

ifm electronic



Operating instructions
Mechatronic flow sensor

efector300®

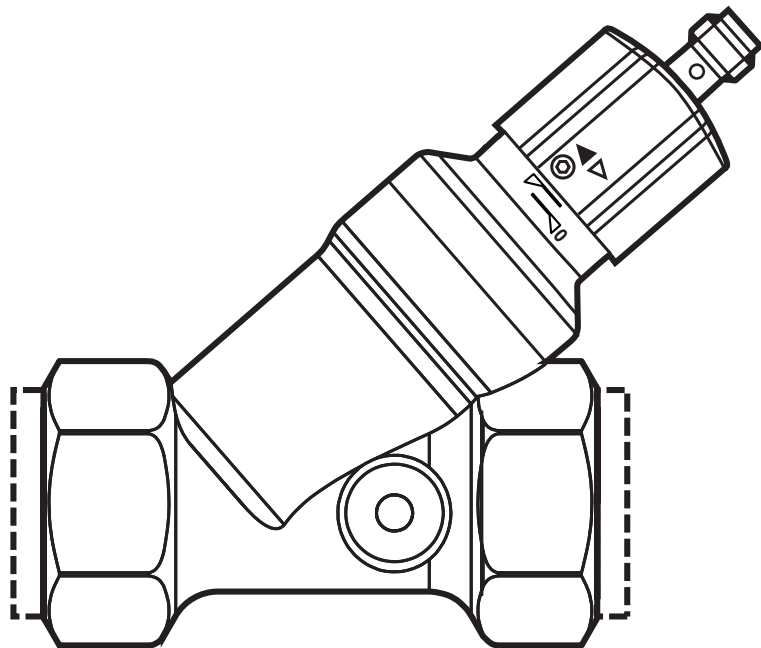
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1 Safety instructions

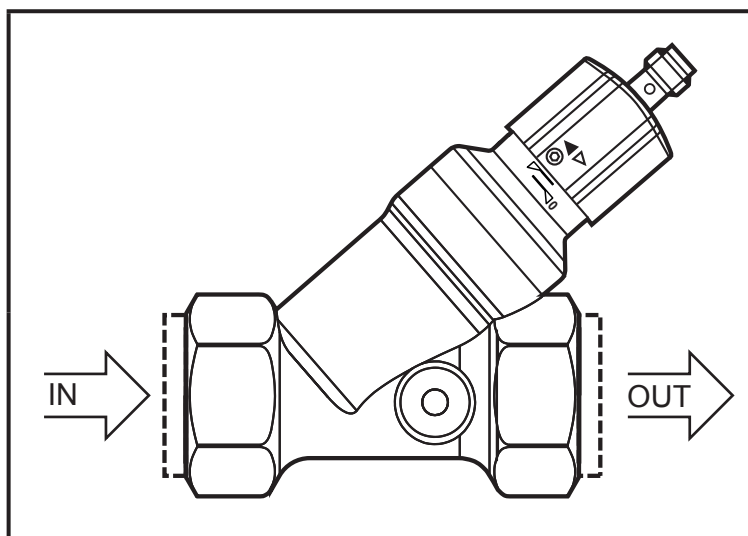
- Please read this document prior to set-up of the unit. Ensure that the product is suitable for your application without any restrictions.
- Improper or non-intended use may lead to malfunctions of the unit or to unwanted effects in your application. That is why installation, electrical connection, set-up, operation and maintenance of the unit must be carried out by qualified personnel authorised by the machine operator.
- In order to guarantee the correct condition of the device for the operating time it is necessary to use the device only for media to which the wetted materials are sufficiently resistant (→ Technical data).
- The responsibility whether the measurement devices are suitable for the respective application lies with the operator. The manufacturer assumes no liability for consequences of misuse by the operator. Improper installation and use of the devices result in a loss of the warranty claims.
- During installation or in case of a fault (e.g. housing damage) media under high pressure or hot media can leak from the system.
 - ▶ Install the unit according to the applicable rules and regulations.
 - ▶ Ensure that the system is free of pressure during installation.
 - ▶ Ensure that no media can leak at the mounting location during installation.
 - ▶ Equip the unit with suitable protection (e.g. cover) to avoid hazard to personnel from leaking media.

2 Functions and features

The unit monitors liquid media (water, glycol solutions, industrial oils, coolants). It detects the volumetric flow quantity to the principle of differential pressure and switches the output.

The switch point is adjustable.

3 Installation



- Insert the unit into the pipe according to the direction of flow (arrow) and tighten.

IN = inlet
OUT = outlet

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Baffled pipes on the sensor's inlet or outlet side are not necessary.

4 Electrical connection

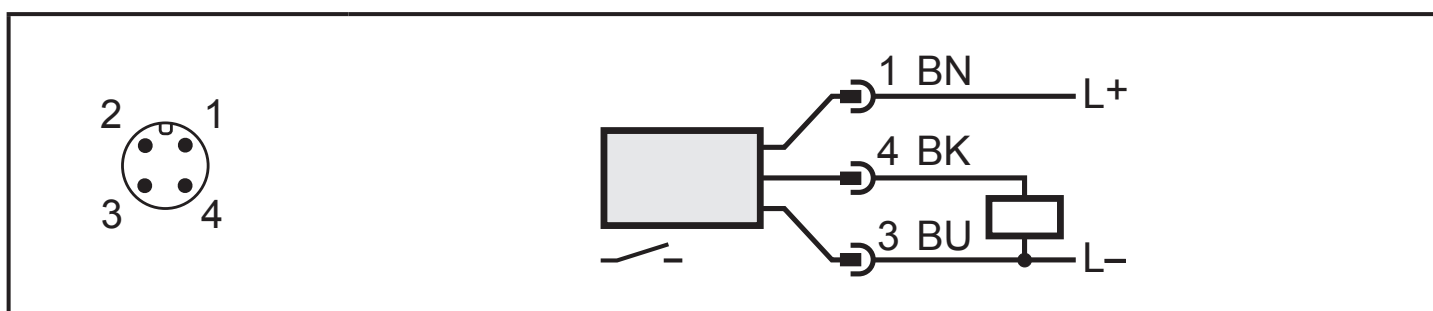


The unit must be connected by a qualified electrician.

