EA01415C/07/EN/02.25-00
71720512
2025-08-31

Installation Instructions
Cleanfit CPA140 and CPA240

Spare parts kits for immersion assembly and flow assembly for 12 mm sensors

Endress+Hauser
People for Process Automation

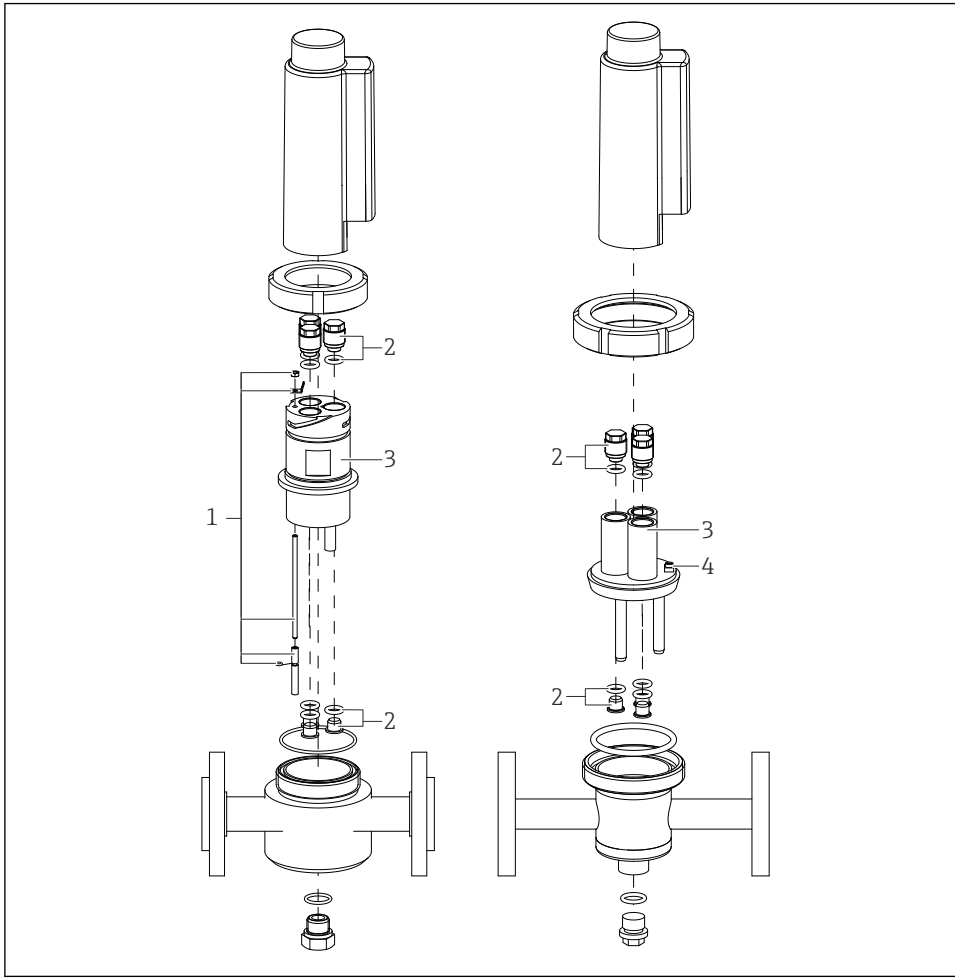
1 Overview

1.1 Spare parts kits

These Installation Instructions apply to the following spare parts kits:

