Technical Information

Dipfit CPA240

Flow assembly for pH or ORP sensors

For very demanding processes

Application

- Chemical industry, e.g. in
  - production of synthetic materials and dyes
  - production or pesticides and fertilizers
  - oil or wastewater separation
  - condensate treatment
- Power stations and incinerator plants, e.g. in
  - cooling water monitoring
  - flue gas cleaning
- Metal extraction and metal processing

Your benefits

- Simple installation and removal of the sensor holder thanks to bayonet lock technology
- Reliable sealing even in media containing solid particles
- Suitable for use at high pressures and temperatures
- Immersion depth from 500 to 2500 mm
- Reduced condensation thanks to breathable GORE-TEX® filter
- Variety of flange connections (DIN, ANSI, JIS) for flexible connection to the process

Endress+Hauser

People for Process Automation
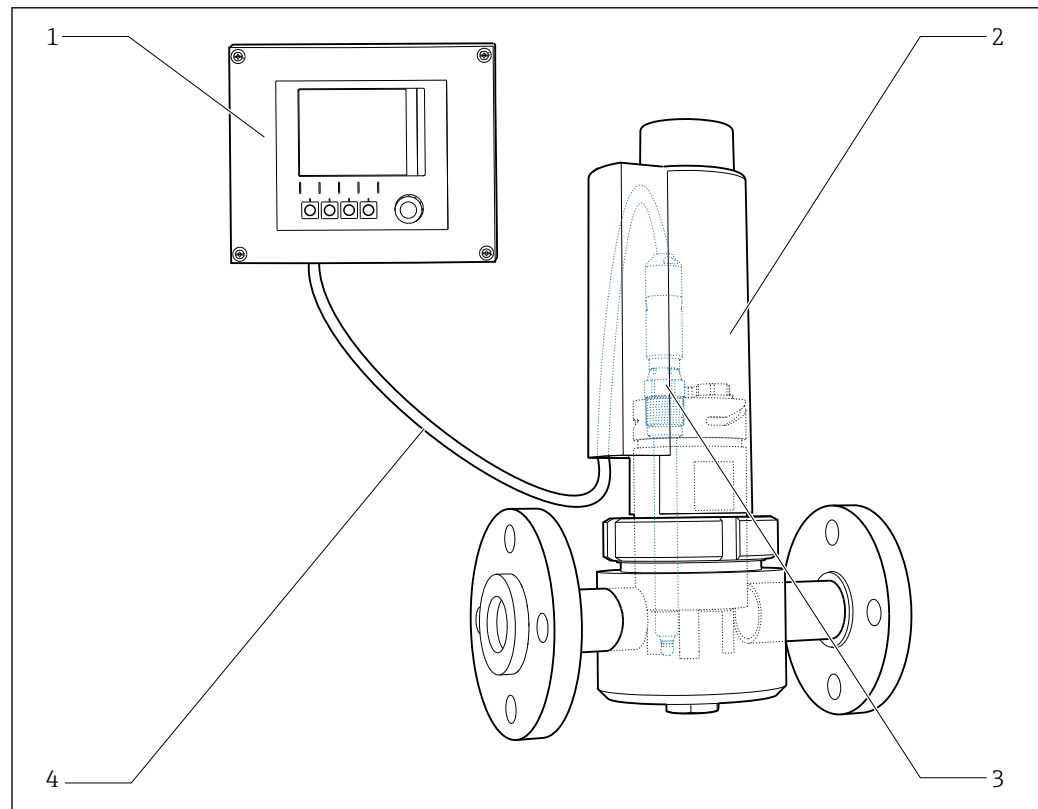
Function and system design

Measuring system

A complete measuring system comprises:
- Flow assembly Flowfit CPA240
- 1-3 pH, ORP, pH/ORP combined sensors or temperature sensors, e.g. CPS11D, CPS12D
- 1-3 measuring cables, e.g. CYK10 or CPK9
- Transmitter, e.g. Liquiline CM442

Optional:
- Extension cable, e.g. CYK11
- Junction box, e.g. VBM

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⊠ 1   Example of a measuring system (process and process connections are not illustrated)

