



## Flow Meter SM-6, SM-6-V

The flow of the sample gas to the analyser must be monitored in the extractive gas analysis. The flow meters of the SM-6 series offer efficient flow measurement for gases and liquids. The applications are typically very complex and require the use of particularly corrosion-resistant materials as well as high operating reliability.

In addition to visual flow measurements, they are also suitable for monitoring the depletion of the filtration capacity of the filter installed in the conditioning line. Electric limit switches can be mounted to the measuring tube for this purpose. These connect to the control system via suitable switch amplifiers. Types with built-in needle valves also allow a specific flow rate to be set.

A corrosion-resistant polycarbonate cover which can also be easily retrofitted to previously installed devices is available as an accessory. The transparent, well-ventilated cover protects the front and both sides of the flow meter, and offers reliable protection against accidental adjustment of the measuring point, particularly for devices equipped with ring initiators. At the same time, the measuring tube is protected against light impacts.

Corrosion-resistant materials

Easy installation

Designed for air and water

Special measuring ranges available upon request

Easy measuring tube replacement

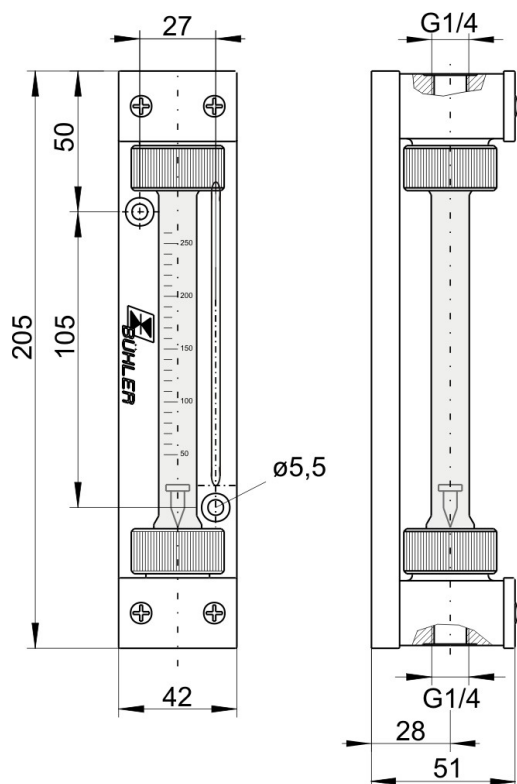
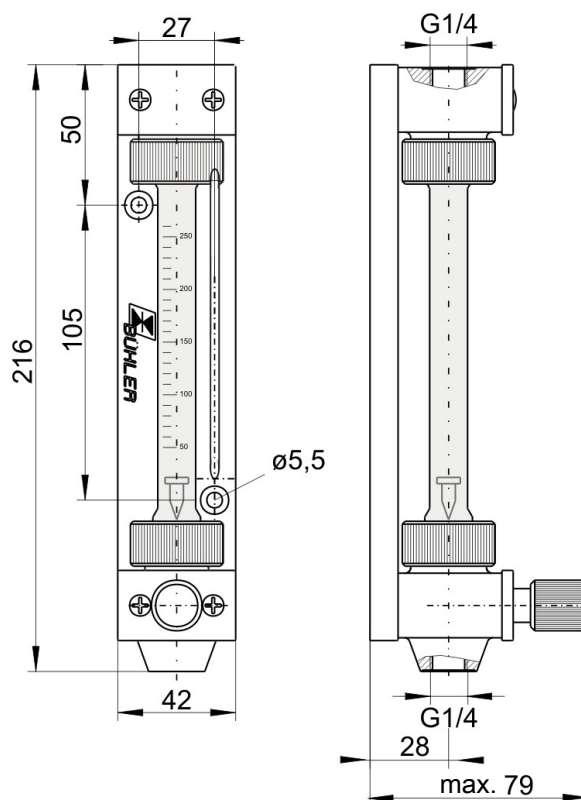
Option to add limit switch and needle valve

