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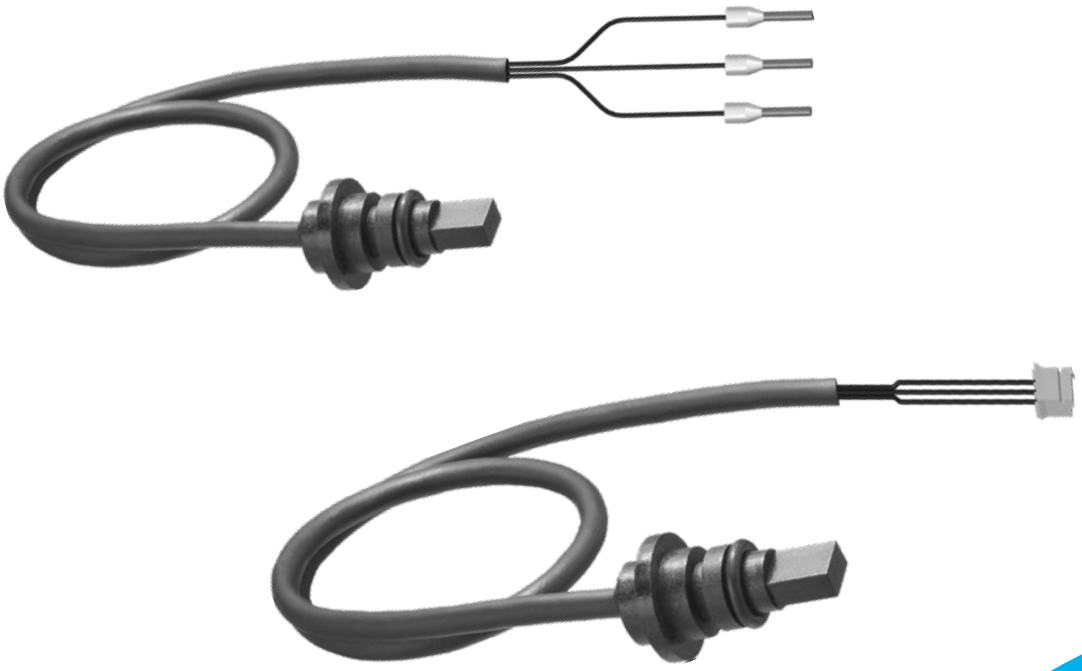
Hall effect sensor for Regumaq X-25/X-45

Mounting instructions EN



Hall effect sensor for Regumaq X-25/X-45

Contents

1. General information

The original mounting instructions are written in German.

The mounting instructions in other languages have been translated from German.

1.1 Validity of the mounting instructions

These mounting instructions are valid for the hall effect sensor of the volume flow sensor for the Regumaq X-25 (item no. 1381170) or Regumaq X-45 (item no.1381171) fresh water station.

1.2 Extent of supply

- Hall effect sensor for Regumaq X-25/X-45
- Safety and installation advice

1.3 Contact

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Paul-Oventrop-Straße 1
59939 Olsberg
GERMANY
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Technical services
Phone: +49 (0) 29 62 82-234

1.4 Declaration of conformity

Oventrop GmbH & Co. KG hereby declares that this product has been manufactured in compliance with the essential requirements and the relevant provisions of the relevant EU directives.

The declaration of conformity can be obtained from the manufacturer.

1.5 Symbols used

	Highlights important information and further additions.
▶	Action required
•	List
1 2	Fixed order. Steps 1 to X.
▷	Result of action

2. Safety-related information

2.1 Correct use

Operational safety is only guaranteed if the product is used as intended.

The hall effect sensor is intended for use in the volume flow sensor for the potable water circuit of the Oventrop Regumaq X-25 and Regumaq X-45 fresh water stations.

Any use beyond and/or different from this is considered improper use.

Claims of any kind against the manufacturer and/or his authorised representatives for damage resulting from improper use cannot be recognised.

Proper use also includes correct compliance with these instructions.

2.2 Warnings

Each warning contains the following elements:

Warning symbol **SIGNAL WORD**

Type and source of danger

Possible consequences if the danger occurs or the warning is ignored.

