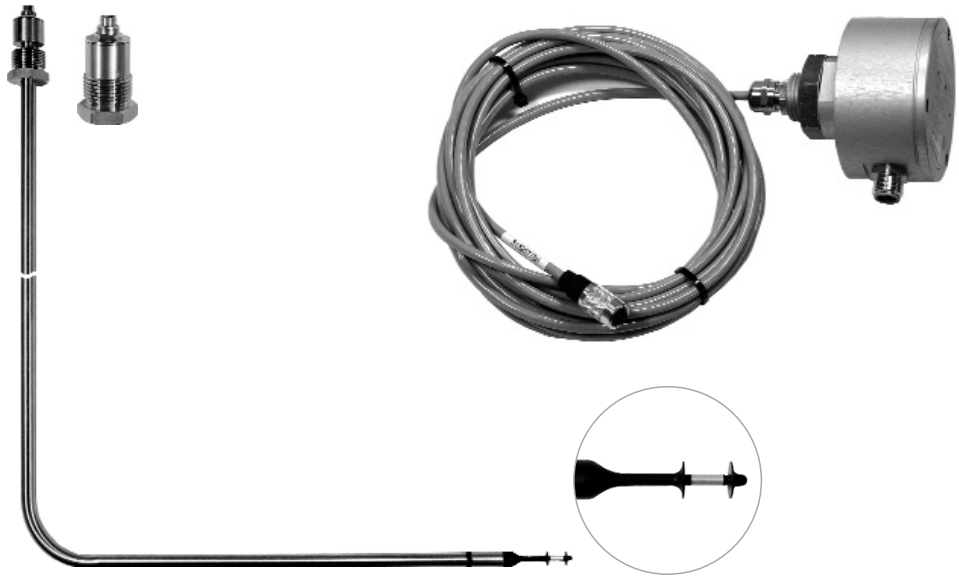
SCHMIDT® Flow Sensor
SS 20.515
SS 20.516



Product description

Flow sensor with integrated transducer for flow measurement of air, especially designed for the monitoring of the laminar airflow in cleanroom installations.

Optimized sensor head resulting in widely independent direction characteristics. Cleanroom suitable design according to GMP standard.

Special mounting adaptors allow mounting in nearly any cleanroom ceiling system.

Product advantages

- Design according to GMP
- Independent of flow direction
- High precision
- Long term stable signal
- Calibration certificate available
- Easy mounting

Applications

- Laminar flow monitoring in cleanrooms and sterile bottling machines
- Flow monitoring in the production of pharmaceuticals, semiconductors, food and optical products
- Flow control in isolators, filter-fan-units, flowboxes

SS 20.515

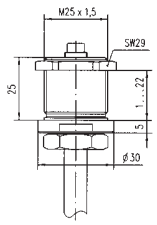
For disinfection with H_2O_2

SS 20.516

Sensor tip with protective coating made of two-component polyurethane resine in polyacrylate / polyurethane basis.
For disinfection with alcohol.

Mounting versions

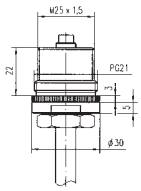
1



Type 1
For mounting in ceilings or frames with thickness from 1 to 22 mm. Opening Ø 26 mm necessary (mounting with counternut) or a thread M25 x 1.5 in ceiling frame.

Scope of delivery
- threaded bush M25 (stainless steel)
- counternut

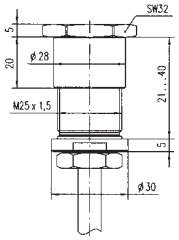
2



Type 2
For mounting in ceiling frames with existing opening with PG21 winding (e.g. sprinkler opening in ceiling frames).

Scope of delivery
- threaded bush M25 (stainless steel)
- Thread adaptor M25 x 1.5 on PG21

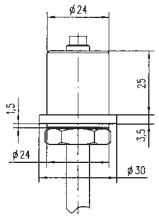
3



Type 3
For mounting in ceiling frames with thickness of 21 to 40 mm, especially for ceiling frames made of hollow profiles. Openings with Ø 26 mm and Ø 28.5 mm are necessary.

Scope of delivery
- threaded bush M25 (stainless steel)
- shank nut

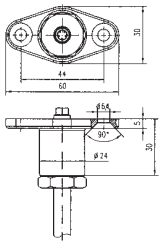
4



Type 4
For welding in stainless steel ceilings.
For pressure-tight mounting.

