

Proline Prosonic Flow B 200 ultrasonic flowmeter

The device for accurate, reliable biogas measurement with loop-powered technology



Benefits:

- Integrated real-time methane fraction measurement
- Optimized for low pressure gas – specialized sensor design
- No additional pressure loss – full bore design
- Process transparency – diagnostic capability
- Convenient device wiring – separate connection compartment
- Safe operation – no need to open the device due to display with touch control, background lighting
- Integrated verification – Heartbeat Technology

Specs at a glance

- **Max. measurement error** Volume flow (standard): - ± 1.5 % o.r. for 3 to 30 m/s (9.84 to 98.4 ft/s) - ± 3 % o.r. for 1 to 3 m/s (3.28 to 9.84 ft/s) Volume flow (option): - ± 0.1 % o.f.s. for 0.3 to 1 m/s (0.98 to 3.28 ft/s) - ± 1.5 % o.r. for 1 to 30 m/s (3.28 to 98.4 ft/s)
- **Measuring range** Standard: 1 to 30 m/s (3.28 to 98.4 ft/s) Option: 0.3 to 30 m/s (0.98 to 98.4 ft/s)
- **Medium temperature range** 0 to +80 °C (+32 to +176 °F)
- **Max. process pressure** 11 bar a (159 psi a)
- **Wetted materials** Sensor: 1.4404/1.4435 (316L) Transducer: HNBR Temperature sensor (option): AFM 34

Field of application: Prosonic Flow B 200 is the specialist for accurate and reliable measurement of wet biogas and digester gas, even under fluctuating process conditions. With its unique integrated real-time methane fraction analysis, Prosonic Flow B 200 enables continuous measurement and monitoring of gas flow as well as gas quality. In

addition to efficient process control and energy balancing, Heartbeat Technology enables compliance and process safety at all times.

Features and specifications

Gas

Measuring principle

Ultrasonic flow

Product headline

The device for accurate, reliable biogas measurement with loop-powered technology.

Inline flowmeter designed for measurement of wet biogas and digester gas under fluctuating process conditions.

Sensor features

Optimized for low pressure gas – specialized sensor design. No additional pressure loss – full-bore design. Process transparency – diagnostic capability.

Multivariable device: flow, temperature and methane. Medium temperature: 0 to 80 °C (32 to 176 °F). Process pressure: 0.7 to 11 bar a (10.2 to 159 psi a).

Transmitter features

Convenient device wiring – separate connection compartment. Safe operation – no need to open the device due to display with touch control, background lighting. Integrated verification – Heartbeat Technology. Loop-powered technology. Robust dual-compartment housing. Plant safety: worldwide approvals.

Nominal diameter range

Single-path version: DN 50 (2"), DN 80 (3")

Two-path version: DN 100 to 200 (4 to 8")

Wetted materials

Sensor: 1.4404/1.4435 (316L)

Transducer: HNBR

Temperature sensor (option): AFM 34

Gas

Measured variables

Volume flow, corrected volume flow, corrected methane volume flow, energy flow, methane fraction, calorific value, temperature

Max. measurement error

Volume flow (standard):

- ± 1.5 % o.r. for 3 to 30 m/s (9.84 to 98.4 ft/s)

- ± 3 % o.r. for 1 to 3 m/s (3.28 to 9.84 ft/s)

Volume flow (option):

- ± 0.1 % o.f.s. for 0.3 to 1 m/s (0.98 to 3.28 ft/s)

- ± 1.5 % o.r. for 1 to 30 m/s (3.28 to 98.4 ft/s)

Measuring range

Standard: 1 to 30 m/s (3.28 to 98.4 ft/s)

Option: 0.3 to 30 m/s (0.98 to 98.4 ft/s)

Max. process pressure

11 bar a (159 psi a)

Medium temperature range

0 to +80 °C (+32 to +176 °F)

Ambient temperature range

Flange material carbon steel: -10 to +60 °C (+14 to +140 °F)

Flange material stainless steel: -40 to +60 °C (-40 to +140 °F)

Transmitter housing material

AlSi10Mg, coated; 1.4404 (316L)

Degree of protection

IP66/67, type 4X enclosure

Display/Operation

4-line backlit display with touch control

(operation from outside)

Configuration via local display and operating tools possible

Gas

Outputs

4-20 mA HART (passive)

4-20 mA (passive)

Pulse/frequency/switch output (passive)

Inputs

Current input 4-20 mA (passive)

Digital communication

HART

Power supply

DC 12 to 35 V (4-20 mA HART with/without pulse/frequency/switch output)

DC 12 to 30 V (4-20 mA HART, 4-20 mA)

DC 12 to 35 V (4-20 mA HART, pulse/frequency/switch output, 4-20 mA input)

DC 9 to 32 V (PROFIBUS PA, pulse/frequency/switch Output)

Hazardous area approvals

ATEX, IECEx, cCSAus, NEPSI, INMETRO, JPN

Metrological approvals and certificates

Calibration performed on accredited calibration facilities (acc. to ISO/IEC 17025)

Pressure approvals and certificates

PED

Material certificates

3.1 material (wetted parts)



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