! Ways to avoid the danger.

Signal words define the severity of the danger posed by a situation.

DANGER

Indicates an imminent danger with high risk. If the situation is not avoided, death or most serious bodily injuries will result.

WARNING

Indicates a possible danger with moderate risk. If the situation is not avoided, death or serious bodily injuries may result.

CAUTION

Indicates a possible danger with lower risk. If the situation is not avoided, minor and reversible bodily injuries will result.

NOTICE

Indicates a situation that can potentially result in damage to property if not avoided.

2.3 Safety notes

We have developed this product in accordance with current safety requirements. Please observe the following notes concerning safe use.

2.3.1 Danger to life due to electric current

Danger to life due to contact with live components.

- Completely disconnect the station from the power supply.
- Check that no voltage is present.
- Secure the station against switching back on.
- Only install in dry indoor areas.

2.3.2 Risk of burns on hot components and surfaces

- Allow the station to cool down before working on it.
- Wear suitable protective clothing to avoid unprotected contact with hot system components and fittings.

2.3.3 Danger due to insufficient personnel qualification

Work on this product may only be carried out by suitably qualified specialist tradespeople.

Due to their professional training and experience as well as knowledge of the relevant legal regulations, qualified specialist tradespeople are able to carry out work on the described product in a professional manner.

2.3.4 Availability of the mounting instructions

Every person who works with this product must have read and apply this manual and all applicable instructions.

The instructions must be available at the place of use of the product.

- Pass on these instructions and all applicable instructions to the operator.

3. Technical description

3.1 Position in the fresh water station

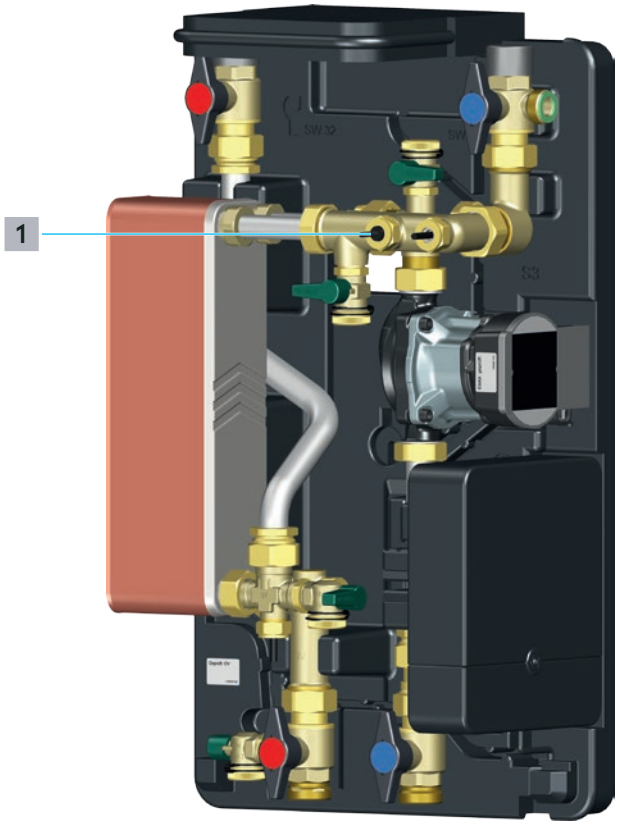

Fig. 1: Position in the Regumaq X-25 or Regumaq X-45 fresh water station

1 Hall effect sensor

3.2 Design

3.2.1 For Regumaq X-25

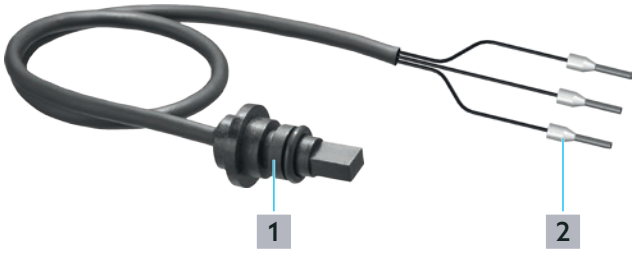

Fig. 2: Design for X-25 (item no. 1381170)