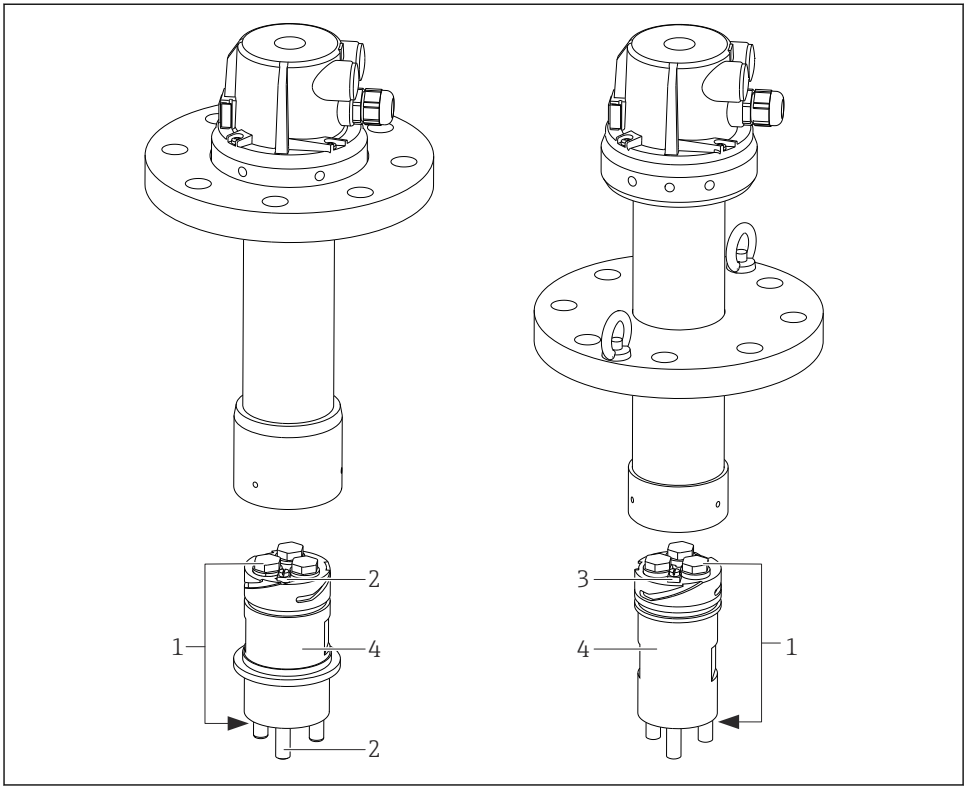
Order code	Designation	Page
51501153 (Fluoraz) 51501152 (Chemraz) 51501151 (Viton) 51501149 (EPDM)	CPA140/240 PEEK sealing plug	→ 🖹 6
71546244 (Fluoraz) 71546245 (Chemraz) 71546246 (Viton) 71546247 (EPDM)	CPA140/240 stainless steel/PEEK sealing plug	→ 🖹 6
51501163 (Hastelloy/EPDM) 51501164 (Hastelloy/Viton) 51501165 (Hastelloy/Chemraz) 51501166 (Hastelloy/Fluoraz) 51501167 (Tantalum/EPDM) 51501168 (Tantalum/Viton) 51501169 (Tantalum/Chemraz) 51501170 (Tantalum/Fluoraz) 71161431 (Without PML/EPDM) 71161433 (Without PML/Viton) 71161434 (Without PML/Chemraz) 71161435 (Without PML/Fluoraz)	CPA140/240-2 electrode holder	→ 🖹 8
51501154 (Hastelloy/EPDM) 51501155 (Hastelloy/Viton) 51501156 (Hastelloy/Chemraz) 51501157 (Hastelloy/Fluoraz) 51501158 (Tantalum/EPDM) 51501159 (Tantalum/Viton) 51501160 (Tantalum/Chemraz) 51501161 (Tantalum/Fluoraz)	CPA140/240 potential matching (PML)	→ 🖹 9
51501162	CPA140/240-3 PML connection	→ 🖹 10

1.2 Overview of the components



1 CPA240-2xxxxxx design (on left) and CPA240-3xxxxxx design (on right)

1 Potential matching (PML)
2 Sealing plug
3 Electrode holder
4 PML connection (Protective ground terminal)



2 CPA140-2xxxxxx design (on left) and CPA140-3xxxxx design (on right)

1 Sealing plug
2 Potential matching (PML)
3 PML connection (Protective ground terminal)
4 Electrode holder

2 Intended use

- The components of the service kits are to be used exclusively as conversion parts or spare parts for immersion assemblies CPA140 or flow assemblies CPA240. Any other use is not permitted!
- Only use original parts from Endress+Hauser.
- Only use original parts of the manufacturer.
- In the Device Viewer, check if the spare part is suitable for the device in question.

