

Thermal massflow meter and controller based on CMOS sensor technology

The 'red-y for gasflow' product series constitutes a major advance in gas flow measurement and control technology.

State-of-the-art sensor technology (CMOS semiconductor chip) with new instrument design and automated calibration opens up new applications and price/performance dimensions.

Very fast response times, maximum precision, minimum pressure drops and a wide measuring range are the main advantages of the integrated sensor technology.

The sensor elements (temperature sensors and heating), along with digitalisation (A/D conversion) and other electronic intelligence, are placed directly on the silicon chip on just a few square millimetres.

With analogue/digital conversion performed directly on the chip, the flow signal is resistant to disruptions.

Additional check functions performed directly on the sensor enhance safety.

The instruments have a digital and analog interface as standard

The measuring and control ranges of the smart series start at full scale

25 in/min to 1000 in/min.

As standard equipment, the instruments have 4–20 mA signals for reading and set value (option 0–5 V) and a digital interface RS-485 with Modbus protocol for instrument regulation, evaluation and configuration. In addition to flow, temperature and totaliser values can also be read out digitally.

The two application versions makes this instrument interesting for a wide range of application. The Hi-Performace version has an accuracy of 0.5 per cent of full scale with a turndown ratio of 1:100.

The Standard Version has an accuracy of 2 per cent f.s. with a turndown ratio of 1:25. For rapid

measurements, the output signal is available after just 10 ms (± 2 per cent of full scale).

The smart series is also

excellent for minute volumes (such as leakage measurement).

Optional accessories such as read out systems, cabling, hand valves, and

fittings facilitate quick customised operation of the instruments.

The compact series instruments is the first battery powered mass flowmeter based on the thermal principle. This feature opens up applications in the field of variable area flowmeters.

In addition to its independence from the mains supply (thanks to the lithium battery) and the hand control valve, the instruments achieve distinction with a freely adjustable installation position, an accurate and easy-to-read display, the independence of pressure and intelligent monitoring functions.

The accuracy is ± 1 per cent of full scale with a turndown ratio of 1:50. The ranges goes from 10-500 in/min up to 20-1000 in/min.

The instruments exist as meter, as controller with high low alarm and as switch. ●

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*Vögtlin Instruments AG/Flow Technology is based in Aesch, Switzerland.
www.voegtlin.com*