1 Sensor body

2 Connections

3.2.2 For Regumaq X-45

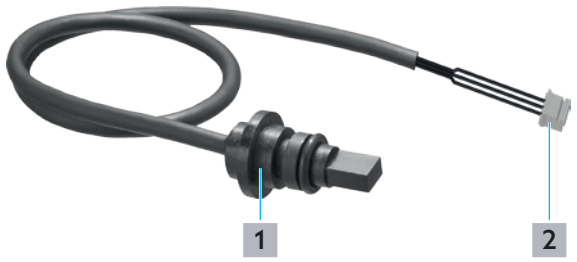

Fig. 3: Design for X-45 (item no. 1381171)

1	Sensor body
2	Plug

3.3 Functional description

Potable water flowing through the body of the volume flow sensor sets a measuring turbine in motion.

The speed is dependent on the volume flow.

The measuring turbine generates a magnetic field of varying field strength depending on the speed.

At the hall effect sensor, the magnetic field is converted into voltage pulses.

The hall effect sensor is connected to the controller in the Regumaq fresh water station via the measuring line.

The controller measures the pulses and calculates the current volume flow from them.

3.4 Transport and storage

Parameter	Value
Temperature range	0 °C to +40 °C
Relative air humidity	Max. 95 %
Particles	Store in a dry and dust-protected place
Mechanical influences	Protected from mechanical shock
Weather influences	Do not store outdoors
	Protect from sunlight
Chemical influences	Do not store together with aggressive media

4. Installation

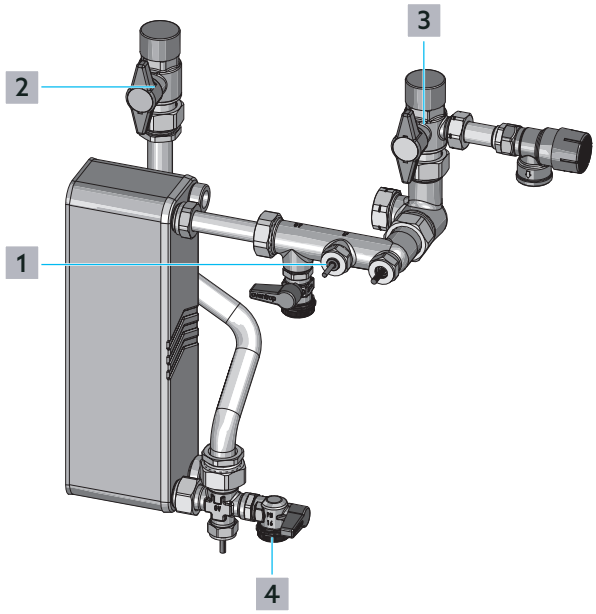

Fig. 4: Potable water circuit

1	Hall effect sensor
2	Isolating ball valve for potable water (hot)
3	Isolating ball valve for potable water (cold)
4	Fill and drain ball valve for potable water (cold)

4.4.1 Tools required

- 24 mm spanner
- Screwdriver for screws with hexalobular socket T25

4.4.2 Replacement of the hall effect sensor

DANGER

Danger to life due to electric current
There is a danger to life if live components are touched.

- ! Completely disconnect the product from the power supply.
- ! Check that no voltage is present.
- ! Secure the product against switching back on.
- ! Only install the product in dry indoor areas.

CAUTION

Risk of scalding due to hot media
If the station has been in operation, there is a risk of scalding due to unintentional escape of hot water or water steam.

- ! Allow the system to cool down.
- ! Wear safety goggles.

CAUTION

Risk of burns on hot components!
Touching hot components can cause burns.

- ! Wear safety gloves.

NOTICE

Risk of damage due to pressure surge
The abrupt injection of water into the station can lead to damage, e.g. to the sensors or sealing points.

- ! Always open and close the ball valves slowly.

NOTICE

Damage to electronic components due to electrostatic discharge

- ! Before touching the inside of the body, take suitable equipotential bonding measures. Touch an earthed component, such as a tap or radiator.

NOTICE

Damage to the electrical lines and connections due to tensile forces
Electrical lines and/or connections can break if excessive tensile forces are applied.

