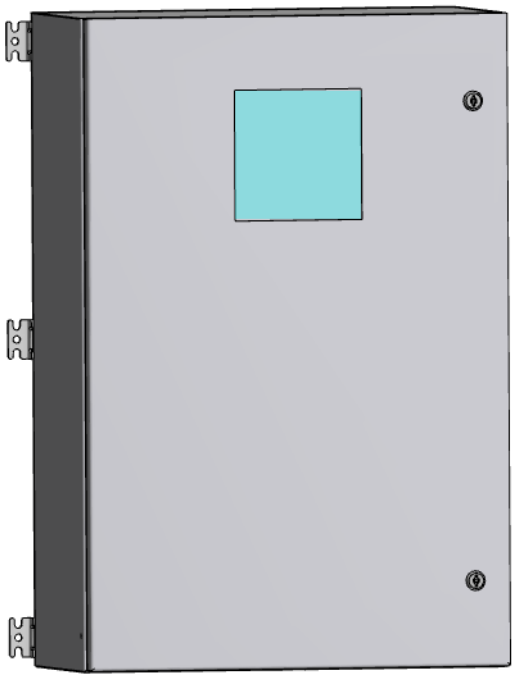
Operating Instructions
FLOWSIC100 Flare-XT

Addendum for the Stainless Steel Enclosure



Endress+Hauser
People for Process Automation

Described product
Product name: FLOWSIC100 Flare-XT

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Contents

1 About this document 4
1.1 Function of this document 4
1.2 Scope of application 4
1.3 Symbols and document conventions 4
1.3.1 Warning symbols 4
1.3.2 Warning levels and signal words 4
1.3.3 Information symbols 4

2 For your safety 4

3 Stainless steel enclosure 5
3.1 Overview 5
3.2 Installation 7
3.2.1 Safety information 7
3.2.2 Fitting the stainless steel enclosure 7
3.2.2.1 Wall fitting 8
3.2.2.2 Option: 2-inch pipe mounting 9
3.2.3 Option: Weatherproof cover 11
3.2.3.1 Weatherproof cover: Wall fitting 12
3.2.3.2 Option: Weatherproof cover fitting on a 2-inch pipe 13
3.2.4 Fitting the Interface Unit inside the stainless steel enclosure ... 14
3.2.4.1 Fitting the Interface Unit 14
3.2.4.2 Protective ground connection 15

1 About this document

1.1 Function of this document

This document supplements and is to be used only in combination with the FLOWSIC100 Flare-XT Operating Instructions.

The content of the Operating Instructions applies as long as not described differently in this Addendum.

1.2 Scope of application

This document describes the stainless steel enclosure option which is available for the Interface Unit.

With the additional optional stainless steel enclosure, the Interface Unit can safely be isolated from the corrosive offshore environment.

1.3 Symbols and document conventions

1.3.1 Warning symbols

Symbol	Significance
	Danger (general)

1.3.2 Warning levels and signal words

DANGER:

Risk or hazardous situation which *will* result in severe personal injury or death.

WARNING:

Risk or hazardous situation which *could* result in severe personal injury or death.

CAUTION:

Hazard or unsafe practice which *could* result in less severe or minor injuries.

NOTICE:

Hazard which *could* result in property damage.

Note:

Tips

1.3.3 Information symbols

Symbol	Significance
	Important technical information for this product

2 For your safety

WARNING:
Read the Operating Instructions carefully before using the device.
Observe all safety and warning notices!

3 Stainless steel enclosure

3.1 Overview

The stainless steel enclosure is available in the following variants:

- Variant 1: Stainless steel enclosure – large: FCFH-900NNNN / FCFH-900PNNN
- Variant 2: Stainless steel enclosure – small: FCFH-700NNNN / FCFH-700PNNN

The device variant can be identified on the type plate on the outside of the housing:

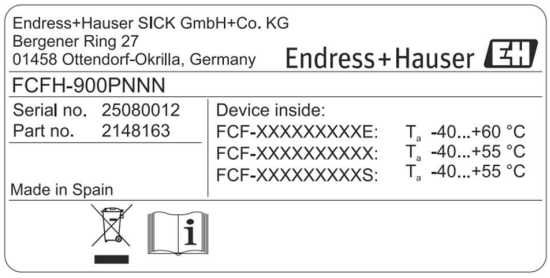


Fig. 1: Type plate (example)

