

Technical Information

Dipfit CLA140

Immersion assembly with flange connection for very demanding processes



Sensor holder with bayonet lock

Application

- Chemical industry, e.g. in
 - production of synthetic materials and dyes
 - production of 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

Function and system design

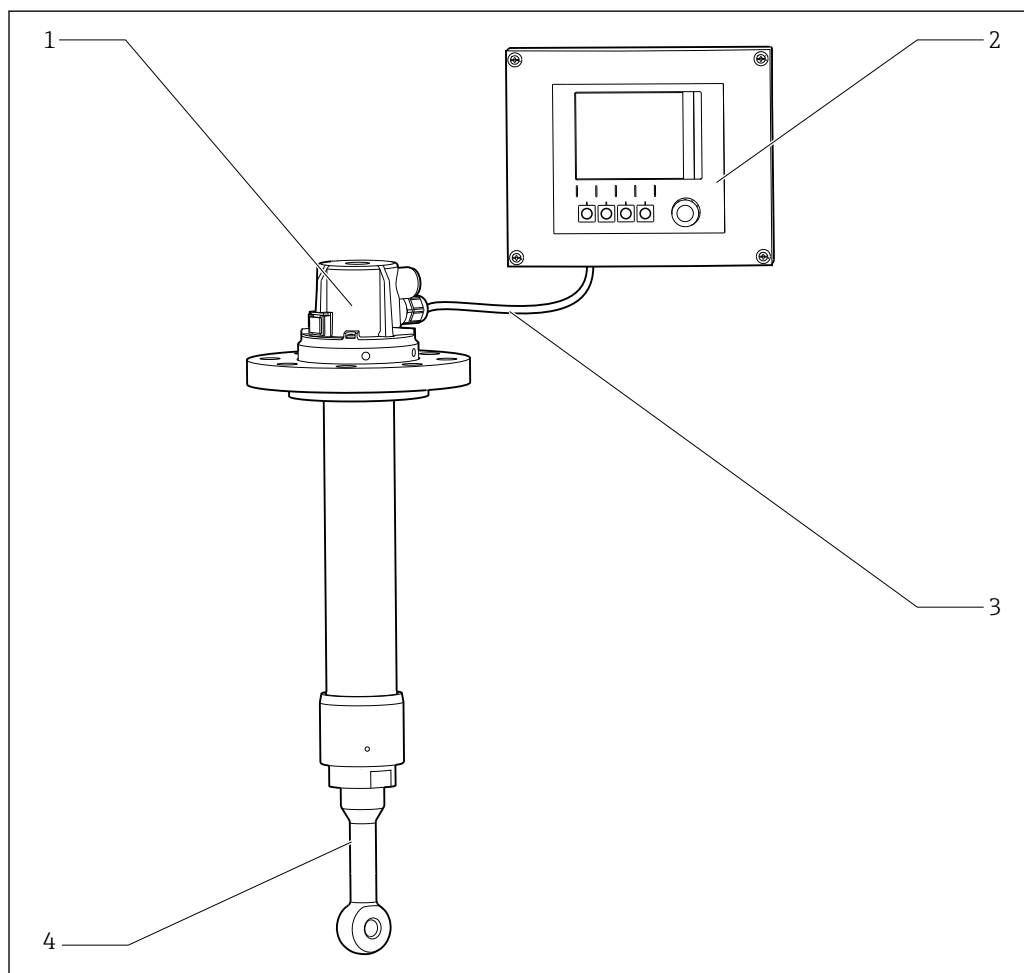
Measuring system

A complete measuring system comprises:

- Immersion assembly Dipfit CLA140
- Conductivity sensor with cable, e.g. Indumax CLS50D
- Transmitter, e.g. Liquiline CM442

Optional:

