



Installation instructions

Electronic unit for SMFx2x magnetic-inductive flow
sensor

E40581

GB

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1 Preliminary note

You will find instructions, technical data, approvals and further information using the QR code on the unit / packaging or at documentation.ifm.com.

1.1 Symbols used

- ✓ Requirement
- Instructions
- ▷ Reaction, result
- [...] Designation of keys, buttons or indications
- Cross-reference
-  Important note
Non-compliance may result in malfunction or interference.
-  Information
Supplementary note

1.2 Warnings

Warnings indicate the possibility of personal injury and damage to property. This enables safe product handling. Warnings are graded as follows:



WARNING

Warning of serious personal injury

▷ If the warning is not observed, fatal and serious injuries are possible.



CAUTION

Warning of minor to moderate personal injury

▷ If the warning is not observed, minor to moderate injuries are possible.

ATTENTION

Warning of damage to property

▷ If the warning is not observed, damage to property is possible.

2 Safety instructions

- The unit described is a subcomponent for integration into a system.
 - The system architect is responsible for the safety of the system.
 - The system architect undertakes to perform a risk assessment and to create documentation in accordance with legal and normative requirements to be provided to the operator and user of the system. This documentation must contain all necessary information and safety instructions for the operator, the user and, if applicable, for any service personnel authorised by the architect of the system.
- Read this document before setting up the product and keep it during the entire service life.
- The product must be suitable for the corresponding applications and environmental conditions without any restrictions.
- Only use the product for its intended purpose (→ Intended use).
- Only use the product for permissible media.
- If the operating instructions or the technical data are not adhered to, personal injury and/or damage to property may occur.
- The manufacturer assumes no liability or warranty for any consequences caused by tampering with the product or incorrect use by the operator.
- Installation, electrical connection, set-up, operation and maintenance of the product must be carried out by qualified personnel authorised by the machine operator.
- Protect units and cables against damage.
- Store the product in its original packaging.

3 Intended use

The electronic unit can be ordered as a spare part for an SMFx2x magnetic-inductive flow sensor: A defective electronic unit of the sensor can be replaced with article E40581.



An electronic unit with display cannot be replaced by an electronic unit without display. Information about suitable accessories at www.ifm.com.



The electronic unit may only be used in combination with a measuring section.

The electronic unit is used as a measuring transducer and for displaying the current process values and parameter setting.

In conjunction with the measuring section, the device monitors liquid media.

The device measures the flow velocity, the volume flow (consumed quantity / time), the consumed quantity, the medium temperature and the conductivity.