Cover prevents contact and accidental adjustment of the measuring point

Used in **DNV-GL and LR type-tested** conditioning unit

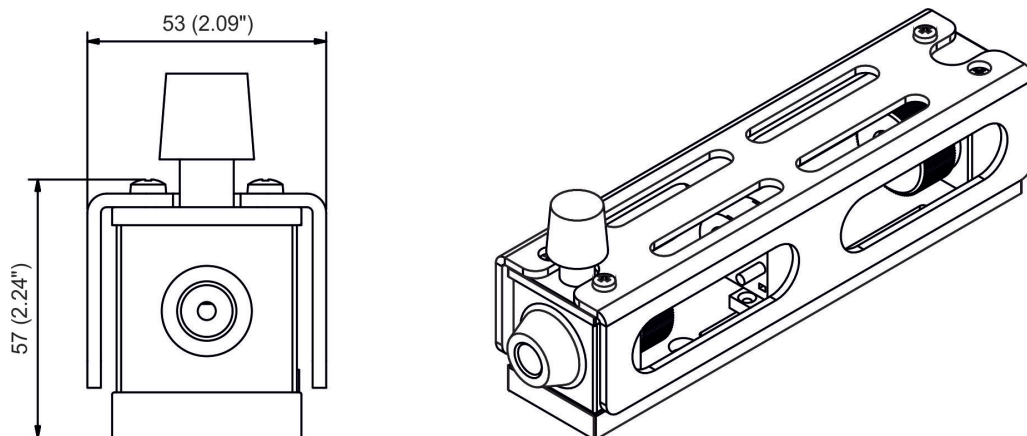
Special design for use in high-vibration environments



**Flow meter dimensions**
**SM-6**

**SM-6-V**

**Use in explosive areas (additional notices):**

The flow meter meets the fundamental safety requirements of Directive 2014/34/EU and is suitable for use in zone 1, explosion group IIB. The flow meter is not marked, as it does not have an innate ignition source and Directive 2014/34/EU therefore does not apply.

**Be sure to observe the instructions in the respective operating instructions!**

**Dimensions flow meter with cover**


**Technical Data**

| Flow meter                  | SM-6   | SM-6-V   |
|-----------------------------|--|--|
| Gas ambient temperature:    | -20 °C to +80 °C *   | -20 °C to +80 °C *   |
| Liquid ambient temperature: | +5 °C to +80 °C *  | +5 °C to +80 °C *  |
| Medium temperature:         | ≤ 150 °C, for special ranges max. 80 °C  | ≤ 130 °C, for special ranges max. 80 °C  |
| Max. operating pressure:    | 4 bar  | 4 bar  |
| Mechanical load:            | Tested based on DNV-GL CG0339 **<br>vibration class A (0.7 g)<br>2 Hz-13.2 Hz amplitude ± 1.0 mm<br>13.2 Hz -100 Hz 0.7 g acceleration | Tested based on DNV-GL CG0339 **<br>vibration class A (0.7 g)<br>2 Hz-13.2 Hz amplitude ± 1.0 mm<br>13.2 Hz -100 Hz 0.7 g acceleration |