Extension cable, e.g. CYK11



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

1 Immersion assembly Dipfit CLA140, here as PVDF version

2 Transmitter CM442

3 Sensor cable

4 CLS50D inductive conductivity sensor

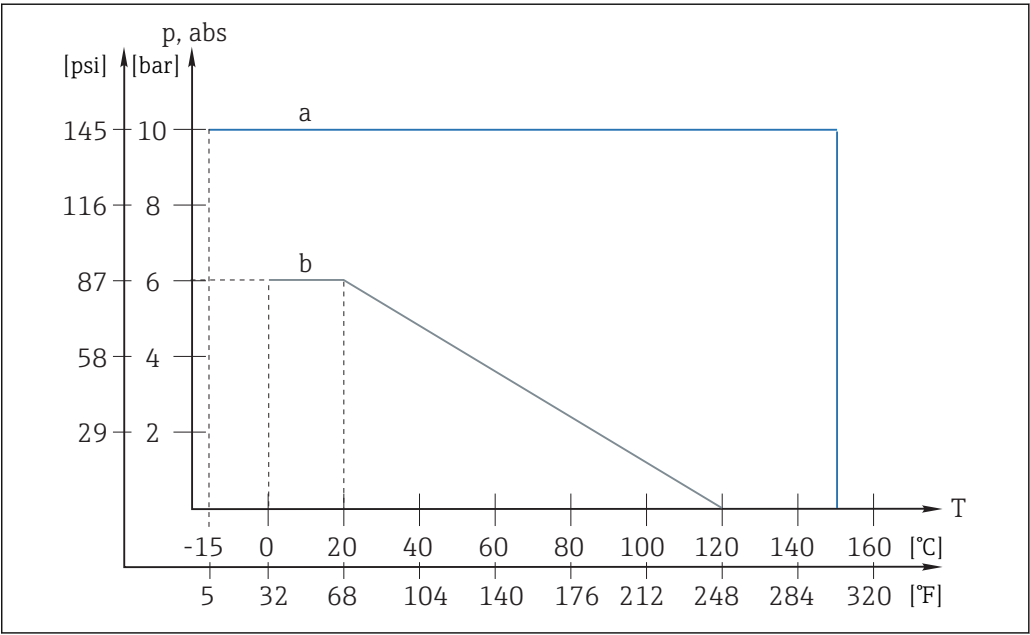
Environment

Ambient temperature range	-10 to +70 °C (+10 to +160 °F)
Storage temperature	-10 to +70 °C (+10 to +160 °F)
Degree of protection	IP65

Process

Process temperature	PVDF version	0 to 120 °C (32 to 250 °F)
	Stainless steel version	-15 to 150 °C (5 to 300 °F), for all seals except EPDM -15 to 140 °C (5 to 280 °F), 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