Variant 1: Stainless steel enclosure – large: FCFH-900NNNN / FCFH-900PNNN

- Dimensions (mm): 900 x 650 x 300 (height, width, depth)
- Weight: 34 kg
- Suitable for: Interface Unit Zone 1 Ex de with terminal compartment
- Material: SS316L uncoated (Optional: CX Coating acc. ISO 12944) with a maximum thickness of 200 µm
- Protection class: IP66
- 9 x M25 SS316 blind plugs, 1x M16 SS316L cable gland for grounding and 1x M12 ventilation plug SS316

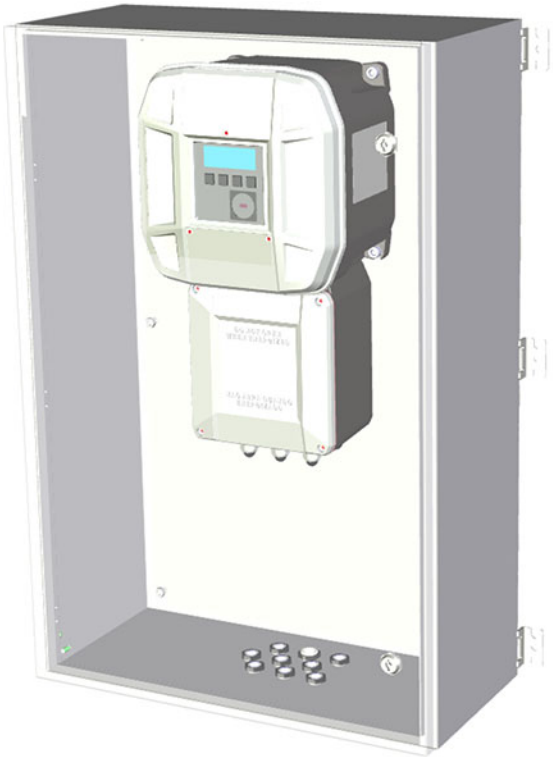


Fig. 2: Stainless steel enclosure – large

Variant 2: Stainless steel enclosure – small: FCFH-700NNNN / FCFH-700PNNN

- Dimensions (mm): 700 x 650 x 300 (height, width, depth)
- Weight: 27 kg
- Suitable for: Interface Unit Zone 1 Ex d / Zone 2 / Div. 2
- Material: SS316L uncoated (Optional: CX Coating acc. ISO 12944) with a max. thickness of 200 µm
- Protection class: IP66
- 9 x M25 SS316 Blind plugs, 1 x M16 SS316L cable gland for grounding and 1 x M12 ventilation Plug SS316

Fig. 3: Stainless steel enclosure – small

3.2 Installation

3.2.1 Safety information

WARNING: Risks during installation
- ▶ Observe the relevant safety regulations in the Operating Instructions FLOWSIC100 Flare-XT as well as the safety notices in this document during all installation work!
- ▶ Take suitable protection measures against possible local hazards or hazards arising from the equipment.
- ▶ Observe and comply with regulations of the plant operator.

Otherwise hazards are possible and safe operation is not ensured.

CAUTION: Accident risk through inadequate fastening of the device
- ▶ Consider the device weight specifications when planning the mounting supports.
- ▶ Ensure sufficient stability:
  - When fitting the device on a wall, ensure that the wall construction is sufficiently stable.
  - When fitting the device on a pipe, ensure sufficient stability of the pipe.
- ▶ Use suitable fasteners to secure the device and optional accessories.
- ▶ Take the vibration load into account.

NOTICE:
The plant operator is responsible for the safety of the system under mechanical load.

NOTICE:
The Interface Unit is only suitable for vertical installation.

NOTICE:
When installing cable glands, the lock nut of the installed blind plugs must be used.

3.2.2 Fitting the stainless steel enclosure

Fit the stainles steel enclosure in an easily accessible and protected position. Carry out all assembly work on-site. The following must be taken into account:

- ▶ Maintain the ambient temperature range in accordance with the technical data of the Interface Unit on the type plate of the housing under consideration of possible radiant heat (shield when necessary).
  The temperature differs depending on the device variant installed:

Device inside	Ambient temperature T_a
FCF-*********E	-40 °C ... +60 °C
FCF-*********X	-40 °C ... +55 °C
FCF-*********S	-40 °C ... +55 °C

- ▶ Protect the stainless steel enclosure against direct sunlight and atmospheric conditions (weatherproof cover available as option).
- ▶ Select an installation location free from vibrations when possible and stabilize vibrations when necessary.
- ▶ Provide sufficient clearance for cables and opening the front door.
- ▶ Select an installation location free of chemical influence.
- ▶ Due to the high weight, at least two persons or suitable lifting/carrying devices are required for installation.

