

Technical Information

CUA262

Flow assembly for CUS52D turbidity sensor



Application

The CUA262 flow assembly is designed for the installation of the CUS52D turbidity sensor. The assembly enables the direct installation of the sensor in the flow of process water. It can be inserted in stainless steel pipes made as a weld-in element.

- Turbidity measurement at all process stages in skids for water treatment
- Turbidity measurement in closed pipe systems (stainless steel)
- Turbidity monitoring in filter modules

Your benefits

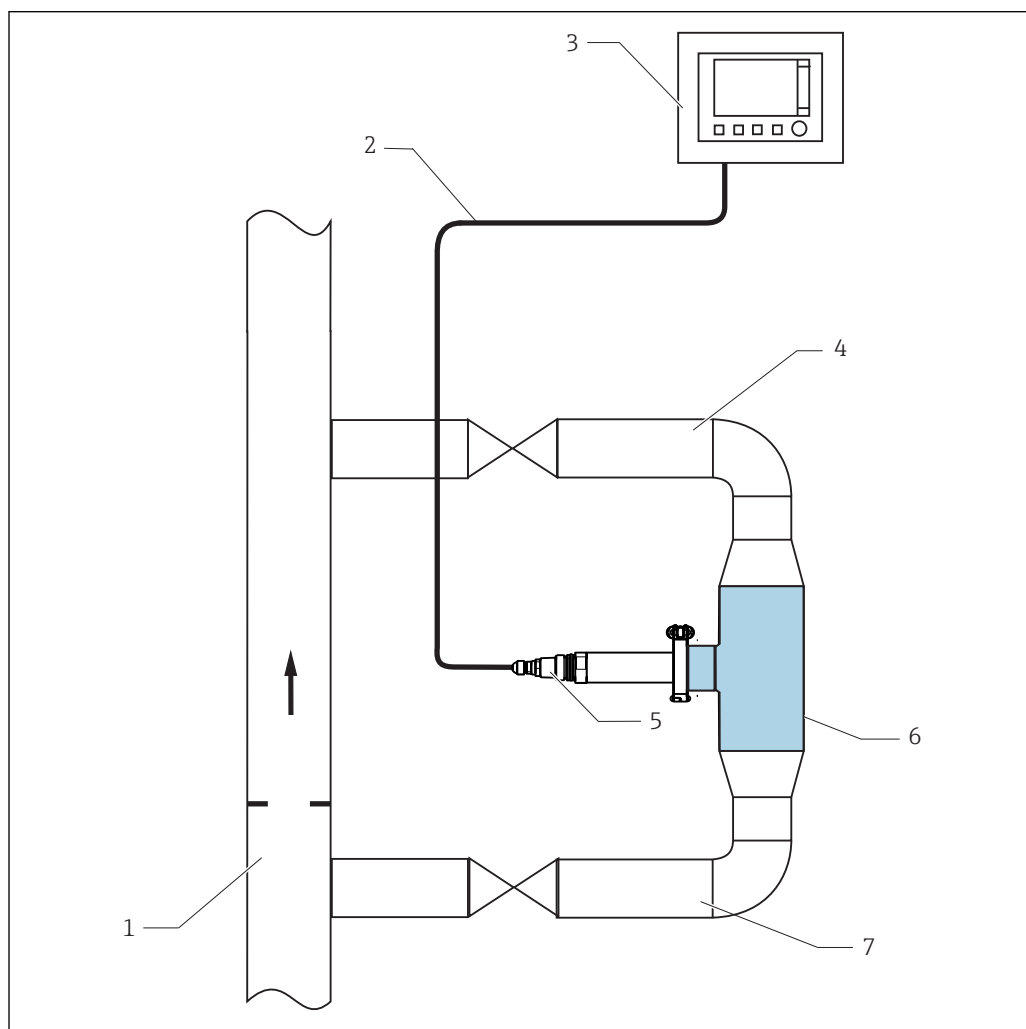
- Direct installation in the process
- No lost water, no product is discarded
- Self-venting with vertical installation
- Suitable for use in drinking water thanks to stainless steel material