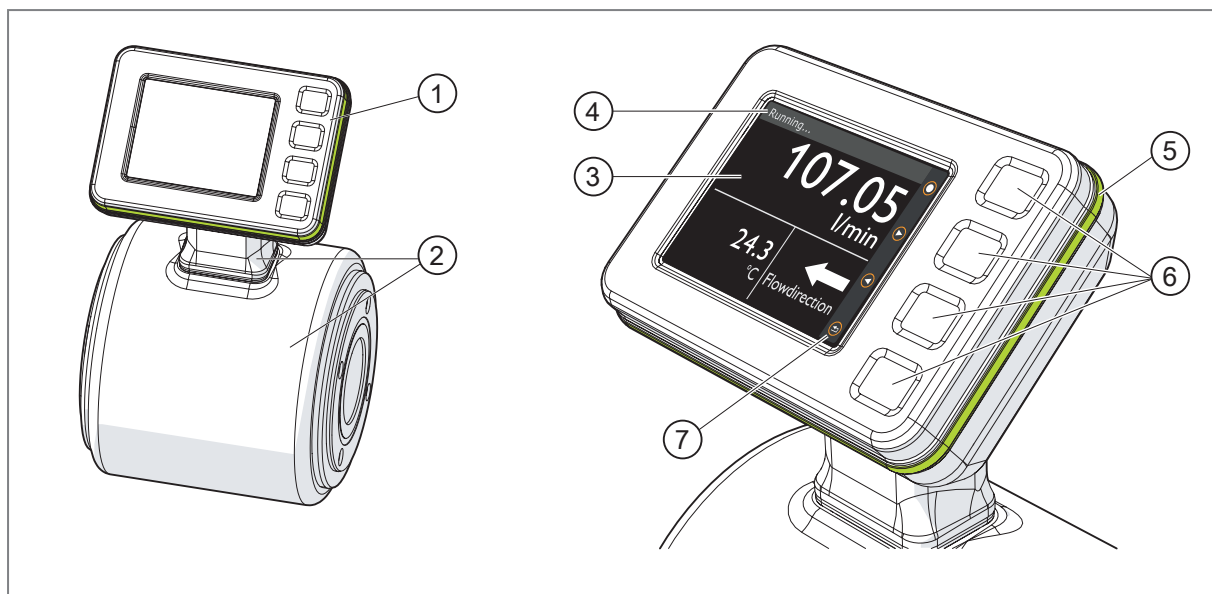


Fig. 1: Flow meter; electronic unit

- 1: Electronic unit of the SMFx2x device, identical in construction to E40581
- 2: Measuring section and electronics bracket of the SMFx2x device
- 3: TFT-Display 3.5": Shows 1 to 4 process values.
- 4: Title line: Describes the status of the device (normal operation, warning messages, error messages).
- 5: Operating status LED (LED ring): Changes colour to signal the status of the device.
- 6: Device keys: Keys for changing views and setting parameters.
- 7: Key symbols: Indicate the functions of the corresponding device keys on the display.



Further information → operating instructions for the SMFx2x sensor can be found at documentation.ifm.com.

4 Items supplied

- 1 electronic unit E40581
- 4 x M5 hexagon nuts

5 Installation

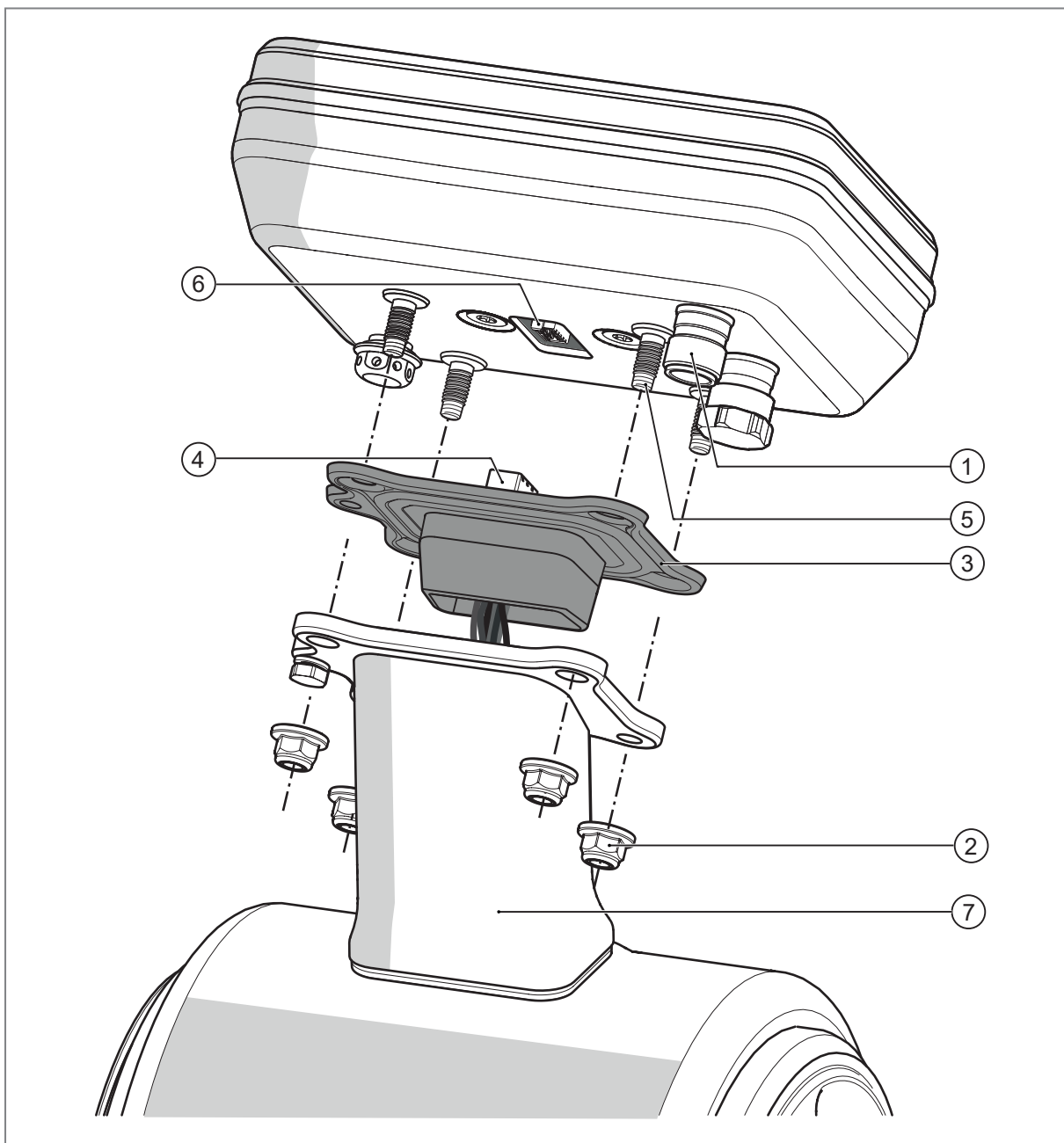


Fig. 2: Mounting / removal

- 1: Connector for electrical connection
- 2: 4 x M5 hexagon nuts
- 3: Seal (firmly bonded to circuit board and socket)
- 4: Circuit board with socket (permanently wired to the electronics in the measuring tube)
- 5: Threaded bolt
- 6: Plug of the electronic unit
- 7: Bracket



The electronic unit is supplied without a seal. In case of replacement, the original seal is reused.

