



Flow sensor

F3

Artikel no. 50276/ [Immersion depth]

Description

The calorimetric air flow sensors from SEIKOM Electronic are a precise and reliable instrument for measuring gas flows. The measuring principle is based on the calorimetric method, in which the change in temperature of the sensor element is proportional to the mass of the passing gas volume.

Due to the highly accurate measuring method, the sensor enables a precise determination of the mass air flow, which ensures an optimal control and regulation of industrial processes. The sensor from SEIKOM Electronic offers a robust and reliable solution for a wide range of applications where accurate monitoring of the air flow is crucial.

Installation conditions

The flow sensor must be connected to the associated evaluation unit in accordance with the connection diagram. Mixing up the connections will lead to malfunctions and possible damage. Screw in the sensor only via the hexagon of the sensor housing. The sensor is not dependent on the installation position and can therefore be mounted from all sides. The sensor tip should be as close as possible to the center of the pipe. The through hole in the shaft of the sensor must be completely inside the duct. There is a small indentation in the metal at the end of the sensor. This mark is intended as a mounting aid and must be placed in the direction from which the gas flow is coming.

For vertical pipes, the direction of flow should be upwards, especially for small air flows (up to 1

m/s), in order to avoid influences from thermally rising air.

For optimum measurement, the sensor requires at least 5 x D (inner pipe diameter) of the free inlet and 3 x D of the outlet to avoid faulty measurements due to turbulence.

To avoid malfunctions, the sensor line must be extended with a cross-section of at least 1.5 mm². The maximum cable length should not exceed 50 m.

The switching point is set via the potentiometer of the associated evaluation unit.

Various options are available for mounting the sensor:

- *Recommended:* Screw-in of the sensor by means of a **screw-in adapter** (Article no. 80404), to variably determine the immersion depth of the sensor and for easy cleaning of the sensor.
- **Screw the sensor** into the duct or pipe using a PG7 thread (alternative connections G1/2-inch, M16 x 1.5 and M20 x 1.5 possible using a reducer)
- Mounting by means of **mounting flange**. (Article no. 79781/10)

Technical data

Media temperature range	-25 ... 120°C
Temperature gradient	30K/min
Immersion depth approx.	50 mm, 130 mm, 165 mm, 300 mm, 400 mm, 500 mm
Process connection	PG7 (optionally possible by means of reducer G1/2-inch, (Article no. 80399) M 16 x 1,5 (Article no. 80403) or M 20 x 1,5 (Article no. 80402))
Sensor material	MS58, nickel-plated, optionally stainless steel (V4A)
Compressive strength	10 bar
Protection class	IP67
Associated evaluation units	NLSW®2a NLSW®45-3 NLSW®75-A

Testmark

Type-tested TÜV
Nord nach DIN EN
61010-1 2011-07

Electrical data

Connection line 2,5 m / 3 x 0,5 mm²

Maintenance instructions

The flow sensor should be cleaned at regular intervals, especially when used in heavily contaminated media. The following procedure is recommended:

- Disassemble sensor
- Carefully soak the sensor in lukewarm soapy water for approx. 10 min. (depending on the contamination)
- Rinse the sensor with lukewarm water and then allow to dry for at least 24 hours.
- Mount sensor in dry condition
- Tart up the flow monitor and if necessary, perform a new calibration with the evaluation unit

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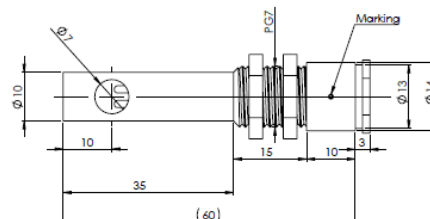
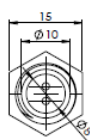
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Immersion depth

50	50 mm
130	130 mm
165	165 mm
300	300 mm
400	400 mm
500	500 mm

Dimensions

Sensor F3/50 (exemplary):



Sensor with other immersion depths correspondingly longer