Scope of delivery
- welding bush (stainless steel)

5



Type 5
For mounting under the ceiling with two screws M6, when it is not possible to countersink in frame or ceiling. Opening Ø 15 mm for cable necessary and 2 threads M6.

Scope of delivery
- flange bush (stainless steel)

SCHMIDT Technology GmbH · Feldbergstraße 1 · D-78112 St. Georgen · Germany
Telefon +49 (0) 77 24/899-0 · Telefax +49 (0) 77 24/899-101 · info@schmidttechnology.de · www.schmidttechnology.de

Form 1014/04/06/1000/2 · Artikel-Nr. 500 989.02 · Technische Änderungen vorbehalten – Data subject to change

Bitte wenden – Turn over

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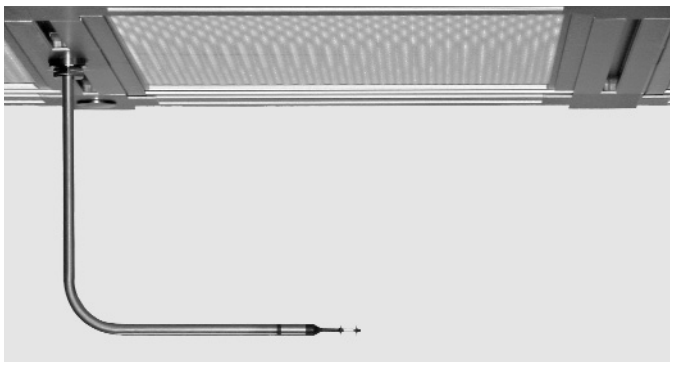
Technical data

Measuring parameter	standard velocity w_N of air relative to standard conditons 20 °C and 1013.25 hPa
Measuring range (w_N)	0 ... 1 m/s 0 ... 2.5 m/s
Lower detection limit	0.06 m/s
Measurement inaccuracy	± (0.06 m/s + 10 % of measurement value) for measuring range 1 m/s ± (0.15 m/s + 6 % of measurement value) for measuring range 2.5 m/s
Repeatability	2 % of measurement value
Response time (t_{90})	1 s (0 to 5 m/s transient)
Operating temperature - Sensor - Electronics	 - 20 °C ... + 85 °C 0 °C ... 60 °C
Humidity range	0...95 % rel. humidity (rH)
Humidity dependency	negligible to 30 °C max. ± 5 % of measuring range in humidity range referred on 55 % rH at 80 °C
Pressure Range	700...1300 hPa
Temperature gradient	2 K/min at w_N = 5 m/s
Analog output	0...10 V 0...20 mA 4...20 mA (optionally)
Load resistance - Voltage output - Current output	 ≥ 10 kΩ ≤ 300 Ω
Supply voltage	24 VDC ± 20 %
Current consumption - Starting current	max. 103 mA (without load) max. 160 mA for 2 s
Electrical connection	plug-in connector, 4-pin with female connector with screw terminals for cables 3 x 0,56 mm², unshielded (cable not included)
Cable lengths - Between sensor and electronics - Voltage output - Current output	 4 m fixed length 15 m max. 100 m max.
Mounting - Sensor - Electronics	 mounted in supplied mounting bush can be adjusted under any rotation angle centre screw G ½ with nut
Dimensions - Electronic housing - Sensor tip - Sensor tube height H length L	 Ø 68 mm x 81 mm aluminium anodized Ø 9 mm x 41 mm PBT glass enforced Ø 9 mm stainless steel 1.4571 300 mm (angled design) 300 mm
Weight	ca. 300 g
Protection type	IP 65

Mounting example



Sensor below a laminar flow unit mounted in the ceiling frame

Accessories

Fixing bracket for electronics	301 045
ISO calibration certificate	300 814

Ordering information

SS 20.515	Art. Nr. 301 020 – XYZAB
SS 20.516	Art. Nr. 301 025 – XYZAB
X = Sensor length	1 = 300 x 300 mm bended sensor tube (ceiling distance H x throat depth L) 2 = 300 mm straight sensor tube
Y = Measuring range	3 = 2.5 m/s; 5 = 1 m/s
Z = Output	1 = 0…10 V; 2 = 0...20 mA; 3 = 4...20 mA
A = Connection	3 = plug-in
B = Mounting	1 = threaded bush M25 x 1.5 2 = threaded bush PG21 3 = threaded bush with shank nut 4 = welding bush 5 = flange bush, tight

Dimensions