the compatibility of the process fluid with the measuring tube material.
- ▶ Ensure the resistance of all fluid-wetted materials in the process.
- ▶ Keep within the specified pressure and temperature range.

Verification for borderline cases:

- ▶ For special fluids and fluids for cleaning, Endress+Hauser is glad to provide assistance in verifying the corrosion resistance of fluid-wetted materials, but does not accept any warranty or liability as minute changes in the temperature, concentration or level of contamination in the process can alter the corrosion resistance properties.

### Residual risks

The external surface temperature of the housing can increase by max. 20 K due to the power consumption of the electronic components. Hot process fluids passing through the measuring device will further increase the surface temperature of the housing. The surface of the sensor, in particular, can reach temperatures which are close to the fluid temperature.

Possible burn hazard due to fluid temperatures!

- ▶ For elevated fluid temperature, ensure protection against contact to prevent burns.

## 2.3 Workplace safety

For work on and with the device:

- ▶ Wear the required personal protective equipment according to federal/national regulations.

For welding work on the piping:

- ▶ Do not ground the welding unit via the measuring device.

If working on and with the device with wet hands:

- ▶ It is recommended to wear gloves on account of the higher risk of electric shock.

## 2.4 Operational safety

Risk of injury.

- ▶ Operate the device in proper technical condition and fail-safe condition only.
- ▶ The operator is responsible for interference-free operation of the device.

## 2.5 Product safety

This measuring device is designed in accordance with good engineering practice to meet state-of-the-art safety requirements, has been tested, and left the factory in a condition in which it is safe to operate.

It meets general safety standards and legal requirements. It also complies with the EC directives listed in the device-specific EC Declaration of Conformity. Endress+Hauser confirms this by affixing the CE mark to the device.

## 2.6 IT security

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

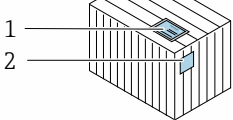
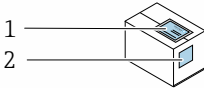
IT security measures in line with operators' security standards and designed to provide additional protection for the device and device data transfer must be implemented by the operators themselves.

### 3 Incoming acceptance and product identification

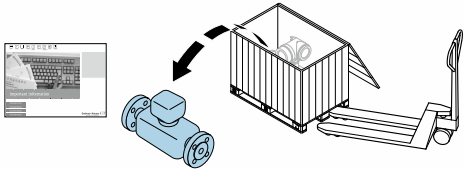
#### 3.1 Incoming acceptance



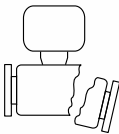
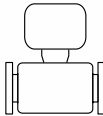
A0028673



Are the order codes on the delivery note (1) and the product sticker (2) identical?



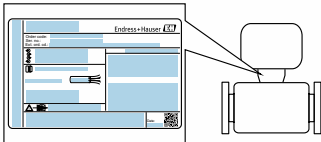
A0028673



Are the goods undamaged?



A0028673



Do the nameplate data match the ordering information on the delivery note?



A0028673



Is the CD-ROM with the Technical Documentation (depends on device version) and documents present?

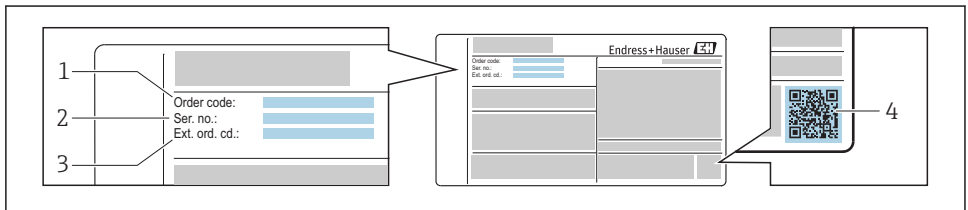


- If one of the conditions is not satisfied, contact your Endress+Hauser Sales Center.
- Depending on the device version, the CD-ROM might not be part of the delivery! The Technical Documentation is available via the Internet or via the *Endress+Hauser Operations App*.

## 3.2 Product identification

The following options are available for identification of the measuring device:


- Nameplate specifications
- Order code with breakdown of the device features on the delivery note
- Enter serial numbers from nameplates in *W@M Device Viewer* ([www.endress.com/deviceviewer](http://www.endress.com/deviceviewer)): All information about the measuring device is displayed.
- Enter the serial number from the nameplates into the *Endress+Hauser Operations App* or scan the 2-D matrix code (QR code) on the nameplate with the *Endress+Hauser Operations App*: all the information for the measuring device is displayed.



A0030196

### 1 Example of a nameplate

- 1 Order code
- 2 Serial number (Ser. no.)
- 3 Extended order code (Ext. ord. cd.)
- 4 2-D matrix code (QR code)

 For detailed information on the breakdown of the specifications on the nameplate, see the Operating Instructions for the device .

## 4 Storage and transport

### 4.1 Storage conditions

Observe the following notes for storage:

- Store in original packaging.
- Do not remove protective covers or protective caps installed on process connections.
- Protect from direct sunlight.
- Store in a dry and dust-free place.
- Do not store outdoors.

Storage temperature: -40 to +80 °C (-40 to +176 °F),

## 4.2 Transporting the product

Transport the measuring device to the measuring point in the original packaging.



Do not remove protective covers or caps installed on process connections. They prevent mechanical damage to the sealing surfaces and contamination in the measuring tube.

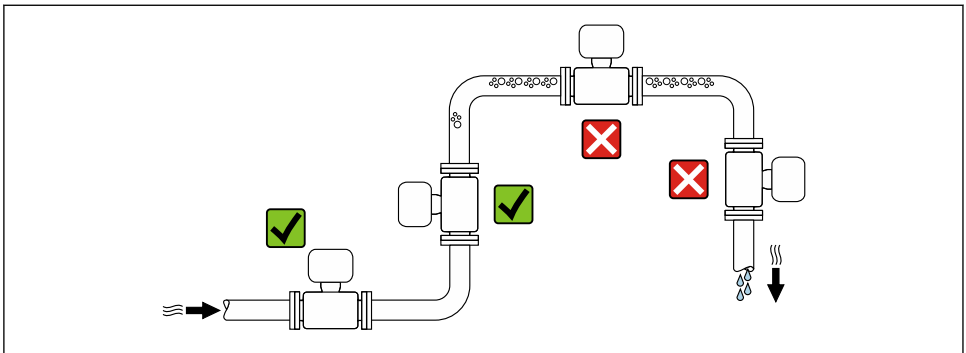
## 5 Installation

### 5.1 Installation conditions

No special measures such as supports are necessary. External forces are absorbed by the construction of the device.