1   Transmitter CM442
2   Flow assembly Flowfit CPA240, here as PVDF version
3   pH sensor CPS11D
4   Sensor cable CYK10

Environment

Ambient temperature range

-10 to +70 ℃ (+10 to +160 ℉)

Storage temperature

-10 to +70 ℃ (+10 to +160 ℉)

Process

Process temperature

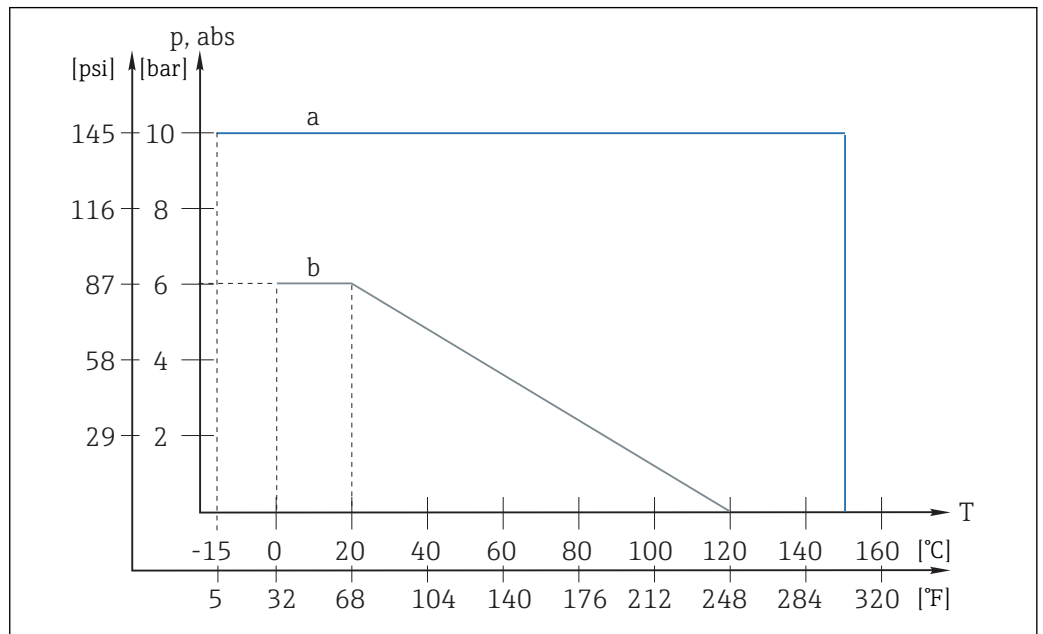|	
PVDF version	0 to 120 ℃ (32 to 250 ℉)
Stainless steel version	-15 to 150 ℃ (5 to 300 ℉), for all seals except EPDM -15 to 140 ℃ (5 to 280 ℉), for EPDM seal

Process pressure	PVDF version	Max. 6 bar (87 psi), absolute
	Stainless steel version	Max. 10 bar (145 psi), absolute