3.2.2.1 *Wall fitting*

NOTICE:

- Use suitable fixing material for mounting the enclosure with the brackets to the wall.
- Observe the total weight of the Interface Unit and stainless steel enclosure as well as local and legal regulations for the design of the wall construction and fastening material.
- Ensure sufficient assembly clearance.
- Maintain a general clearance of 15 cm around the enclosure to ensure better heat circulation.

General clearance:

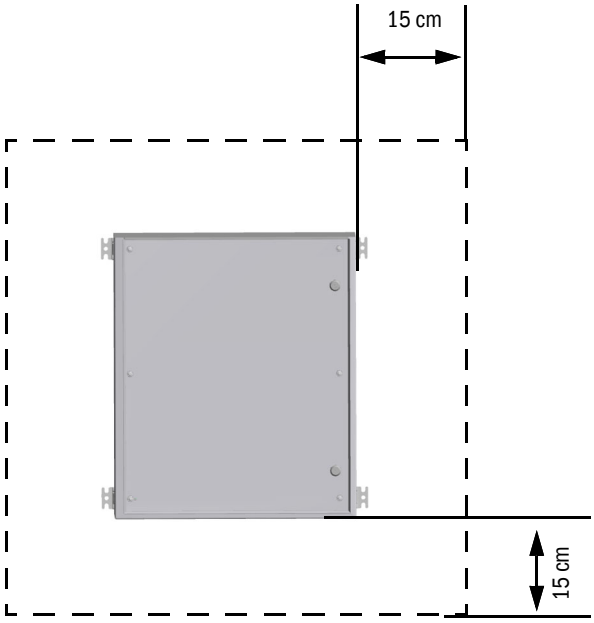


Fig. 4: General clearance, stainless steel enclosure (valid for all device versions)

- Screw the stainless steel enclosure to the wall as marked in → Fig. 5

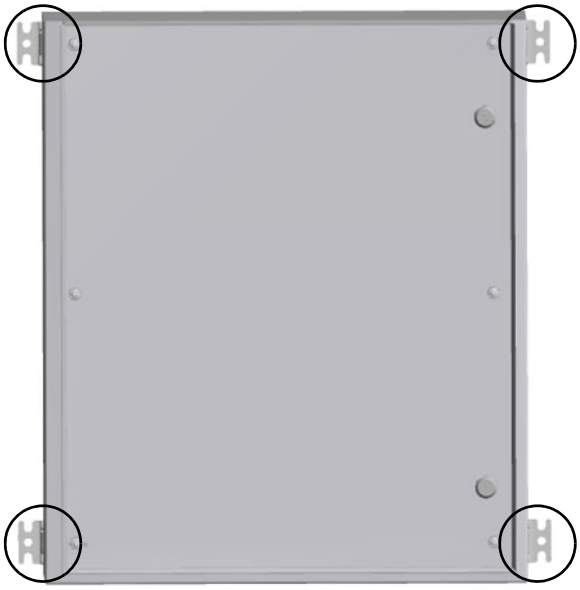
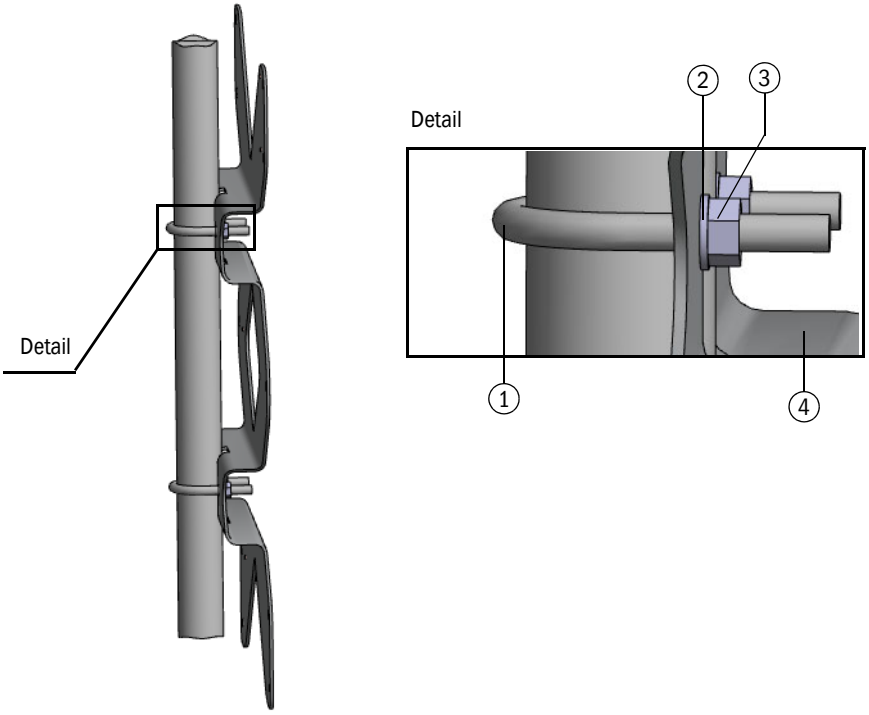