#### 5.1.1 Mounting position

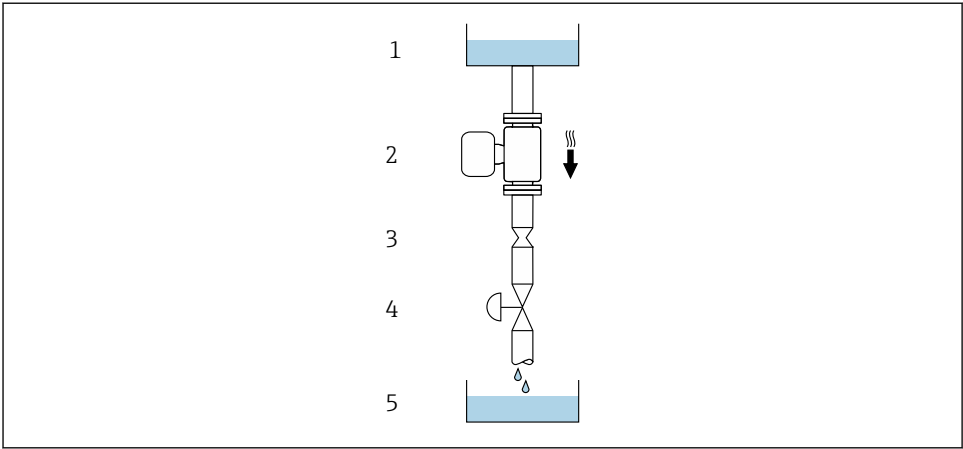
##### Mounting location



A0028772

##### *Installation in down pipes*

However, the following installation suggestion allows for installation in an open vertical pipeline. Pipe restrictions or the use of an orifice with a smaller cross-section than the nominal diameter prevent the sensor running empty while measurement is in progress.



A0028773

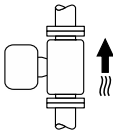
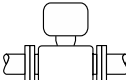
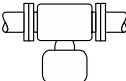

 2 Installation in a down pipe (e.g. for batching applications)

- 1 Supply tank
- 2 Sensor
- 3 Orifice plate, pipe restriction
- 4 Valve
- 5 Batching tank

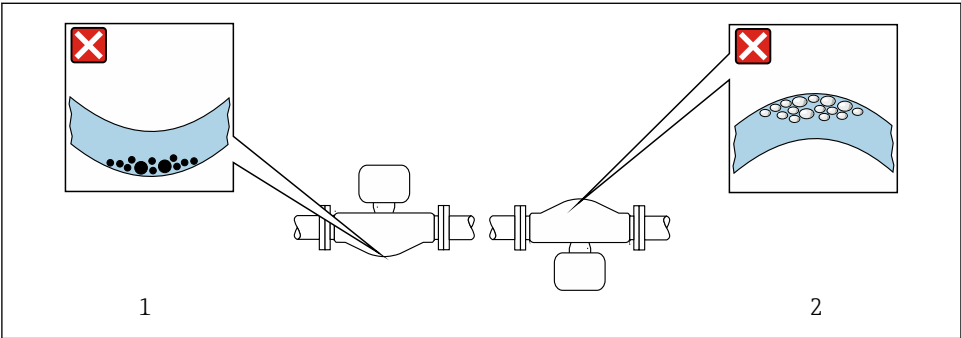
DN		Ø orifice plate, pipe restriction	
[mm]	[in]	[mm]	[in]
8	$\frac{3}{8}$	6	0.24
15	$\frac{1}{2}$	10	0.40
25	1	14	0.55

**Orientation**

The direction of the arrow on the sensor nameplate helps you to install the sensor according to the flow direction.

Orientation			Recommendation
A	Vertical orientation	 A0015591	✓✓
B	Horizontal orientation, transmitter at top	 A0015589	✓✓ <sup>1)</sup> → 3, 13
C	Horizontal orientation, transmitter at bottom	 A0015590	✓✓ <sup>2)</sup> → 3, 13
D	Horizontal orientation, transmitter at side	 A0015592	✗

- 1) Applications with low process temperatures may decrease the ambient temperature. To maintain the minimum ambient temperature for the transmitter, this orientation is recommended.
- 2) Applications with high process temperatures may increase the ambient temperature. To maintain the maximum ambient temperature for the transmitter, this orientation is recommended.




A0028774

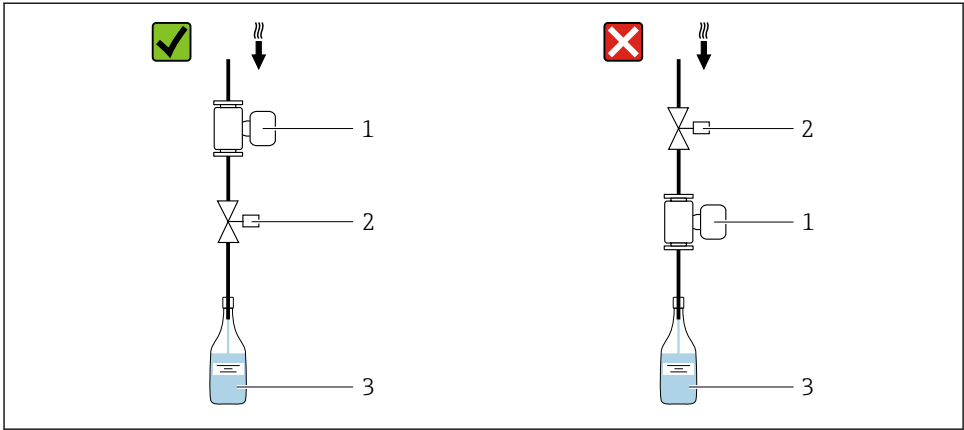
3 Orientation of sensor with curved measuring tube

- 1 Avoid this orientation for fluids with entrained solids: Risk of solids accumulating.
- 2 Avoid this orientation for outgassing fluids: Risk of gas accumulating.

