

# Proline Promass A 500 Coriolis flowmeter

Accurate single-tube flowmeter for lowest flow rates, as remote version with up to 4 I/Os



More information and current pricing:

[www.ca.endress.com/8A5C](http://www.ca.endress.com/8A5C)

## Benefits:

- Space-saving installation – compact, lightweight sensor
- Highest product quality – self-drainable measuring tube design in all line sizes
- Optimum process safety – resistant to corrosive ambient conditions and internal clogging
- Full access to process and diagnostic information – numerous, freely combinable I/Os and fieldbuses
- Reduced complexity and variety – freely configurable I/O functionality
- 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):  $\pm 0.35\%$  Density (liquid):  $\pm 0.0005 \text{ g/cm}^3$
- **Measuring range** 0 to 450 kg/h (0 to 16.54 lb/min)
- **Medium temperature range** -50 to 205 °C (-58 to 401 °F)
- **Max. process pressure** 430.9 bar (6250 psi)
- **Wetted materials** Measuring tube: stainless steel, 1.4435 (316/316L); Alloy C22

**Field of application:** The compact Promass A is ideal for continuous process control in very demanding applications. Its unique self-drainable single-tube system enables accurate measurement of liquids and gases at lowest flow rates and high pressure. With its innovative remote transmitter Promass A 500 maximizes installation flexibility and operational safety in demanding environments. Heartbeat Technology ensures measurement reliability and compliant verification.

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## Features and specifications

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Gas

### Measuring principle

Coriolis

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### Product headline

Accurate single-tube flowmeter for lowest flow rates, as remote version with up to 4 I/Os.

Suitable for applications with smallest flow quantities in all industries.

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### Sensor features

Space-saving installation – compact, lightweight sensor. Highest product quality – self-drainable measuring tube design in all line sizes. Optimum process safety – resistant to corrosive ambient conditions and internal clogging.

Nominal diameter: DN 1 to 4 ( $\frac{1}{24}$  to  $\frac{1}{8}$ " ). Process pressure up to 430.9 bar (6250 psi). Medium temperature up to +205 °C (+401 °F).

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### Transmitter features

Full access to process and diagnostic information – numerous, freely combinable I/Os and fieldbuses. Reduced complexity and variety – freely configurable I/O functionality. Integrated verification – Heartbeat Technology.

Remote version with up to 4 I/Os. Backlit display with touch control and WLAN access. Standard cable between sensor and transmitter.

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### Nominal diameter range

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

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### Wetted materials

Measuring tube: stainless steel, 1.4435 (316/316L); Alloy C22

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### Measured variables

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

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## Gas

**Max. measurement error**Mass flow (liquid):  $\pm 0.1$  %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 450 kg/h (0 to 16.54 lb/min)

**Max. process pressure**

430.9 bar (6250 psi)

**Medium temperature range**

-50 to 205 °C (-58 to 401 °F)

**Ambient temperature range**

-40 to 60 °C (-40 to +140 °F)

**Sensor housing material**

Stainless steel, 1.4404 (316L)

**Transmitter housing material**

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

**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

**Display/Operation**

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

Configuration via local display and operating tools possible

**Gas****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

**Inputs**

Status input

4-20 mA input

**Digital communication**

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

**Power supply**

DC 24 V

AC 100 to 230 V

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

**Hazardous area approvals**

ATEX, IECEx, cCSAus, INMETRO, NEPSI

**Product safety**

CE, C-TICK

**Functional safety**

Functional safety according to IEC 61508, applicable in safety-relevant applications in accordance with IEC 61511

**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)

**Gas****Pressure approvals and certificates**

CRN

**Material certificates**

3.1 material

**Hygienic approvals and certificates**

3-A, cGMP

**Liquids****Measuring principle**

Coriolis

**Product headline**

Accurate single-tube flowmeter for lowest flow rates, as remote version with up to 4 I/Os.

Suitable for applications with smallest flow quantities in all industries.

**Sensor features**

Space-saving installation – compact, lightweight sensor. Highest product quality – self-drainable measuring tube design in all line sizes. Optimum process safety – resistant to corrosive ambient conditions and internal clogging.

Nominal diameter: DN 1 to 4 ( $\frac{1}{24}$  to  $\frac{1}{8}$ "). Process pressure up to 430.9 bar (6250 psi). Medium temperature up to +205 °C (+401 °F).

**Transmitter features**

Full access to process and diagnostic information – numerous, freely combinable I/Os and fieldbuses. Reduced complexity and variety – freely configurable I/O functionality. Integrated verification – Heartbeat Technology.

Remote version with up to 4 I/Os. Backlit display with touch control and WLAN access. Standard cable between sensor and transmitter.

**Nominal diameter range**DN 1 to 4 ( $\frac{1}{24}$  to  $\frac{1}{8}$ ")

## Liquids

**Wetted materials**

Measuring tube: stainless steel, 1.4435 (316/316L); Alloy C22

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**Measured variables**

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

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**Max. measurement error**

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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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## Liquids

### 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

### Inputs

Status input

4-20 mA input

### Digital communication

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

### Power supply

DC 24 V

AC 100 to 230 V

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

### Hazardous area approvals

ATEX, IECEx, cCSAus, INMETRO, NEPSI

### Product safety

CE, C-TICK

### Functional safety

Functional safety according to IEC 61508, applicable in safety-relevant applications in accordance with IEC 61511

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## Liquids

### Pressure approvals and certificates

CRN

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### Material certificates

3.1 material

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### Hygienic approvals and certificates

3-A, cGMP

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## Density/Concentration

### Measuring principle

Coriolis

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### Nominal diameter range

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

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Configuration via local display and operating tools possible

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**Density/Concentration****Outputs**

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Density/Concentration

**Pressure approvals and certificates**

PED, CRN

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**Material certificates**

3.1 material

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