Fig. 5: Example: installation brackets at the stainless steel enclosure – small

3.2.2.2 *Option: 2-inch pipe mounting*

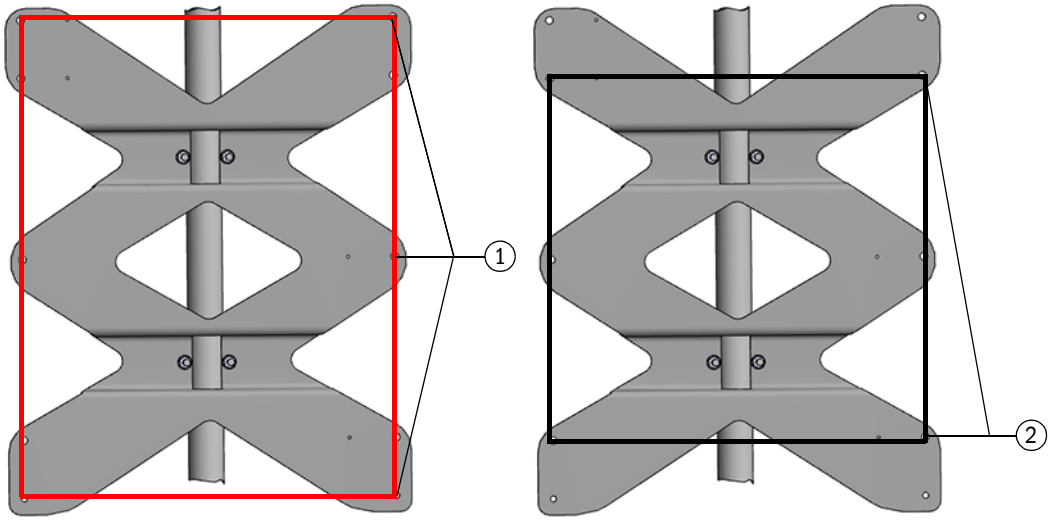
▶ Use two round steel bows (1), associated washers (2) and nuts (3) to fasten the installation plate (4) on the 2-inch pipe.
Weight of installation plate: 13.5 kg



1 Round steel bow
2 Washer
3 Nut
4 Installation plate

Fig. 6: Fastening the installation plate

▶ Use nuts, washers and screws to fasten the stainless steel enclosure on the installation plate through the marked openings.



1 Six holes for fitting the stainless steel enclosure – large
2 Four holes for fitting the stainless steel enclosure – small

Fig. 7: Fastening the stainless steel enclosure

Example:

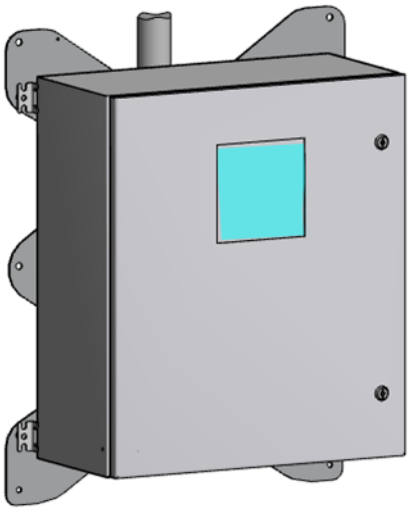


Fig. 8: Small enclosure (fitted to 2-inch pipe)

3.2.3 Option: Weatherproof cover

There is one version of the weatherproof cover for all types of stainless steel enclosures.