Function and system design

Measuring system

A complete measuring system comprises:

- Flow assembly Flowfit CUA262
- Sensor Turbimax CUS52D
- Transmitter, e.g. Liquiline CM442
- Measuring cable



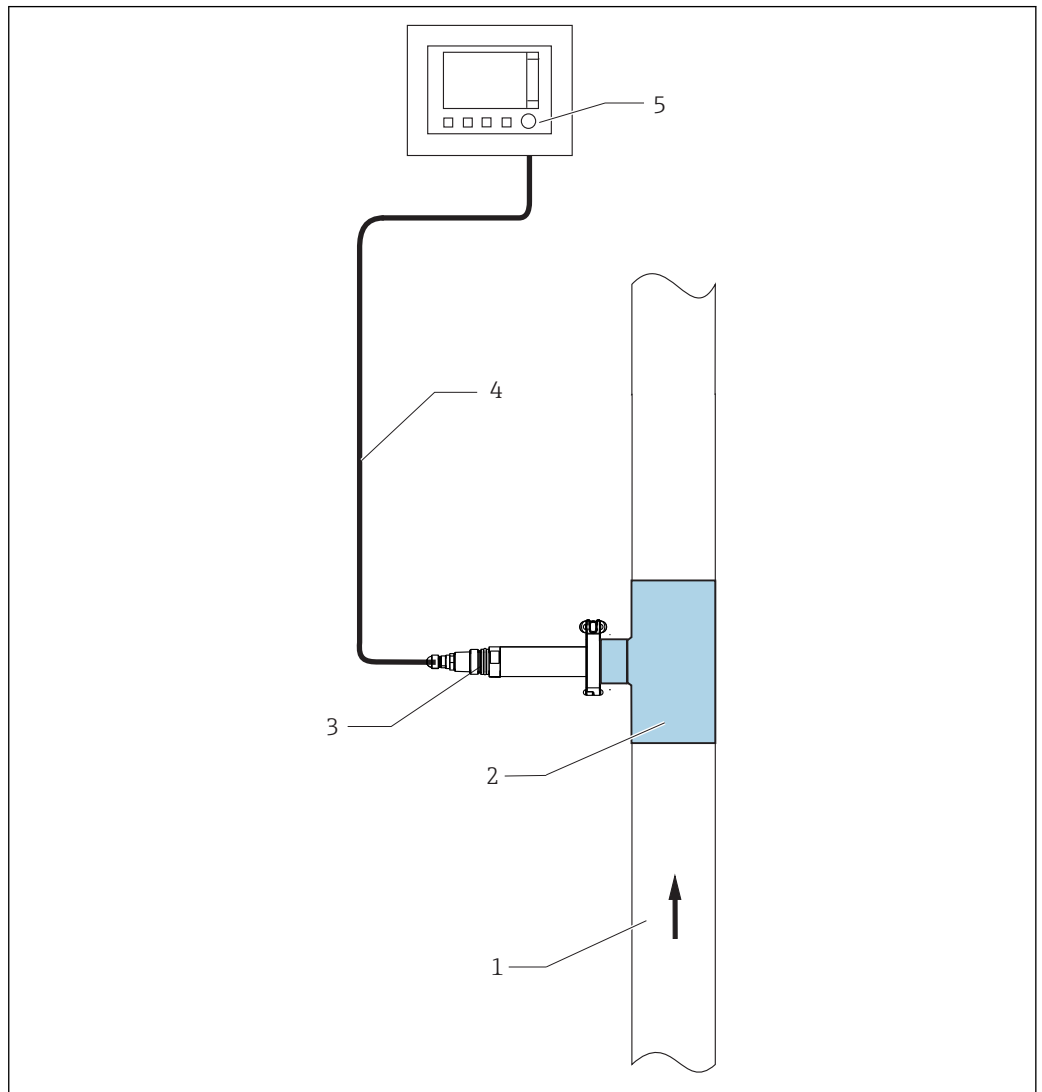
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1 Measuring system