Pressure-temperature ratings	

⊡ 2   Pressure-temperature ratings
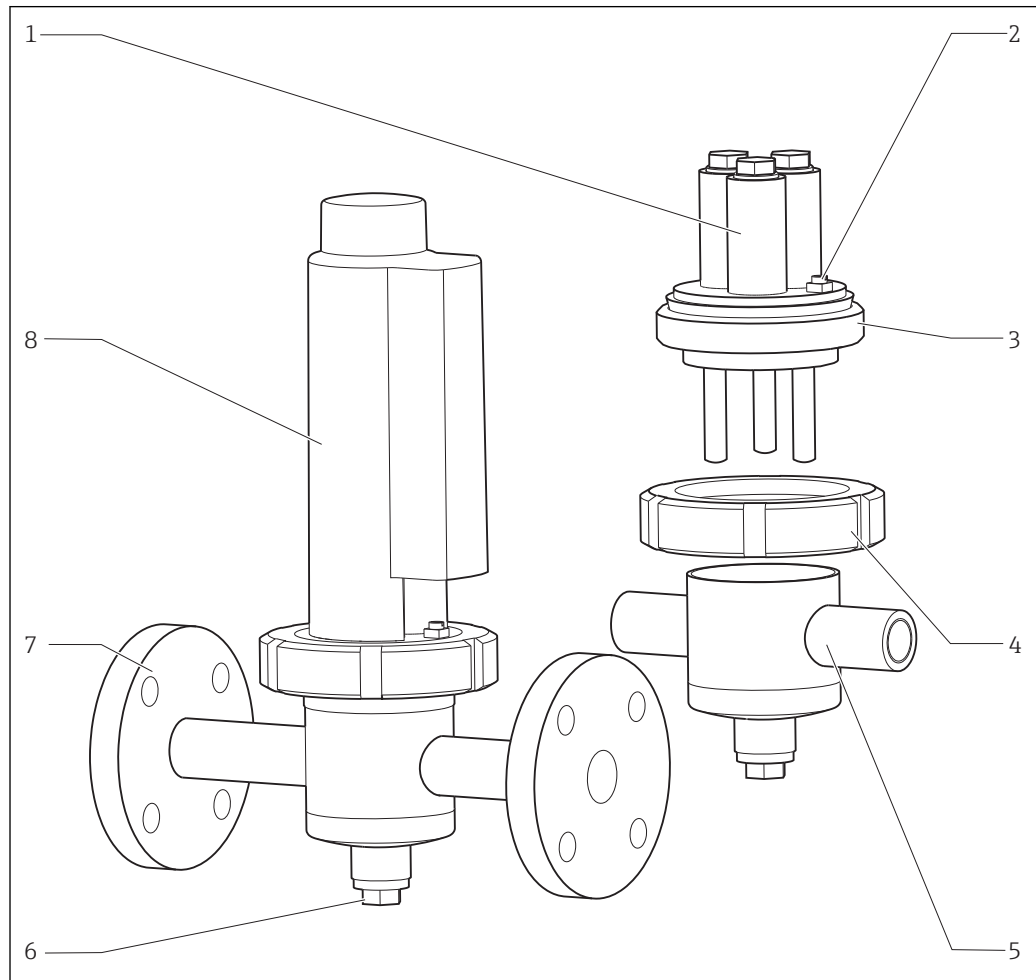
a   Stainless steel version
