

Proline Promass G 100 Coriolis flowmeter

The most compact high-pressure sensor with an ultra-compact transmitter



More information and current pricing:

www.at.endress.com/8G1B

Benefits:

- Easy and safe process integration – threaded connections
- Fewer process measuring points – multivariable measurement (flow, density, temperature)
- Space-saving installation – no in/outlet run needs
- Space-saving transmitter – full functionality on the smallest footprint
- Time-saving local operation without additional software and hardware – integrated web server
- Integrated verification – Heartbeat Technology

Specs at a glance

- **Max. measurement error** Mass flow (liquid): $\pm 0.10\%$ (standard), 0.05% (option) Volume flow (liquid): $\pm 0.10\%$ Mass flow (gas): $\pm 0.35\%$ Density (liquid): $\pm 0.0005\text{ g/cm}^3$
- **Measuring range** 0 to 2 200 000 kg/h (0 to 80 840 lb/min)
- **Medium temperature range** Standard: -50 to $+150\text{ }^\circ\text{C}$ ($-58\text{...}+302\text{ }^\circ\text{F}$) Option: -50 to $+240\text{ }^\circ\text{C}$ ($-58\text{...}+464\text{ }^\circ\text{F}$) High temperature option: -50 to $+350\text{ }^\circ\text{C}$ ($-58\text{...}+662\text{ }^\circ\text{F}$) Option: -196 to $+150\text{ }^\circ\text{C}$ (-320 to $+302\text{ }^\circ\text{F}$)
- **Max. process pressure** PN 100, Class 600, 63K
- **Wetted materials** Measuring tube: 1.4539 (904L); 1.4404 (316/316L); Alloy C22, 2.4602 (UNS N06022) Connection: 1.4404 (316/316L); Alloy C22, 2.4602 (UNS N06022); 1.4301 (F304)

Field of application: Promass G provides safe and accurate measurement of liquids and gases in high pressure applications up to 350 bar (5080 psi). Rupture disc and threaded process connections provide easy and safe integration. Combined with the smallest transmitter housing

available today it delivers full performance on the smallest footprint. Designed for applications where space is a premium, Promass G 100 will be the preferred choice for system integrators, skid builders and equipment manufacturers.

Features and specifications

Density/Concentration

Measuring principle

Coriolis

Product headline

Most compact high-pressure sensor with an ultra-compact transmitter . Accurate measurement of liquids and gases in high-pressure applications.

Sensor features

Easy and safe process integration – threaded connections. Fewer process measuring points – multivariable measurement (flow, density, temperature). Space - saving installation – no in-/outlet run needs. Internal threads as process connection. Process pressure up to 350 bar (5080 psi). Rupture disc available.

Transmitter features

Space-saving transmitter – full functionality on the smallest footprint. Time-saving local operation without additional software and hardware – integrated web server. Integrated verification – Heartbeat Technology. Robust, ultra-compact transmitter housing. Pre - configured plug connector. Local display available.

Nominal diameter range

DN 8 to 250 ($\frac{3}{8}$ to 10")

Wetted materials

Measuring tube: 1.4539 (904L); 1.4404 (316/316L); Alloy C22, 2.4602 (UNS N06022)

Connection: 1.4404 (316/316L); Alloy C22, 2.4602 (UNS N06022); 1.4301 (F304)

Density/Concentration**Measured variables**

Mass flow, density, temperature, volume flow, corrected volume flow, reference density, concentration

Max. measurement error

Mass flow (liquid): ± 0.10 % (standard), 0.05 % (option)

Volume flow (liquid): ± 0.10 %

Mass flow (gas): ± 0.35 %

Density (liquid): ± 0.0005 g/cm³

Measuring range

0 to 2 200 000 kg/h (0 to 80 840 lb/min)

Max. process pressure

PN 100, Class 600, 63K

Medium temperature range

Standard: -50 to $+150$ °C (-58 ... $+302$ °F)

Option: -50 to $+240$ °C (-58 ... $+464$ °F)

High temperatur option: -50 to $+350$ °C (-58 ... $+662$ °F)

Option: -196 to $+150$ °C (-320 to $+302$ °F)

Ambient temperature range

Standard: -40 to $+60$ °C (-40 to $+140$ °F)

Option: -60 to $+60$ °C (-76 to $+140$ °F)

Sensor housing material

Standard: 1.4301 (304), corrosion resistant

Option: 1.4404 (316L)

Sensor connection housing (standard): AlSi10Mg, coated

Sensor connection housing (option): 1.4301 (304); 1.4404 (316L);

1.4409 (CF3M) similar to 316L

Transmitter housing material

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

Density/Concentration**Degree of protection**

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

Sensor remote version (option): IP69.