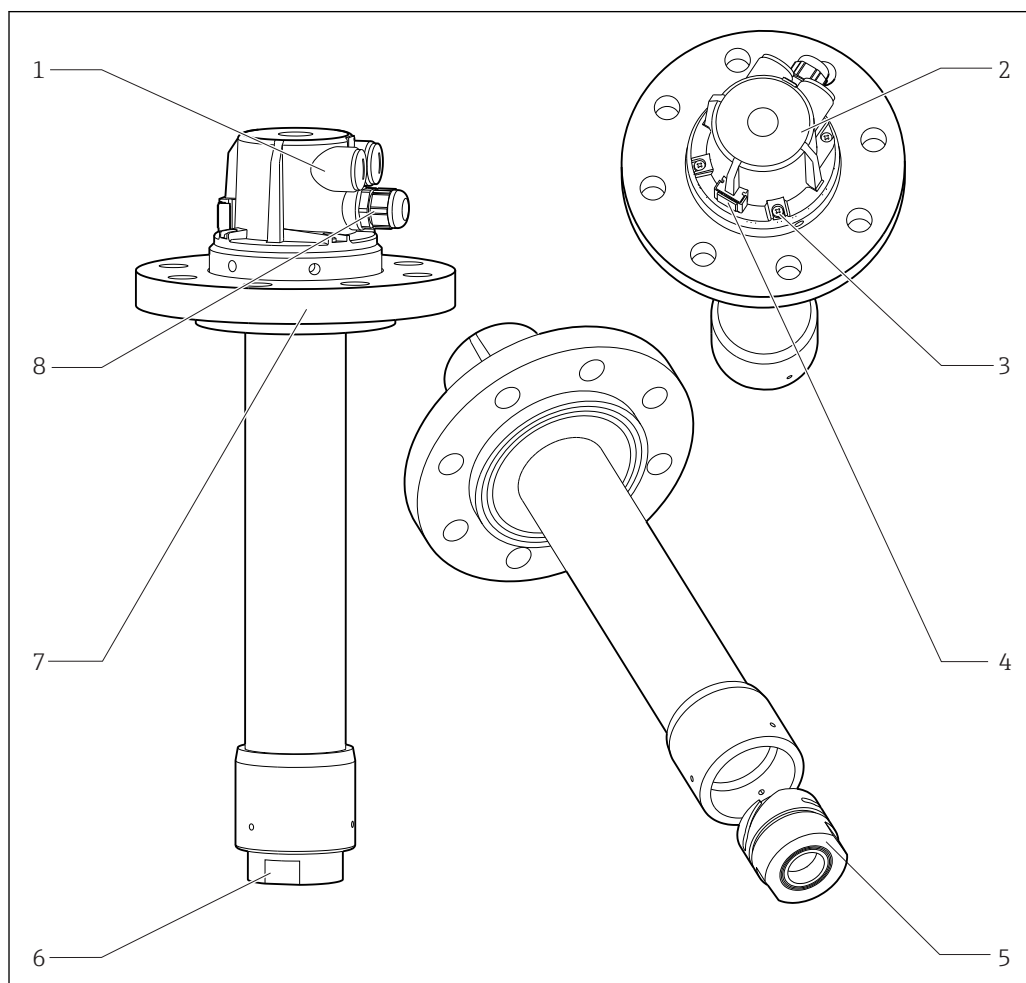
2 Pressure-temperature ratings

- a Stainless steel version
- a PVDF version

Mechanical construction

Design

PVDF version

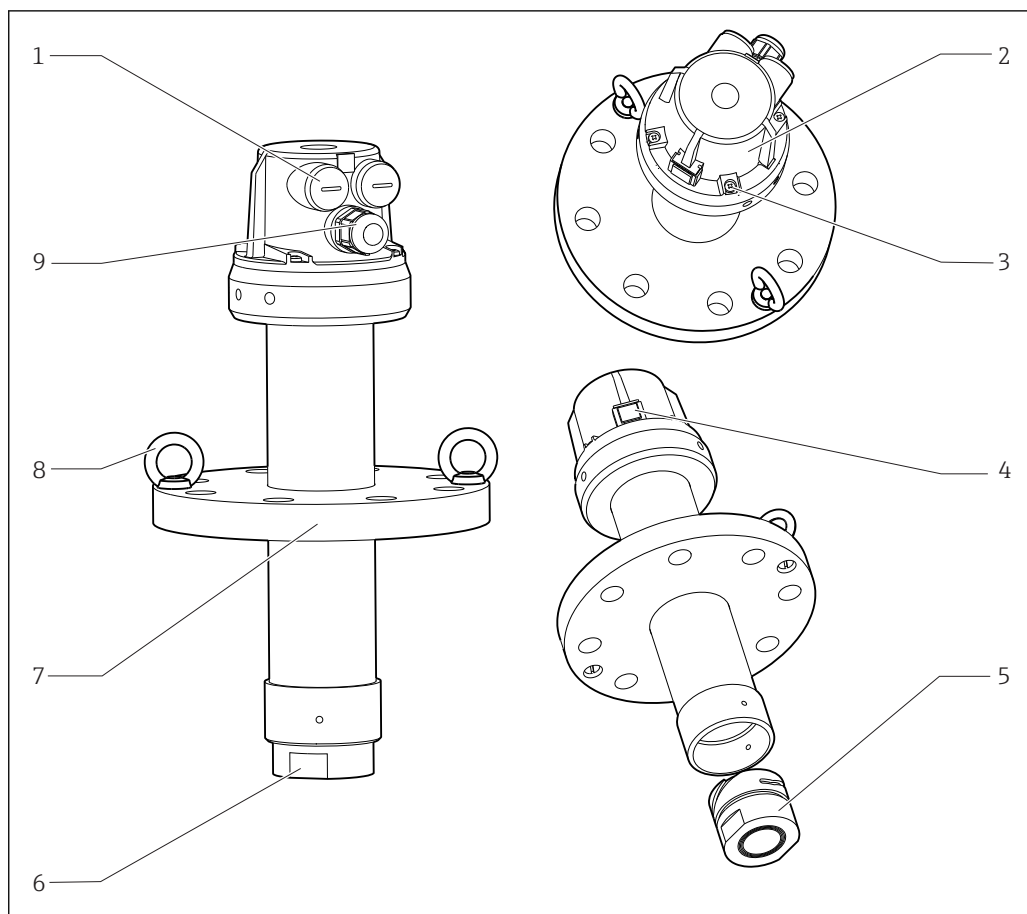


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3 PVDF version

- 1 Dummy plug Pg 16
- 2 Assembly head
- 3 M4 screws
- 4 GORE-TEX® filter
- 5 Sensor holder with bayonet lock
- 6 Wrench grip AF55
- 7 Lap joint flange, depending on version
- 8 Cable gland Pg 13.5

