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

Specs at a glance
- **Max. measurement error** Volume flow (standard): - ±1.0 % o.r. for 3 to 40 m/s (9.84 to 131.23 ft/s) - ±2 % o.r. for 0.3 to 3 m/s (0.98 to 9.84 ft/s) Volume flow (optional calibration): - ±0.5 % o.r. for 3 to 40 m/s (9.84 to 131.23 ft/s) - ±1.0 % o.r. for 0.3 to 3 m/s (0.98 to 9.84 ft/s) Corrected volume flow (standard): - ±1.5 % o.r. for 3 to 40 m/s (9.84 to 131.23 ft/s) - ±2.5 % o.r. for 0.3 to 3 m/s (0.98 to 9.84 ft/s) Corrected volume flow (optional calibration): - ±1.0 % o.r. for 3 to 40 m/s (9.84 to 131.23 ft/s) - ±1.5 % o.r. for 0.3 to 3 m/s (0.98 to 9.84 ft/s) Sound Velocity: ±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

More information and current pricing: www.us.endress.com/9G3B
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
**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):
- ±1.0 % o.r. for 3 to 40 m/s (9.84 to 131.23 ft/s)
- ±2 % o.r. for 0.3 to 3 m/s (0.98 to 9.84 ft/s)
Volume flow (optional calibration):
- ±0.5 % o.r. for 3 to 40 m/s (9.84 to 131.23 ft/s)
- ±1.0 % o.r. for 0.3 to 3 m/s (0.98 to 9.84 ft/s)
Corrected volume flow (standard):
- ±1.5 % o.r. for 3 to 40 m/s (9.84 to 131.23 ft/s)
- ±2.5 % o.r. for 0.3 to 3 m/s (0.98 to 9.84 ft/s)
Corrected volume flow (optional calibration):
- ±1.0 % o.r. for 3 to 40 m/s (9.84 to 131.23 ft/s)
- ±1.5 % o.r. for 0.3 to 3 m/s (0.98 to 9.84 ft/s)
Sound Velocity: ±0.2 % o.r.

**Measuring range**
Gas: 0.3 m/s to 40 m/s
**Gas**

<table>
<thead>
<tr>
<th><strong>Max. process pressure</strong></th>
<th>0.7 to 101 bar a (10.15 to 1464.88 psi a)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Medium temperature range</strong></td>
<td>-50 to 150 °C (-58 to +302°F)</td>
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<tr>
<td></td>
<td>-50 to 100 °C (-58 to +212°F) with integrated pressure cell</td>
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<tr>
<td><strong>Ambient temperature range</strong></td>
<td>-40 to 60 °C (-40 to +140 °F)</td>
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<tr>
<td></td>
<td>Optional: -50 to 60 °C (-58 to +140 °F)</td>
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<tr>
<td><strong>Sensor housing material</strong></td>
<td>Stainless Steel, 1.4404 (316/316L), 1.4408/1.4409 (CF3M)</td>
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<tr>
<td><strong>Transmitter housing material</strong></td>
<td>AlSi10Mg, coated; 1.4409 (CF3M) similar to 316L</td>
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<td></td>
<td>Polycarbonate</td>
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<td><strong>Degree of protection</strong></td>
<td>Compact version: IP66/67, type 4X enclosure.</td>
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<tr>
<td></td>
<td>Optional: External WLAN antenna: IP67</td>
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<tr>
<td><strong>Display/Operation</strong></td>
<td>4-line backlit display with Touch Control (operation from outside)</td>
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<td></td>
<td>Configuration via local display and operating tools possible</td>
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<td></td>
<td>Remote display available</td>
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<tr>
<td><strong>Outputs</strong></td>
<td>3 outputs:</td>
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<tr>
<td></td>
<td>4-20 mA HART (active/passive)</td>
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<tr>
<td></td>
<td>4-20 mA (active/passive)</td>
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<tr>
<td></td>
<td>Pulse/frequency/sensor output (active/passive)</td>
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<tr>
<td></td>
<td>Double pulse output (active/passive)</td>
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<td></td>
<td>Relay output</td>
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<tr>
<td><strong>Inputs</strong></td>
<td>Status input</td>
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<tr>
<td></td>
<td>4-20 mA input</td>
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</tbody>
</table>
Gas

**Digital communication**
HART, Modbus RS485

**Power supply**
24V DC
100 to 230 V AC
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.us.endress.com/9G3B](http://www.us.endress.com/9G3B)