3 Personnel authorized to carry out conversion

- Installation, commissioning, operation and maintenance of the measuring system may be carried out only by specially trained technical personnel.
- The technical personnel must be authorized by the plant operator to perform the stated tasks.
- The electrical connection may only be established by an electrical technician.
- The technical personnel must have read and understood these Installation Instructions and must follow the instructions they contain.
- Measuring point faults may be repaired only by authorized and specially trained personnel.
- In the case of Ex-certified devices, the technical staff must also be trained in explosion protection.

Repairs not described in the Operating Instructions provided must only be carried out directly at the manufacturer's site or by the service organization.

4 Safety instructions

⚠ WARNING

Risk of injury from high pressure, high temperatures, chemical hazards, or escaping medium!

- ▶ Before any maintenance task, depressurize and drain the system.
- ▶ Flush the assembly thoroughly before starting work, as it may contain medium residues.

⚠ CAUTION

Risk to health due to contact with reagents, chemicals or process solutions!

- ▶ Wear protective gloves, protective goggles and protective clothing.
- ▶ Immediately rinse splashes with plenty of water and a 1% sodium bicarbonate solution ($NaHCO_3$, baking soda).
- ▶ In case of eye contact, rinse the affected area with plenty of water and then seek medical advice. Show the relevant safety data sheet to the physician.
- ▶ Note the nationally applicable workplace safety regulations for the work area when handling toxic or corrosive chemicals.

NOTICE

Material damage due to solvents!

- ▶ Do not use any halogen-containing organic solvents or acetone. These solvents could destroy plastic components of the assembly.

Potential impact on the process

Before decommissioning an active device, the potential impact on the overall process must be taken into account! This applies in particular when using the switching contacts, the analog signal outputs or the communication interface of the associated measuring instrument to control process variables. Coordinate service tasks with the operator!

Contact Endress+Hauser Service if you have questions: www.addresses.endress.com

5 Scope of delivery

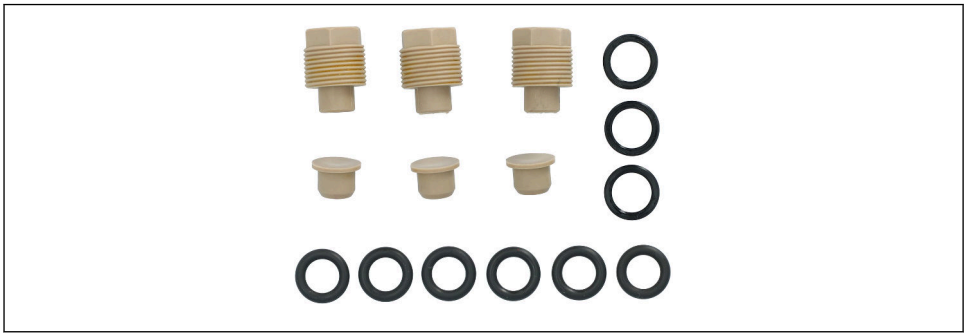
5.1 Kit CPA140/240, PEEK sealing plug

The difference between the contents of the following kits is the O-ring material:

- 51501153 kit CPA140/240 sealing plug; Fluoraz
- 51501152 kit CPA140/240 sealing plug; Chemraz
- 51501151 kit CPA140/240 sealing plug; Viton
- 51501149 kit CPA140/240 sealing plug; EPDM

The kits contain the following parts → 3, 6:

3 x	Dummy plug PG 13.5 PEEK	3 x	Sealing plug PEEK
3 x	Thrust collar	1 x	Kit instructions
6 x	O-ring ID 10.69 W 3.53 OD 17.75 mm; for material see above		



A0060045

3 *CPA140/240 PEEK sealing plug*

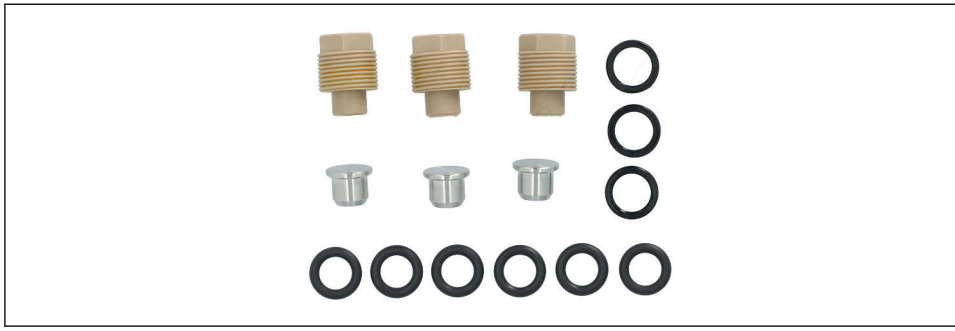
5.2 Kit CPA140/240 stainless steel/PEEK sealing plug

