

# Proline Promass G 100 Coriolis flowmeter

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



More information and current pricing:

[www.uk.endress.com/8G1B](http://www.uk.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)

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**Density/Concentration****Measured variables**

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

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**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):  $\pm 0.0005$  g/cm<sup>3</sup>

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**Measuring range**

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

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**Max. process pressure**

PN 100, Class 600, 63K

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**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)

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**Ambient temperature range**

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

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

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**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

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**Transmitter housing material**

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

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**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

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**Display/Operation**

4-line backlit display with touch control (operation from outside)

Configuration via local display and operating tools possible

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**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

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**Inputs**

Status input

4-20 mA input

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**Digital communication**

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

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**Power supply**

DC 24 V

AC 100 to 230 V

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

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**Hazardous area approvals**

ATEX, IECEx, cCSAus, NEPSI, INMETRO, EAC

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**Product safety**

CE, C-tick, EAC marking

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**Density/Concentration****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 (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)

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**Pressure approvals and certificates**

PED, CRN, AD 2000

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**Material certificates**

3.1 material

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

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**Hygienic approvals and certificates**

3-A, EHEDG

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**Gas****Measuring principle**

Coriolis

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**Product headline**

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

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## Gas

**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

**Max. measurement error**

Mass flow (liquid):  $\pm 0.15$  %

Volume flow (liquid):  $\pm 0.15$  %

Mass flow (gas):  $\pm 0.75$  %

Density (liquid):  $\pm 0.0005$  g/cm<sup>3</sup>

**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

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## Liquids

### **Measuring principle**

Coriolis

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### **Product headline**

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

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### **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.

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### **Nominal diameter range**

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

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## Liquids

**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):  $\pm 0.15$  %Volume flow (liquid):  $\pm 0.15$  %Mass flow (gas):  $\pm 0.75$  %Density (liquid):  $\pm 0.0005$  g/cm<sup>3</sup>**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

**Transmitter housing material**

Compact: AlSi10Mg, coated

Compact/ultra - compact: 1.4301 (304)

**Degree of protection**

IP66/67, type 4X enclosure

## Liquids

### Display/Operation

4 - line backlit display available (no local operation)  
Configuration via web browser and operating tools possible

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### Outputs

4 - 20 mA HART (active)  
Pulse/frequency/switch output (passive)

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### Inputs

None

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### Digital communication

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

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### Power supply

DC 20 to 30 V

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### Hazardous area approvals

ATEX, IECEx, cCSAus, INMETRO, NEPSI, EAC

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### Product safety

CE, C-Tick, EAC marking

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### Material certificates

3.1 material

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