SCHMIDT® Technology

SCHMIDT® Flow Sensor
SS 20.415
Instructions for Use

SCHMIDT® Flow Sensor

SS 20.415

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Imprint:

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1 Important Information

These instructions for use must be read completely and observed carefully, before putting the unit into operation.

Any claims under the manufacturer's liability for damage resulting from non-observance or non-compliance with these instructions will become void.

Tampering with the device in any way whatsoever - with the exception of the designated use and the operations described in these instructions for use - will forfeit any warranty and exclude any liability.

The unit is designed exclusively for the use described below (s. chapter 2). In particular, it is not designed for direct or indirect personal protection.

SCHMIDT Technology cannot give any warranty as to its suitability for a certain purpose and cannot be held liable for errors contained in these instructions for use or for accidental or sequential damage in connection with the delivery, performance or use of this unit.

2 Field of Application

The SCHMIDT® flow sensor SS 20.415 has been designed for stationary use in cleanrooms under atmospheric pressure conditions.

The sensor measures the flow velocity of the measuring medium as standard velocity (unit m/s), relative to the standard pressure of 1013.25 hPa and the standard temperature of 20°C. The output signal is linear and independent of the pressure and temperature of the medium.

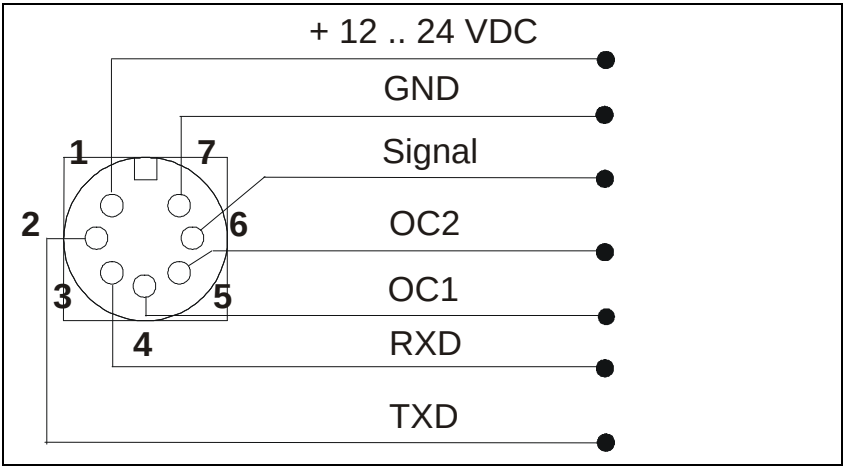
3 Mounting Information

Mounting sequence
If not yet in place, first drill a bore into the wall or ceiling for installing the mounting bush. Then the mounting bush is fastened in the wall or ceiling. Then the connecting cable is laid and passed through the mounting bush. The plug should project from the mounting bush by about 5 cm. There must be enough room behind the mounting bush, to allow the cable to be pushed backward when screwing in the sensor. Then the sensor is connected to the connecting plug from the cleanroom side and the plug is secured by tightening the threaded ring. Next the sensor is inserted into the mounting bush, aligned at the right angle, and then the mounting screw is tightened to such an extent that the sensor can no longer rotate.

Mounting in the ceiling
The bent sensor has been designed for mounting in the ceiling. After screwing the sensor into the ceiling sleeve, the sensor can be swivelled to the correct position by rotating it. The sensor is now automatically in the correct position for a vertical down flow of the air from the filter outlet.

Mounting in the wall
The straight sensor has been designed for mounting in the wall. After screwing the sensor into the sleeve, it must be aligned such that the sensor arrow points downward to the floor and the housing line visible on the front of the sensor tip is aligned exactly vertically. The dashed line on the sensor tube is then exactly on the topside of the tube. This guarantees that the vertical down flow from the filter outlet can flow in a straight line through the chamber of the sensor element.

4 Electrical Connections



Connection assignment SS 20.415
View of the plug pins at the sensor

Round connector type: Binder (series 712)

All signals use GND as common earth. The analog output has been designed as passive current sink.

Attention: Only operate the sensor in the defined range of operating voltage (12 .. 24 VDC). Undervoltage may result in malfunction. Overvoltage may lead to irreversible damage of the sensor.

5 Putting into Operation

The sensor is ready within 5 sec after switch-on. If the sensor has a temperature different from that of the place of use, this time will increase until the sensor has reached ambient temperature.

Attention: Do not plug in or pull the sensor with the supply voltage switched on.

To program the sensor by means of the programming kit, it is dismounted from the mounting bush and the connecting cable is disconnected from the sensor. The sensor can now be connected to the cable of the programming kit.

6 Service Information

Service
Soiling of the sensor tip will reduce the measuring accuracy. Therefore, the sensor tip must be checked regularly for soiling. When heavily soiled, the sensor will output an error signal (analog output = 2 mA). If this is the case, clean the sensor carefully (see below). If the error signal does not disappear, the sensor must be sent in to the manufacturer for servicing.

Cleaning the sensor tip
The sensor tip can be cleaned carefully with compressed air to remove dust/soiling. Resilient soiling can be removed by rinsing the sensor tip carefully with alcohol (e.g. isopropanol). Do not try to clean the sensor tip by mechanical means of any type.

Do not use strong cleaners, solvents, brush or other hard objects for cleaning!

Do not shake a wet sensor.

Recalibration
If the customer has made no other provisions, we recommend repeating the calibration at a 12-month interval. To do so, the sensor must be sent in to the manufacturer.

Spare parts or repair
No spare parts are available, since a repair is only possible at the manufacturer's. In case of defects, the sensors must be sent in to the supplier for repair.
When the sensor is used in systems important for operation, we recommend keeping a replacement sensor in stock.

Test certificates and material certificates
No certificates are necessary for this sensor. Upon request, we shall prepare a calibration certificate according to ISO 9001, traceable to national standards, at a charge.

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