- ! Ensure that the cables connected to the controller are not subjected to tensile forces.

4.4.2.1 Replacement of the hall effect sensor at the volume flow sensor for the potable water circuit

1. Complete disconnect the fresh water station from the power supply.
2. Lift off the upper shell.
3. Slowly close the isolating ball valve for potable water (hot) (position **2** in Fig. 4 on page 7).
4. Slowly close the isolating ball valve for potable water (cold) (position **3** in Fig. 4 on page 7).
5. Unscrew the cap of the fill and drain ball valve for potable water (cold) (position **4** in Fig. 4 on page 7).
6. Connect the drain hose to the fill and drain ball valve for potable water (cold) (position **4** in Fig. 4 on page 7).
7. Open the fill and drain ball valve for potable water (cold) (position **4** in Fig. 4 on page 7).
8. Loosen the union nut of the volume flow sensor.

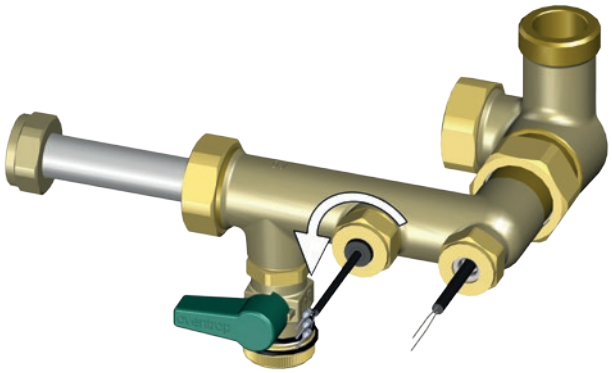

Fig. 5: Loosing of the union nut of the volume flow sensor

9. Carefully remove the defective hall effect sensor.
10. Mount the new hall effect sensor in reverse order.

Observe the correct positioning of the O-rings.

11. Remove the drain hose.

4.4.2.2 Electrical connection of the hall effect sensor

The controller holder in the lower shell is designed in such a way that you can easily secure the controller in a convenient installation position without tools.

