





Installation Instructions

Kit CKI50 measuring head








For versions with 2, 5 or 10 mm

1 About this document

1.1 Warnings

Structure of information	Meaning
 <p>Causes (/consequences) If necessary, Consequences of non-compliance (if applicable) ▶ Corrective action</p>	<p>This symbol alerts you to a dangerous situation. Failure to avoid the dangerous situation will result in a fatal or serious injury.</p>
 <p>Causes (/consequences) If necessary, Consequences of non-compliance (if applicable) ▶ Corrective action</p>	<p>This symbol alerts you to a dangerous situation. Failure to avoid the dangerous situation can result in a fatal or serious injury.</p>
 <p>Causes (/consequences) If necessary, Consequences of non-compliance (if applicable) ▶ Corrective action</p>	<p>This symbol alerts you to a dangerous situation. Failure to avoid this situation can result in minor or more serious injuries.</p>
 <p>Cause/situation If necessary, Consequences of non-compliance (if applicable) ▶ Action/note</p>	<p>This symbol alerts you to situations which may result in damage to property.</p>

1.2 Symbols used

Symbol	Meaning
	Additional information, tips
	Permitted or recommended
	Not permitted or not recommended
	Reference to device documentation
	Reference to page
	Reference to graphic
	Result of a step

2 Identification

2.1 Scope of delivery

Kit CKI50 measuring head in the version ordered

2.2 Tools list



- 71462042 Kit CKI50 O-ring measuring head FFKM
- 71462055 Kit CKI50 disassembly tool, measuring head
- 71462060 Kit CKI50 sensor holder
- O-ring picker, plastic

2.3 Additional documentation

Detailed information on the device can be found in the Operating Instructions and in the other documentation available at:

- www.endress.com/device-viewer
- Smart phone/tablet: Endress+Hauser Operations App

3 Removing the device from the process

Method 1:

1. Disconnect the cable from the transmitter.
2. Remove the device, along with the cable, from the process.

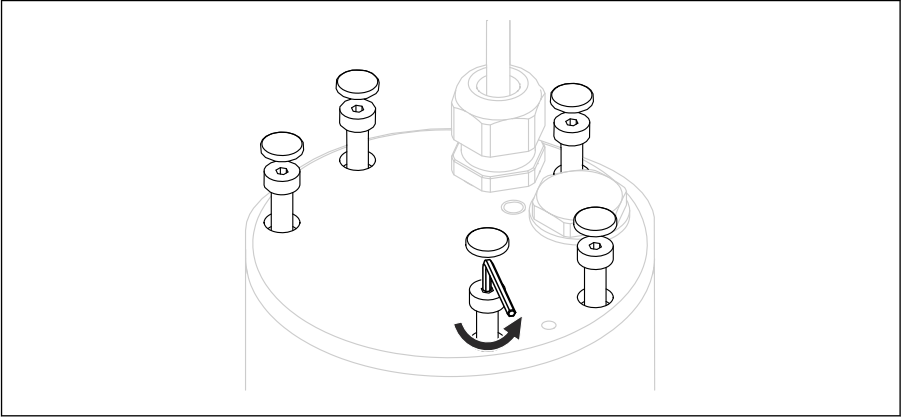
Method 2 (cable cannot be removed):

Required tools:

- Allen key 3 mm (0.12 in)
- Allen key 6 mm (0.24 in)
- Disassembly tool for the lid (kit order number: 71462057)

