Proline Prosonic Flow G 300 ultrasonic flowmeter

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

More information and current pricing:
www.uk.endress.com/9G3B

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

- **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):
- ±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

Max. process pressure
0.7 to 101 bar a (10.15 to 1464.88 psi a)

Medium temperature range
-50 to 150 °C (-58 to +302°F)
-50 to 100 °C (-58 to +212°F) with integrated pressure cell

Ambient temperature range
-40 to 60 °C(-40 to +140 °F)
Optional: -50 to 60 °C(-58 to +140 °F)

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

Transmitter housing material
AlSi10Mg, coated; 1.4409 (CF3M) similar to 316L
Polycarbonate

Degree of protection
Compact version: IP66/67, type 4X enclosure.
Optional: External WLAN antenna: IP67

Display/Operation
4-line backlit display with Touch Control (operation from outside)
Configuration via local display and operating tools possible
Remote display available

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

Inputs
Status input
4-20 mA input

Gas

Digital communication
HART, Modbus RS485

Power supply
24V DC
100 to 230 V AC
AC 100 to 230 V / DC 24 V (non harzardous 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.uk.endress.com/9G3B**