Stainless steel version

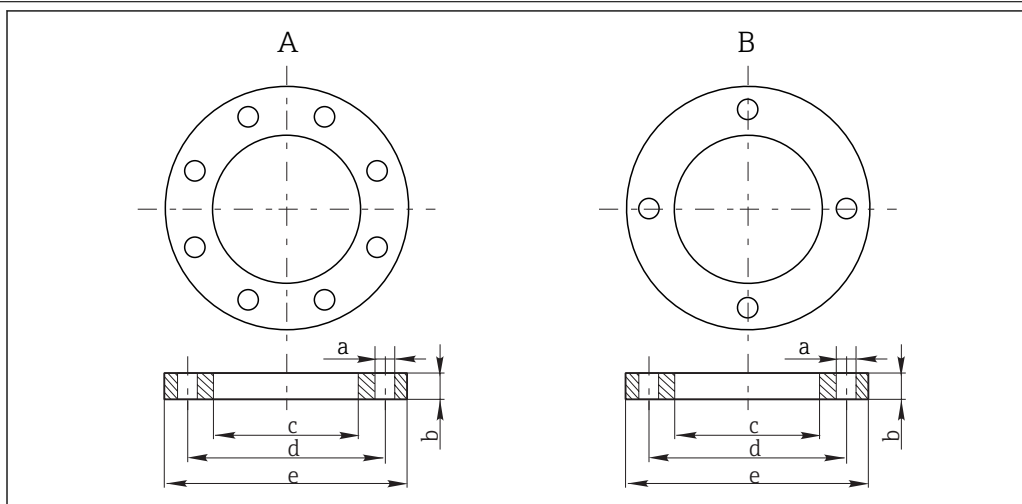


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4 Stainless steel version

- 1 Dummy plug Pg 16
- 2 Assembly head
- 3 M4 screws
- 4 GORE-TEX® filter
- 5 Sensor holder with bayonet lock
- 6 Wrench grip AF55
- 7 Fixed flange, depending on version
- 8 Installation aids (screw-in lifting eyes)
- 9 Cable gland Pg 13.5