- 1 Process pipe
- 2 Measuring cable
- 3 Liquiline CM442 transmitter
- 4 Return line with shut-off valve
- 5 Turbidity sensor CUS52D
- 6 CUA262 flow assembly
- 7 Inlet with shut-off valve

Installation

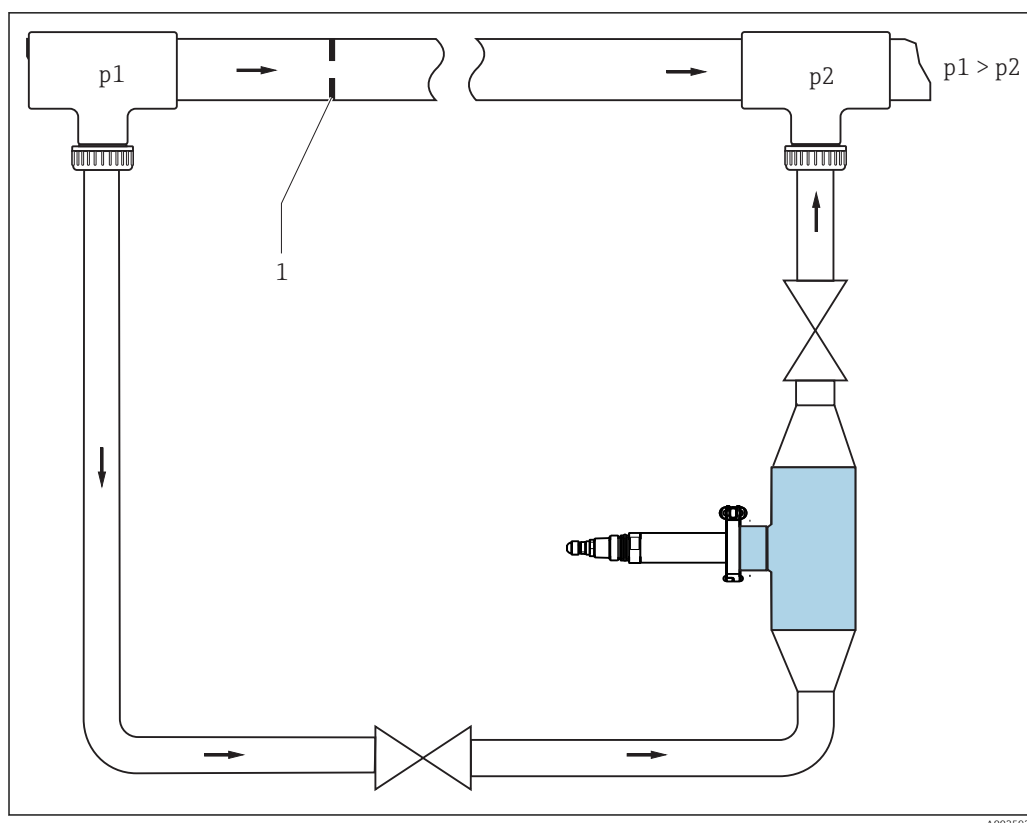
Installation instructions



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2 Installation in the process pipe

- 1 Direction of flow
- 2 CUA262 flow assembly
- 3 Turbidity sensor CUS52D
- 4 Measuring cable
- 5 Liquiline CM442 transmitter



3 Connection example with bypass and orifice plate in the main pipe (supply from below)

1 Orifice plate

To achieve flow through the assembly with a bypass, pressure p_1 must be higher than pressure p_2 .

- Install the orifice plate in the main pipe → 3, 4.