Valves

Never install the sensor downstream from a filling valve. If the sensor is completely empty this corrupts the measured value.

 Correct measurement is only possible if the pipe is completely full. Perform sample fillings before commencing filling in production.

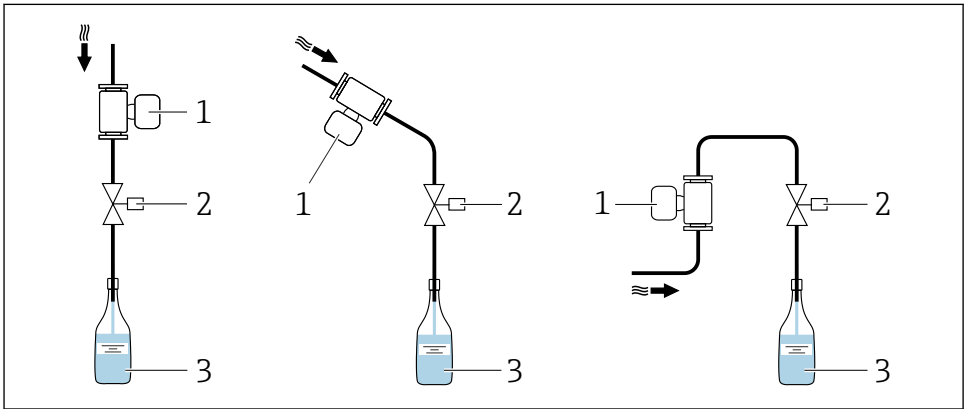


A0003768

- 1 Measuring device
- 2 Filling valve
- 3 Container

Filling systems

The pipe system must be completely full to ensure optimum measurement.



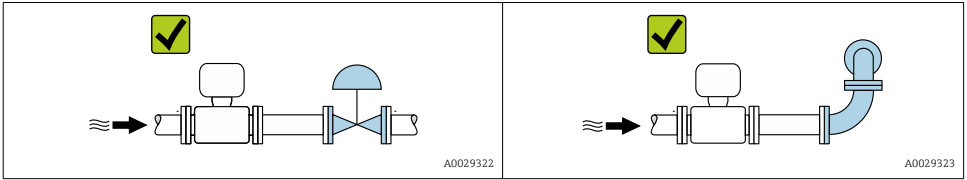
A0003795

4 Filling system

- 1 Measuring device
- 2 Filling valve
- 3 Container

## Inlet and outlet runs

No special precautions need to be taken for fittings which create turbulence, such as valves, elbows or T-pieces, as long as no cavitation occurs → 15.



For the dimensions and installation lengths of the device, see the "Technical Information" document, "Mechanical construction" section.

### 5.1.2 Requirements from environment and process

#### Ambient temperature range



For detailed information on the ambient temperature range, see the Operating Instructions for the device.

#### Temperature tables



Observe the interdependencies between the permitted ambient and fluid temperatures when operating the device in hazardous areas.



For detailed information on the temperature tables, see the separate document entitled "Safety Instructions" (XA) for the device.

#### System pressure

It is important that cavitation does not occur, or that gases entrained in the liquids do not outgas. This is prevented by means of a sufficiently high system pressure.

For this reason, the following mounting locations are recommended:

- At the lowest point in a vertical pipe
- Downstream from pumps (no danger of vacuum)

#### Thermal insulation

In the case of some fluids, it is important that the heat radiated from the sensor to the transmitter is kept to a minimum. A wide range of materials can be used for the required insulation.

#### NOTICE

#### Electronics overheating on account of thermal insulation!

- Observe maximum permitted insulation height of the transmitter neck so that the transmitter head is completely free.

**NOTICE****Danger of overheating with insulation**

- ▶ Ensure that the temperature at the lower end of the transmitter housing does not exceed 80 °C (176 °F)

**NOTICE****The insulation can also be thicker than the maximum recommended insulation thickness.**

Prerequisite:

- ▶ Ensure that convection takes place on a sufficiently large scale at the transmitter neck.
- ▶ Ensure that a sufficiently large area of the housing support remains exposed. The uncovered part serves as a radiator and protects the electronics from overheating and excessive cooling.

**Heating****NOTICE****Electronics can overheat due to elevated ambient temperature!**

- ▶ Observe maximum permitted ambient temperature for the transmitter.
- ▶ Depending on the fluid temperature, take the device orientation requirements into account.

**NOTICE****Danger of overheating when heating**

- ▶ Ensure that the temperature at the lower end of the transmitter housing does not exceed 80 °C (176 °F).
- ▶ Ensure that convection takes place on a sufficiently large scale at the transmitter neck.
- ▶ Ensure that a sufficiently large area of the housing support remains exposed. The uncovered part serves as a radiator and protects the electronics from overheating and excessive cooling.

*Heating options*

If a fluid requires that no heat loss should occur at the sensor, users can avail of the following heating options:

- Electrical heating, e.g. with electric band heaters
- Via pipes carrying hot water or steam
- Via heating jackets



For detailed information on heating with electric band heaters, see the Operating Instructions for the device.