**CAUTION**

Risk of electric shock

- ▷ Touching live parts can result in personal injury.
- ▶ Ensure that the power supply is disconnected before installing or removing the electronic unit.

Procedure:**ATTENTION**

Damage to the device when replacing the electronic unit

- ▷ Improper replacement will invalidate the warranty.
- ▶ Ensure that the internal cabling is not damaged.
- ▶ Ensure that ingress of moisture and foreign substances is avoided when the device is open.

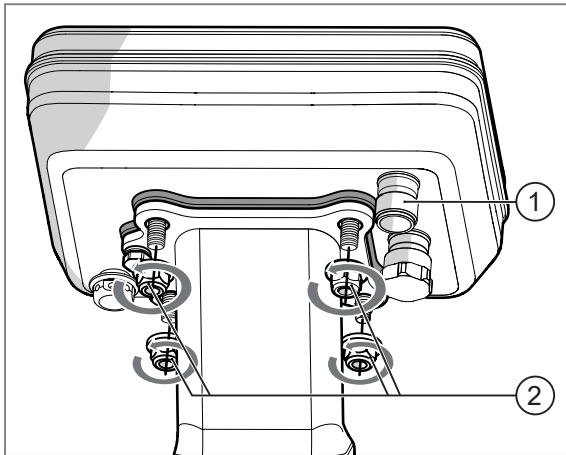


Fig. 3: Unscrew the defective electronic unit.

- ▶ Loosen the connector for the electrical connection (1).
- ▶ Loosen the four M5 hexagonal nuts (2) at the bottom of the electronic unit.

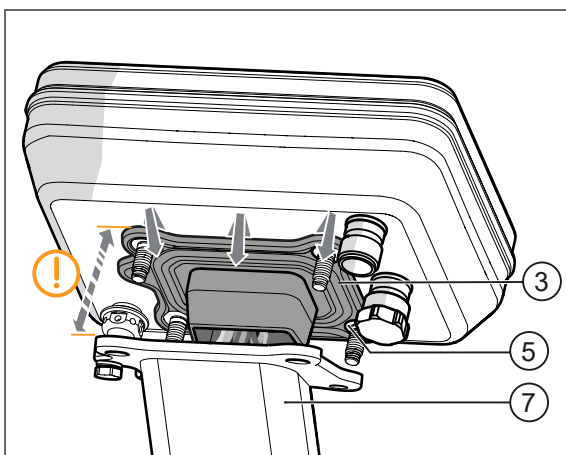


Fig. 4: Remove seal.

- ▶ Lift the defective electronic unit slightly off the bracket (7).
- ▶ Remove the seal (3) from the threaded bolts (5).



Do not pull the cabling too far out of the bracket.

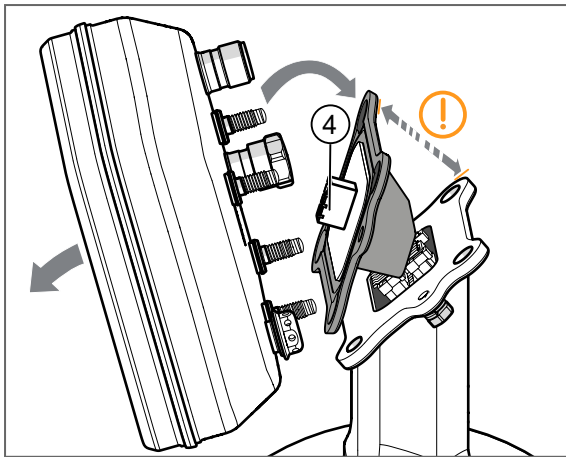


Fig. 5: Remove the defective electronic unit.

- Remove the seal together with the circuit board and socket (4) from the electronics unit to release the plug connection.



Do not pull the cabling too far out of the bracket.

- Remove the faulty electronic unit.

