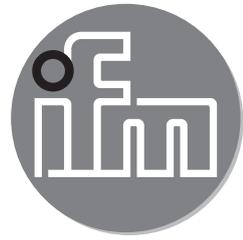


ifm electronic



Operating instructions  
Mechatronic flow sensor

**efector 300<sup>®</sup>**

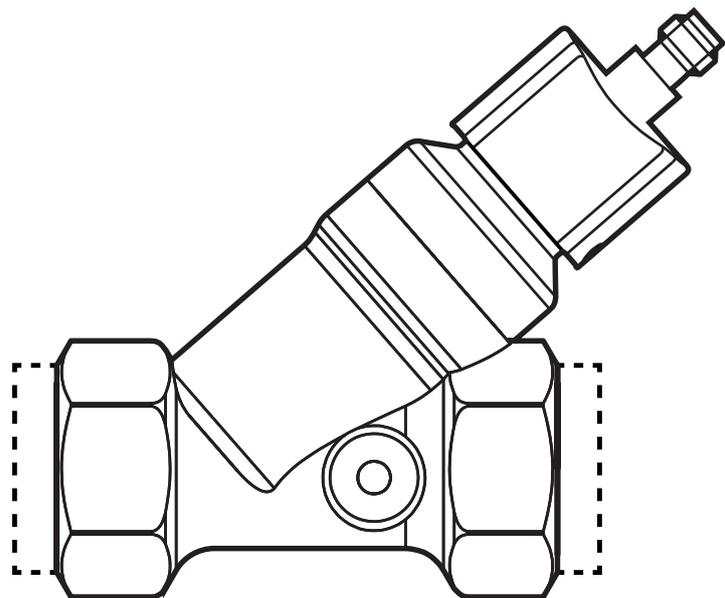
**SBY4xx**

**SBG4xx**

**SBN4xx**

**UK**

80008285 / 00 10 / 2014



# 1 Preliminary note

- ▶ Instructions
- > Reaction, result
- Cross-reference



Important note

Non-compliance can result in malfunction or interference.



Information

Supplementary note.

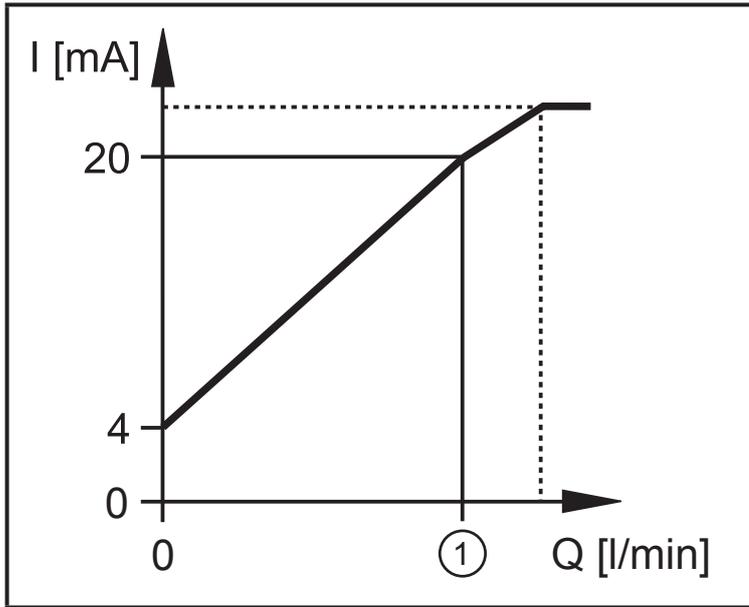
## 2 Safety instructions

- 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 only 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 the device must only be used in media with which the wetted parts are compatible (→ 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 (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.

### 3 Functions and features

The unit monitors liquid media (water, glycol solutions, industrial oils, coolants). It detects the flow quantity on the principle of differential pressure and converts it into an analogue output signal (4...20 mA).