1. Remove the screw cover from all the screws on the lid.

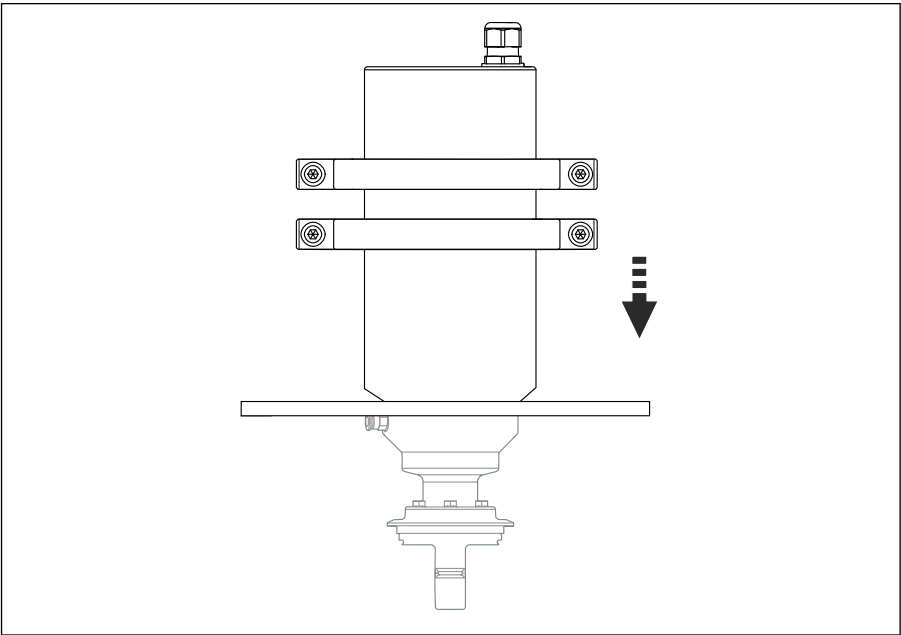
2.



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Loosen the screws uniformly with an Allen key 3 mm (0.12 in).

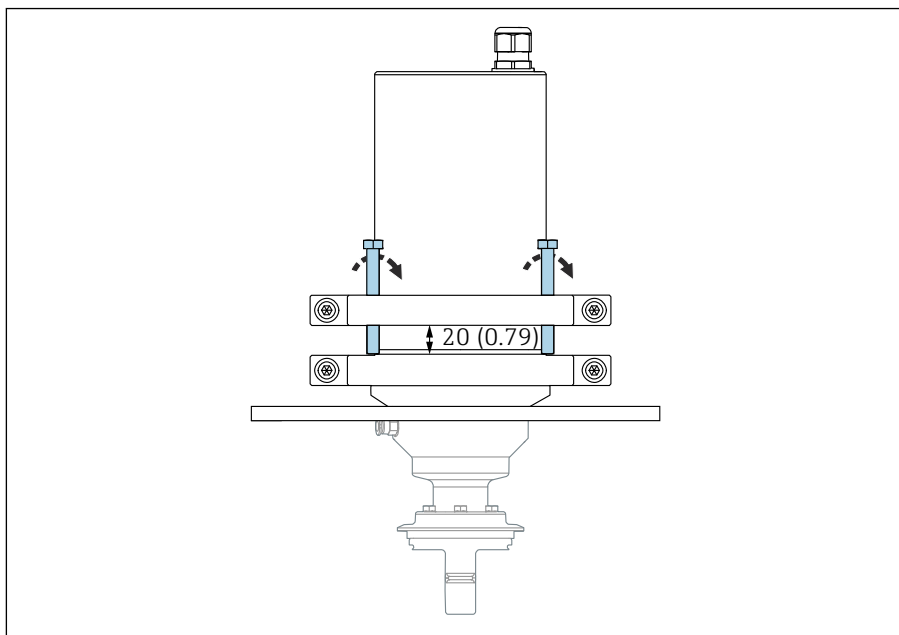
3.



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Position the disassembly tool for the lid on the device.

4.



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Use an Allen key to tighten 2 screws in the top part of the disassembly tool 6 mm (0.24 in) so that the screws still project by 20 mm (0.8 in).

5. Tighten the screws until the housing is pushed up.
6. Remove the housing of the process spectrometer.
7. With one hand, push the underside of the lid from the inside to the outside.
8. Remove the lid from the housing.
9. Using the plastic bag supplied, protect the lid and cable from moisture at the installation location.
10. Remove the device from the process.
 - ↳ Additional maintenance work can now be carried out at a safe place.