The difference between the contents of the following kits is the O-ring material:

- 71546244 Kit CPA140/240 sealing plug; PEEK/316L Fluoraz
- 71546245 Kit CPA140/240 sealing plug; PEEK/316L Chemraz
- 71546246 Kit CPA140/240 sealing plug; PEEK/316L Viton
- 71546247 kit CPA140/240 sealing plug; PEEK/316L EPDM

The kits contain the following parts → 4, 7:

3 x	Dummy plug PG 13.5 PEEK	3 x	Dummy plug, stainless steel
3 x	Thrust collar	1 x	Kit instructions
6 x	O-ring ID 10.69 W 3.53 OD 17.75 mm; for material see above		



A0060044

4 CPA140/240 stainless steel/PEEK sealing plug

5.3 Kits CPA140/240-2 electrode holder

The difference between the contents of the following kits is the O-ring material and the potential matching pin version:

- 51501163 Kit CPA140/240-2 electrode holder Hastelloy/EPDM
- 51501164 Kit CPA140/240-2 electrode holder Hastelloy/Viton
- 51501165 Kit CPA140/240-2 electrode holder Hastelloy/Chemraz
- 51501166 Kit CPA140/240-2 electrode holder Hastelloy/Fluoraz
- 51501167 Kit CPA140/240-2 electrode holder tantalum/EPDM
- 51501168 Kit CPA140/240-2 electrode holder tantalum/Viton
- 51501169 Kit CPA140/240-2 electrode holder tantalum/Chemraz
- 51501170 Kit CPA140/240-2 electrode holder tantalum/Fluoraz
- 71161431 Kit CPA140/240-2 electrode holder without PML/EPDM
- 71161433 Kit CPA140/240-2 electrode holder without PML/Viton
- 71161434 Kit CPA140/240-2 electrode holder without PML/Chemraz
- 71161435 Kit CPA140/240-2 electrode holder without PML/Fluoraz

The kits contain the following parts → 5, 8:

1 x	Electrode holder, PVDF, with sealing plug, with or without potential matching, Hastelloy/tantalum	1 x	Kit instructions

A0059985

5 *CPA140/240-2 electrode holder*

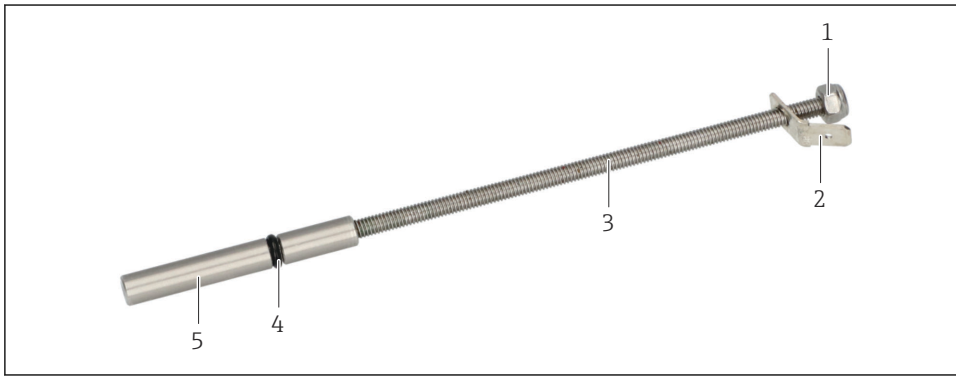
5.4 Kits CPA140/240 potential matching (PML)

The difference between the contents of the following kits is the O-ring material and the potential matching pin version:

