

# Preliminary Datasheet SFM3020 series

## Analog Mass Flow Meter



### Product Summary

SFM3020 is Sensirion's solution on providing high volumes of flow meters for medical ventilators in order to support the global pandemic situation due to the Corona virus outbreak. It relies on a modular approach of assembling approved parts with good availability to Sensirion and a high-volume through-put manufacturing.

The housing geometry is based on the SFM3000 flow meter, hence it remains mechanically compatible to the SFM3000.

A flow range from -10slm to +160slm and one directional flow supports high flow applications while still allowing to detect back flows. To minimize pressure-drop the SFM3020 is equipped with one mesh at the inlet.

**Disclaimer: The product is not fully qualified but the risk is deemed low as the processes and materials are already used in other products currently in production.**

#### Benefits of Sensirion's CMOSens® Technology

- Scalability
- High reliability and long-term stability
- Best signal-to-noise ratio
- Industry-proven technology with a track record of more than 15 years
- Designed for mass production
- High process capability

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## 1. Ordering Information

Use the part names and order number shown in the following table when ordering the SFM3020. For the latest product information and local distributors, visit [www.sensirion.com](http://www.sensirion.com).

Part name	Description	Order number
SFM3020-160-C	-10 to 160slm range, with cap	3.000.401

## 2. Specifications

### 2.1. Flow Specification<sup>1</sup>

Parameter	Condition	SFM3020		Units
Measurement range <sup>2</sup>		Air/O <sub>2</sub> : -10 to 160		slm <sup>3</sup>
		Max.	Typ.	
Accuracy <sup>4,5</sup>	span(0..160slm)	±3%	±2%	m.v. <sup>6</sup>
	span(-10...0slm)	±5%	±3%	m.v.
	zero point	0.15 (max.)	0.05 (typ.)	slm
Repeatability <sup>5</sup>	span	1%		m.v.
	zero point	0.05		slm
Noise Level <sup>5</sup>	span	+1%	0.5%	m.v.
	zero point	0.06		slm
Span shift due to temperature variation		< 0.5% of reading per 10°C		
Flow step response time (τ <sub>63</sub> )		< 5ms		
Calibrated for		Air		
Compensation formula		O <sub>2</sub>		
Media compatibility		Air, N <sub>2</sub> , O <sub>2</sub> , non-condensing		
Pressure Drop @60slm @200slm		One mesh version <80 / 0.32 <500 / 2.0		Pa / inH <sub>2</sub> O

<sup>1</sup> Unless otherwise noted, all sensor specifications are valid at 25°C with VDD = 5 V and absolute pressure = 966 mbar.

<sup>2</sup> For other ranges contact Sensirion

<sup>3</sup> In standard liter per minute at 20°C and 1013 mbar

<sup>4</sup> Output voltage integral non linearity is not included. Note that the effect can add up to ±0.2125slm @ 5V V<sub>dd</sub> on the flow value.

<sup>5</sup>Span or offset value, whichever is larger

<sup>6</sup>Measured value