a   PVDF version

Mechanical construction
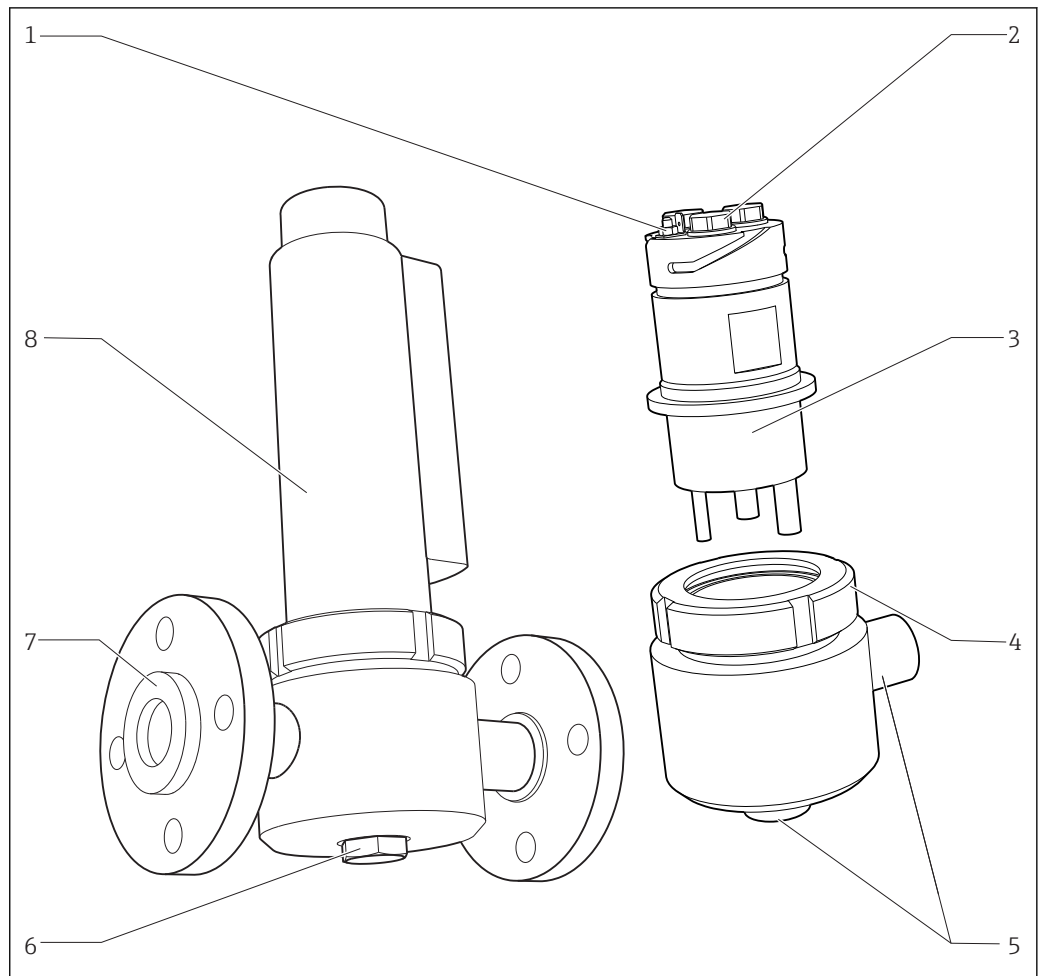
Design **Stainless steel version**