The inlet and outlet connection of the flow assembly are always identical. The system is symmetrical.

1. Install the flow assembly vertically.
2. Connect the inflow at the bottom end (upward flow in the pipe).

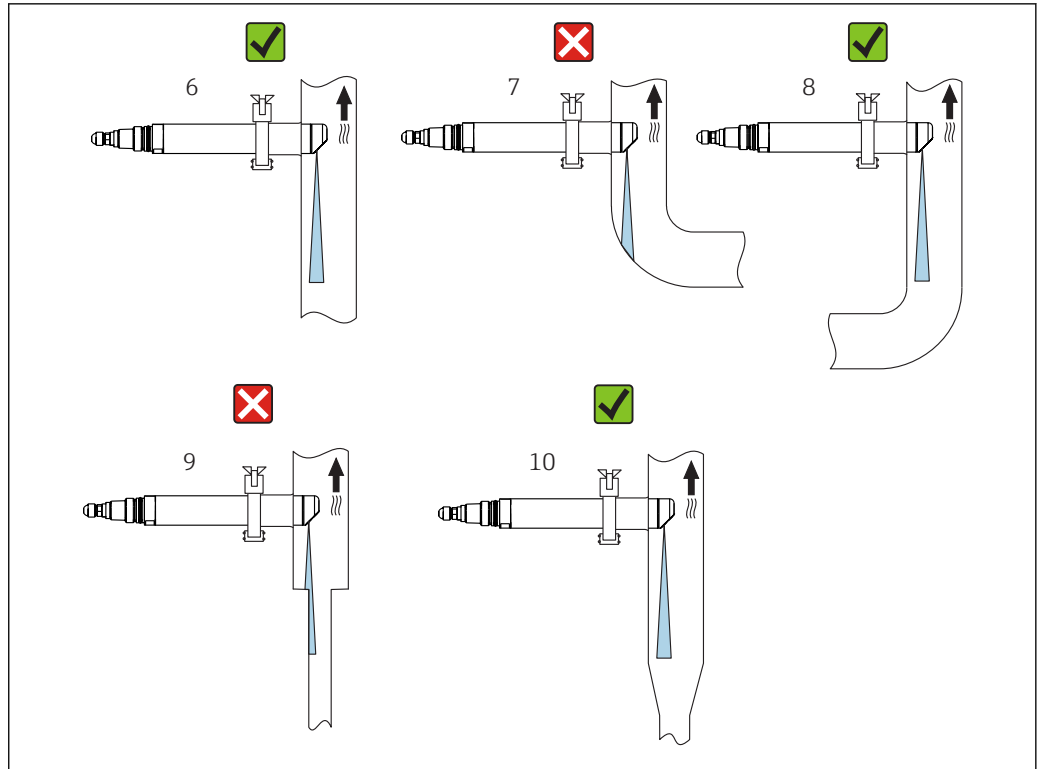
i Avoid buckles and loops in the hose system.

i Pay attention to the installation instructions (flow direction) for the sensor.

Wall effects:

Backscattering at the pipe wall results in falsified measurements in the case of turbidity values < 200 FNU. If this occurs, change the orientation.

Information on avoiding wall effects:




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4 Orientation for pipes and assemblies

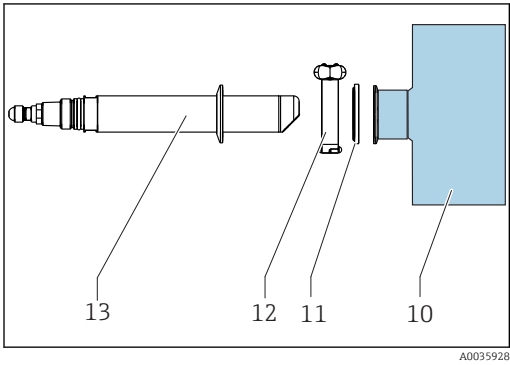
- Install the sensor in such a way that the light beam is not reflected (item 6).
- Avoid sudden changes in cross-section (item 9). Changes in cross-section must be gradual and located as far away as possible from the sensor (item 10).
- Do not install the sensor directly downstream from a bend (item 7). Instead position it as far away as possible from the bend (item 8).
- When using reflective materials (e.g. stainless steel), the pipe diameter must be at least 100 mm (4 in). It is recommended to adjust the installation position (orientation) onsite.
- Pipes made of stainless steel with diameter >DN 300 exhibit hardly any wall effects.

