Flow sensor
F7

Article no. 80504/ [Immersion depth]
76107/ [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 gas volume flowing past.

Due to the highly accurate measurement method, the sensor enables precise determination of the mass air flow, ensuring 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 according to the connection diagram. Mixing up the connections will lead to malfunctions and possibly damage.

Screw in the sensor only via the hexagon of the sensor housing. The sensor is independent of 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.

In 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.

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

To avoid malfunctions, the sensor cable 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 **screw-in adapter** (item 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 by means of a PG7 thread (alternative connections G1/2-inch, M16 x 1.5 as well as M20 x 1.5 possible by means of reducer).
- Mounting by means of **mounting flange** (item no. 79781/10).

Technical data

Media temperature range	-10 ... 80°C
Temperature gradient	15K/min.
Immersion depth approx.	50 mm (Standard) or 165 mm
Process connection	PG7, optionally possible by means of reducer G1/2-inch (item no. 80399), M 16 x 1.5 (item no. 80403) or M 20 x 1.5 (item no. 80402)
Sensor material	MS58, nickel-plated
Compressive strength	5 bar
Protection class	IP67
Associated evaluation units	NLSW®45-5
Temperature range of sensor connection cable	
moved	-15°C ... 80°C
unmoved	-40°C ... 80°C

Electrical data

Connection line	2.5 m / 3 x 0.5 mm²
Wire colors	black/ brown/ gray

Maintenance instructions

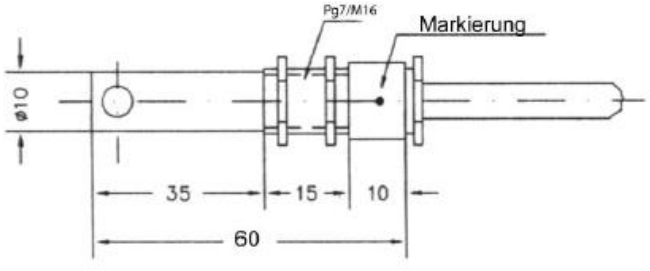
The flow sensor should be cleaned at regular intervals, especially when used in heavily contaminated media. Do not clean the sensor tip with a screwdriver, wire brush or similar, as there is a risk of damage. The following procedure is recommended:

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

Article number flow sensor F7		
Item no.	**80504/ 76108/**	**50 165**
Immersion depth		
50	50 mm	
165	165 mm	

Dimensions

Sensor F7/50 (exemplary):



Sensor with other immersion depths correspondingly longer.

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