The national and international regulations for the installation of electrical equipment must be adhered to.

Voltage supply according to EN 50178, SELV, PELV.

- Disconnect power.
- Connect the unit as follows:



Core colours of ifm sockets: 1 = BN (brown), 3 = BU (blue), 4 = BK (black)
Colours to DIN EN 60947-5-2

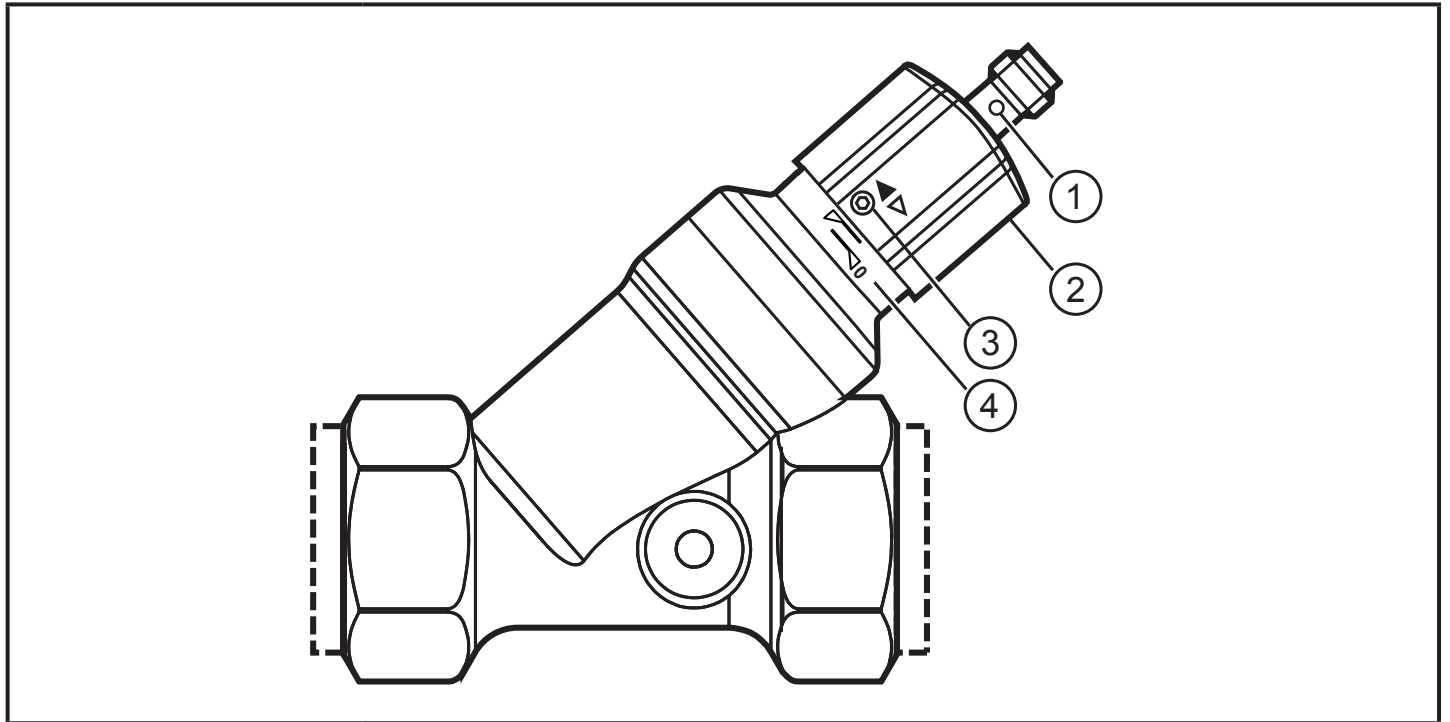


Information about the available adapters at www.ifm.com.

5 Settings

There are 2 options to set the switch point:

- Defining the target value → 5.1.
- Adjust the unit to the existing flow → 5.2.



1: LED
2: cap

3: fixing screw
4: setting scale



Do not turn the cap beyond the maximum value of the setting range (→ Technical data) to avoid faulty switching.

5.1 Defining the target value for the switch point

- ▶ Loosen the fixing screw.
- ▶ Turn the cap until the target value becomes visible on the setting scale (figure → 5 Settings).
- ▶ Tighten the fixing screw.

5.2 Setting the switch point to the existing flow

- ▶ Let the normal flow circulate in the installation.
- ▶ Loosen the fixing screw.
- ▶ Set the switch point by slowly turning the cap: the switch point has been reached as soon as the LED is lit.
- ▶ Tighten the fixing screw.

6 Operation

After power on, the unit is ready for operation.

The unit detects the volumetric flow quantity and switches the output according to the setting.

- Output closed (LED = ON), if volumetric flow quantity \geq switch point.
- Output open (LED = OFF), if volumetric flow quantity $<$ switch point.

7 Technical data and scale drawings

Technical data and scale drawing at www.ifm.com.

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8 Maintenance, repair, disposal

If used correctly, no maintenance and repair measures are necessary.

In case of strongly polluted media: mount a filter before the inlet (IN). Recommendation: use a 200-micron filter.

Only the manufacturer is allowed to repair the unit.

After use dispose of the unit in an environmentally friendly way in accordance with the applicable national regulations.