

Preliminary Datasheet SFM3019 series

Digital Mass Flow Meter



Product Summary

SFM3019 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 +240slm and one directional flow supports high flow applications while still allowing to detect back flows. To minimize pressure-drop the SFM3019 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 item numbers shown in the following table when ordering the SFM3019. For the latest product information and local distributors, visit www.sensirion.com.

Part name	Description	Product number
SFM3019-240-C	-10 to 240slm range, with cap	3.000.400

2. Specifications

2.1 Flow Specification¹

Parameter	Condition	SFM3019		Units
Measurement range ²		Air/O ₂ : -10 to 240		slm ³
		Max.	Typ	
Accuracy ⁵	span (0...240slm)	±3%	±2%	m.v. ⁴
	span (-10...0slm)	±5%	±3%	m.v.
	Zero point	0.1 (max.)	0.05 (typ.)	slm
Repeatability ⁵	span	±1%		m.v.
	Zero point	0.05		slm
Noise Level ⁵	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 ₆₃)		< 3ms		
Resolution		16 bit		
Calibrated for		O ₂ , Air		
Media compatibility		Air, N ₂ , O ₂ , non-condensing		
Pressure Drop @60slm @200slm		One mesh version <80 / 0.32 <500 / 2.0		Pa / inH ₂ O

¹ Unless otherwise noted, all sensor specifications are valid at 25°C with VDD = 3.3 V and absolute pressure = 966 mbar.

² For other ranges contact Sensirion

³ In standard liter per minute at 20°C and 1013 mbar

⁴ Measured value

⁵ Span or offset value, whichever is larger