**Vibrations**

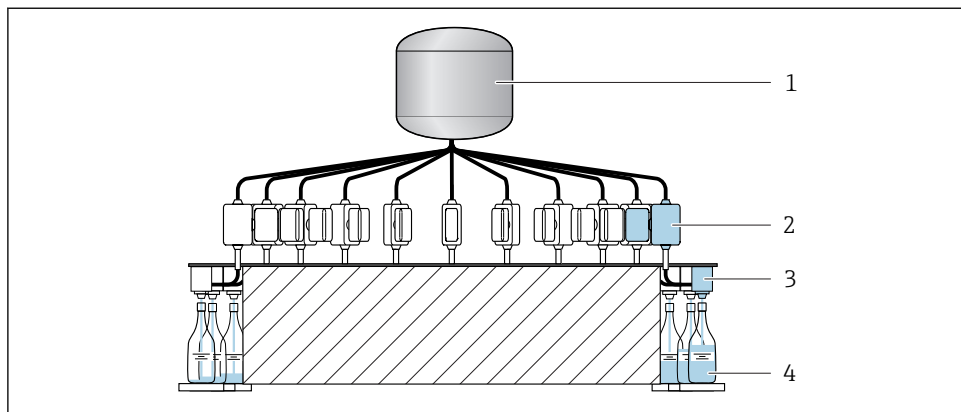
The high oscillation frequency of the measuring tubes ensures that the correct operation of the measuring system is not influenced by plant vibrations.

### 5.1.3 Special mounting instructions

#### Information for filling systems

Correct measurement is possible only if the piping is completely filled. We therefore recommend that some test batches be carried out prior to production batching.

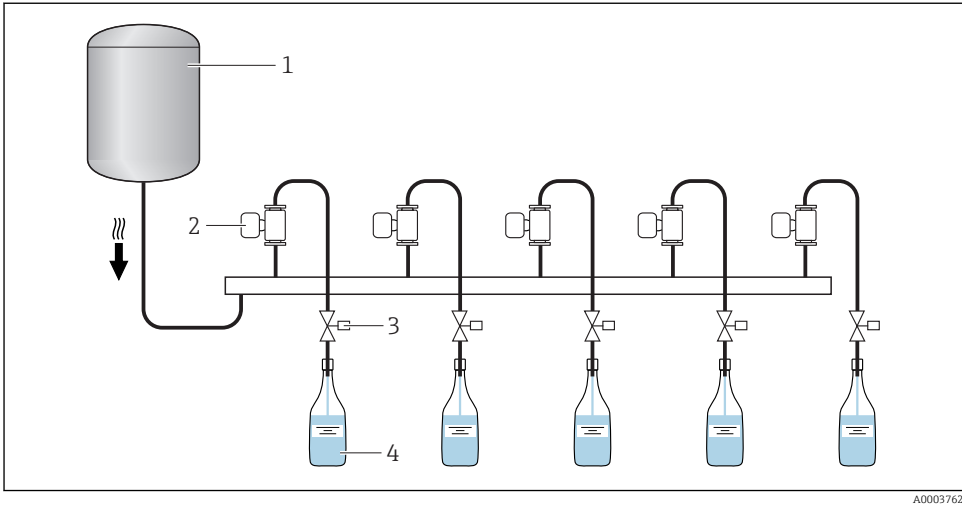
#### *Circular filling system*



A0003761

- 1 Tank
- 2 Measuring device
- 3 Batching valve
- 4 Vessel

## Linear filling system



A0003762

- 1 Tank
- 2 Measuring device
- 3 Batching valve
- 4 Vessel

## Zero point adjustment


The **Sensor adjustment** submenu contains parameters required for zero point adjustment.

### NOTICE

**All Dosimass measuring devices are calibrated in accordance with state-of-the-art technology. Calibration takes place under reference conditions .**

Therefore, a zero point adjustment is generally not required for the Dosimass!

- Experience shows that a zero point adjustment is advisable only in special cases.
- When maximum accuracy is required and flow rates are very low.
- Under extreme process or operating conditions (e.g. very high process temperatures or very high-viscosity fluids).

 Detailed information on reference conditions

## 5.2 Mounting the measuring device

### 5.2.1 Required tools

For process connections, use the appropriate installation tool.

### 5.2.2 Preparing the measuring device

1. Remove all remaining transport packaging.

2. Remove any protective covers or protective caps present from the sensor.
3. Remove stick-on label on the electronics compartment cover.


### 5.2.3 Mounting the measuring device

#### **WARNING**

#### **Danger due to improper process sealing!**

- ▶ Ensure that the inside diameters of the gaskets are greater than or equal to that of the process connections and piping.
- ▶ Ensure that the gaskets are clean and undamaged.
- ▶ Install the gaskets correctly.
- ▶ Ensure that the direction of the arrow on the nameplate of the sensor matches the flow direction of the fluid.

## 5.3 Post-installation check

Is the device undamaged (visual inspection)?	<input type="checkbox"/>
Does the measuring device conform to the measuring point specifications?	<input type="checkbox"/>
For example: <ul style="list-style-type: none"> <li>■ Process temperature</li> <li>■ Process pressure (refer to the chapter on "Pressure-temperature ratings" of the "Technical Information" document on the CD-ROM provided)</li> <li>■ Ambient temperature</li> <li>■ Measuring range</li> </ul>	
Has the correct orientation for the sensor been selected ? <ul style="list-style-type: none"> <li>■ According to sensor type</li> <li>■ According to medium temperature</li> <li>■ According to medium properties (outgassing, with entrained solids)</li> </ul>	
Does the arrow on the sensor nameplate match the direction of flow of the fluid through the piping →  12?	
Are the measuring point identification and labeling correct (visual inspection)?	<input type="checkbox"/>
Is the device adequately protected from precipitation and direct sunlight?	<input type="checkbox"/>
Are the securing screw and securing clamp tightened securely?	<input type="checkbox"/>

## 6 Electrical connection



The measuring device does not have an internal circuit breaker. For this reason, assign the measuring device a switch or power-circuit breaker so that the power supply line can be easily disconnected from the mains.

### 6.1 Connection conditions

#### 6.1.1 Requirements for connecting cable

The connecting cables provided by the customer must fulfill the following requirements.

##### Electrical safety

In accordance with applicable federal/national regulations.

##### Permitted temperature range

- $-40\text{ °C}$  ( $-40\text{ °F}$ ) to  $+80\text{ °C}$  ( $+176\text{ °F}$ )
- Minimum requirement: cable temperature range  $\geq$  ambient temperature  $+20\text{ K}$

##### Signal cable

*Pulse/frequency/switch output*

Standard installation cable is sufficient.

*Status input and switch output (batch)*

Standard installation cable is sufficient.

