

# Proline Promass A 100

## Coriolis flowmeter

The single-tube flowmeter for smallest flow quantities with an ultra-compact transmitter



More information and current pricing:

[www.endress.com/8A1B](http://www.endress.com/8A1B)

### Benefits:

- Highest process safety – self-drainable measuring tube design
- 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):  $\pm 0.1$  % Volume flow (liquid):  $\pm 0.1$  % Mass flow (gas):  $\pm 0.5$  % Density (liquid):  $\pm 0.0005$  g/cm<sup>3</sup>
- **Measuring range** 0 to 450 kg/h (0 to 16.5 lb/min)
- **Medium temperature range**  $-50$  to  $+205$  °C ( $-58$  to  $+401$  °F)
- **Max. process pressure** PN 40, Class 300, 20K, 400 bar (5800 psi)
- **Wetted materials** Measuring tube: 1.4539 (904L); Alloy C22, 2.4602 (UNS N06022) Connection: 1.4539 (904L); Alloy C22, 2.4602 (UNS N06022); 1.4404 (316/316L)

**Field of application:** Promass A is known for its highly accurate measurement of small quantities of liquids and gases for high pressure and low pressure. Combined with the smallest transmitter housing available today it delivers full performance on the smallest footprint. Promass A 100 is the preferred choice for system integrators, skid builders and equipment manufacturers. Available with an ultra-compact

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

## Features and specifications

### Liquids

#### Measuring principle

Coriolis

#### Product headline

The single-tube flowmeter for smallest flow quantities with an ultra-compact transmitter.

Measuring accurately smallest quantities of liquids and gases for continuous process control.

#### Sensor features

Highest process safety – self-drainable measuring tube design. Fewer process measuring points – multivariable measurement (flow, density, temperature). Space-saving installation – no in-/outlet run needs.

Nominal diameter: DN 1 to 4 ( $\frac{1}{24}$  to  $\frac{1}{8}$ "). Process pressure up to 400 bar (5800 psi). Medium temperature up to +205 °C (+401 °F).

#### 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. Highest degree of protection: IP69. Local display available.

#### Nominal diameter range

DN 1 to 4 ( $\frac{1}{24}$  to  $\frac{1}{8}$ ")

#### Wetted materials

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

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

## Liquids

### Measured variables

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

### Max. measurement error

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

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

Mass flow (gas):  $\pm 0.5$  %

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

### Measuring range

0 to 450 kg/h (0 to 16.5 lb/min)

### Max. process pressure

PN 40, Class 300, 20K, 400 bar (5800 psi)

### Medium temperature range

-50 to +205 °C (-58 to +401 °F)

### Ambient temperature range

Standard: -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

Standard: IP66/67, type 4X enclosure

Option: IP69

### Display/Operation

4-line backlit display available (no local operation)

Configuration via web browser and operating tools possible

## Liquids

### 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, EAC

### Product safety

CE, C-Tick, EAC marking

### Metrological approvals and certificates

Calibration performed on accredited calibration facilities (acc. to ISO/IEC 17025), NAMUR

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

### Hygienic approvals and certificates

3-A, EHEDG, cGMP

## Gas

### Measuring principle

Coriolis

## Gas

### Product headline

The single-tube flowmeter for smallest flow quantities with an ultra-compact transmitter.

Measuring accurately smallest quantities of liquids and gases for continuous process control.

### Sensor features

Highest process safety – self-drainable measuring tube design. Fewer process measuring points – multivariable measurement (flow, density, temperature). Space-saving installation – no in-/outlet run needs.

Nominal diameter: DN 1 to 4 ( $\frac{1}{24}$  to  $\frac{1}{8}$ "). Process pressure up to 400 bar (5800 psi). Medium temperature up to +205 °C (+401 °F).

### 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. Highest degree of protection: IP69. Local display available.

### Nominal diameter range

DN 1 to 4 ( $\frac{1}{24}$  to  $\frac{1}{8}$ ")

### Wetted materials

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

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

### Measured variables

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

### Max. measurement error

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

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

Mass flow (gas):  $\pm 0.5$  %

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

## Gas

**Measuring range**

0 to 450 kg/h (0 to 16.5 lb/min)

**Max. process pressure**

PN 40, Class 300, 20K, 400 bar (5800 psi)

**Medium temperature range**

–50 to +205 °C (–58 to +401 °F)

**Ambient temperature range**

Standard: –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**

Standard: IP66/67, type 4X enclosure

Option: IP69

**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

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**Gas****Power supply**

DC 20 to 30 V

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**Hazardous area approvals**

ATEX, IECEx, cCSAus, INMETRO, NEPSI, EAC

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**Other approvals and certificates****Product safety**

CE, C-Tick, EAC marking

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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)

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**Pressure approvals and certificates**

CRN

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**Material certificates**

3.1 material

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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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**Product headline**

The single-tube flowmeter for smallest flow quantities with an ultra-compact transmitter.

Measuring accurately smallest quantities of liquids and gases for continuous process control.

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## Density/Concentration

### Sensor features

Highest process safety – self-drainable measuring tube design. Fewer process measuring points – multivariable measurement (flow, density, temperature). Space-saving installation – no in-/outlet run needs. Nominal diameter: DN 1 to 4 ( $\frac{1}{24}$  to  $\frac{1}{8}$ "). Process pressure up to 400 bar (5800 psi). Medium temperature up to +205 °C (+401 °F).

### 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. Highest degree of protection: IP69. Local display available.

### Nominal diameter range

DN 1 to 4 ( $\frac{1}{24}$  to  $\frac{1}{8}$ ")

### Wetted materials

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

### Measured variables

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

### Max. measurement error

Mass flow (liquid):  $\pm 0.1$  %  
Volume flow (liquid):  $\pm 0.1$  %  
Mass flow (gas):  $\pm 0.5$  %  
Density (liquid):  $\pm 0.0005$  g/cm<sup>3</sup>

### Measuring range

0 to 450 kg/h (0 to 16.5 lb/min)

### Max. process pressure

PN 40, Class 300, 20K, 400 bar (5800 psi)



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**Density/Concentration****Medium temperature range**

–50 to +205 °C (–58 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**

1.4301 (304), corrosion resistant

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**Transmitter housing material**

Compact: AlSi10Mg, coated

Compact/ultra-compact: 1.4301 (304)

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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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**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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## Density/Concentration

### **Product safety**

CE, C-Tick, EAC marking

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### **Metrological approvals and certificates**

Calibration performed on accredited calibration facilities (acc. to ISO/IEC 17025), NAMUR

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

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### **Pressure approvals and certificates**

CRN

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### **Material certificates**

3.1 material

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### **Hygienic approvals and certificates**

3-A, EHEDG, cGMP

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