**Material**

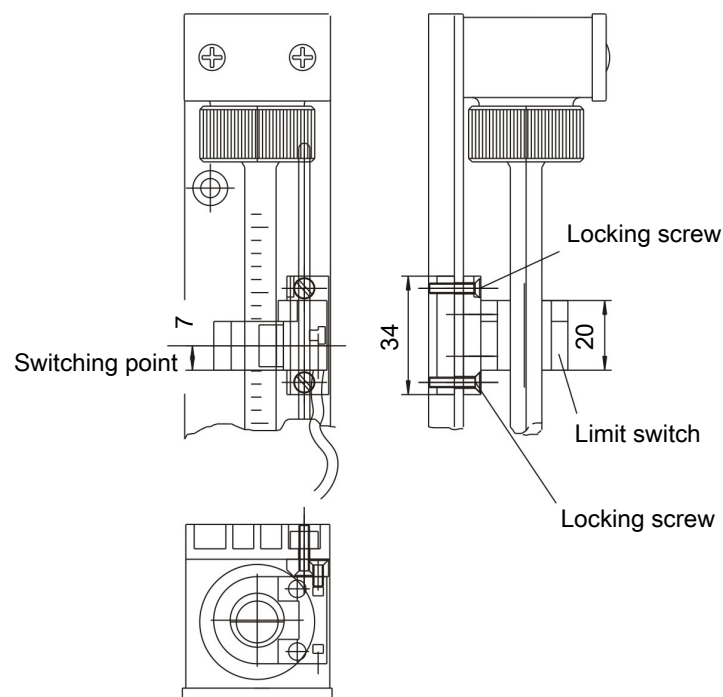
|                    |                           |                                       |
|--------------------|---------------------------|---------------------------------------|
| Heads:             | PTFE                      | PTFE                                  |
| Seal:              | PTFE                      | PTFE                                  |
| Adjusting spindle: | -                         | PVDF/Viton or PCTFE/perfluorelastomer |
| Measuring tube:    | Borosilicate glass        | Borosilicate glass                    |
| Float:             | Hastelloy C 4             | Hastelloy C 4                         |
| Swivel nut:        | PPS fibreglass reinforced | PPS fibreglass reinforced             |
| Base plate:        | PA                        | PA                                    |

\* Please note the ambient temperature for the configuration with limit switch!

\*\* not when using a flow meter with a cover.

| Limit switch              | Ø10*   | Ø15  |
|---------------------------|--|--|
| Ingress protection class: | IP 67  | IP 67  |
| Ambient temperature:      | -20 °C to +80 °C                                     | -20 °C to +70 °C                                     |
| Housing material:         | PBT  | PBT  |
| Operation:                | bi-stable  | bi-stable  |
| Cord length:              | 2 m  | 2 m  |
| Approval:                 | PTB 99 ATEX 2128X<br>Ex II 2 G Ex ia II C T6...T1 Gb | PTB 99 ATEX 2128X<br>Ex II 2 G Ex ia II C T6...T1 Gb |

\* Use in special range under some circumstances. For more information available upon request.

**Limit switch dimensions**


## Ordering instructions

The item number is a code for the configuration of your unit. Please use the following model key:

| 4056 | XX  | X | 99 | X | Measuring range*                   |
|------|-----|---|----|---|------------------------------------|
|      | 0 0 |   |    |   | Air 6 - 60 NI/h                    |
|      | 0 1 |   |    |   | Air 10 - 100 NI/h                  |
|      | 0 2 |   |    |   | Air 25 - 250 NI/h                  |
|      | 0 3 |   |    |   | Air 50 - 500 NI/h                  |
|      | 0 4 |   |    |   | Air 80 - 800 NI/h                  |
|      | 0 5 |   |    |   | Water 0.5 - 5 L/h                  |
|      | 0 6 |   |    |   | Water 1.2 - 12 L/h                 |
|      | 0 7 |   |    |   | Water 2.5 - 25 L/h                 |
|      | 0 8 |   |    |   | Water 4 - 40 L/h                   |
|      | 0 9 |   |    |   | Water 6 - 60 L/h                   |
|      | 1 0 |   |    |   | Special range                      |
|      |     | 0 |    |   | without needle valve               |
|      |     | 1 |    |   | Valve PVDF / Viton                 |
|      |     | 2 |    |   | Valve PCTFE / perfluorelastomer    |
|      |     |   |    | S | Limit switch with mounting bracket |
|      |     |   |    | - | without limit switch               |

\* Standard measuring tubes; air 20 °C 1.2 bar abs; water 20 °C

**Ordering information for limit switch:** A limit switch is factory installed if the last character of the item number is "S". Without the "S" marking the flow meter has no limit switch. We offer various switch amplifiers for controlling the limit switch (see data sheet no. 400003).

## Spare parts and accessories – SM-6, SM-6-V

| Item no. | Description        |
|----------|--------------------|
| 40158998 | Cover SM-6, SM-6-V |

## NOTICE



## Important information on use of a cover

- Cover only available as retrofit kit.
- Not suitable for explosive areas.
- Maximum medium temperature limited to 120 °C.