

Proline Promass H 100 Coriolis flowmeter

The chemically resistant single-tube flowmeter with an ultra-compact transmitter



More information and current pricing:

www.casc.endress.com/8H1B

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
- 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, Tantalum only): $\pm 0.5\%$ 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 chemically resistant single-tube design of the Promass H is destined for applications requiring highest corrosion resistance. Combined with the smallest transmitter housing available today it delivers full performance on the smallest footprint. Designed for applications where space is a premium, Promass H 100 will be the preferred choice for system integrators, skid builders and equipment manufacturers.

Features and specifications

Density/Concentration

Measuring principle

Coriolis

Product headline

Chemically resistant single-tube flowmeter with an ultra-compact transmitter.

Measuring highly accurately liquids and gases in applications requiring highest corrosion resistance.

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).

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 8 to 50 ($\frac{3}{8}$ to 2")

Wetted materials

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

Connection: Tantalum; 702 (UNS R60702)

Measured variables

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

Density/Concentration**Max. measurement error**Mass flow (liquid): ± 0.1 %Volume flow (liquid): ± 0.1 %Mass flow (gas, Tantalum only): ± 0.5 %Density (liquid): ± 0.0005 g/cm³

Measuring range0 to 70 000 kg/h (0 to 2570 lb/min)

Max. process pressurePN 40, Class 300, 20K

Medium temperature rangeTantalum: -50 to $+150$ °C (-58 to $+302$ °F)Zirconium: -50 to $+205$ °C (-58 to $+401$ °F)

Ambient temperature rangeStandard: -40 to $+60$ °C (-40 to $+140$ °F)Option: -50 to $+60$ °C (-58 to $+140$ °F)

Sensor housing material1.4301 (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)

Density/Concentration**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)

Heartbeat Technology complies with the requirements for traceable verification according to ISO 9001:2008 – Section 7.6a (TÜV SÜD attestation)

Pressure approvals and certificates

PED, CRN

Material certificates

3.1 material

Gas**Measuring principle**

Coriolis

Product headline

Chemically resistant single-tube flowmeter with an ultra-compact transmitter.

Measuring highly accurately liquids and gases in applications requiring highest corrosion resistance.

Gas**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).

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 8 to 50 ($\frac{3}{8}$ to 2")

Wetted materials

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

Connection: Tantalum; 702 (UNS R60702)

Measured variables

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

Max. measurement error

Mass flow (liquid): ± 0.1 %

Volume flow (liquid): ± 0.1 %

Mass flow (gas, Tantalum only): ± 0.5 %

Density (liquid): ± 0.0005 g/cm³

Measuring range

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

Max. process pressure

PN 40, Class 300, 20K

Gas

Medium temperature range

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

Zirconium: -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

Power supply

DC 20 to 30 V

Hazardous area approvals

ATEX, IECEx, cCSAus, INMETRO, NEPSI

Gas

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 traceable verification according to ISO 9001:2008 – Section 7.6a (TÜV SÜD attestation)

Pressure approvals and certificates

PED, CRN

Material certificates

3.1 material

Liquids

Measuring principle

Coriolis

Product headline

Chemically resistant single-tube flowmeter with an ultra-compact transmitter.

Measuring highly accurately liquids and gases in applications requiring highest corrosion resistance.

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).

Liquids

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 8 to 50 ($\frac{3}{8}$ to 2")

Wetted materials

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

Connection: Tantalum; 702 (UNS R60702)

Measured variables

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

Max. measurement error

Mass flow (liquid): ± 0.1 %

Volume flow (liquid): ± 0.1 %

Mass flow (gas, Tantalum only): ± 0.5 %

Density (liquid): ± 0.0005 g/cm³

Measuring range

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

Max. process pressure

PN 40, Class 300, 20K

Medium temperature range

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

Zirconium: -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)

Liquids

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

Power supply

DC 20 to 30 V

Hazardous area approvals

ATEX, IECEx, cCSAus, INMETRO, NEPSI, EAC

Product safety

CE, C-Tick, EAC marking

Liquids

Metrological approvals and certificates

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

Heartbeat Technology complies with the requirements for traceable verification according to ISO 9001:2008 – Section 7.6a (TÜV SÜD attestation)

Pressure approvals and certificates

PED, CRN

Material certificates

3.1 material

More information www.casc.endress.com/8H1B