##### Modbus RS485



- The electrical connection of the shield to the device housing must be properly implemented (e.g. using a knurled nut).
- Observe the following with regard to cable loading:
  - Voltage drop due to the cable length and cable type.
  - Valve performance.

*Total length of cable in the Modbus network  $\leq 50\text{ m}$*

Use a shielded cable.

*Example:*

Terminated device plug with cable: Lumberg RKWTH 8-299/10

*Total length of cable in the Modbus network  $> 50\text{ m}$*

Use shielded twisted pair cable for RS485 applications.




*Example:*

- Cable: Belden item no. 9842 (for 4-wire version, the same cable can be used for the power supply)
- Terminated device plug: Lumberg RKCS 8/9 (shieldable version)

6.1.2      **Terminal assignment**

Connection is solely by means of device plug:

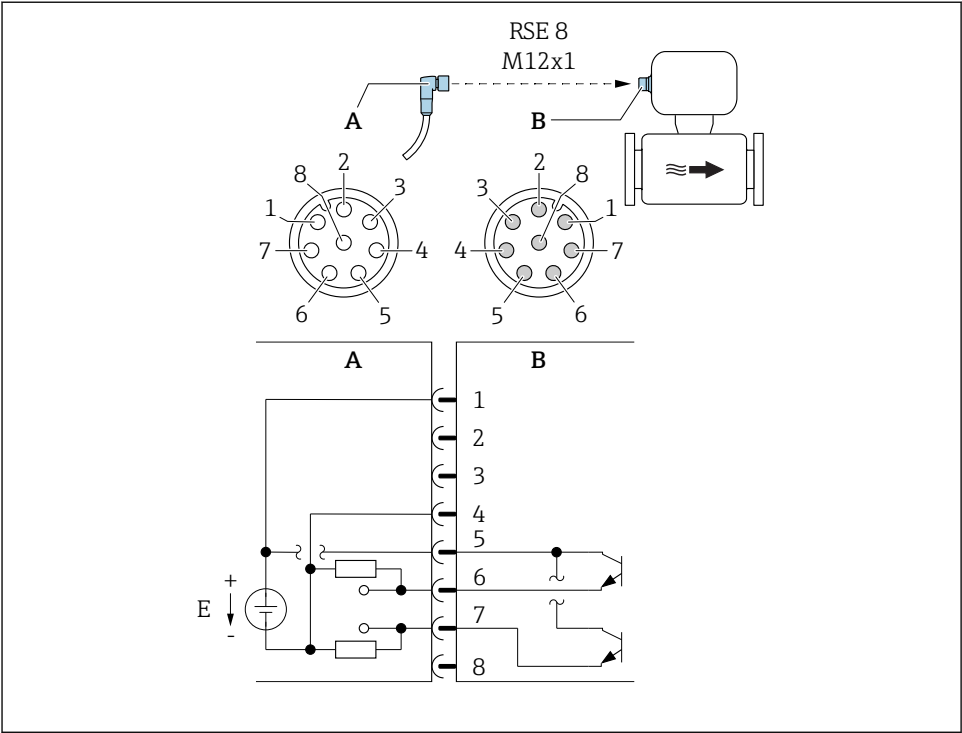
*There are different device versions available:*

Order code for "Output, input":	Device plug
Option 3: 2 pulse/frequency/switch outputs	→  22
Option 4: Modbus RS485, 1 switch output (batch), 1 status input	→  24
Option 5: Modbus RS485, 2 switch outputs (batch), 1 status input	→  26

6.1.3 Pin assignment, device plug

Device version: 2 pulse/frequency/switch outputs

Order code for "Output, input", option 3:  
2 Pulse/frequency/switch output



A0032569

5 Connection to device

- A Coupling: Supply voltage, pulse/freq./switch output
- B Connector: Supply voltage, pulse/freq./switch output
- E PELV or SELV power supply
- 1 to 8 Pin assignment

Pin assignment

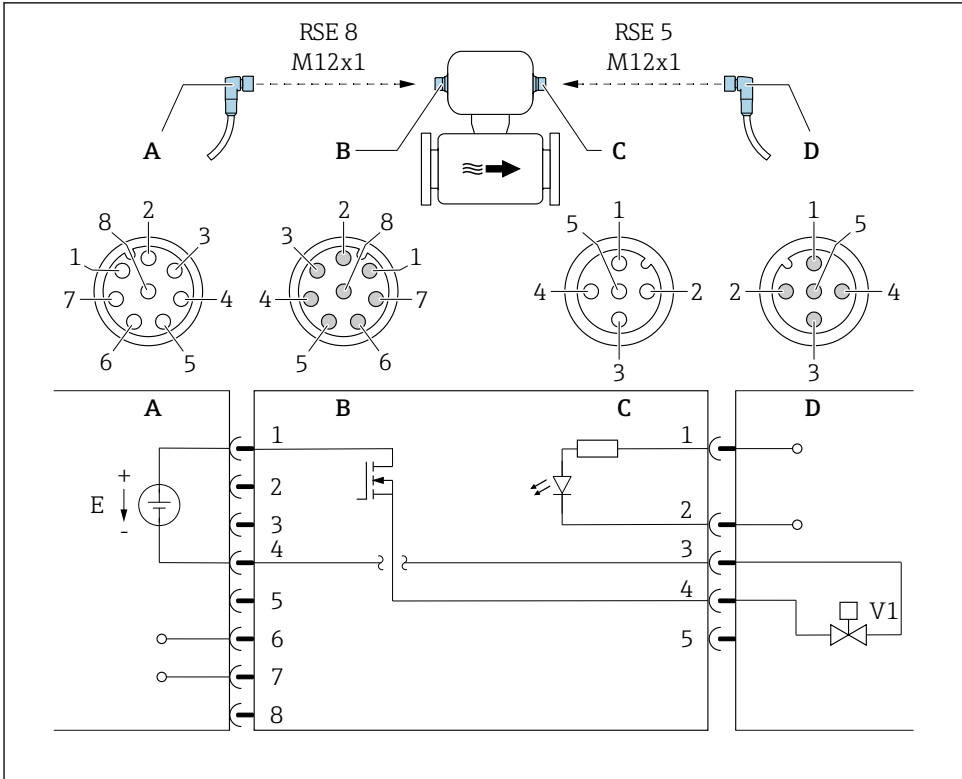
Connection: Coupling (A) – Connector (B)		
Pin	Assignment	
1	L+	Supply voltage
2	+	Service interface RX