⊡ 3   Stainless steel versions

1   3 sensor mounting slots
2   Potential matching connection (PML)
3   Sensor holder
4   Union nut
5   Process connection, version A, with NPT½" thread
6   Drain screw
7   Process connection, version A, with fixed flange
8   Protection cover
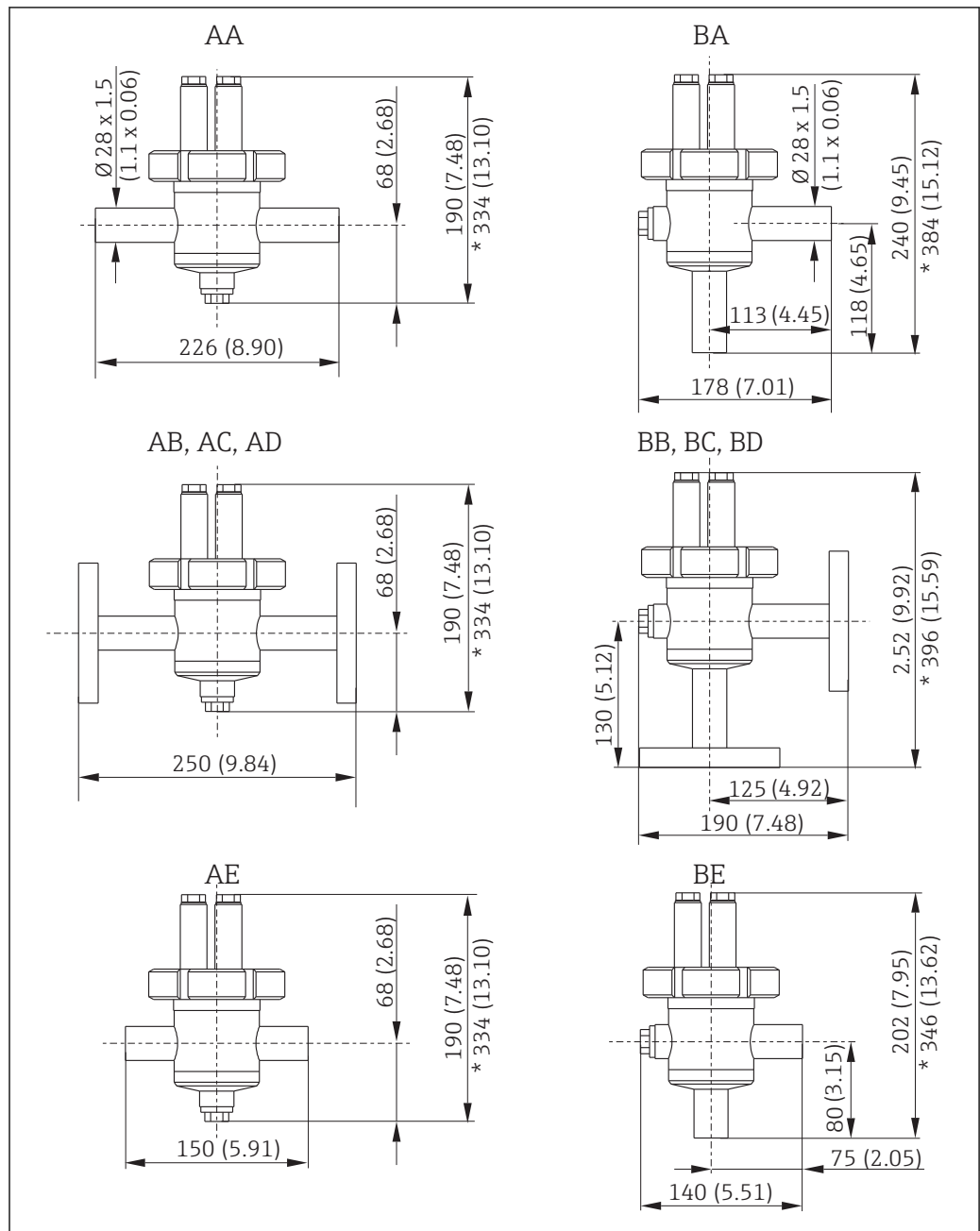
PVDF version