1 Carefully remove the controller from the lower shell as shown in Fig. 6 on page 9.

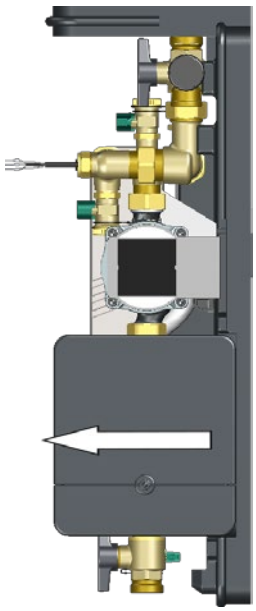

Fig. 6: Removal of the controller from the lower shell

2 Turn the controller and fix it in the installation position as shown in Fig. 7 on page 9.

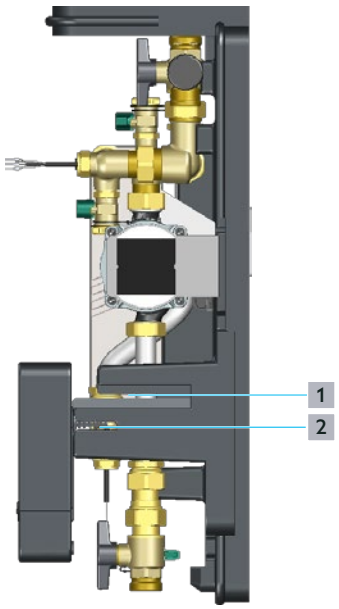

Fig. 7: Installation position

1 Opening for operation position
2 Opening for installation position

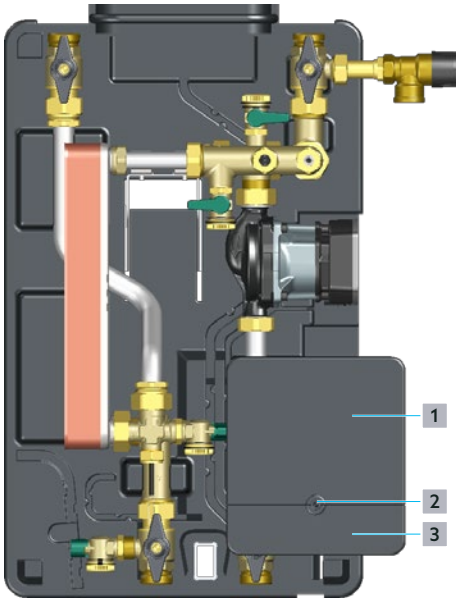

Fig. 8: Opening of the controller

1 Connection panel cover
2 Screw with hexalobular socket
3 Supply line cover

3 Loosen the screw (position **2** in Fig. 8 on page 9) and put it to one side.

4 Slide the connection panel cover (position **1** in Fig. 8 on page 9) upwards until it audibly locks into place.

5 Fold down the supply line cover (position **3** in Fig. 8 on page 9).

- The hall effect sensor for the Regumaq X-25 fresh water station is equipped with three individual connections.
- The hall effect sensor for the Regumaq X-45 fresh water station is equipped with a plug.

Connecting block Regumaq X-25

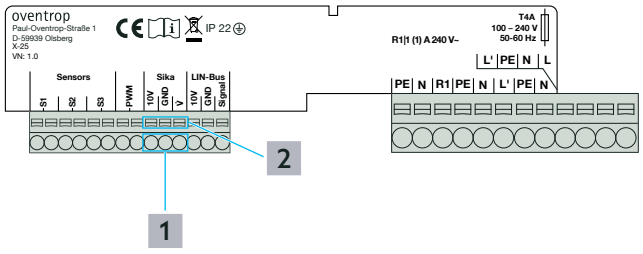

Fig. 9: Connecting block Regumaq X-25

1 Connections Sika (10V, GND, V̇)
2 Actuating push buttons

Connecting block Regumaq X-45

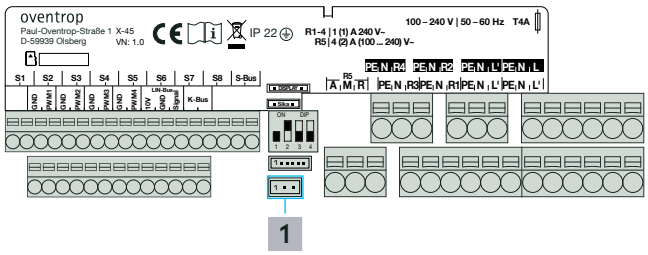

Fig. 10: Connecting block Regumaq X-45

1	Connections Sika (plug-in connection)

6 Fold down the supply line cover (position **3** in Fig. 8 on page 9).

7 **When using the Regumaq X-25 fresh water station:**
For later installation of the new sensor, note the colour coding!
Press down the respective actuating push button, e.g. with a screwdriver, and loosen the connections of the dismantled hall effect sensor.
Make the electrical connections for the new hall effect sensor according to the terminal assignment.

Here it is not necessary to press down the actuating push buttons.

When using the Regumaq X-45 fresh water station:
Loosen the plug-in connection of the dismantled hall effect sensor.

NOTICE

Damage to the plug-in connection
The plug-in connection can be damaged if it is plugged on the wrong way round with high pressure.

- ! Make sure that the plug is seated correctly.
- ! Apply only a little force.

Connect the plug of the new hall effect sensor to the connecting block.

8 Fix the supply line with a suitable cable tie for strain relief.

9 Close the supply line cover and the connection panel cover.

10 Tighten the screw.

11 Plug the controller back from the installation position to the operation position (see Fig. 6 on page 9).

12 Lay the electrical lines in the channels provided in the lower shell.
To avoid crosstalk, do not lay live lines and signal lines in the same channel.

13 Bleed the system as described in the operating instructions for the fresh water station you are using.

14 Connect the power supply.

▷ The fresh water station is ready for operation.

5. Disposal

Directive 2012/19/UE WEEE:

Do not dispose of old devices with normal domestic waste, but take them to a designated collection point for the recycling of electrical and electronic appliances.

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Wir regeln das. Seit 1851.

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