

## Proline Prosonic Flow G 300 ultrasonic flowmeter

Highly robust gas specialist for fluctuating conditions with compact, easily accessible transmitter



### 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

More information and current pricing:

[www.casc.endress.com/9G3B](http://www.casc.endress.com/9G3B)

### 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 compact transmitter offers high flexibility in terms of operation and system integration: access from one side, remote display and improved connectivity options. 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 with compact, easily accessible transmitter.

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. Compact dual-compartment housing with up to 3 I/Os. Backlit display with touch control and WLAN access. Remote display available.

**Nominal diameter range**

DN 25 to 300 (1 to 12")

**Wetted materials**

Measuring tube: 1.4408/1.4409 (CF3M)

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

**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

**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

## 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**

Compact version: IP66/67, type 4X enclosure.

Optional: External WLAN antenna: IP67

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**Display/Operation**

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

Configuration via local display and operating tools possible

Remote display available

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**Outputs**

3 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

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**Power supply**

24V DC

100 to 230 V AC

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

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**Hazardous area approvals**

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

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**Product safety**

CE, C-tick

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**Functional safety**

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

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**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

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**Pressure approvals and certificates**

PED, CRN

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**Material certificates**

3.1 material

NACE MR0175/MR0103

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