Dimensions

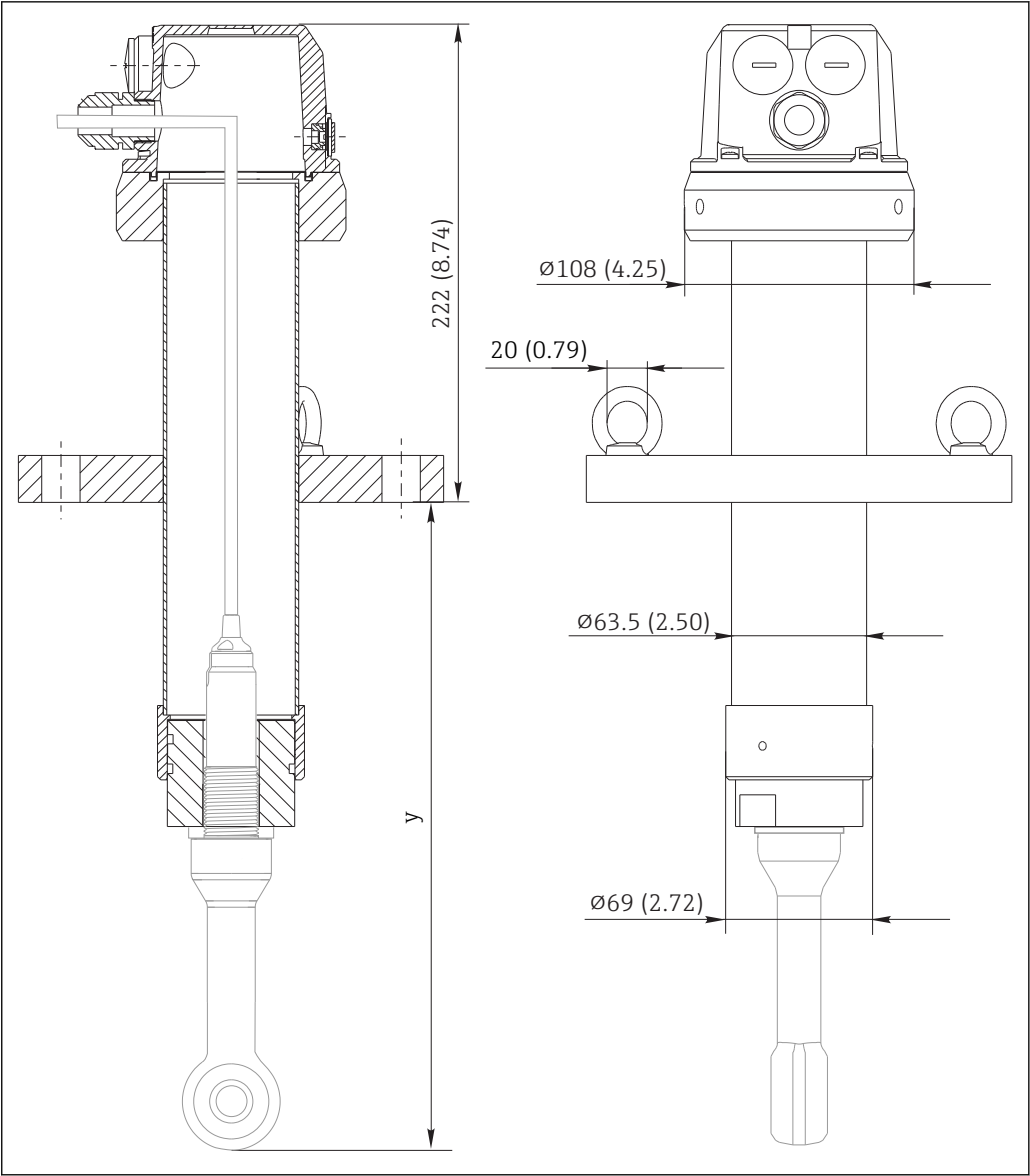


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5 Flange dimensions, → Table