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🖻 4   *PVDF versions*

1   Potential matching connection (PML)
2   3 sensor mounting slots
3   Sensor holder
4   Union nut
5   Process connection, version B, with NPT½" thread
6   Drain screw
7   Process connection, version A, with lap joint flange
8   Protection cover

Dimensions

AA

Ø 28 x 1.5 (1.1 x 0.06)
68 (2.68)
190 (7.48)
* 334 (13.10)
226 (8.90)

BA

Ø 28 x 1.5 (1.1 x 0.06)
240 (9.45)
* 384 (15.12)
118 (4.65)
113 (4.45)
178 (7.01)

AB, AC, AD

68 (2.68)
190 (7.48)
* 334 (13.10)
250 (9.84)

BB, BC, BD

2.52 (9.92)
* 396 (15.59)
130 (5.12)
125 (4.92)
190 (7.48)

AE

68 (2.68)
190 (7.48)
* 334 (13.10)
150 (5.91)

BE

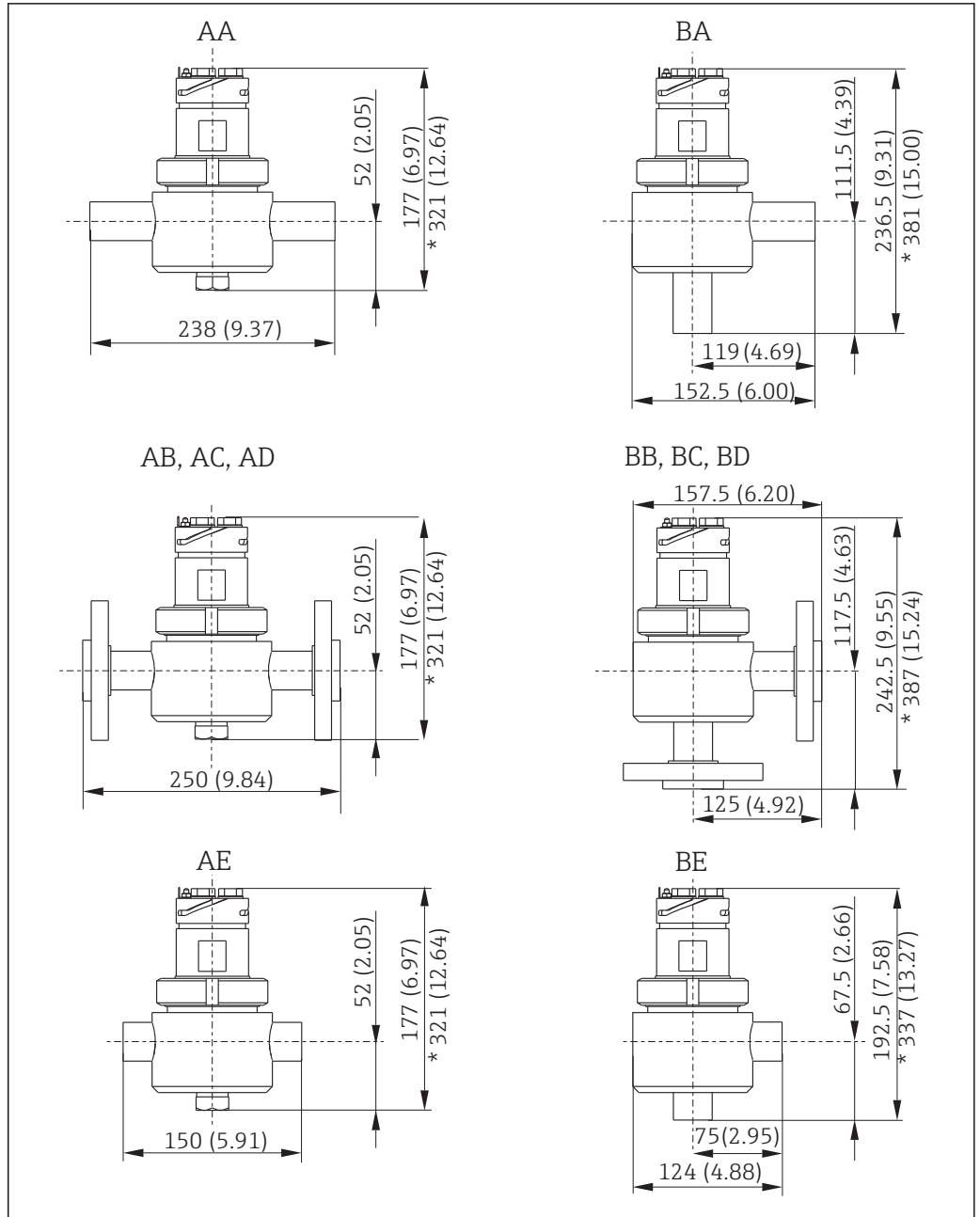202 (7.95)
* 346 (13.62)
80 (3.15)
75 (2.05)
140 (5.51)

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☒ *5   Stainless steel version, dimensions in mm (in)*
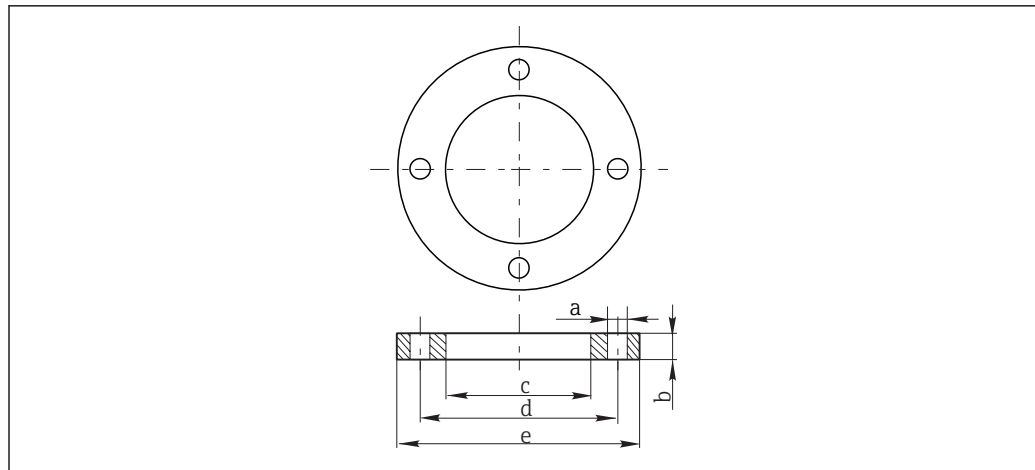
*   *With protection cover*