It is possible to leave the measuring head in the process for maintenance tasks. Only select method 3 **if the process cannot be stopped**. The optical components can become contaminated.

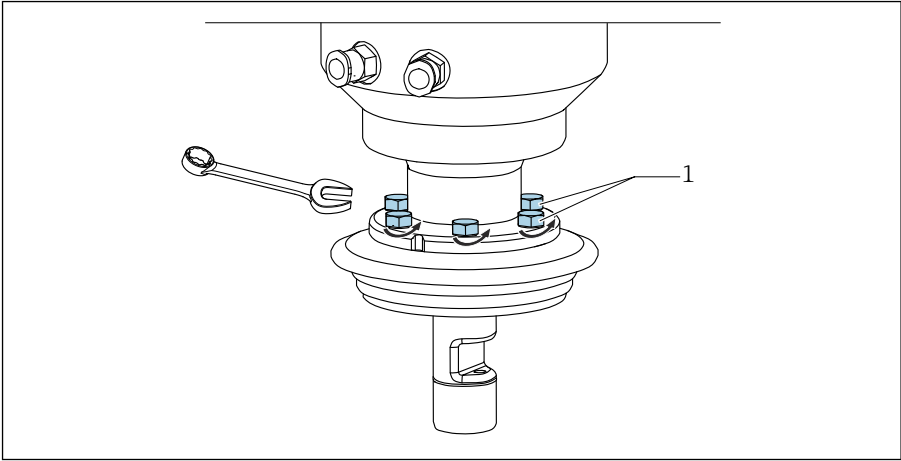
Method 3:

Required tools:

Wrench, 8 mm across flats

1. Perform steps in method 2 → 3.

2.



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Release the 6 hexagonal-headed bolts on the measuring head.

3. Remove the electronics unit from the measuring head.
4. Cover the opening on the measuring head with the plug to prevent dust from entering.

i Preferably perform method 1 →  3. Method 1 presents the lowest risk of soiling the optical components.

4 Replacing the measuring head

WARNING

Leaking medium

Risk of injury!

- ▶ Before each maintenance task, ensure that the process pipe is empty and rinsed.
- ▶ As the device may contain residual medium, rinse it thoroughly before starting work.

CAUTION

Residual medium and high temperatures

Risk of injury!

- ▶ When working with parts that are in contact with the medium, protect against residual medium and elevated temperatures.
- ▶ Wear protective goggles and safety gloves.

NOTICE

Dirt on the optical components

- ▶ Perform maintenance work at a clean workplace.

NOTICE**Work performed carelessly**

Damage to the optical components!

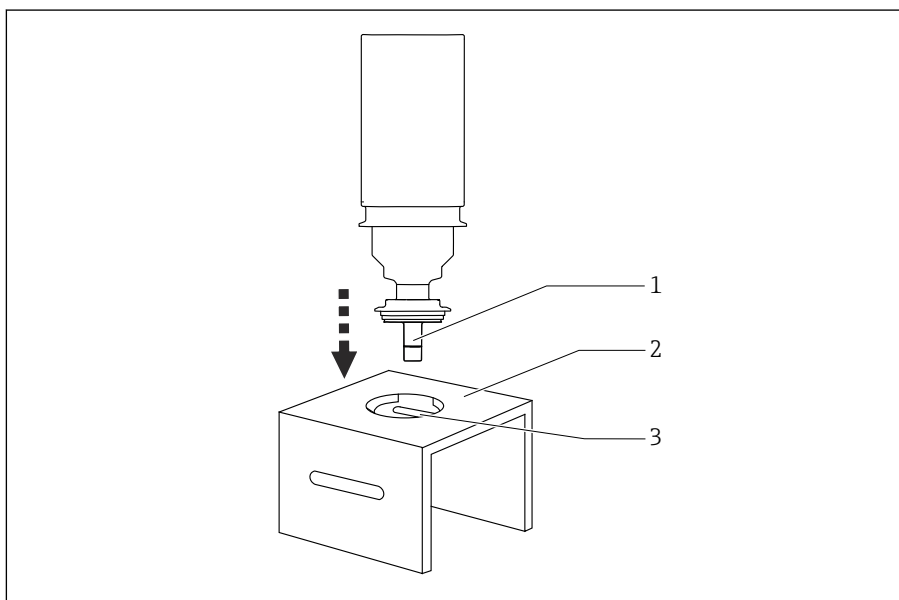
- ▶ Ensure that maintenance work is carried out by qualified specialists only.