Mounting the flow assembly

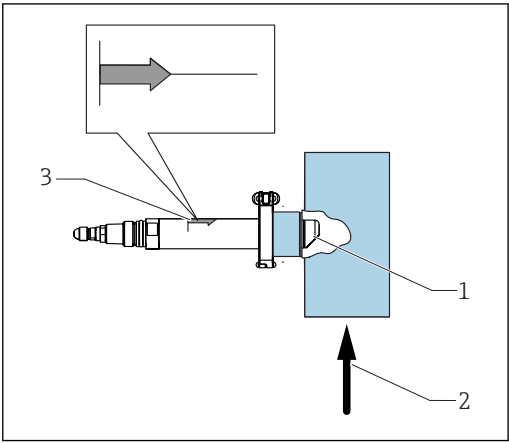
1. Attach the flow assembly to the pipe as a weld-on element.
2. Install the flow assembly vertically.
3. Connect the inflow at the bottom end (upward flow in the pipe).

 Avoid buckles and loops in the hose system.

Mounting the sensor



5 Sensor installation
10 CUA262 flow assembly
11 Clamp seal
12 Locking clamp
13 Turbidity sensor CUS52D



6 Sensor orientation
1 Optical windows
2 Direction of flow
3 Installation marking

- i** Only insert turbidity sensors into the assembly with a 2" clamp.
1. Install the sensor in such a way that the optical windows of the sensor are aligned against the direction of flow (item 2).
 2. Use the installation marking (item 3) on the sensor to ensure the correct sensor orientation.

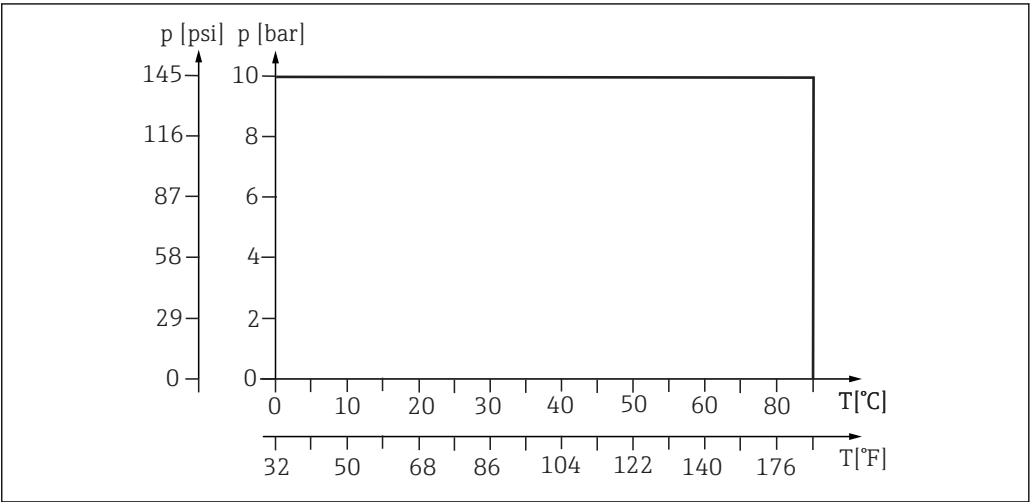
Environment

Ambient temperature range	0 to 60 °C (32 to 140 °F)
Storage temperature	0 to 60 °C (32 to 140 °F), in the original packaging

