Proline Promass A 500
Coriolis flowmeter

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

Benefits:
- Space-saving installation – compact, lightweight sensor
- Highest product quality – self-drainable measuring tube 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 Ethernet
- Reduced complexity and variety – freely configurable I/O functionality
- Integrated verification – Heartbeat Technology

Specs at a glance
- **Max. measurement error** Mass flow (liquid): ±0.1 % Volume flow (liquid): ±0.1 % Mass flow (gas): ±0.35 % Density (liquid): ±0.0005 g/cm³
- **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.

Features and specifications
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 \(\frac{1}{8}\)“)

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

**Measured variables**
Mass flow, density, temperature, volume flow, corrected volume flow, reference density

**Max. measurement error**
Mass flow (liquid): ±0.1 %
Volume flow (liquid): ±0.1 %
Mass flow (gas): ±0.35 % Density (liquid): ±0.0005 g/cm³
### Liquids

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<td>AlSi10Mg, coated; 1.4409 (CF3M) similar to 316L; Polycarbonat</td>
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| **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 |
| **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 |
### Liquids

**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)

**Pressure approvals and certificates**
CRN

**Material certificates**
3.1 material

**Hygienic approvals and certificates**
3-A, cGMP

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### Gas

**Measuring principle**
Coriolis
Gas

**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 (⅛ to ⅛”). 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 (¼ to ⅛”)

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

**Measured variables**
Mass flow, density, temperature, volume flow, corrected volume flow, reference density

**Max. measurement error**
Mass flow (liquid): ±0.1 %
Volume flow (liquid): ±0.1 %
Mass flow (gas): ±0.35 % Density (liquid): ±0.0005 g/cm³

**Measuring range**
0 to 450 kg/h (0 to 16.54 lb/min)
### Gas

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**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)

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### Density/Concentration

**Measuring principle**
Coriolis
Proline Promass A 500 / 8A5C

Density/Concentration

Product headline
Accurate single-tube flowmeter for lowest flow rates, as remote version with up to 4 I/Os.
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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 (½" to ¼”). Process pressure up to 430.9 bar (6250 psi). Medium temperature up to +205 °C (+401 °F).

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**Density/Concentration**

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More information [www.us.endress.com/8A5C](http://www.us.endress.com/8A5C)