- 51501154 Kit CPA140/240-2 PML Hastelloy/EPDM
- 51501155 Kit CPA140/240-2 PML Hastelloy/Viton
- 51501156 Kit CPA140/240-2 PML Hastelloy/Chemraz
- 51501157 Kit CPA140/240-2 PML Hastelloy/Fluoraz
- 51501158 Kit CPA140/240-2 PML tantalum/EPDM
- 51501159 Kit CPA140/240-2 PML tantalum/Viton
- 51501160 Kit CPA140/240-2 PML tantalum/Chemraz
- 51501161 Kit CPA140/240-2 PML tantalum/Fluoraz
-

The kits contain the following parts → 6, 9:

1	1 x	Hexagonal nut M4
2	1 x	Flat plug
3	1 x	Tie rod
4	1 x	O-ring ID 2.90 W 1.78 OD 6.46 mm EPDM/FKM/ Chemraz/Fluoraz
5	1 x	Potential matching pin Hastelloy or tantalum
	1 x	Kit instructions



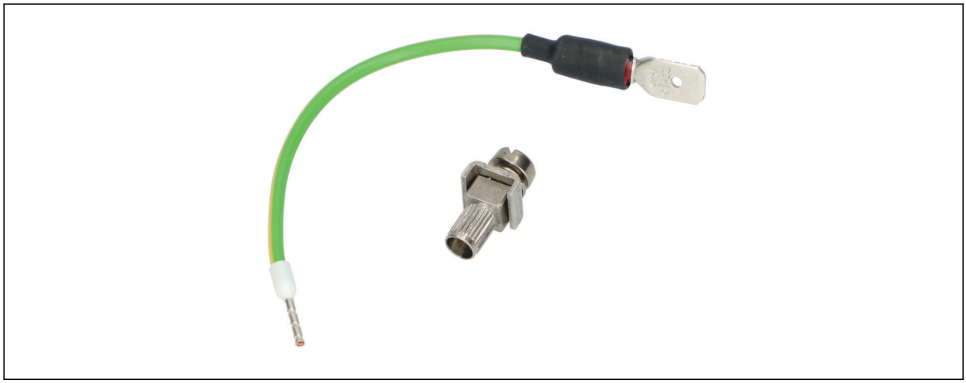
A0059986

6 *CPA140/240 potential matching (PML)*

5.5 51501162 Kit CPA140/240-3 PML connection

The kit contains the following parts → 7, 10:

1 x	Potential matching terminal M4	1 x	Kit instructions
1 x	Cable		



A0059987

7 *CPA140/240-3 PML connection*

6 Replacing the components

WARNING

Risk of injury from high pressure, high temperature or chemical hazards if process medium escapes!

- Do not exceed the permitted maximum process pressure.
- Prior to installing and removing the sensor, depressurize the system.

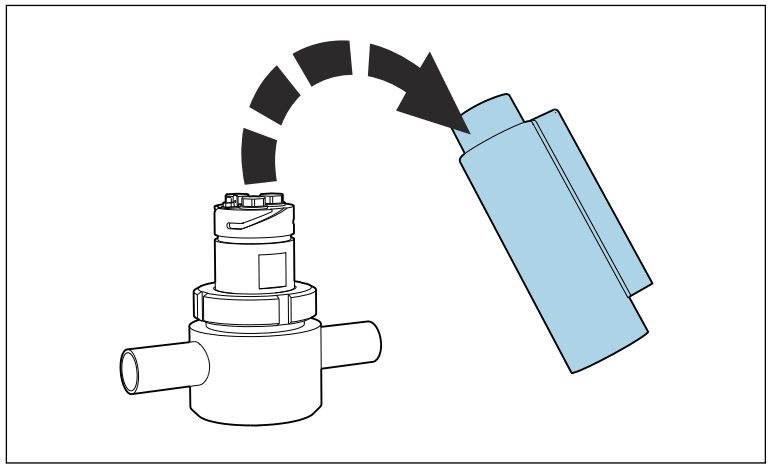
pH sensor with KCl supply line

Use the pressurized version of the CPY7B electrolyte supply vessel. Loop the KCl supply line in the assembly cover so that it is gently curved, but not bent or buckled.

The PVDF version is illustrated in the graphics below. The sealing plug mounting procedure is identical for the stainless steel version.

