

Nanomass Gas Density

The device for continuous gas density measurement in the process



Benefits:

- High process safety and product quality – permanente process monitoring in real time
- Increased process efficiency – continuous measurement and fast response time
- High availability – maintenance-free
- Complete data transparency – integrated data logger
- Excellent price/performance ratio – multivariable measurement (temperature, pressure, concentration)
- Reliable – insensitive to vibrations

More information and current pricing:

www.casc.endress.com/DCEB

Field of application: Nanomass Gas Density is the first device for precise gas density measurement based on the revolutionary MEMS-Coriolis technology – a combination of innovative micro-technology and Endress+Hauser's long experience. For the first time, under economically attractive conditions parameters such as gas density or quality can be monitored continuously in the process. Nanomass Gas Density can be easily integrated into any existing process infrastructure.

Features and specifications

Density

Measuring principle

MEMS coriolis

Density

Sensor features

High process safety and product quality – permanent process monitoring in real time. Increased process efficiency – continuous measurement and fast response time. High availability – maintenance - free. Integrated pressure and temperature measurement. Different hazardous area approvals available.

Transmitter features

Complete data transparency – integrated data logger. Excellent price/performance ratio – multivariable measurement (temperature, pressure, concentration). Reliable – insensitive to vibrations. 2 - line backlit display with push buttons.

Nominal diameter range

DN 0.7 (1/36")

Wetted materials

Micro channel:

Silicon; Schott Borofloat 33

Manifold

1.4542 (17 - 4 PH)

Connection:

Swagelok, 1.4404 (316L)

Pressure sensor:

1.4404 (316L)

O - ring: Viton

Process membrane: Ceramics (Al₂O₃)

Measured variables

Density, temperature, pressure, reference density, average molar mass, concentration

Max. measurement error

Density (gas): $\pm 0.1 \text{ kg/m}^3$

Temperature: $\pm 0.5^\circ\text{C}$

Pressure: $\pm 0.02 \text{ bar}$

Density

Measuring range

0 to 30 kg/m³ (0 to 0.03 g/cm³, 0 to 0.03 SGU)

Max. process pressure

20 bar (290 psi)

Medium temperature range

-20 to +60 °C (-4 to +140 °F)

Ambient temperature range

-20 to +60 °C (-4 to +140 °F)

Transmitter housing material

Powder - coated aluminium

Degree of protection

Standard: IP65/67

Display/Operation

2 - line backlit display with push buttons

Configuration via local display and operating tools possible

USB or RS232 interface

Outputs

2 outputs:

4 - 20 mA (passive)

Inputs

None

Power supply

DC 8 to 28 V

Hazardous area approvals

ATEX, IECEx, UL C/US Cl. I

Other approvals and certificates

Calibration

NAMUR

Density/Concentration**Measuring principle**

MEMS coriolis

Product headline

The device for continuous gas density measurement in the process. Highly accurate density and concentration measurement of non - corrosive, inflammable, non - inflammable gases and gas mixtures.

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