

Flowrate Sensor FS242



- Measuring ranges from (0)0.3..6 m/s
- Impulse output PNP/NPN or Analog output 4..20 mA, 2-wire
- Filter function
- Process pressure max. 10 bar
- Medium temperature max. 60 °C

Characteristics

The Flow-Sensor FS242 was designed for continuous flow measurement of pure liquids (without solid parts). The rotor of the FS242 turns in the liquid stream. Small magnets inside the wings generate pulses, when passing a hall sensor built-in the body of the sensor. The pulse frequency is directly proportional to the flow speed. Dependent on the selected version a built-in electronic circuit provides PNP and NPN output or loop powered analog output 4..20 mA.

The pipe diameter should be selected to get flow speed within the range 0.3..6.0 m/s under different operating conditions. Suitable flow fittings FF25 for different pipe sizes are available. For pressure and temperature please mind material specified data of PVC-U.

Technical data

Power supply

Supply voltage : 4..30 V DC (impulse output)
 10..30 V DC (analog output 4..20 mA)
 Working temperature : 0..60 °C
 Electrical connection : 4 pole plug DIN EN 175301-803/A
 CE-conformity : IEC61326:2004, IEC 61000-4-2/3/4/5/6
 CISPR16-1/2

Output

Measuring range : (0)0.3..6.0 m/s
 (flow quantities see table)
 Impulse : transistor NPN / PNP open collector,
 max. 20 mA, short circuit protection
 Analog : 4..20 mA
 Accuracy : 2.5 % of the measuring range, +0.5 %
 of the end value in the range 0.3..6 m/s
 Repeatability : 0.5 %
 Medium temperature : 0..60 °C
 Process pressure : max. 10 bar
 Min. Reynoldsno. : 4500

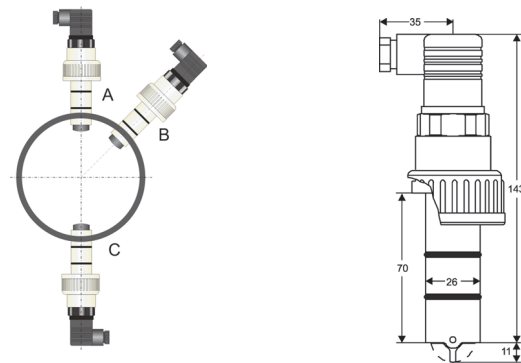
Material

Sensor body/ cap nut : PP
 Seal : EPDM
 Rotor : PVC-U
 Bearing : ceramic Al₂O₃
 Weight : 140 g
 Protection class : IP65

K-factor and flow ranges

Fitting	K-factor [Impulse/liter]	Flow range [l/min]	Flow range [m ³ /h]
FF25-2-0-DN15	132.4	0.. 60.7	0.. 3.64
FF25-2-0-DN20	73.45	0.. 109.5	0.. 6.57
FF25-2-0-DN25	41.02	0.. 196.0	0.. 11.76
FF25-2-0-DN32	24.56	0.. 327.4	0.. 19.64
FF25-2-0-DN40	15.47	0.. 519.7	0.. 31.18
FF25-2-0-DN50	9.284	0.. 866.0	0.. 51.96
FF25-2-0-DN65	6.252	0..1286.0	0.. 77.16
FF25-2-0-DN80	4.451	0..1806.3	0..108.98
FF25-2-0-DN100	2.815	0..2856.1	0..171.37

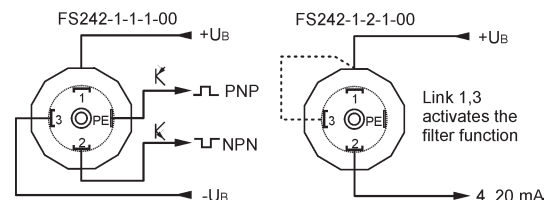
Dimensions / mounting instructions



Horizontal flow direction

- A Installation without air bubbles (optimal)
 B Installation with temporarily air bubbles and small solid parts
 C Installation without solid parts

Connection diagram



Ordering code

FS242 - 1. - 2. - 3. - 4.

1. Measuring range [m/s]	2. Output	3. Material	4. Options
1 (0)0.3..6.0	1 impulse NPN / PNP 2 analog 4..20 mA	1 PVC-U, PP, ceramic, EPDM, max. 60 °C	00 without option

Note:
 Flow fitting FF25 see page Fehler: Referenz nicht gefunden