

# Proline Promass H 500 Coriolis flowmeter

Chemically resistant single-tube flowmeter, as remote version with up to 4 I/Os



More information and current pricing:

[www.cz.endress.com/8H5B](http://www.cz.endress.com/8H5B)

## Benefits:

- Maximum safety for chemically aggressive fluids – corrosion-resistant wetted parts
- Fewer process measuring points – multivariable measurement (flow, density, temperature)
- Space-saving installation – no in/outlet run needs
- 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):  $\pm 0.10\%$  Volume flow (liquid):  $\pm 0.10\%$  Mass flow (gas, Tantalum only):  $\pm 0.50\%$  Density (liquid):  $\pm 0.0005 \text{ g/cm}^3$
- **Measuring range** 0 to 70 000 kg/h (0 to 2570 lb/min)
- **Medium temperature range** Tantalum:  $-50$  to  $+150 \text{ }^\circ\text{C}$  ( $-58$  to  $+302 \text{ }^\circ\text{F}$ ) Zirconium:  $-50$  to  $+205 \text{ }^\circ\text{C}$  ( $-58$  to  $+401 \text{ }^\circ\text{F}$ )
- **Max. process pressure** PN 40, Class 300, 20K
- **Wetted materials** Measuring tube: Tantalum 2.5W; 702 (UNS R60702) Connection: Tantalum; 702 (UNS R60702)

**Field of application:** The highly accurate Promass H is destined for applications requiring maximum corrosion resistance and guarantees optimal safety for chemically aggressive fluids. With its innovative remote transmitter Promass H 500 maximizes installation flexibility and operational safety in demanding environments. Heartbeat Technology ensures process safety at all times.

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## Features and specifications

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### Liquids

**Measuring principle**

Coriolis

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**Product headline**

Chemically resistant single-tube flowmeter, as remote version with up to 4 I/Os.

Highly accurate measurement of liquids and gases in applications requiring highest corrosion resistance.

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**Sensor features**

Maximum safety for chemically aggressive fluids – corrosion - resistant wetted parts. Fewer process measuring points – multivariable measurement (flow, density, temperature). Space - saving installation – no in-/outlet run needs.

Measuring tube made of Tantalum, Zirconium. Nominal diameter: DN 8 to 50 ( $\frac{3}{8}$  to 2"). 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 8 to 50 ( $\frac{3}{8}$  to 2")

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**Wetted materials**

Measuring tube: Tantalum 2.5W; 702 (UNS R60702)

Connection: Tantalum; 702 (UNS R60702)

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**Measured variables**

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

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## Liquids

**Max. measurement error**

Mass flow (liquid):  $\pm 0.10\%$

Volume flow (liquid):  $\pm 0.10\%$

Mass flow (gas, Tantalum only):  $\pm 0.50\%$

Density (liquid):  $\pm 0.0005\text{ g/cm}^3$

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**Measuring range**

0 to 70 000 kg/h (0 to 2570 lb/min)

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**Max. process pressure**

PN 40, Class 300, 20K

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**Medium temperature range**

Tantalum:  $-50$  to  $+150\text{ }^\circ\text{C}$  ( $-58$  to  $+302\text{ }^\circ\text{F}$ )

Zirconium:  $-50$  to  $+205\text{ }^\circ\text{C}$  ( $-58$  to  $+401\text{ }^\circ\text{F}$ )

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**Ambient temperature range**

Standard:  $-40$  to  $+60\text{ }^\circ\text{C}$  ( $-40$  to  $+140\text{ }^\circ\text{F}$ )

Option:  $-50$  to  $+60\text{ }^\circ\text{C}$  ( $-58$  to  $+140\text{ }^\circ\text{F}$ )

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**Sensor housing material**

1.4301 (304), corrosion resistant

Sensor connection housing (standard): AlSi10Mg, coated

Sensor connection housing (option): 1.4301 (304); 1.4404 (316L);

1.4409 (CF3M) similar to 316L

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**Transmitter housing material**

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

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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

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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

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### Inputs

Status input

4-20 mA input

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### Digital communication

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

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### 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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### Hazardous area approvals

ATEX, IECEx, cCSAus, NEPSI, INMETRO, EAC

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### Product safety

CE, C-tick, EAC marking

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### Functional safety

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

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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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## Liquids

### Pressure approvals and certificates

PED, CRN

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### Material certificates

3.1 material

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## Density/Concentration

### Measuring principle

Coriolis

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### Product headline

Chemically resistant single-tube flowmeter, as remote version with up to 4 I/Os.

Highly accurate measurement of liquids and gases in applications requiring highest corrosion resistance.

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### Sensor features

Maximum safety for chemically aggressive fluids – corrosion - resistant wetted parts. Fewer process measuring points – multivariable measurement (flow, density, temperature). Space - saving installation – no in-/outlet run needs.

Measuring tube made of Tantalum, Zirconium. Nominal diameter: DN 8 to 50 ( $\frac{3}{8}$  to 2"). 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 8 to 50 ( $\frac{3}{8}$  to 2")

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### Wetted materials

Measuring tube: Tantalum 2.5W; 702 (UNS R60702)

Connection: Tantalum; 702 (UNS R60702)

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## Density/Concentration

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### Measured variables

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

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### Max. measurement error

Mass flow (liquid):  $\pm 0.10$  %

Volume flow (liquid):  $\pm 0.10$  %

Mass flow (gas, Tantalum only):  $\pm 0.50$  %

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

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### Measuring range

0 to 70 000 kg/h (0 to 2570 lb/min)

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### Max. process pressure

PN 40, Class 300, 20K

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### Medium temperature range

Tantalum:  $-50$  to  $+150$  °C ( $-58$  to  $+302$  °F)

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

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**Density/Concentration****Display/Operation**

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

Configuration via local display and operating tools possible

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**Inputs**

Status input

4-20 mA input

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**Digital communication**

HART, PROFIBUS DP, PROFIBUS PA, FOUNDATION Fieldbus, Modbus

RS485, Profinet, Ethernet/IP, OPC-UA

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**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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**Functional safety**

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## Density/Concentration

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PED, CRN

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### **Material certificates**

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## Density

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Coriolis

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## Density

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## Gas

### Measuring principle

Coriolis

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