NOTICE**Effects on process and process control**

- ▶ When carrying out any work on the system, bear in mind any potential impact this could have on the process control system and the process itself.
- ▶ For your own safety, only use original accessories and parts. With genuine parts, the function, accuracy and reliability are also ensured after maintenance work.

4.1 Maintenance position of process spectrometer

1.



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☑ 1 Put the process spectrometer into the maintenance position.

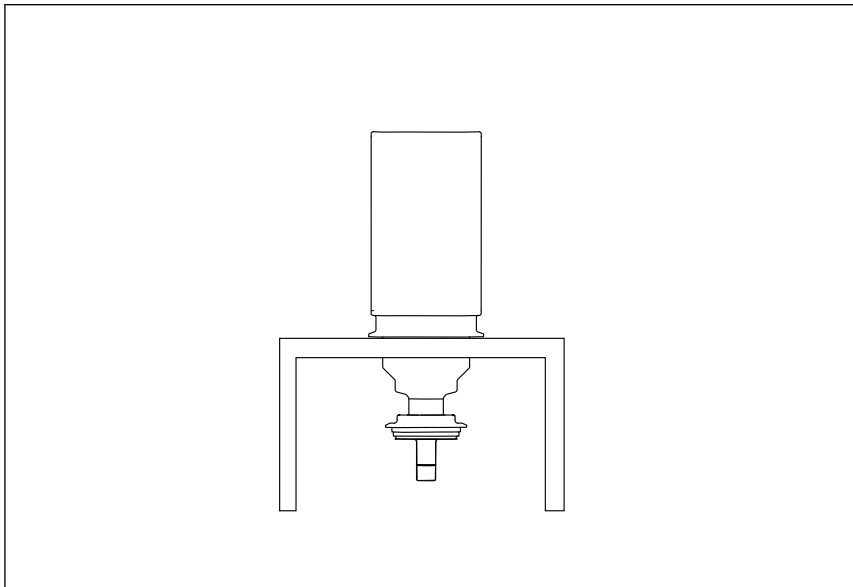
1 Measuring head

2 Holder

3 Recess in holder

Position the assembled holder with the recess at the top.

- Place the device into the recess.





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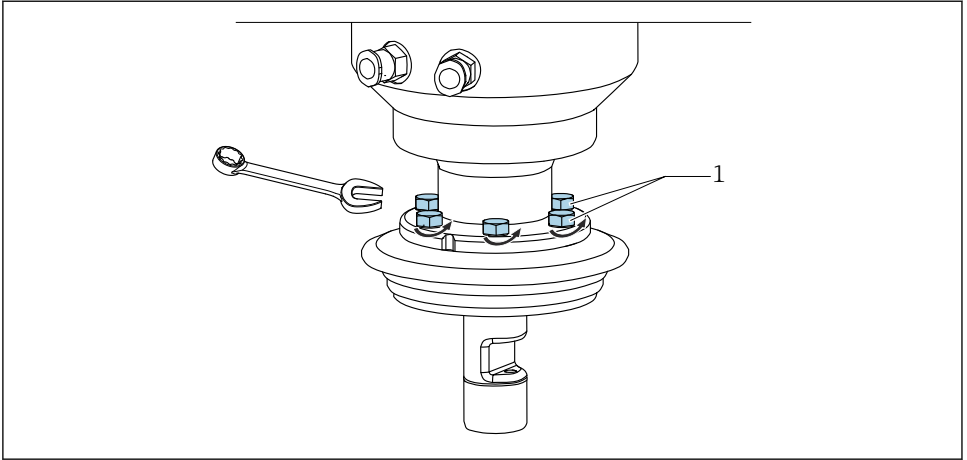
 2 *Process spectrometer in maintenance position*

- Ensure the device is securely seated.

