

Proline Promass G 100 Coriolis flowmeter

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



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): $\pm 0.15\%$ Volume flow (liquid): $\pm 0.15\%$ Mass flow (gas): $\pm 0.75\%$ Density (liquid): $\pm 0.0005 \text{ g/cm}^3$
- **Measuring range** 0 to 18 000 kg/h (0 to 662 lb/min)
- **Medium temperature range** -50 to $+150^\circ\text{C}$ (-58 to $+302^\circ\text{F}$)
- **Max. process pressure** 350 bar (5080 psi)
- **Wetted materials** Measuring tube: 1.4435 (316L) Connection: 1.4404 (316/316L)

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

Liquids

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 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

Liquids

Max. measurement errorMass flow (liquid): $\pm 0.15\%$ Volume flow (liquid): $\pm 0.15\%$ Mass flow (gas): $\pm 0.75\%$ Density (liquid): $\pm 0.0005 \text{ g/cm}^3$ **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 $+150\text{ }^{\circ}\text{C}$ (-58 to $+302\text{ }^{\circ}\text{F}$)**Ambient temperature range** -40 to $+60\text{ }^{\circ}\text{C}$ (-40 to $+140\text{ }^{\circ}\text{F}$)Option: -50 to $+60\text{ }^{\circ}\text{C}$ (-58 to $+140\text{ }^{\circ}\text{F}$)**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

Liquids

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, EAC

Product safety

CE, C-Tick, EAC marking

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)

Material certificates

3.1 material

Gas

Measuring principle

Coriolis

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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.

Gas

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)

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

Gas

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

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Material certificates

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Gas

Density/Concentration

Measuring principle

Coriolis

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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

Density/Concentration**Max. measurement error**Mass flow (liquid): $\pm 0.15\%$ Volume flow (liquid): $\pm 0.15\%$ Mass flow (gas): $\pm 0.75\%$ Density (liquid): $\pm 0.0005 \text{ g/cm}^3$

Measuring range0 to 18 000 kg/h (0 to 662 lb/min)

Max. process pressure350 bar (5080 psi)

Medium temperature range -50 to $+150\text{ }^{\circ}\text{C}$ (-58 to $+302\text{ }^{\circ}\text{F}$)

Ambient temperature range -40 to $+60\text{ }^{\circ}\text{C}$ (-40 to $+140\text{ }^{\circ}\text{F}$)Option: -50 to $+60\text{ }^{\circ}\text{C}$ (-58 to $+140\text{ }^{\circ}\text{F}$)

Sensor housing material1.4301 (304), corrosion resistant

Transmitter housing material

Compact: AlSi10Mg, coated

Compact/ultra-compact: 1.4301 (304)

Degree of protectionIP66/67, 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)

InputsNone

Density/Concentration

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, EAC

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CE, C-tick, EAC marking

Metrological approvals and certificates

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Heartbeat Technology complies with the requirements for measurement traceability according to ISO 9001:2015 – Section 7.1.5.2 a (TÜV SÜD attestation)

Pressure approvals and certificates

CRN

Material certificates

3.1 material



info@lenntech.com Tel. +31-152-610-900

www.lenntech.com Fax. +31-152-616-289