Connection: Coupling (A) – Connector (B)		
Pin	Assignment	
3	+	Service interface TX
4	L-	Supply voltage
5	+	Pulse/frequency/switch output
6	–	Pulse/frequency/switch output 1
7	–	Pulse/frequency/switch output 2
8	–	Service interface GND

# **Device version: Modbus RS485, status output and status input**

Order code for "Output, input", option 4:

Modbus RS485, 1 switch output (batch), 1 status input



A0032570

## **6 Connection to device**

A Coupling: Supply voltage, Modbus RS485

B Connector: Supply voltage, Modbus RS485

C Coupling: Switch output (batch), status input

D Connector: Switch output (batch), status input

E PELV or SELV power supply

V1 Valve 1 (batch)

1 to Pin assignment

8

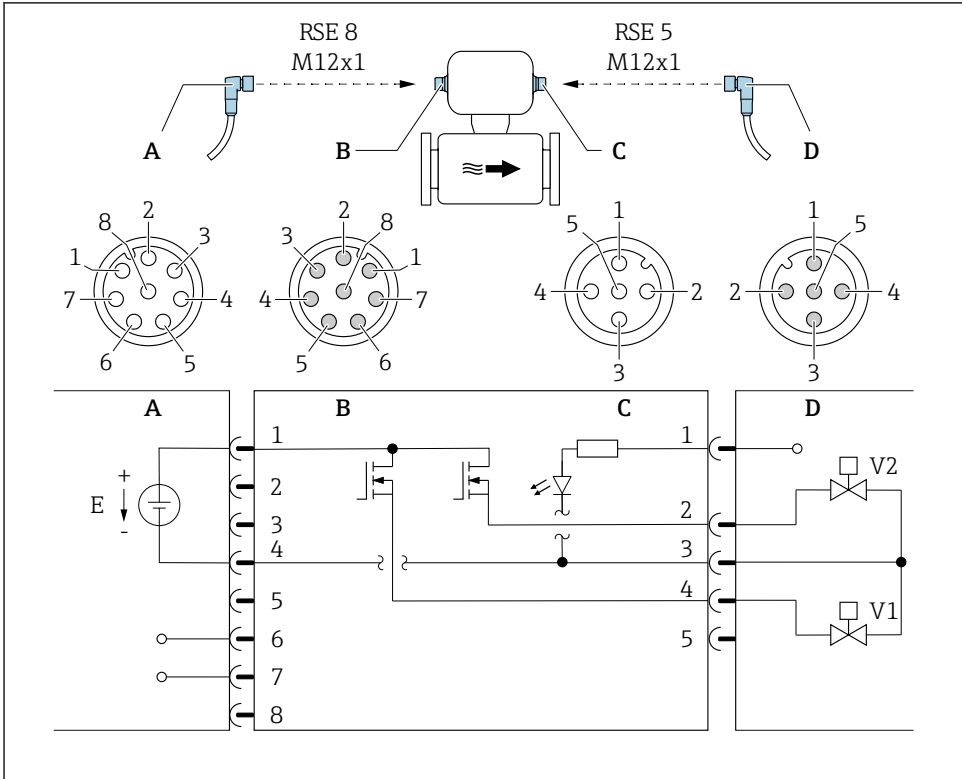
Pin assignment

Connection: Coupling (A) – Connector (B)			Connection: Coupling (C) – Connector (D)		
Pin	Assignment		Pin	Assignment	
1	L+	Supply voltage	1	+	Status input
2	+	Service interface RX	2	–	Status input
3	+	Service interface TX	3	–	Switch output (batch)
4	L-	Supply voltage	4	+	Switch output (batch)
5	Not assigned		5	Not assigned	
6	A	Modbus RS485			
7	B	Modbus RS485			
8	–	Service interface GND			

# **Device version: Modbus RS485 , 2 status outputs and status input**

Order code for "Output, input", option 5:

Modbus RS485, 2 switch outputs (batch), 1 status input



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## **7 Connection to device**

A Coupling: Supply voltage, Modbus RS485

B Connector: Supply voltage, Modbus RS485

C Coupling: Switch outputs (batch), status input

D Connector: Switch outputs (batch), status input

E PELV or SELV power supply

V1 Valve (batch), level 1

V2 Valve (batch), level 2

1 to Pin assignment

8

*Pin assignment*

Connection: Coupling (A) – Connector (B)			Connection: Coupling (C) – Connector (D)		
Pin	Assignment		Pin	Assignment	
1	L+	Supply voltage	1	+	Status input
2	+	Service interface RX	2	+	Switch output (batch) 2
3	+	Service interface TX	3	–	Switch outputs, status input
4	L-	Supply voltage	4	+	Switch output (batch) 1
5	Not assigned		5	Not assigned	
6	A	Modbus RS485			
7	B	Modbus RS485			
8	–	Service interface GND			

**6.1.4 Requirements for the supply unit****Supply voltage**

DC 24 V (nominal voltage: DC 20 to 30 V)



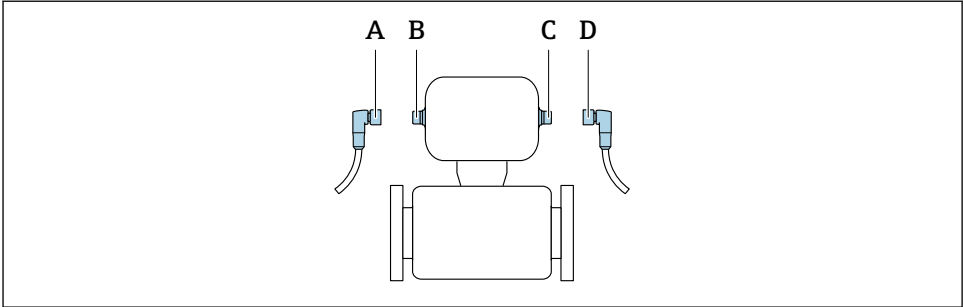
- The power unit must be tested to ensure that it meets safety requirements (e.g. PELV, SELV).
- The supply voltage must not exceed a maximum short-circuit current of 50 A.

