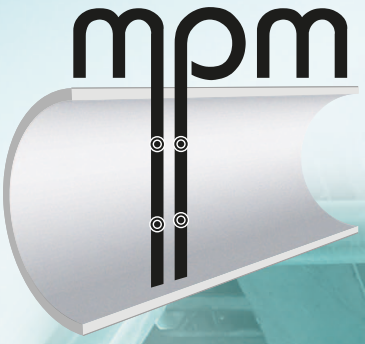
Simply a question of
better measurement

SCHMIDT® Technology

SCHMIDT® InLine Mass Flow Sensor

Shortest inlet and outlet distances due to Multi-Point-Measurement



- Direct measurement of mass flow and temperature
- Low pressure loss
- Additional modules to increase functionality
- Simple installation with integrated measuring distance
- **High measuring accuracy** even in installations with a **poor flow profile**

Perfect for use in air consumption and air and gases flow measurement, as well as for compressed air operated tools and machines.

Multi-**P**oint-**M**easurement – Principle of Operation

The well-known and time proven measuring principle of thermal anemometry has been integrated into the new **SCHMIDT® InLine Mass Flow Sensor**, now with 4-point measurement.

The **SCHMIDT® MPM Technology** generates four measuring values in parallel. Processing these values by intelligent algorithms it is possible to achieve greatly improved and reliable measurements, even with insufficient inlet and outlet distances.

Four well-protected and streamlined mass flow elements have been strategically positioned inside the measuring section. The radial arrangement of the four measuring points combined with the associated signal processing means that even poor flow profiles can be reliably and more accurately measured.

Two parallel positioned sensor carriers integrated into the measuring section of the sensor carry the four high precision and fully independent flow sensor elements. A temperature sensor element, used to determine the air/gas temperature, has been placed on a third carrier positioned between them.
Each of the four flow sensor elements are electrically heated to a distinct fixed temperature above the temperature of the medium. The power required to maintain this positive temperature differential ("over temperature") is processed to determine the mass flow and the sensor sends out a linear current / pulse signal proportionate to the flow. The great advantage of this measuring principle is that no additional pressure or temperature measurement of the medium is required.

The "true professional" for industrial processes and compressed air technology

The **SCHMIDT® InLine Mass Flow Sensor** is the perfect solution for demanding and tough industrial applications. It can be used for a diverse range of applications, such as compressed air and gas monitoring on process burners, compressed air consumption, air and gases flow measurement, compressed air measurement to air operated tools and machines. In addition to mass flow, the sensor also measures the medium temperature in the range -20 °C to +60 °C.

The **SCHMIDT® InLine Mass Flow Sensor** comes with four integrated dual LEDs to indicate the flow range as well as the operating status of the sensor itself. The measuring values for flow and temperature are supplied via two independent outputs. A second plug-in connector enables the connection of accessory modules to give additional features to the device.

The sensor can be supplied with or without the available and optional extended measuring section. It is very easy to install … screw in the sensor into the pipework installation, connect it electrically, and the job is done!
The sensor operates without any moving parts and due to the measuring principle without any drift or signs of ageing. Maintenance cost and effort for the sensor is reduced to a minimum.

Sensor	Outer diameter	Measuring range
IL 30.005	DN 15 / 0.5"	76.3 Nm³/h [1]
IL 30.010 MPM	DN 25 / 1"	229 Nm³/h [1]
IL 30.015 MPM	DN 40 / 1.5"	417 Nm³/h [1]
IL 30.020 MPM	DN 50 / 2"	712 Nm³/h [1]

[1] Based on standard conditions: T_N = 20 °C and p_N = 1,013.25 hPa

Operating temperature	-20 … +60 °C
Measuring accuracy flow	± (3 % of measured value + 0.3 % fmr)
Measuring accuracy temperature	≤ ±2 °C (at mass flow >2 % fmr)
Output 1 (OUT 1)	4 … 20 mA flow
Output 2 (OUT 2)	4 ... 20 mA temperature
Impulse output	connection for consumption meter
Maximum pressure	16 bar G
Medium	clean compressed air, nitrogen, other gases on request; non-condensing (up to 95 % rH)

Want to learn more about **SCHMIDT® MPM Technology**? Further information are available on our website **www.schmidt-sensors.com** or at Mr Oliver Joos, phone +49 7724 / 899-198 or by e-mail at **o.joos@schmidttechnology.de**