*6   PVDF version, dimensions in mm (in)

*   With protection cover

☒ 7   *Flange dimensions, → Table*

	Stainless steel assembly version			PVDF assembly version		
	DN25 PN16	ANSI 1" 150 lbs	JIS 10K 25A	DN25 PN16	ANSI 1" 150 lbs	JIS 10K 25A
a [mm (in)]	14 (0.55)	16 (0.63)	19 (0.75)	14 (0.55)	16 (0.63)	19 (0.75)
b [mm (in)]	14 (0.55)	14 (0.55)	14 (0.55)	14 (0.55)	14 (0.55)	14 (0.55)
c [mm (in)]				42 (1.65)	42 (1.65)	42 (1.65)
d [mm (in)]	85(3.35)	79 (3.11)	90 (3.54)	85(3.35)	79 (3.11)	90 (3.54)
e [mm (in)]	115 (4.53)	108 (4.25)	125 (4.92)	115 (4.53)	115 (4.53)	125 (4.92)
Screws	M12	M12	M16	M12	M12	M16
Bore holes	8	4	4	8	4	4

Weight

Depends on version (material, immersion depth):

PVDF	2.5 to 3.0 kg (5.5 to 6.6 lbs)
Stainless steel	8.0 to 12.0 kg (17.6 to 26.5 lbs)

Materials

In contact with medium, depending on version

Immersion tube	PVDF / stainless steel 1.4404 (AISI 316L)
O-rings	EPDM / VITON / Chemraz / Fluoraz
Sensor holder	PVDF / stainless steel 1.4404 (AISI 316L)

Not in contact with medium, depending on version

Assembly head	PP-GF 20
Lap joint flange	UP-GF / stainless steel 1.4404 (AISI 316L)
Installation aids [1]	Stainless steel 1.4301 (AISI 304)

1)   Only for stainless steel version

Process connections

Depending on version:
- None
- Flange DN 80 / PN 16
- Flange ANSI 3" / 150 lbs
- Flange JIS 10K 80A

Cable glands

1 x Pg 13.5 and 2 x dummy plug Pg 16

| Immersion depth | Depending on version:
• 500 mm (19.7 in)
• 1000 mm (39.4 in)
• 1500 mm (59.1 in)
• 2000 mm (78.7 in)
• 2500 mm (98.4 in) |

Ordering information

| Product page | www.endress.com/cpa240 |

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.

| Scope of delivery | The scope of delivery comprises:
• Ordered version of assembly
• Operating Instructions

▸ If you have any queries:
  Please contact your supplier or local sales center. |

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.

Sensors (selection)	**Orbisint CPS11D** • pH sensor for process technology • Optional SIL version for connecting to SIL transmitter • With dirt-repellent PTFE diaphragm 📖 Technical Information TI00028C **Ceraliquid CPS41D** pH electrode with ceramic junction and KCl liquid electrolyte 📖 Technical Information TI00079C **Orbisint CPS12D** ORP sensor for process technology 📖 Technical Information TI00367C **Ceraliquid CPS42D** ORP electrode with ceramic junction and KCl liquid electrolyte 📖 Technical Information TI00373C **Memosens CPS16D** • Combined pH/ORP sensor for process technology • With dirt-repellent PTFE diaphragm • With Memosens technology • Product Configurator on the product page: www.endress.com/cps16D 📖 Technical Information TI00503C
Measuring cable	**Memosens data cable CYK10** • For digital sensors with Memosens technology • Product Configurator on the product page: www.endress.com/cyk10 📖 Technical Information TI00118C **Measuring cable CPK9** • Terminated measuring cable for connecting analog sensors with TOP68 plug-in head • Selection in accordance with product structure • Ordering information: Endress+Hauser sales office or www.endress.com.
KCl supply vessel	**Electrolyte vessel CPY7B** • Storage container for KCl electrolyte, 200 ml • Product Configurator on the product page: www.endress.com/cpy7b 📖 Operating Instructions BA00128C

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