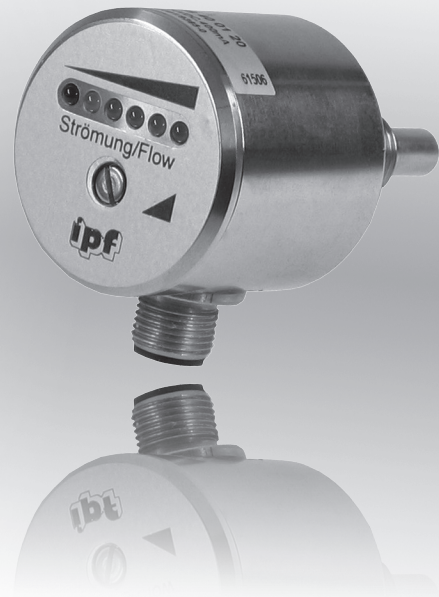




| | | |
|------------|------------------------|---------------|
| dimensions | G¼" Ø 40 x 73mm | |
| | G½" Ø 40 x 84mm | |
| | G½" Ø 40 x 66mm | |
| flow | water | 1 ... 150cm/s |
| | oil | 3 ... 300cm/s |


- ✓ **robust against soiling**
- ✓ **no moving parts means zero wear**
- ✓ **pressure-proof to 100 bar**
- ✓ **VA 1.4571 robust metal housing**
- ✓ **flow indicated by row of LEDs**
- ✓ **easy to install in T-pieces**
- ✓ **integrated amplifier**




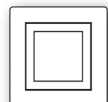
single-piece stainless steel sensing head, wear-free



PNP


DC


M12




description

The flow sensor functions according to the calorimetric principle. The measuring probe is heated from inside by a few degrees Celsius above the temperature of the flow medium into which the probe projects. If the medium is flowing, the heat generated in the probe is dissipated by the medium, i.e. the probe is cooled.

The temperature at the probe is measured and compared with the medium temperature, which is also measured. From the temperature difference, it is possible to calculate the flow status for any medium.

If the sensor is to be used in corrosive or oxidative media, materials such as Hastalloy or titanium are available on request.

The sensing head has a new electronic and mechanical design and is single-piece component made of stainless steel. This

ensures absolute leaktightness and high pressure resistance. Furthermore, this material is suitable for a wide range of different applications.

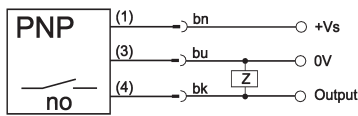
application examples

- ▶ continuous monitoring of the presence of a fluid or gas flow
- ▶ movement of granulates
- ▶ monitoring of cooling systems
- ▶ dry-run protection for pumps
- ▶ use in ventilation systems, purification plants, filling and metering systems, in medical and laboratory equipment as well as air-conditioning systems
- ▶ monitoring of filters and sieves

| article-no. | SS400120 | SS410120 | SS410124 |
|---------------------------------|--|--|--|
| connection (sensing element) | G $\frac{1}{4}$ " | G $\frac{1}{2}$ " | G $\frac{1}{2}$ " |
| output | pnp, no | pnp, no | pnp, no |
| | | | |
| TECHNICAL DATA | | | |
| detection range | water: 1 ... 150cm/s oil: 3 ... 300cm/s | water: 1 ... 150cm/s oil: 3 ... 300cm/s | water: 1 ... 150cm/s oil: 3 ... 300cm/s |
| pressure resistance | 100bar | 100bar | 100bar |
| output | pnp, no | pnp, no | pnp, no |
| operating voltage | 24V DC \pm 20% | 24V DC \pm 20% | 24V DC \pm 20% |
| output current (max. load) | < 400mA | < 400mA | < 400mA |
| current consumption (w/o load) | < 70mA | < 70mA | < 70mA |
| voltage drop (max. load) | < 2V DC | < 2V DC | < 2V DC |
| readiness delay | 2 ... 15s | 2 ... 15s | 2 ... 15s |
| display | LED row | LED row | LED row |
| flow setting | potentiometer | potentiometer | potentiometer |
| short-circuit protection | + | + | + |
| reverse polarity protection | + | + | + |
| housing material | VA 1.4571 | VA 1.4571 | VA 1.4571 |
| material (sensing element) | VA 1.4571 | VA 1.4571 | VA 1.4571 |
| dimensions | \varnothing 40 x 73mm | \varnothing 40 x 84mm | \varnothing 40 x 67mm |
| operating temperature | -20 ... +80°C | -20 ... +80°C | -20 ... +80°C |
| temperature (medium) | -20 ... +80°C | -20 ... +80°C | -20 ... +80°C |
| temperature gradient | 250°C/min. | 250°C/min. | 250°C/min. |
| degree of protection (EN 60529) | IP67 | IP67 | IP67 |
| connection | M12-connector 4-pin, 3 assigned | M12-connector 4-pin, 3 assigned | M12-connector 4-pin, 3 assigned |
| connection accessories | e.g. VK200021 | e.g. VK200021 | e.g. VK200021 |
| connection (sensing element) | G $\frac{1}{4}$ " | G $\frac{1}{2}$ " | G $\frac{1}{2}$ " |

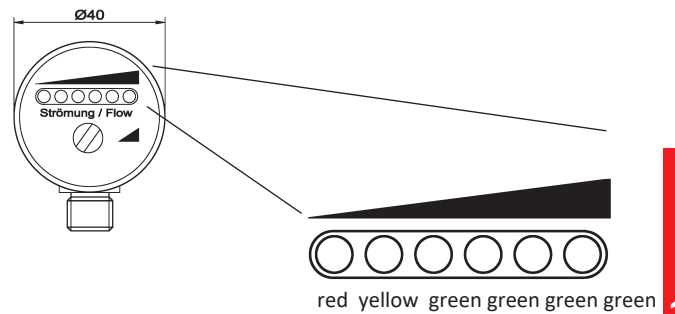
connection

switching devices



wire colors: bn = brown (1), bu = blue (3), bk = black (4)

LED indicators



setting instructions

calibration for stationary medium

Install the sensor and set the potentiometer such that the red LED lights up. In case of a flow at least one green LED must light up.

calibration for flowing medium

Install the sensor and set the potentiometer such that two green LEDs light up. When the medium is stationary, the red LED lights up.

falling below the set flow

Install the sensor, preset the flow and set the potentiometer such that the first green LED lights up. Any reduction in the flow speed causes the green LED to extinguish first followed by the yellow LED, and the switching output is disabled. Now the red LED lights up.

exceeding the set flow

Install the sensor, preset the flow and set the potentiometer such that the red LED lights up. Any increase in the flow speed causes the red LED to extinguish, the yellow LED lights up and the swit-

ching output is enabled.

LED assignment

red

Flow below set value, switching output disabled.

yellow

Flow at set value; switching output enabled.

yellow and green

Flow above set value, switching output switched, flow reserve sufficient.

This data sheet only contains the available standard variants. For other output / connection variants, we kindly ask that you contact us.

We are happy to supply the right cable socket for the plug equipment. You will find a list in the "accessories" section of the catalog under **ipf-SENSORFLEX**® "cable sockets" or in the search window on our homepage www.ipf-electronic.com (using the search term "VK").

Warning: Never use these devices in applications where the safety of a person depends on their functionality.

NOTES

A large grid area for taking notes, consisting of a 20x30 grid of small squares. The grid is empty and occupies the majority of the page.