**6.2 Connecting the measuring device****NOTICE**

**Limitation of electrical safety due to incorrect connection!**

**6.2.1 Connecting the transmitter****Connection by means of device plug**

Connection is solely by means of device plug.



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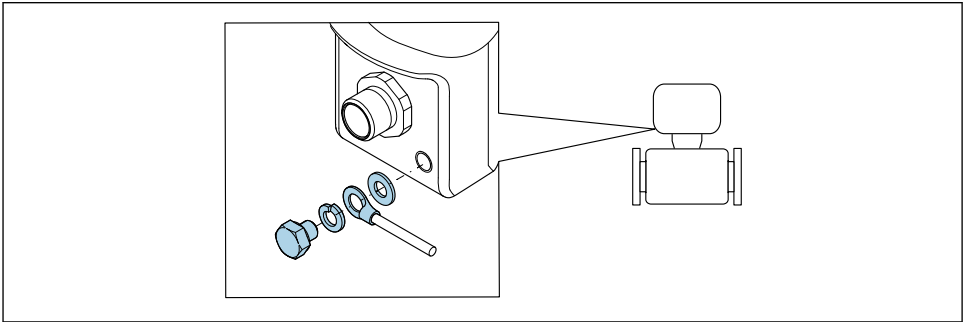
A, C Coupling  
B, D Plug

The number of device plugs depends on the device version:

Order code for "Output, input":	Device plug
Option 3: 2 pulse/frequency/switch outputs	→  22
Option 4: Modbus RS485, 1 switch output (batch), 1 status input	→  24
Option 5: Modbus RS485, 2 switch outputs (batch), 1 status input	→  26

Grounding

Grounding is by means of a cable socket.



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6.3 Ensuring the degree of protection

The measuring device fulfills all the requirements for IP67 degree of protection, Type 4X enclosure.

To guarantee IP67 degree of protection, Type 4X enclosure, carry out the following steps after the electrical connection:

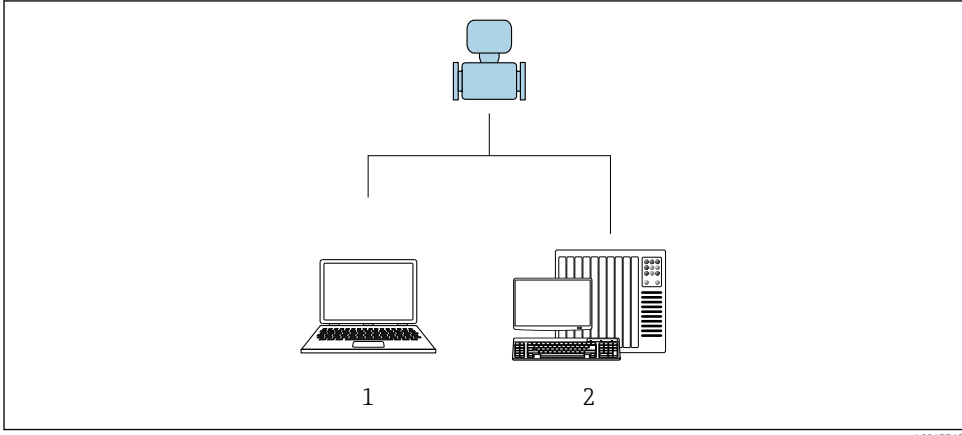
- Tighten all device plugs.

## 6.4 Post-connection check

Is the device undamaged (visual inspection)?	<input type="checkbox"/>
Does the supply voltage in the system match the specifications on the device's nameplate?	<input type="checkbox"/>
Do the cables used comply with the necessary specifications?	<input type="checkbox"/>
Are the maximum values for voltage and current at the pulse and status output being observed?	<input type="checkbox"/>

## 7 Operation options

### 7.1 Overview of operation options



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- 1 Computer with "FieldCare" or "DeviceCare" operating tool
- 2 Control system (e.g. PLC)

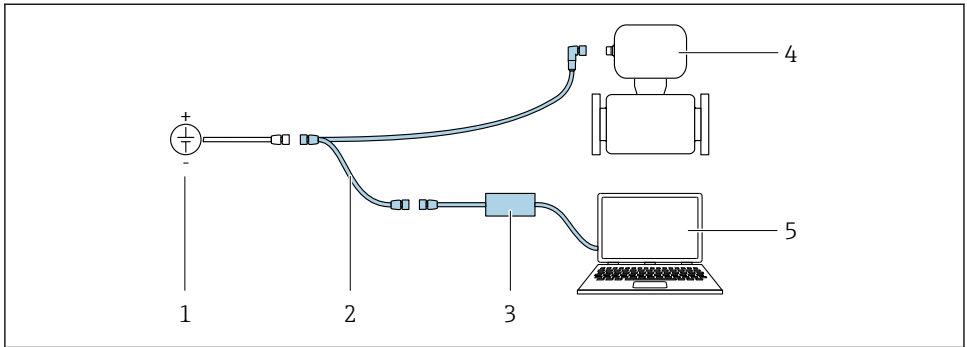
## 7.2 Access to the operating menu via the operating tool

### 7.2.1 Connecting the operating tool

#### Using the service adapter and Commubox FXA291

Operation and configuration can be performed using the Endress+Hauser FieldCare or DeviceCare service and configuration software.

The device is connected to the USB port of the computer via the service adapter and Commubox FXA291.



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- 1 Supply voltage 24 V DC
- 2 Service adapter
- 3 Dosimag
- 4 Commubox FXA291
- 5 Computer with "FieldCare" or "DeviceCare" operating tool

## 7.2.2 FieldCare

### Function scope

FDT-based plant asset management tool from Endress+Hauser. It can configure all smart field devices in a system and helps you manage them. By using the status information, it is also a simple but effective way of checking their status and condition.