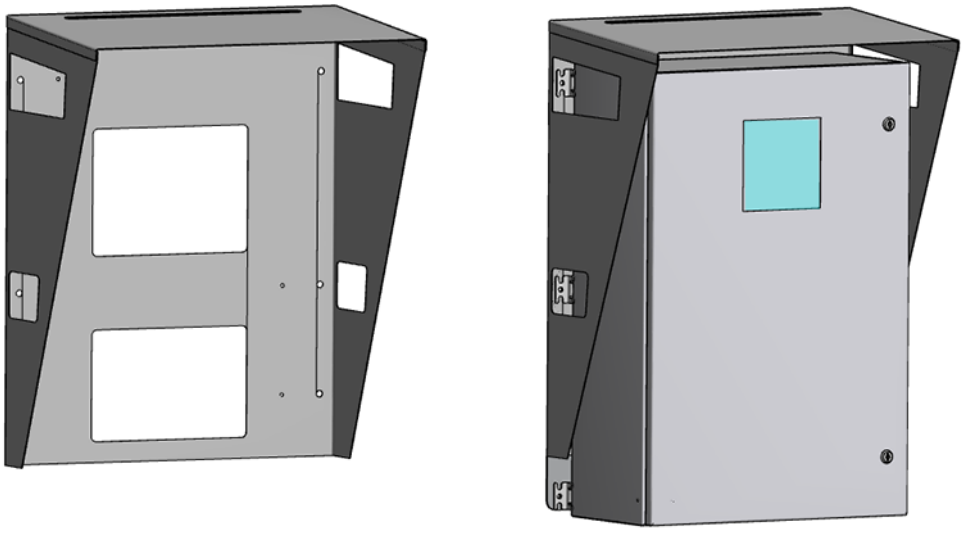


Fig. 9: Weatherproof cover

Dimensions and weight

Weight of weatherproof cover: 13 kg

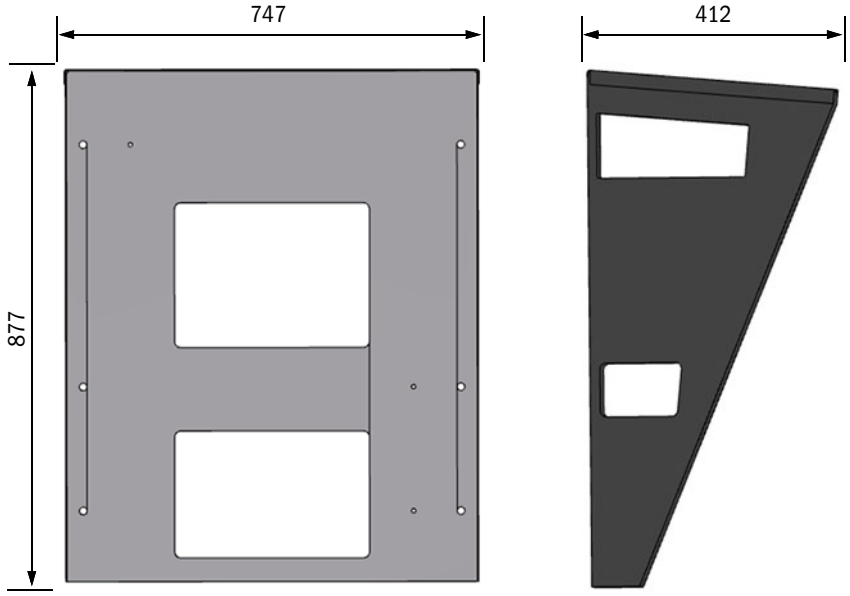


Fig. 10: Dimensions weatherproof cover (mm)

NOTICE:

- Use suitable fixing material for mounting the weatherproof cover to the wall
- Observe the total weight of the assembly as well as local and legal regulations for the design of the wall construction and fastening material.
- Ensure sufficient assembly clearance.