Process

Process temperature range	0 to 90 °C (32 to 194 °F)
Process pressure range	0 to 10 bar (0 to 145 psi)

Pressure-temperature ratings

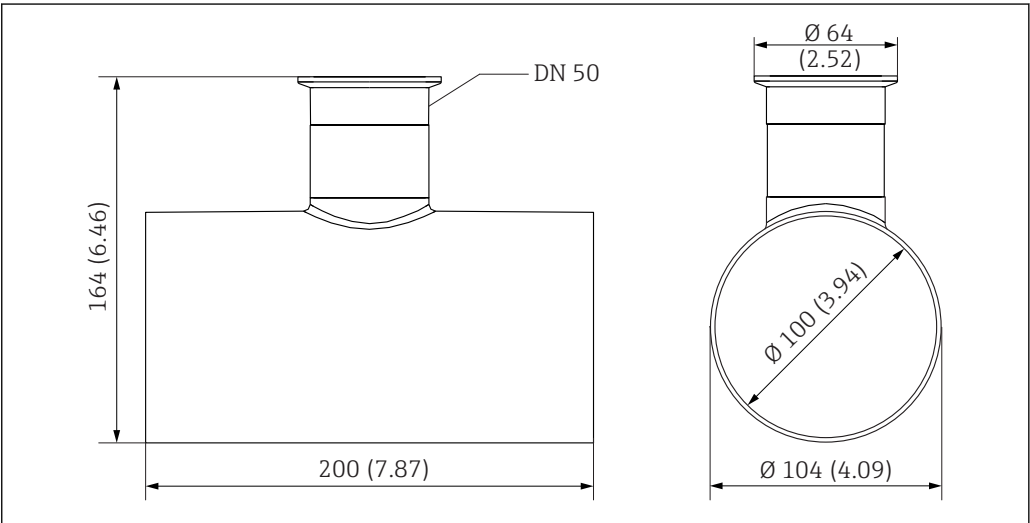


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7 Pressure-temperature ratings

Mechanical construction

Dimensions



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8 Dimensions. Engineering unit: mm (in)

 Clamp according to DIN 32676

Weight

1.11 kg (2.45 lb)

Materials

Assembly housing:	Stainless steel 1.4404 (AISI 316 L)
Seals:	EPDM
Dummy cover:	Stainless steel 1.4404 (AISI 316 L)

Certificates and approvals

DRGL- 2014/68/EU / PED- 2014/68/EU

The assembly has been manufactured according to good engineering practice as per Article 4, Paragraph 3 of the Pressure Equipment Directive 2014/68/EU and is therefore not required to bear the CE label.

Ordering information

Scope of delivery

The scope of delivery comprises:

- 1 Flowfit CUA262 flow assembly, version as ordered
 - 1 clamp seal and locking clamp
 - 1 x Operating Instructions
- If you have any queries:
Please contact your supplier or local sales center.


Product page

www.endress.com/cua262

Product Configurator

On the product page there is a **Configure** button to the right of the product image.

1. Click this button.
↳ The Configurator opens in a separate window.
2. Select all the options to configure the device in line with your requirements.
↳ In this way, you receive a valid and complete order code for the device.
3. Export the order code as a PDF or Excel file. To do so, click the appropriate button on the right above the selection window.

 For many products you also have the option of downloading CAD or 2D drawings of the selected product version. Click the **CAD** tab for this and select the desired file type using picklists.

Accessories

The following are the most important accessories available at the time this documentation was issued.

- For accessories not listed here, please contact your Service or Sales Center.

Description	Order number
Dummy cover for clamp connection; 1 pc	71242180

Ultrasonic cleaning system CYR52

- For attachment to assemblies and pipes
- Product Configurator on the product page: www.endress.com/cyr52

 Technical Information TI01153C

www.addresses.endress.com
