

# Proline Promass O 100 Coriolis flowmeter

The robust high-pressure flowmeter with an ultra-compact transmitter



More information and current pricing:

[www.cz.endress.com/801B](http://www.cz.endress.com/801B)

## Benefits:

- Maximum safety – highest resistance to stress corrosion cracking
- 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):  $\pm 0.1$  (standard), 0.05 % (option) Volume flow (liquid):  $\pm 0.1$  % Mass flow (gas):  $\pm 0.35$  % Density (liquid):  $\pm 0.0005$  g/cm<sup>3</sup>
- **Measuring range** 0 to 800 000 kg/h (0 to 29 400 lb/min)
- **Medium temperature range**  $-40$  to  $+205$  °C ( $-40$  to  $+401$  °F)
- **Max. process pressure** PN 250, Class 1500
- **Wetted materials** Measuring tube: 25Cr duplex (Super Duplex), 1.4410 (UNS S32750) Connection: 25Cr duplex (Super Duplex), 1.4410 (F53) Measuring tube: 1.4539 (904L) Connection

**Field of application:** Promass O is designed for premium accuracy of liquids and gases at the highest process pressures in the oil and gas industry. The sensor is fully suitable for offshore conditions and resistant to stress corrosion cracking. Promass O 100 delivers full performance on the smallest footprint with its ultra-compact transmitter and thus enables seamless system integration. Heartbeat Technology ensures process safety at all times.

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## Features and specifications

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Gas

### Measuring principle

Coriolis

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### Product headline

Robust high-pressure flowmeter with an ultra-compact transmitter. For premium accuracy at highest process pressures, fully suitable for offshore conditions.

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### Sensor features

Maximum safety – highest resistance to stress corrosion cracking. Fewer process measuring points – multivariable measurement (flow, density, temperature). Space - saving installation – no in-/outlet run needs. Measuring tube in 25Cr Duplex, 1.4410 (UNS S32750). Process pressure up to PN 250 (Class 1500). Nominal diameter: DN 80 to 150 (3 to 6").

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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. Robust, ultra-compact transmitter housing. Highest degree of protection: IP69. Local display available.

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### Nominal diameter range

DN 80 to 150 (3 to 6")

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### Wetted materials

Measuring tube: 25Cr duplex (Super Duplex), 1.4410 (UNS S32750)  
Connection: 25Cr duplex (Super Duplex), 1.4410 (F53)  
Measuring tube: 1.4539 (904L)  
Connection

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### Measured variables

Mass flow, density, temperature, volume flow, corrected volume flow (API tables), reference density, concentration

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## Gas

**Max. measurement error**

Mass flow (liquid):  $\pm 0.1$  (standard), 0.05 % (option)

Volume flow (liquid):  $\pm 0.1$  %

Mass flow (gas):  $\pm 0.35$  %

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**Measuring range**

0 to 800 000 kg/h (0 to 29 400 lb/min)

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**Max. process pressure**

PN 250, Class 1500

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**Medium temperature range**

-40 to +205 °C (-40 to +401 °F)

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**Ambient temperature range**

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

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

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**Sensor housing material**

1.4404 (316L), highest corrosion resistance

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**Transmitter housing material**

Compact: AlSi10Mg, coated

Compact/ultra - compact: 1.4404 (316L)

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**Degree of protection**

Standard: IP66/67, type 4X enclosure

Option: IP69

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**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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## Gas

**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

**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)

**Marine approvals and certificates**

LR approval, DNV GL approval, ABS approval, BV approval, CCS approval

**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

## Density/Concentration

**Measuring principle**

Coriolis

**Product headline**

Robust high-pressure flowmeter with an ultra-compact transmitter. For premium accuracy at highest process pressures, fully suitable for offshore conditions.

## Density/Concentration

### Sensor features

Maximum safety – highest resistance to stress corrosion cracking. Fewer process measuring points – multivariable measurement (flow, density, temperature). Space - saving installation – no in-/outlet run needs. Measuring tube in 25Cr Duplex, 1.4410 (UNS S32750). Process pressure up to PN 250 (Class 1500). Nominal diameter: DN 80 to 150 (3 to 6").

### Transmitter features

Space - saving transmitter – full functionality on the smallest footprint. Time - saving local operation without additional software and hardware – integrated web server. Robust, ultra-compact transmitter housing. Highest degree of protection: IP69. Local display available.

### Nominal diameter range

DN 80 to 150 (3 to 6")

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Measuring tube: 25Cr duplex (Super Duplex), 1.4410 (UNS S32750)  
Connection: 25Cr duplex (Super Duplex), 1.4410 (F53)

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Mass flow, density, temperature, volume flow, corrected volume flow (API tables), reference density, concentration

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PN 250, Class 1500

### Medium temperature range

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## Density/Concentration

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

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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

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## Density/Concentration

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### **Pressure approvals and certificates**

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### **Material certificates**

3.1 material  
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## Liquids

### **Measuring principle**

Coriolis

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For premium accuracy at highest process pressures, fully suitable for offshore conditions.

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## Liquids

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Robust, ultra-compact transmitter housing. Highest degree of protection: IP69. Local display available.

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### Inputs

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DC 20 to 30 V

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ATEX, IECEx, cCSAus, INMETRO, NEPSI, EAC

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### Product safety

CE, C-Tick, EAC marking

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