3.2.3.1 *Weatherproof cover: Wall fitting*

1 First, screw the weatherproof cover to the wall through the two holes marked in → Fig. 11.

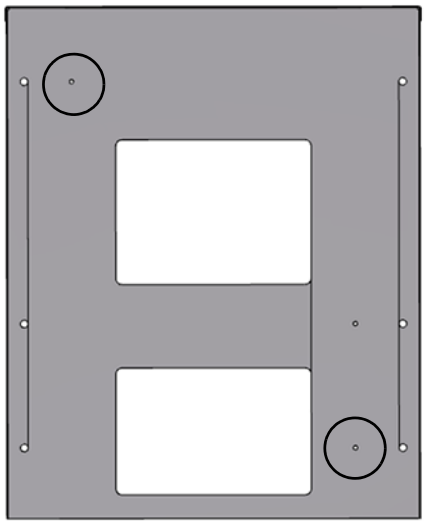
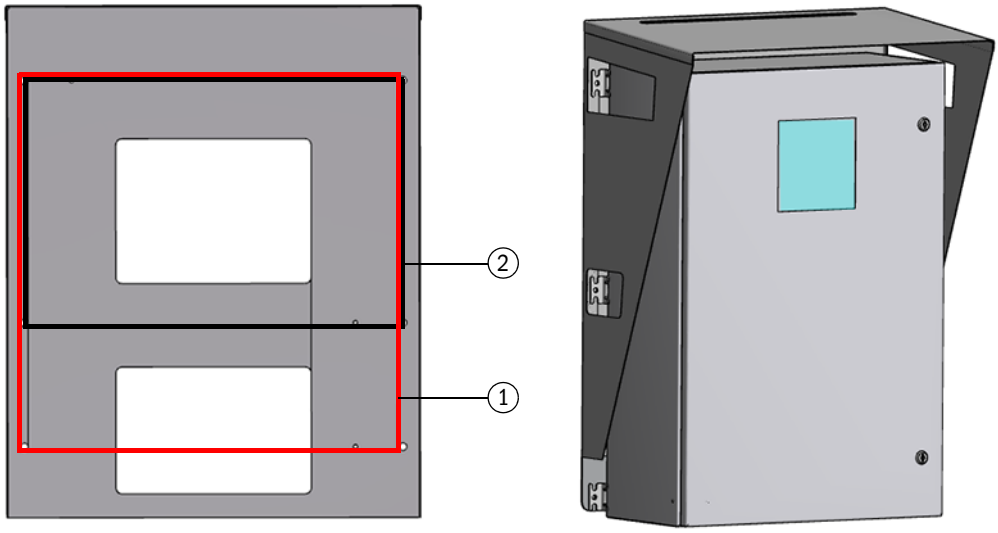


Fig. 11: .Fitting the weatherproof cover on the wall

2 Then screw the stainless steel enclosure also to the wall through the holes in the weatherproof cover as marked in → Fig. 12.



1 Holes for fitting the stainless steel enclosure – large
2 Holes for fitting the stainless steel enclosure – small

Fig. 12: Fitting the stainless steel enclosure to the wall

3.2.3.2 *Option: Weatherproof cover fitting on a 2-inch pipe*

1 Mount the installation plate to the 2-inch pipe, see “Option: 2-inch pipe mounting”, page 9. Do not install the stainless steel enclosure yet.
2 Screw the weatherproof cover to the mounting plate with the two supplied M6 screws.

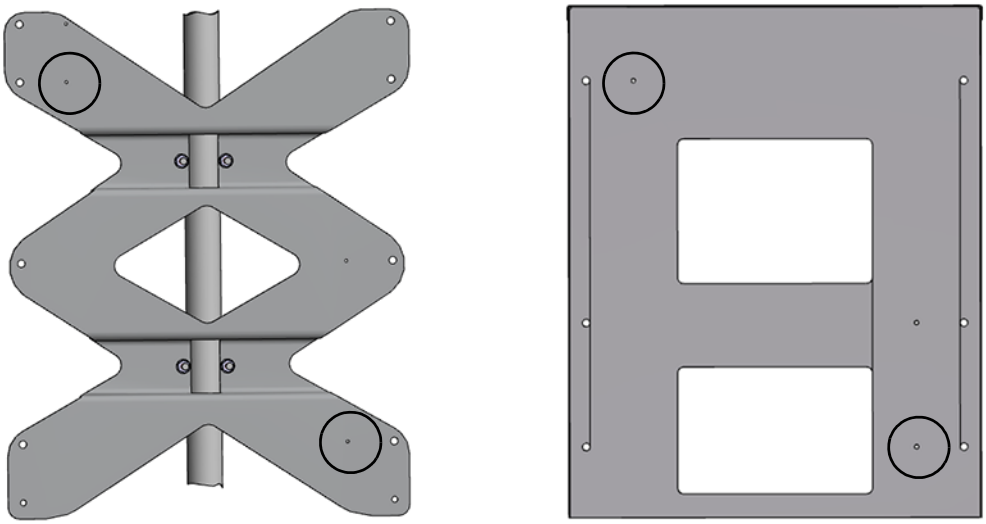


Fig. 13: Fitting the weatherproof cover to the 2-inch pipe

3 Screw the stainless steel enclosure to the installation plate through the holes in the weatherproof cover as marked in → Fig. 14 with the supplied assembly material.