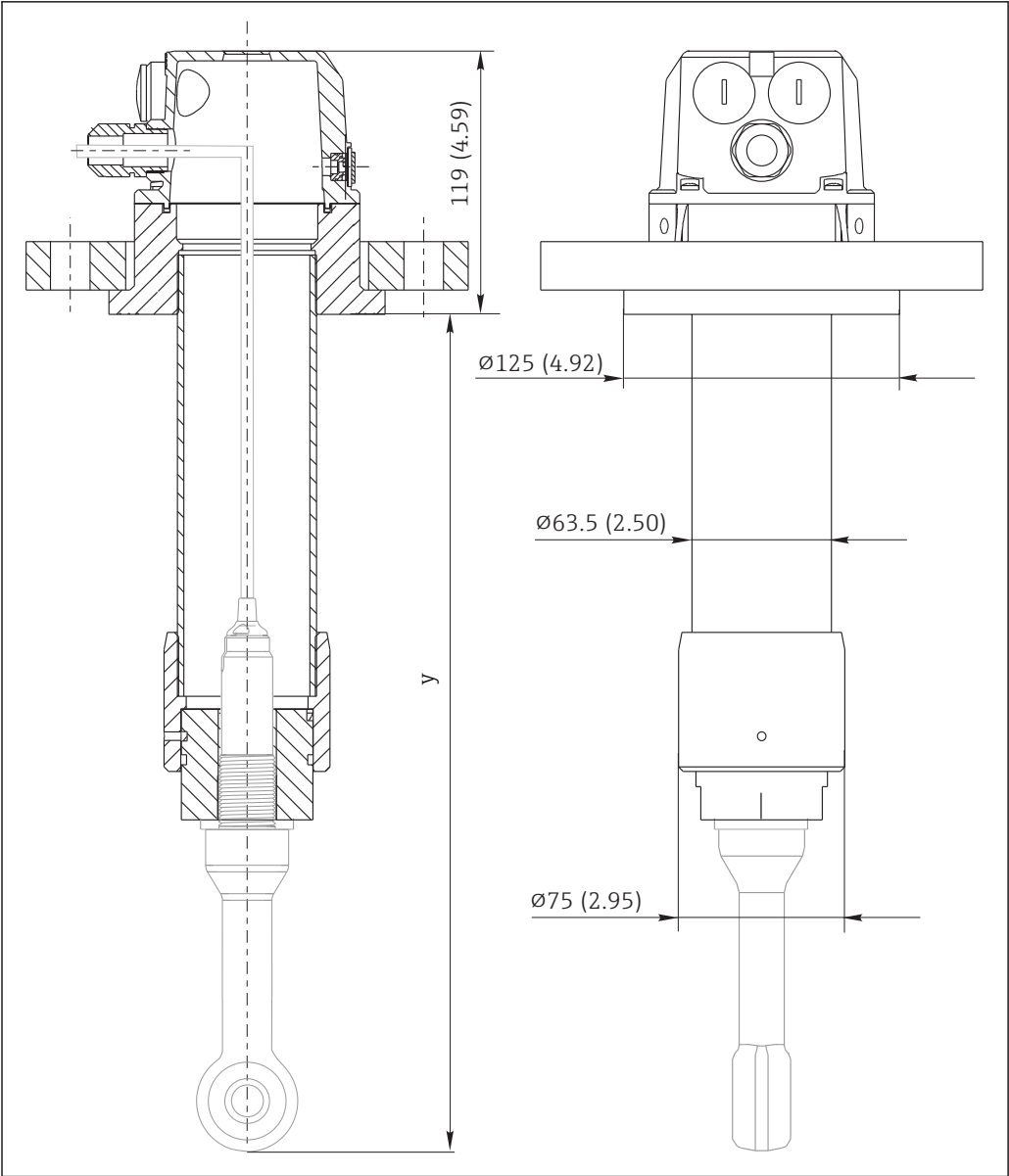
A Stainless steel version
B PVDF version

	Stainless steel assembly version			PVDF assembly version		
	DN80 PN16	ANSI 3" 150 lbs	JIS 10K 80A	DN80 PN16	ANSI 3" 150 lbs	JIS 10K 80A
a [mm (in)]	18 (0.71)	19 (0.75)	19 (0.75)	18 (0.71)	19 (0.75)	19 (0.75)
b [mm (in)]	20 (0.79)	23.8 (0.94)	18 (0.71)	22 (0.87)	22 (0.87)	18 (0.71)
c [mm (in)]	63.5 (2.50)	63.5 (2.50)	63.5 (2.50)	110 (4.33)	110 (4.33)	110 (4.33)
d [mm (in)]	160 (6.30)	152.4 (6.00)	150 (5.91)	160 (6.30)	152 (5.98)	150 (5.91)
e [mm (in)]	200 (7.87)	190.5 (7.50)	185 (7.28)	200 (7.87)	200 (7.87)	185 (7.28)
Screws	M16	M16	M16	M16	M16	M16
Bore holes	8	4	4	8	4	4



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6 Stainless steel version, dimensions in mm (in)
y Immersion depth, → Configurator on product page



 7 PVDF version, dimensions in mm (in)
y Immersion depth, → Configurator on product page

 Sensor not included in the assembly delivery!

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
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Cable glands	1 x Pg 13.5 and 2 x dummy plug Pg 16
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Sensor mounting slots	1 x G ³ / ₄
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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)
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Certificates and approvals

Pressure Equipment Directive 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.
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Inspection certificate	A test certificate 3.1 in accordance with EN 10204 is supplied depending on the version (→ Product Configurator on the product page).
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Ordering information

Product page	www.endress.com/cla140
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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.
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Scope of delivery	The scope of delivery comprises: ■ Ordered version of assembly ■ Operating Instructions
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- ▶ 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.

Indumax CLS50D / CLS50

- High-durability inductive conductivity sensor
- For standard and hazardous area applications
- With Memosens technology
- Product Configurator on the product page: www.endress.com/cls50d or www.endress.com/cls50



Technical Information TI00182C

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