4.2 Disassembling the measuring head

Removing the measuring head from the device:

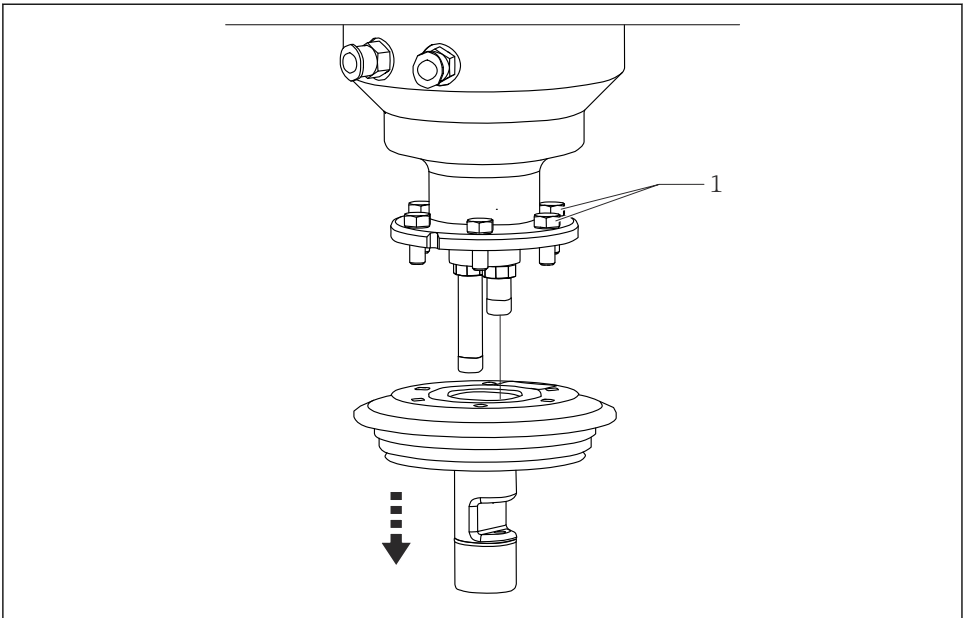
- Untighten the 6 hexagonal-headed bolts with a wrench (8mm across flats)
→  3,  9.
- Release the measuring head from the top part of the device.
- Pull the measuring head down.
- Fit the yellow protective caps supplied on the 2 optical sleeves.



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▣ 3 Disassembling the measuring head

1 6 hexagonal-headed bolts M5x12 (8mm across flats)



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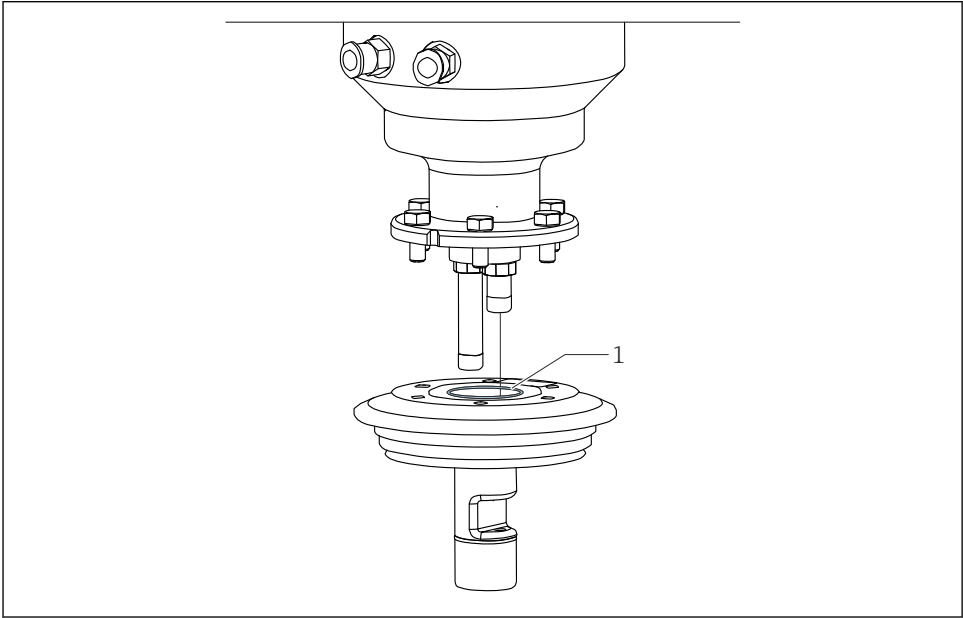
▣ 4 Disassembling the measuring head