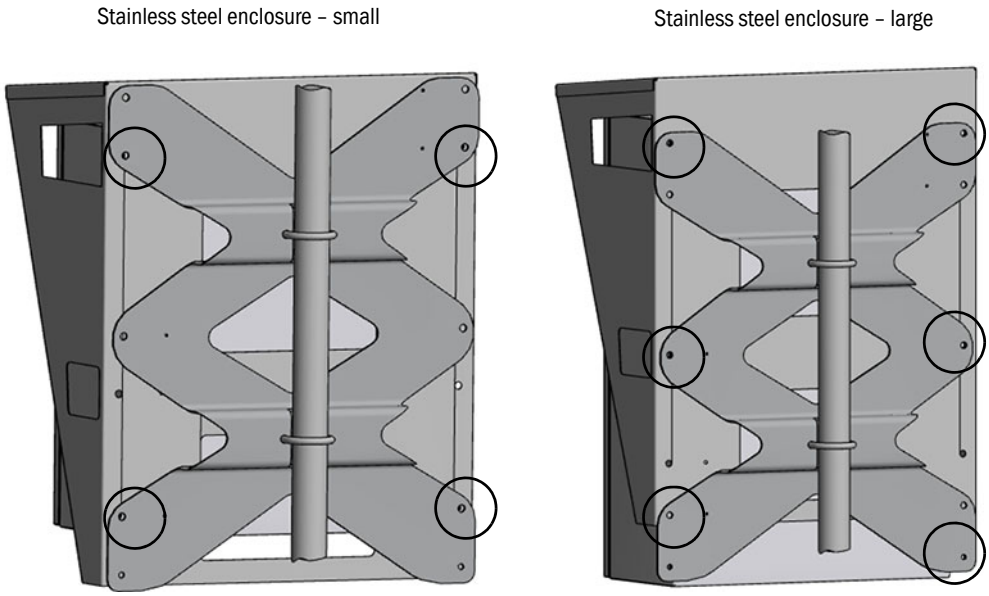
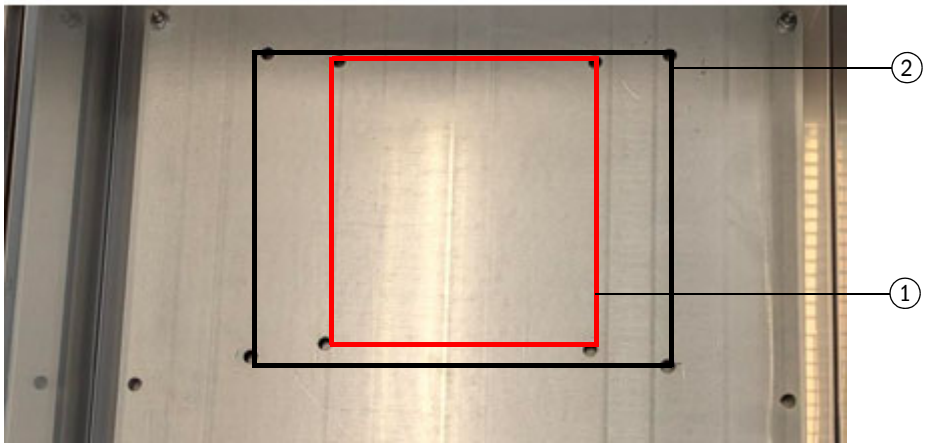


Fig. 14: Fitting the stainless steel enclosure to the 2-inch pipe

3.2.4 Fitting the Interface Unit inside the stainless steel enclosure

3.2.4.1 *Fitting the Interface Unit*

Screw the Interface Unit to the stainless steel enclosure as marked in → Fig. 15 with the supplied assembly material.



1 Holes for fitting the Interface Unit Zone 1
2 Holes for fitting the Interface Unit Zone 2

Fig. 15: Fitting the Interface Unit

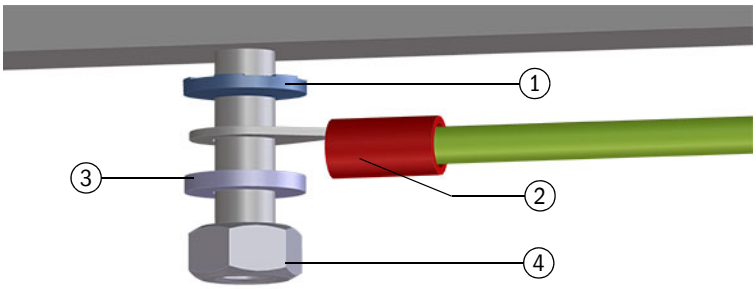
NOTICE: For Interface Unit Zone 2 configurations

- Always keep the display protective flap closed when the display is not in use!
- Make sure that the display flap is always closed before closing the stainless steel enclosure door – risk of breaking the flap!

