

# Proline Promass X 300

## Coriolis flowmeter

Highest capacity four-tube flowmeter with a compact, easily accessible transmitter



More information and current pricing:

[www.it.endress.com/8X3B](http://www.it.endress.com/8X3B)

### Benefits:

- Increased profit – single installation point providing premium accuracy for large quantities
- 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 Ethernet
- Reduced complexity and variety – freely configurable I/O functionality
- Integrated verification – Heartbeat Technology

### Specs at a glance

- **Max. measurement error** Mass flow (liquid):  $\pm 0.10\%$  (standard),  $0.05\%$  (option) Volume flow (liquid):  $\pm 0.10\%$  Mass flow (gas):  $\pm 0.35\%$  Density (liquid):  $\pm 0.0005 \text{ g/cm}^3$
- **Measuring range** 0 to 4100 t/h (0 to 4520 tn. sh./h)
- **Medium temperature range**  $-50$  to  $+180^\circ\text{C}$  ( $-58$  to  $+356^\circ\text{F}$ )
- **Max. process pressure** PN 100, Class 600
- **Wetted materials** Measuring tube: 1.4404 (316/316L)  
Connection: 1.4404 (316/316L)

**Field of application:** The patented four-tube Promass X provides premium accuracy ( $0.05\%$ ) for highest capacity and offers an outstanding performance in on- and offshore applications in the oil and gas industry. With its compact transmitter Promass X 300 offers a high flexibility in terms of operation and system integration: access from one side, remote display and improved connectivity options. Heartbeat Technology enables measurement reliability and compliant verification.

## Features and specifications

### Liquids

#### Measuring principle

Coriolis

#### Product headline

Highest capacity four-tube flowmeter with a compact, easily accessible transmitter.

For highest flow rates and outstanding performance in on/offshore oil and gas applications.

#### Sensor features

Increased profit – single installation point providing premium accuracy for large quantities. Fewer process measuring points – multivariable measurement (flow, density, temperature). Space-saving installation – no in-/outlet run needs.

Nominal diameter: DN 300 to 400 (12 to 16"). Four-tube system with low pressure drop. Complete exterior design made of 1.4435 (316L).

#### 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.

Compact dual-compartment housing with up to 3 I/Os.

#### Nominal diameter range

DN 300 to 400 (12 to 16")

#### Wetted materials

Measuring tube: 1.4404 (316/316L)

Connection: 1.4404 (316/316L)

#### Measured variables

Mass flow, density, temperature, volume flow, corrected volume flow (API tables), reference density, concentration

## Liquids

**Max. measurement error**

Mass flow (liquid):  $\pm 0.10$  % (standard), 0.05 % (option)

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

Mass flow (gas):  $\pm 0.35$  %

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

**Measuring range**

0 to 4100 t/h (0 to 4520 tn. sh./h)

**Max. process pressure**

PN 100, Class 600

**Medium temperature range**

$-50$  to  $+180$  °C ( $-58$  to  $+356$  °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**

1.4404 (316L), highest corrosion resistance

**Transmitter housing material**

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

**Degree of protection**

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

Remote display available"

## Liquids

### Outputs

3 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, PROFINET over Ethernet-APL, 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, UK Ex, KC

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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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## Liquids

### **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)

MI-005 Liquids other than water (Hydrocarbons), LPG, cryogenic  
MI-002, PTB

### **Marine approvals and certificates**

LR approval, DNV approval, ABS approval, BV approval, CCS approval

### **Pressure approvals and certificates**

PED, CRN

### **Material certificates**

3.1 material

NACE MR0175/MR0103, PMI; welding test acc. to EN ISO, ASME, NORSOK

## Gas

### **Measuring principle**

Coriolis

### **Product headline**

Highest capacity four-tube flowmeter with a compact, easily accessible transmitter.

For highest flow rates and outstanding performance in on/offshore oil and gas applications.

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Nominal diameter: DN 300 to 400 (12 to 16"). Four-tube system with low pressure drop. Complete exterior design made of 1.4435 (316L).

## Gas

**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.

Compact dual-compartment housing with up to 3 I/Os.

**Nominal diameter range**

DN 300 to 400 (12 to 16")

**Wetted materials**

Measuring tube: 1.4404 (316/316L)

Connection: 1.4404 (316/316L)

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## Gas

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**Degree of protection**

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

Remote display available

**Outputs**

3 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, PROFINET over Ethernet-APL, 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, NEPSI, INMETRO, EAC, UK Ex, KC

**Product safety**

CE, C-tick, EAC marking

## Gas

### Functional safety

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

### Metrological approvals and certificates

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## Density/Concentration

### Measuring principle

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## Density/Concentration

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### Transmitter features

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

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**Density/Concentration****Power supply**

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