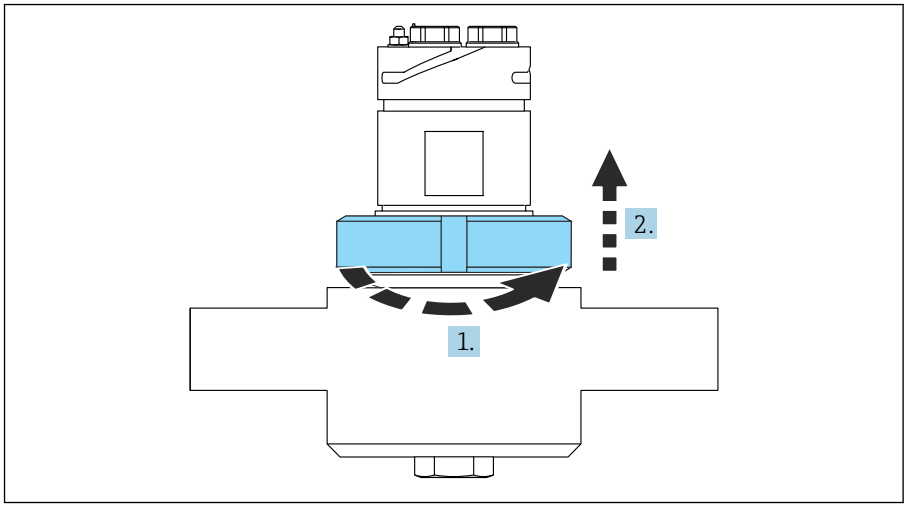
6.1 Replacing the sealing plugs (CPA240)

Install the sensors preferably after mounting the assembly.

1. Shut off the pipe and depressurize it.
2. 

   Remove the protection cover.

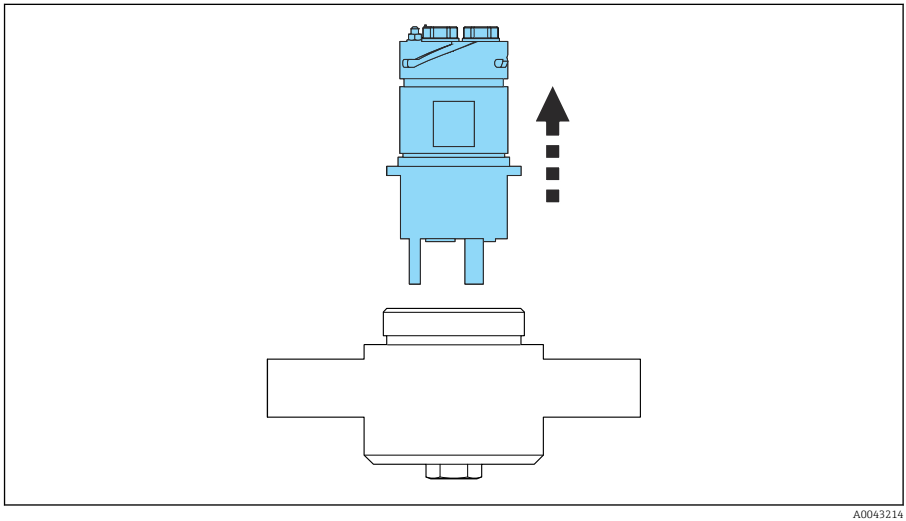
3.



A0043213

Loosen the union nut and remove it.

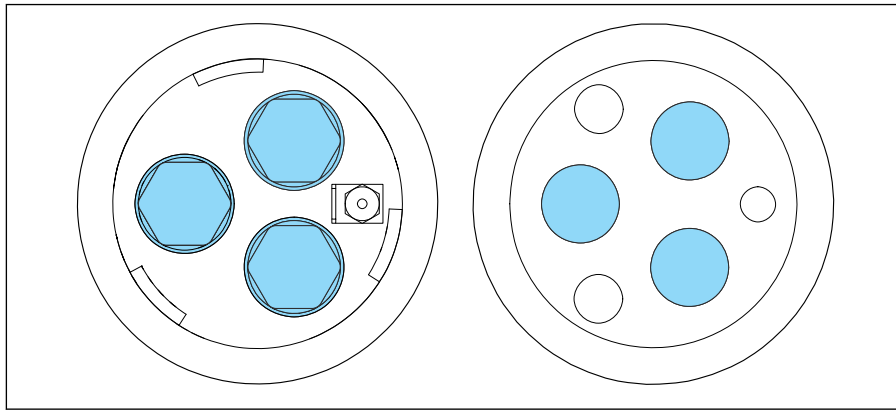
4.