Transmitter remote version: 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

Outputs

4 outputs:

4-20 mA HART (active/passive)

4-20 mA WirelessHART

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

Digital communication

HART, PROFIBUS PA, FOUNDATION Fieldbus, Modbus RS485, Profinet, Ethernet/IP, OPC-UA

Power supply

DC 24 V

AC 100 to 230 V

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

Hazardous area approvals

ATEX, IECEx, cCSAus, NEPSI, INMETRO, EAC

Product safety

CE, C-tick, EAC marking

Density/Concentration**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 (TÜV SÜD attestation)

MI-005 (Liquids other than water (Hydrocarbons, cryogenic liquids)

NTEP (Liquids other than water, LPG, cryogenic liquids)

MC (Liquids other than water, cryogenic liquids)

Pressure approvals and certificates

PED, CRN, AD 2000

Material certificates

3.1 material

NACE MR0175/MR0103, PMI; welding test acc. to EN ISO, ASME, NORSOK

Hygienic approvals and certificates

3-A, EHEDG

Gas**Measuring principle**

Coriolis

Product headline

Most compact high-pressure sensor with an ultra-compact transmitter .
Accurate measurement of liquids and gases in high-pressure applications.

Gas

Sensor features

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Transmitter features

Space-saving transmitter – full functionality on the smallest footprint. Time-saving local operation without additional software and hardware – integrated web server. Integrated verification – Heartbeat Technology. Robust, ultra-compact transmitter housing. Pre - configured plug connector. Local display available.

Nominal diameter range

DN 8 to 25 ($\frac{3}{8}$ to 1")

Wetted materials

Measuring tube: 1.4435 (316L)

Connection: 1.4404 (316/316L)

Measured variables

Mass flow, density, temperature, volume flow, corrected volume flow, reference density

Max. measurement error

Mass flow (liquid): ± 0.15 %

Volume flow (liquid): ± 0.15 %

Mass flow (gas): ± 0.75 %

Density (liquid): ± 0.0005 g/cm³

Measuring range

0 to 18 000 kg/h (0 to 662 lb/min)

Max. process pressure

350 bar (5080 psi)

Medium temperature range

-50 to +150 °C (-58 to +302 °F)

Gas

Ambient temperature range

-40 to +60 °C (-40 to +140 °F)

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

Sensor housing material

1.4301 (304), corrosion resistant

Transmitter housing material

Compact: AlSi10Mg, coated

Compact/ultra - compact: 1.4301 (304)

Degree of protection

IP66/67, type 4X enclosure

Display/Operation

4 - line backlit display available (no local operation)

Configuration via web browser and operating tools possible

Outputs

4 - 20 mA HART (active)

Pulse/frequency/switch output (passive)

Inputs

None

Digital communication

HART, Modbus RS485, EtherNet/IP, PROFIBUS DP, PROFINET

Power supply

DC 20 to 30 V

Hazardous area approvals

ATEX, IECEx, cCSAus, INMETRO, NEPSI

Product safety

CE, C-Tick

Gas

Metrological approvals and certificates

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Material certificates

3.1 material

Liquids

Measuring principle

Coriolis

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Liquids

Wetted materials

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Measured variables

Mass flow, density, temperature, volume flow, corrected volume flow, reference density

Max. measurement errorMass flow (liquid): ± 0.15 %Volume flow (liquid): ± 0.15 %Mass flow (gas): ± 0.75 %Density (liquid): ± 0.0005 g/cm³**Measuring range**

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Max. process pressure

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Transmitter housing material

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Compact/ultra - compact: 1.4301 (304)

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Liquids

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3.1 material

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