Simply a question of
better measurement

SCHMIDT® Technology

SCHMIDT® InLine Mass Flow Sensor Mini-IL

With integrated measuring transmitter

- Measurement of mass flow directly at the machine or tool
- Low pressure loss
- Simple installation using standard pipes or push-in fittings for pneumatic hose connections

fluidic

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

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Flow rate volumes of gases – an important parameter in industrial processes

Actions to save energy and to assure quality in the production process are of particular importance in industrial processes. The ability to measure volumetric flow rates and volumetric flow of gases precisely is essential for this purpose. The requirements imposed on the flow sensor used for this are demanding: the sensor has to be capable of delivering precise measurements for different gases, at high overpressures and across a wide range of temperatures.

A further consideration when selecting a flow sensor is the required maintenance and associated costs. The **SCHMIDT® InLine Mass Flow Sensor Mini-IL** is a low-maintenance flowmeter offering accurate and reliable measurements even in long-term installations.

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

The thermal **SCHMIDT® Mass Flow Sensor Mini-IL** is the perfect solution for demanding industrial applications. It can be used for a diverse range of applications, such as compressed air monitoring directly at the machine or tool, consumption recording of gases and a great deal more.

Thanks to its DN8 and DN12 connection sizes particularly low mass flow rates can be monitored. The Mini-IL is pressure-resistant up to 8 bar overpressure as standard.

This sensor is very easy to install: mount the sensor using the included measuring section pipes or push-in fittings for pneumatic hose connections and connect it electrically - then you are ready to go!

This sensor operates without any moving parts and employs a measuring principle that eliminates any drift or signs of ageing. This reduces the required sensor maintenance to an absolute minimum.

Technical Data	
Technology / Design	Thermal InLine Mass Flow Sensor
Measuring parameters	Standard[1] mass flow $\dot{v}_N$
Measuring range[2] $\dot{v}_N$	¼": 0.2 ... 20 Norm-l/min; 1 ... 100 / 200 Norm-l/min ⅜": 3 ... 300 / 500 Norm-l/min
Measuring accuracy[3] $\dot{v}_N$	±(5 % of measured value +[0.4 % of fmr, min. 0.1 l/min])
Response time (t_{90}) $\dot{v}_N$	Ca. 10 s
Medium to be measured	Clean air or nitrogen, other gases on request
Maximum pressure	8 bar (overpressure)
Humidity	≤ 95 % rH, non-condensing (in measurement operation)
Operating temperature	-20 … +60 °C
Installation connection	2 measuring section tubes (length 100 mm, threads R¼ resp. length 150 mm, threads R⅜) or 2 push-in fittings for pneumatic hose connection (12/16 mm, field of application -10 … +60 °C)
Signal outputs	Analogue output 1 x 4 … 20 mA ($\dot{v}_N$) or Digital output (Modbus RTU [$\dot{v}_N$ and T_M, fix 9600 Bd] resp. module interface) incl. analogue output 4 … 20 mA [$\dot{v}_N$]
LED indicator	Operational and sensor status
Supply voltage U_B	24 V DC ± 10 %
Current consumption	Typ. 25 mA; max. 100 mA
Electrical connection	Analogue: Cable, pigtail, 4 x 0.14 mm², length 2 m Digital: Cable length 0.2 m, M12 connector 8-pole
Admissible cable length	Max. 100 m
Ingress protection	IP64 (enclosure)
Protection class	III (SELV oder PELV)
Material	Enclosure: PBT Holder: brass, nickel-plated Pipe: stainless steel Cable: PVC, gray

[1] related to T_N = 20 °C and p_N = 1013.25 hPa
[2] minimum value measuring range = lower measuring range limit
[3] under adjustment conditions, fmr: final measuring range

Order information SCHMIDT® Mass Flow Sensor Mini-IL

	Description	Art.-No.				
Basic sensor	**SCHMIDT® Mass Flow Sensor IL 30.208** · basic version: $\dot{v}_N$; 8 bar; 5 % class; DN8 / G¼	572900	A	B	C	D
	Options					
Type	Standard		1			
Mechanical type	2 measuring section tubes (length 100 mm, thread R¼ on both sides; enclosed, not fitted)			1		
	2 push-in fittings for pneumatic hose connection (hose outer diameter 12 mm, fitted, field of application -10 … +60 °C)			2		
Measuring range	Measuring range 0.2 … 20 Norm-l/min				1	
	Measuring range 1 … 100 Norm-l/min				2	
	Measuring range 1 … 200 Norm-l/min				3	
Output signal	Analogue output 1 x 4 … 20 mA ($\dot{v}_N$; with 2 m fixed cable, open cable ends)					1
	Digital output (Modbus RTU [$\dot{v}_N$ and T_M] resp. module interface) incl. analogue output 4 … 20 mA [$\dot{v}_N$]; 0.2 m cable with M12 connector, male, 8-pole					2

	Description	Art.-No.				
Basic sensor	**SCHMIDT® Mass Flow Sensor IL 30.212** · basic version: $\dot{v}_N$ 8 bar; 5 % class; DN12 / G⅜	572901	A	B	C	D
	Options					
Type	Standard		1			
Mechanical type	2 measuring section tubes (length 150 mm, thread R⅜ on both sides; enclosed, not fitted)			1		
	2 push-in fittings for pneumatic hose connection (hose outer diameter 16 mm, fitted, field of application -10 … +60 °C)			2		
Measuring range	Measuring range 3 … 300 Norm-l/min				1	
	Measuring range 3 … 500 Norm-l/min				2	
Output signal	Analogue output 1 x 4 … 20 mA ($\dot{v}_N$; with 2 m fixed cable, open cable ends)					1
	Digital output (Modbus RTU [$\dot{v}_N$ and T_M] resp. module interface) incl. analogue output 4 … 20 mA [$\dot{v}_N$]; 0.2 m cable with M12 connector, male, 8-pole					2

	Standard Calibration Certificate	Art.-No.
Calibration Certificate	Factory Calibration Certificate IL 30.208	on request
	Factory Calibration Certificate IL 30.212	on request

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

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