A0043214

Remove the sensor holder.

5.



A0043215

Remove the blind plug with the seal (top) and dummy plug (bottom) from the sensor mounting slot.

Dummy plugs (bottom) can be carefully levered out using a flat screwdriver with a wide blade.

NOTICE

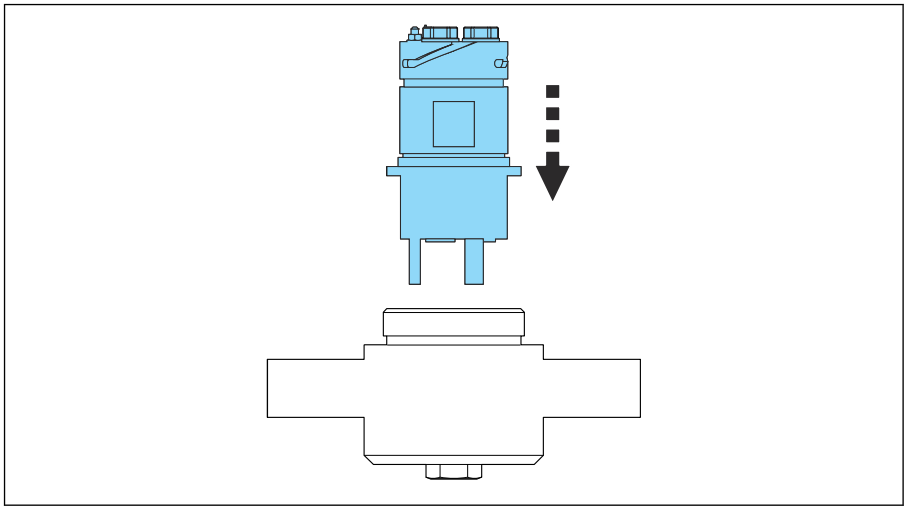
Risk of injury due to screwdriver!

When levering out the sealing plug, the screwdriver may slip and cause injury.

- ▶ Remove the sealing plug carefully.

Before inserting a new sealing plug, ensure that the existing seal is not damaged. Insert a new seal if necessary!

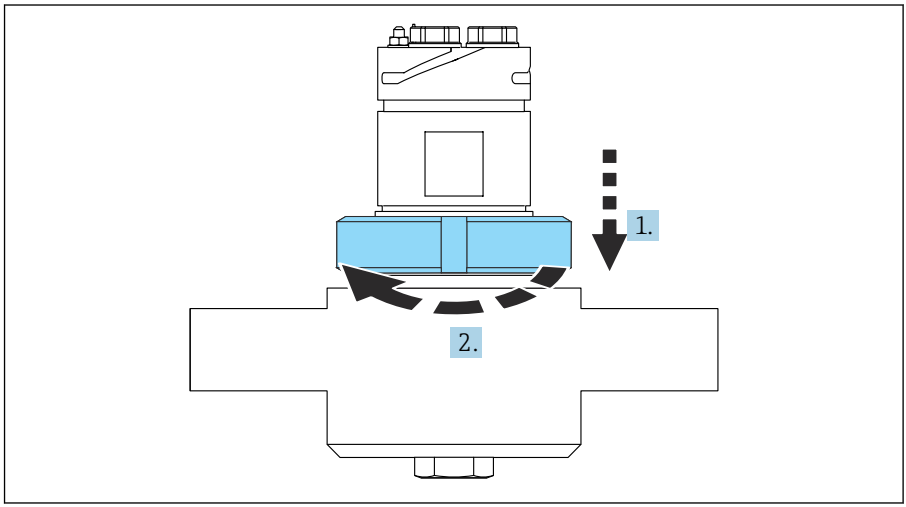
6.



A0043217

Mount the sensor holder.

7.