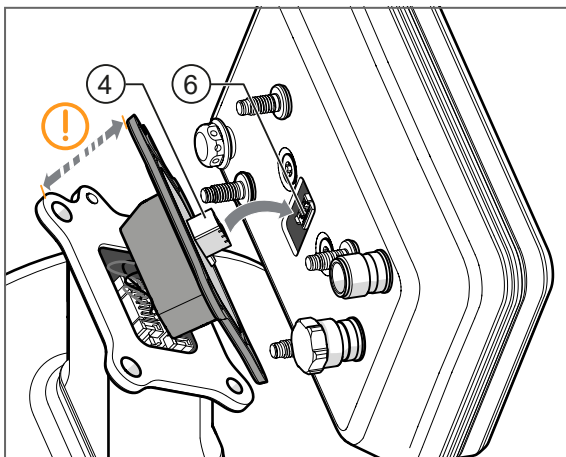


Fig. 6: Connect the new electronic unit.

- Have the new electronic unit ready.
- Carefully plug the socket (4) onto the plug (6) of the new electronic unit.



Do not pull the cabling too far out of the bracket.

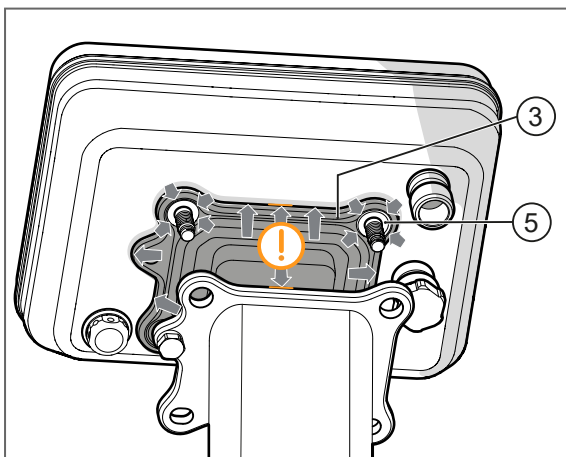


Fig. 7: Install the seal.

- Press the seal (3) with the four outer holes precisely onto the collar of the four threaded bolts (5) of the new electronics unit.



Do not pull the cabling too far out of the bracket.

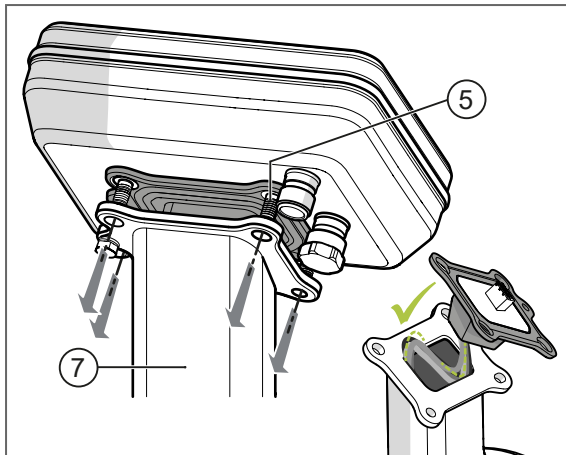


Fig. 8: Install the new electronic unit.

- Insert the new electronic unit with the threaded bolts (5) into the holes of the bracket (7).



Do not pinch the cabling. If the cabling has been pulled out too far, insert it into the bracket in an S-shape without kinks.

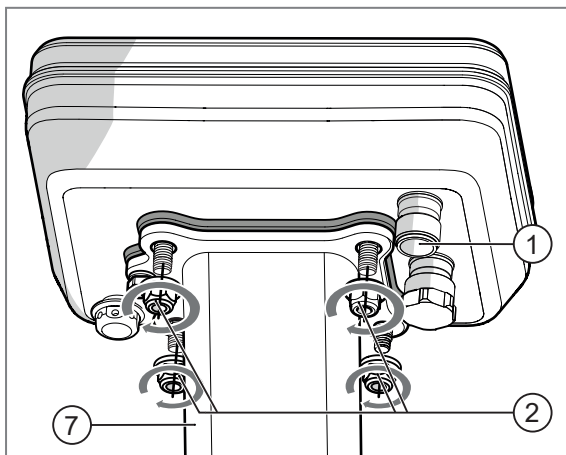


Fig. 9: Screw on the new electronic unit.

- Screw the new electronics unit to the bracket (7) using the four M5 hexagon nuts (2). Tightening torque: 4 Nm.



The seal must lie completely flat against the electronics unit.

- Restore the electrical connection via the connector (1).
- ▷ After a restart, the device works with the same parameter settings as before the replacement.

6 Maintenance, repair and disposal

The goods can only be replaced if the product seal on the packaging is not damaged.

A defective device can be returned to the manufacturer for repair.

Only the manufacturer is allowed to repair the unit.

- ▶ In case of return shipment, ensure that the unit is free from soiling, especially from dangerous and toxic substances.
- ▶ After use dispose of the product or components in an environmentally friendly way in accordance with the applicable national regulations.
- ▶ Dispose of used batteries in accordance with national environmental regulations. Do not dispose of used batteries as household waste.