

# Proline Promass F 100 Coriolis flowmeter

The flowmeter with premium accuracy,  
robustness and an ultra-compact transmitter



More information and current pricing:

[www.apsc.endress.com/8F1B](http://www.apsc.endress.com/8F1B)

## Benefits:

- Highest process safety – immune to fluctuating and harsh environments
- Fewer process measuring points – multivariable measurement (flow, density, temperature)
- Space-saving installation – no in/outlet run needs
- Space-saving transmitter – full functionality on 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):  $\pm 0.25\%$  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  $+150\text{ }^\circ\text{C}$  ( $-58$  to  $+302\text{ }^\circ\text{F}$ ) Option:  $-50$  to  $+240\text{ }^\circ\text{C}$  ( $-58\text{...}+464\text{ }^\circ\text{F}$ )
- **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)

**Field of application:** Promass F has a long standing reputation as a highly accurate device under varying process conditions. It is suited for broadest range of applications. Combined with the smallest transmitter housing available today it delivers full performance on the smallest footprint. Promass F 100 will be the preferred choice for system integrators, skid builders and equipment manufacturers. Available with

an extra-compact stainless steel hygienic housing it can be placed even into the most compact rigs.

## Features and specifications

### Gas

#### Measuring principle

Coriolis

#### Product headline

The flowmeter with premium accuracy, robustness and an ultracompact transmitter. Highest measurement performance for liquids and gases under varying, demanding process conditions.

#### Sensor features

Highest process safety – immune to fluctuating and harsh environments. Fewer process measuring points – multivariable measurement (flow, density, temperature). Space-saving installation – no in/outlet run needs. Mass flow: measurement error  $\pm 0.05$  % (PremiumCal). Medium temperature up to  $+240$  °C ( $+464$  °F).

#### Transmitter features

Space - saving transmitter – full functionality on smallest footprint. Time - saving local operation without additional software and hardware – integrated web server. Integrated verification – Heartbeat Technology. Robust, ultra - compact transmitter housing. High ingress protection: IP69.

#### 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)

#### Measured variables

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

## Gas

**Max. measurement error**

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

Mass flow (gas):  $\pm 0.25$  %

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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**

1.4301/1.4307 (304L), corrosion resistant

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**Transmitter housing material**

Compact: AlSi10Mg, coated

Compact/ultra - compact: 1.4301 (304), 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, NEPSI, INMETRO, 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)

**Marine approvals and certificates**

ABS (American Bureau of Shipping)

BV (Bureau Veritas)

LR (Lloyds Register)

BV approval

**Pressure approvals and certificates**

PED, CRN, AD 2000

## Gas

**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, cGMP

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## Density/Concentration

**Measuring principle**

Coriolis

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**Nominal diameter range**

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

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**Density/Concentration****Wetted materials**

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

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## Density/Concentration

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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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**Steam****Measuring principle**Coriolis

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**Steam****Measured variables**

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

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

Mass flow (gas):  $\pm 0.25$  %

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No local operation

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