1 6 hexagonal-headed bolts

4.3 Mounting the measuring head

Mount the new measuring head on the device:

1. Make sure that the green O-ring (non-lubricated) is located in the groove provided for this purpose.



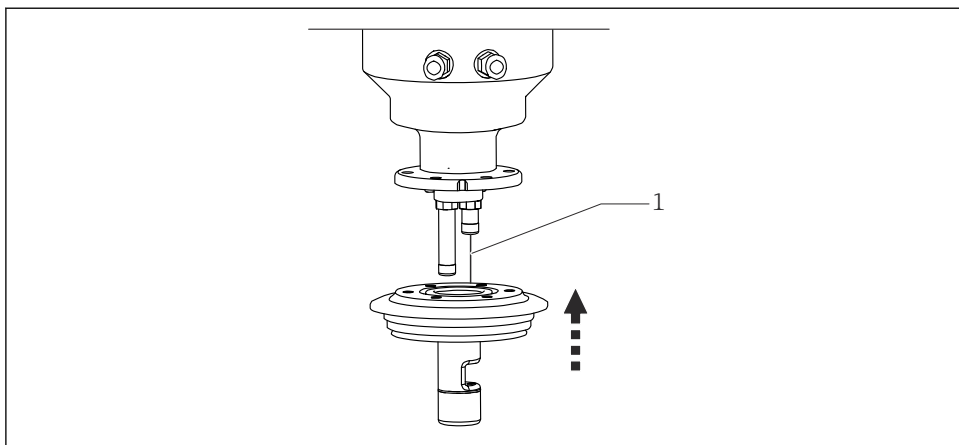
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1 Green O-ring

2. Remove the yellow protection caps from the optical sleeves
3. Insert the temperature sensor into the opening provided in the measuring head.
4. Place the sleeves over the corresponding points in the measuring head.

i Make sure that the short sleeve is located on the side of the measurement slit.
Make sure that the cable of the temperature sensor does not become jammed.

5. Fit the measuring head on the device.
6. Tighten the 6 hexagonal-headed bolts (8 mm (0.3 in) across flats) diagonally with a torque of 6 Nm (4.4 lbf ft).




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5 Mounting the measuring head


1 Temperature sensor

5 Introducing the device into the process

If method 2 →  3 has been performed to open the device, introduce the device into the process as follows:

Preparatory steps

1. Replace the surface seals of the screws.
2. Replace the O-rings on the lid and base.
3. Lubricate the new O-rings.
4. Fit the lubricated O-ring onto the pipe. The pipe serves as a mounting aid.
5. Mount the pipe.

 Ensure that the O-ring does not become jammed.

6. Position the O-ring in the groove provided.

Closing the lid

Required tools:

- Allen key 3 mm (0.12 in)
 - O-ring-picker made of plastic
1. Turn the fitting screws briefly in the wrong direction.
 - ↳ The fitting screws snap into the thread.

2. Tighten the screws uniformly and in diagonally opposite sequence with an Allen key 3 mm (0.12 in) and a torque of 1.5 Nm (1.1 lbf ft) .
3. Fit the screw covers back on.



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