### 4 Function



1: final value of the measuring range

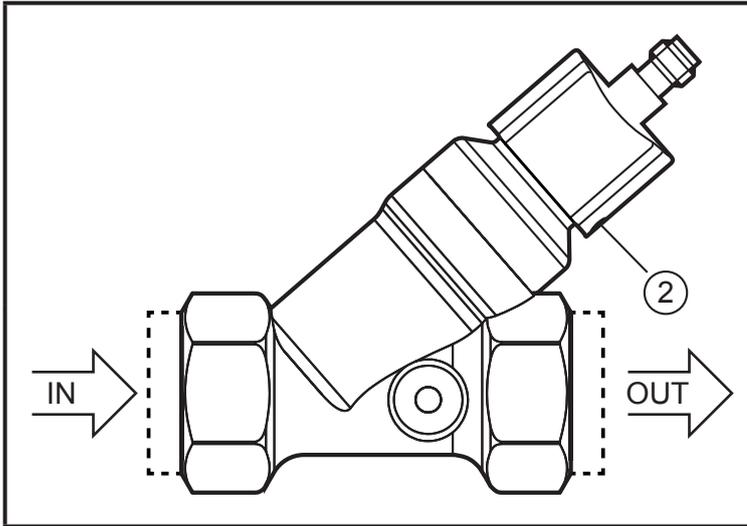
The analogue signal for water (20 °C) is linear from 4 mA (= no flow) to 20 mA (= final value of the measuring range, see Technical Data).

For an output signal  $> 20$  mA the flow quantity is above the final value of the measuring range.

## 5 Installation



Loosening the socket head screw (2) and moving the cap do not change the setting of the sensor. However, moving the cap may be useful to read the label.



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

IN = inlet  
OUT = outlet



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

- ▶ Do not install the unit on ferromagnetic materials. (Ferromagnetic materials are all metals exerting an attractive force on test magnets.)
- ▶ Do not operate the unit in the vicinity of magnetic constant and alternating fields (e.g. welding systems).
- ▶ If the sensors are installed side by side, observe a minimum distance of 50 mm between the sensor axes.

## 6 Electrical connection

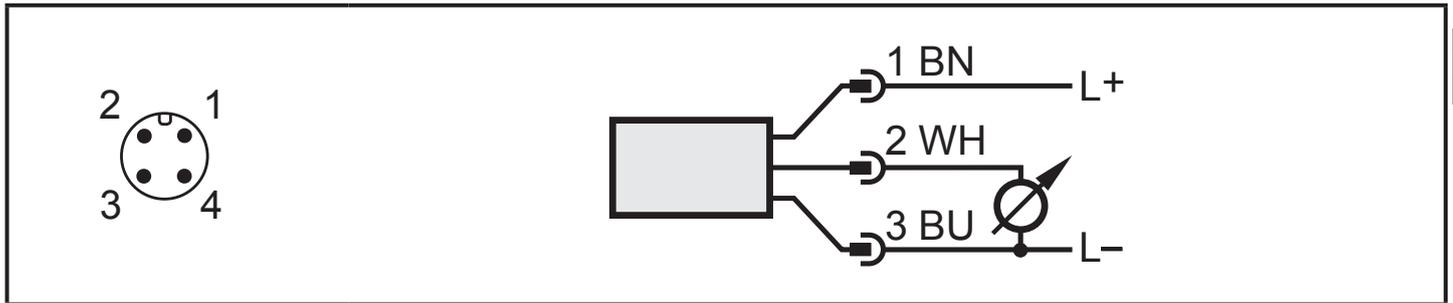


The unit must be connected by a qualified electrician.

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), 2 = WH (white), 3 = BU (blue)  
Colours to DIN EN 60947-5-2



Information about available sockets/connectors at [www.ifm.com](http://www.ifm.com).

## 7 Technical data and scale drawing

Technical data and scale drawing at [www.ifm.com](http://www.ifm.com)

## 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.