

## Proline Prosonic Flow G 500 ultrasonic flowmeter

Highly robust gas specialist for fluctuating process conditions as remote version with up to 4 I/Os



More information and current pricing:

[www.be.endress.com/9G5B](http://www.be.endress.com/9G5B)

### Benefits:

- Flexible device with user-definable gas mixtures for demanding measuring tasks
- Maximum reliability even with humid or wet gas – sensor design insensitive to condensate
- High-performance process control – real-time pressure- and temperature-compensated values
- Efficient solution – multivariable, no pressure loss
- Full access to process and diagnostic information – numerous, freely combinable I/Os
- Reduced complexity and variety – freely configurable I/O functionality
- Integrated verification – Heartbeat Technology

### Specs at a glance

- **Max. measurement error** Volume flow (standard): -  $\pm 1.0\%$  o.r. for 3 to 40 m/s (9.84 to 131.23 ft/s) -  $\pm 2\%$  o.r. for 0.3 to 3 m/s (0.98 to 9.84 ft/s) Volume flow (optional calibration): -  $\pm 0.5\%$  o.r. for 3 to 40 m/s (9.84 to 131.23 ft/s) -  $\pm 1.0\%$  o.r. for 0.3 to 3 m/s (0.98 to 9.84 ft/s) Corrected volume flow (standard): -  $\pm 1.5\%$  o.r. for 3 to 40 m/s (9.84 to 131.23 ft/s) -  $\pm 2.5\%$  o.r. for 0.3 to 3 m/s (0.98 to 9.84 ft/s) Corrected volume flow (optional calibration): -  $\pm 1.0\%$  o.r. for 3 to 40 m/s (9.84 to 131.23 ft/s) -  $\pm 1.5\%$  o.r. for 0.3 to 3 m/s (0.98 to 9.84 ft/s) Sound Velocity:  $\pm 0.2\%$  o.r.
- **Measuring range** Gas: 0.3 m/s to 40 m/s
- **Medium temperature range** -50 to 150 °C (-58 to +302°F) -50 to 100 °C (-58 to +212°F) with integrated pressure cell

- **Max. process pressure** 0.7 to 101 bar a (10.15 to 1464.88 psi a)
- **Wetted materials** Measuring tube: 1.4408/1.4409 (CF3M)  
Transducer: 1.4404 (316, 316L, Titan Grade 2)

**Field of application:** For a wide range of gas applications Prosonic Flow G provides reliable flow measurement, even with wet gas and changing gas properties and compositions. A pressure-rated sensor housing with rupture disc limits safety risks. The innovative remote transmitter maximizes installation flexibility and operational safety in demanding environments. Heartbeat Technology ensures compliance and process safety at all times.

## Features and specifications

### Gas

#### Measuring principle

Ultrasonic flow

#### Product headline

Highly robust gas specialist for fluctuating process conditions as remote version with up to 4 I/Os.

Flexible device with user-definable gas mixtures for demanding measuring tasks.

Accurate measurement of natural and process gas in the chemical as well as oil and gas industries.

#### Sensor features

Maximum reliability even with humid or wet gas – sensor design insensitive to condensate. High-performance process control – real-time pressure- and temperature-compensated values. Efficient solution – multivariable, no pressure loss.

Direct measurement: flow, pressure & temperature. Wetted parts: titanium / 316L. Maximum measuring accuracy: 0.5 %.

## Gas

**Transmitter features**

Full access to process and diagnostic information – numerous, freely combinable I/Os. Reduced complexity and variety – freely configurable I/O functionality. Integrated verification – Heartbeat Technology. Remote version with up to 4 I/Os. Backlit display with touch control and WLAN access. Standard cable between sensor and transmitter.

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**Nominal diameter range**

DN 25 to 300 (1 to 12")

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**Wetted materials**

Measuring tube: 1.4408/1.4409 (CF3M)

Transducer: 1.4404 (316, 316L, Titan Grade 2)

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**Measured variables**

Volume flow, corrected volume flow, mass flow, flow velocity, speed of sound, pressure, temperature, density, dynamic viscosity, energy flow, Wobbe index, methane fraction, calorific value, molar mass

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**Max. measurement error**

Volume flow (standard):

- $\pm 1.0$  % o.r. for 3 to 40 m/s (9.84 to 131.23 ft/s)
- $\pm 2$  % o.r. for 0.3 to 3 m/s (0.98 to 9.84 ft/s)

Volume flow (optional calibration):

- $\pm 0.5$  % o.r. for 3 to 40 m/s (9.84 to 131.23 ft/s)
- $\pm 1.0$  % o.r. for 0.3 to 3 m/s (0.98 to 9.84 ft/s)

Corrected volume flow (standard):

- $\pm 1.5$  % o.r. for 3 to 40 m/s (9.84 to 131.23 ft/s)
- $\pm 2.5$  % o.r. for 0.3 to 3 m/s (0.98 to 9.84 ft/s)

Corrected volume flow (optional calibration):

- $\pm 1.0$  % o.r. for 3 to 40 m/s (9.84 to 131.23 ft/s)
- $\pm 1.5$  % o.r. for 0.3 to 3 m/s (0.98 to 9.84 ft/s)

Sound Velocity:  $\pm 0.2$  % o.r.

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**Measuring range**

Gas: 0.3 m/s to 40 m/s

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## Gas

**Max. process pressure**

0.7 to 101 bar a (10.15 to 1464.88 psi a)

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**Medium temperature range**

-50 to 150 °C (-58 to +302°F)

-50 to 100 °C (-58 to +212°F) with integrated pressure cell

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**Ambient temperature range**

-40 to 60 °C (-40 to +140 °F)

Optional: -50 to 60 °C (-58 to +140 °F)

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**Sensor housing material**

Stainless Steel, 1.4404(316/316L), 1.4408/1.4409 (CF3M)

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**Transmitter housing material**

AlSi10Mg, coated; 1.4409 (CF3M) similar to 316L

Polycarbonate

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**Degree of protection**

Sensor remote version: IP66/67, type 4X enclosure

Transmitter remote version: IP66/67, Type 4X enclosure

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**Display/Operation**

4-line backlit display with Touch Control (operation from outside)

Configuration via local display and operating tools possible

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**Outputs**

4 outputs:

4-20 mA HART (active/passive)

4-20 mA (active/passive)

Pulse/frequency/switch output (active/passive)

Double pulse output (active/passive)

Relay output

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**Inputs**

Status input

4-20 mA input

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## Gas

**Digital communication**

HART, Modbus RS485

**Power supply**

AC 100 to 230 V / DC 24 V (non-hazardous area)

**Hazardous area approvals**

ATEX, IECEx, cCSAus, JPN, EAC, UK Ex

**Product safety**

CE, C-tick

**Functional safety**

Functional safety according to IEC 61508, applicable in safety-relevant applications in accordance with IEC 61511

**Metrological approvals and certificates**

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

Heartbeat Technology complies with the requirements for measurement traceability according to ISO 9001:2015 – Section 7.1.5.2 a

**Pressure approvals and certificates**

PED, CRN

**Material certificates**

3.1 material

NACE MR0175/MR0103

More information [www.be.endress.com/9G5B](http://www.be.endress.com/9G5B)