Typical functions:

- Configuring parameters of transmitters
- Loading and saving device data (upload/download)
- Documentation of the measuring point
- Visualization of the measured value memory (line recorder) and event logbook



For additional information about FieldCare, see Operating Instructions BA00027S and BA00059S

### Source for device description files

- [www.endress.com](http://www.endress.com) → Downloads
- CD-ROM (contact Endress+Hauser)
- DVD (contact Endress+Hauser)

### Establishing a connection

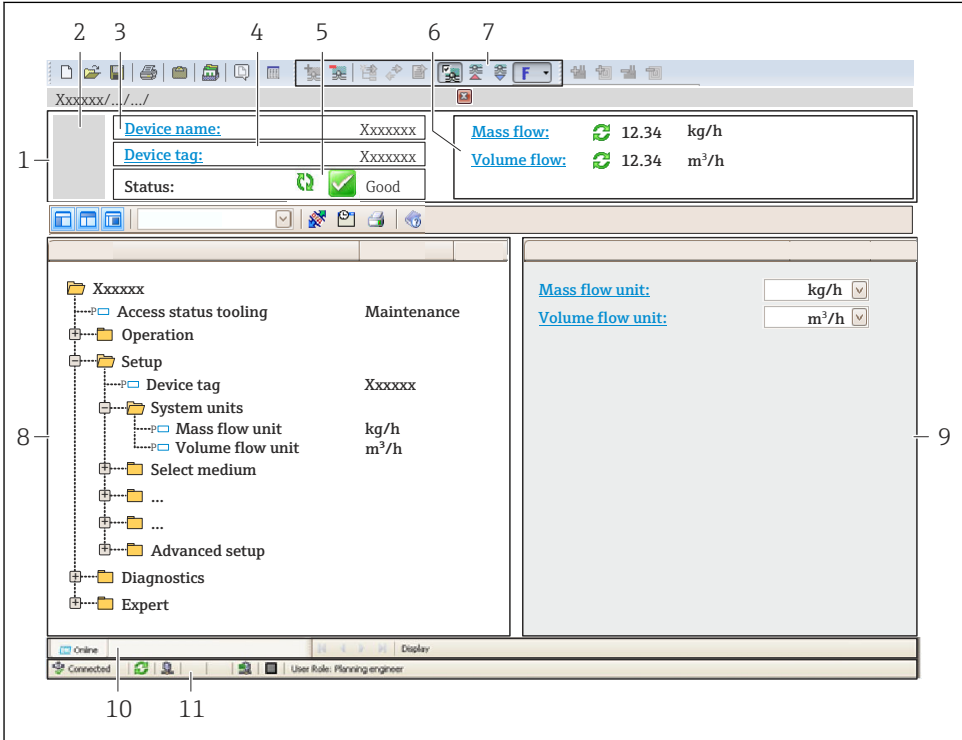
Service adapter, Commubox FXA291 and "FieldCare" operating tool

1. Start FieldCare and launch the project.
2. In the network: Add a device.
  - ↳ The **Add device** window opens.
3. Select the **CDI Communication FXA291** option from the list and press **OK** to confirm.

4. Right-click **CDI Communication FXA291** and select the **Add device** option in the context menu that opens.
5. Select the desired device from the list and press **OK** to confirm.
6. Establish the online connection to the device.

 For additional information, see Operating Instructions BA00027S and BA00059S

## User interface



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- 1 Header
- 2 Picture of device
- 3 Device name
- 4 Tag name
- 5 Status area with status signal
- 6 Display area for current measured values
- 7 Edit toolbar with additional functions such as save/restore, event list and create documentation
- 8 Navigation area with operating menu structure
- 9 Working area
- 10 Range of action
- 11 Status area

### 7.2.3 DeviceCare

#### Function scope

Tool to connect and configure Endress+Hauser field devices.

The fastest way to configure Endress+Hauser field devices is with the dedicated "DeviceCare" tool. Together with the device type managers (DTMs) it presents a convenient, comprehensive solution.



For details, see Innovation Brochure IN01047S

#### Source for device description files

- [www.endress.com](http://www.endress.com) → Downloads
- CD-ROM (contact Endress+Hauser)
- DVD (contact Endress+Hauser)

## 8 System integration



For detailed information on system integration, see the Operating Instructions for the device.

## 9 Commissioning

### 9.1 Function check

Before commissioning the measuring device:

- ▶ Make sure that the post-installation and post-connection checks have been performed.
- "Post-installation check" checklist →  19
- "Post-connection check" checklist →  29

### 9.2 Switching on the measuring device

- ▶ The function check has been completed successfully.  
Switch on the supply voltage.
  - ↳ The measuring device runs through internal test functions.

The device is operational and operation commences.



If the device does not start up successfully, a diagnostic message is displayed on the DeviceCare or FieldCare operating interface, depending on the cause of the problem:  
Operating Instructions for the device

### 9.3      Configuring the measuring device

The **Setup** menu with its submenus contains all the parameters needed for standard operation.

 The available submenus of the specific device may vary depending on the device version (e.g. communication method).


Submenu	Meaning
System units	For configuring the units for all measured values
Status input	For configuring the status input
Batch output	For configuring the switch output (batch) for controlling the valves
Pulse/frequency/switch output 1 to n	For configuring the selected output type
Communication	For configuring the digital communication interface
Low flow cut off	For configuring the low flow cut off
Partially filled pipe detection	For configuring the detection of partial filled and empty pipes

### 9.4      Defining the tag name

To enable fast identification of the measuring point within the system, you can enter a unique designation using the **Device tag** parameter and thus change the factory setting.

**Navigation**  
"Setup" menu → Device tag

### 9.5      Protecting settings from unauthorized access

 For detailed information on protecting the settings against unauthorized access, see the Operating Instructions for the device.

## 10      Diagnostic information

Faults are displayed on the welcome page of the DeviceCare and FieldCare operating tools once the connection to the device has been established.

Remedial measures are provided for each diagnostic event to ensure that problems can be rectified quickly.

In DeviceCare and FieldCare: Remedial measures are displayed on the welcome page in a separate field below the diagnostic event.

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[www.addresses.endress.com](http://www.addresses.endress.com)

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