3.2.4.2 *Protective ground connection*

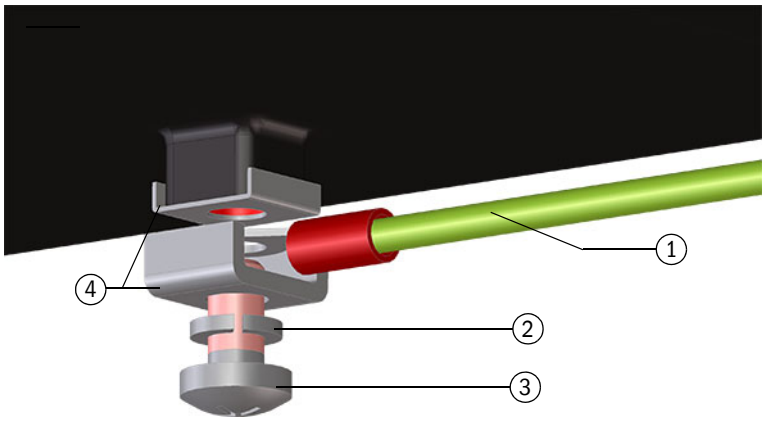
1 In order to ground the stainless steel enclosure, the loose grounding cable inside has to be connected to the appropriate location at the Interface Unit as marked in → Fig. 16.

Interface Unit Zone 2/Div.



1 Contact disc (ensure correct alignment)
2 Line
3 Washer
4 Nut (torque: 6.0 Nm for M6)

Interface Unit Zone 1/Div. 1



1 Line
2 Lock washer
3 Screw (torque: 8.0 Nm)
4 C-profile

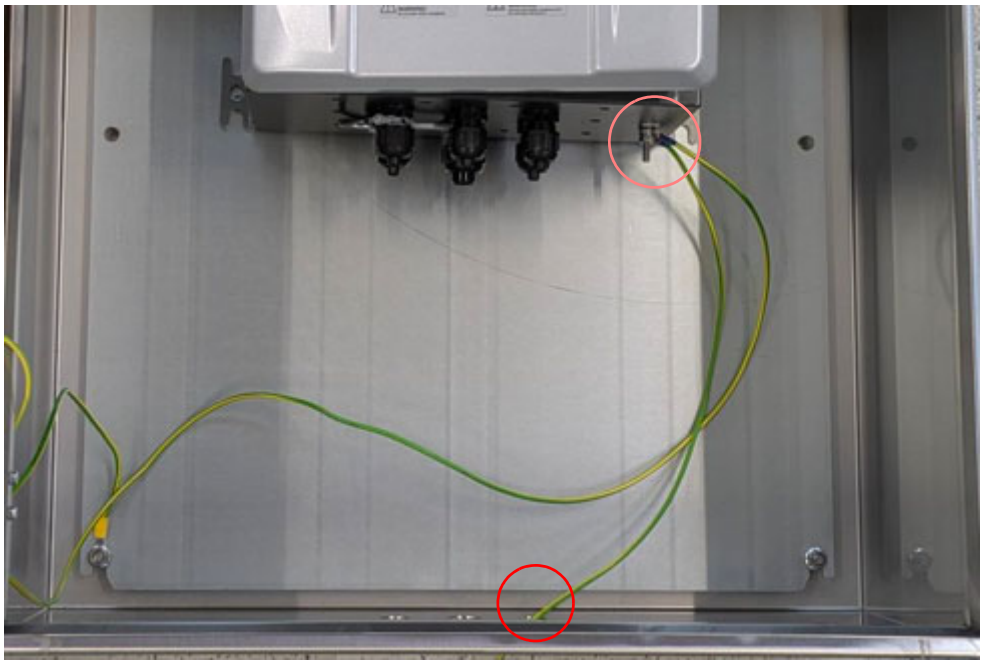


Fig. 16: Grounding the stainless steel enclosure

2 The Interface Unit has to be grounded itself with an additional cable. Feed the cable through the designated M16 cable gland.

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