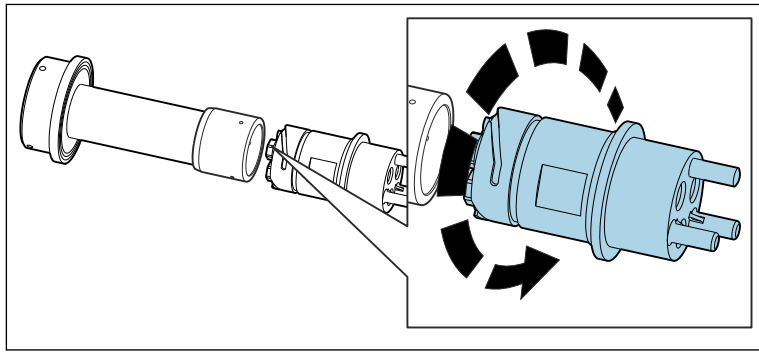
A0043216

Fit the union nut and tighten it.

6.2 Replacing the sealing plugs (CPA140)

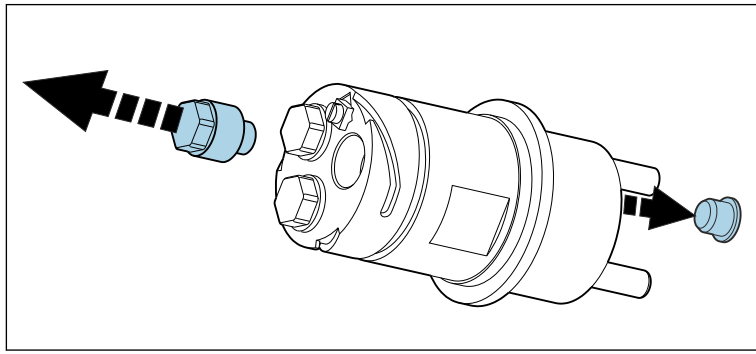
Install the sensors preferably after mounting the assembly.

1.



Unscrew the sensor holder (bayonet lock).

2.



Remove the dummy plug along with the O-ring, thrust collar and sealing plug and replace them with new parts.

↳ Do not remove the dummy plug and sealing plug in the mounting slots that are not used!

Dummy plugs (bottom) can be carefully levered out using a flat screwdriver with a wide blade.

NOTICE

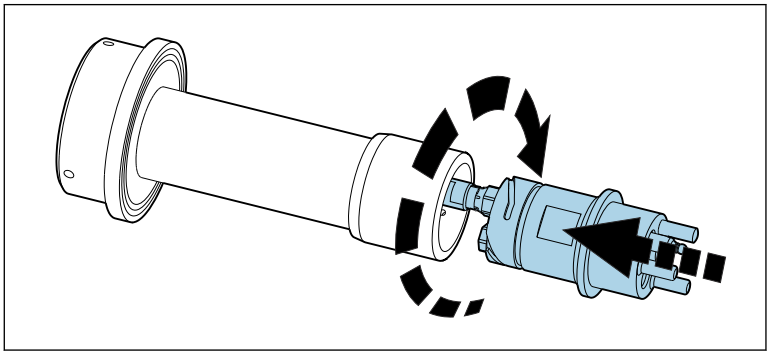
Risk of injury due to screwdriver!

When levering out the sealing plug, the screwdriver may slip and cause injury.

▶ Remove the sealing plug carefully.

Before inserting a new sealing plug, ensure that the existing seal is not damaged. Insert a new seal if necessary!

▶



Screw in the sensor holder. Use a flat key wrench AF55 if necessary.

7 Additional documentation

Detailed information on the devices shown here can be found in the Operating Instructions for each device and in the other documentation, available at:
- www.endress.com/device-viewer
- Smartphone/tablet: Endress+Hauser Operations app

8 Disposal

8.1 Assemblies

▶ Observe the local regulations.

8.2 Sensors

If required by the Directive 2012/19/EU on waste electrical and electronic equipment (WEEE), the product is marked with the depicted symbol in order to minimize the disposal of WEEE as unsorted municipal waste. Do not dispose of products bearing this marking as unsorted municipal waste. Instead, return them to the manufacturer for disposal under the applicable conditions.

www.addresses.endress.com

Endress+Hauser

People for Process Automation