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

SCHMIDT® InLine Mass Flow Sensor
Shortest inlet and outlet distances due to Multi-Point-Measurement

Perfect for use in air consumption and air and gases flow measurement, as well as for compressed air operated tools and machines.
Multi-Point-Measurement – 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.

<table>
<thead>
<tr>
<th>Sensor</th>
<th>Outer diameter</th>
<th>Measuring range</th>
</tr>
</thead>
<tbody>
<tr>
<td>IL 30.005</td>
<td>DN 15 / 0.5&quot;</td>
<td>76.3 Nm/h</td>
</tr>
<tr>
<td>IL 30.010 MPM</td>
<td>DN 25 / 1&quot;</td>
<td>229 Nm/h</td>
</tr>
<tr>
<td>IL 30.015 MPM</td>
<td>DN 40 / 1.5&quot;</td>
<td>417 Nm/h</td>
</tr>
<tr>
<td>IL 30.020 MPM</td>
<td>DN 50 / 2&quot;</td>
<td>712 Nm/h</td>
</tr>
</tbody>
</table>

1) Based on standard conditions: Tₙ = 20 °C and pₙ = 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)