

# Proline Promass E 100

## Coriolis flowmeter

### Mid-range Coriolis flowmeter with an ultra-compact transmitter



More information and current pricing:

[www.it.endress.com/8E1C](http://www.it.endress.com/8E1C)

#### Benefits:

- Cost-effective – multipurpose device; an alternative to conventional volumetric flowmeters
- 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):  $\pm 0.15\%$  (standard),  $\pm 0.10\%$  (option) Volume flow (liquid):  $\pm 0.15\%$  Mass flow (gas):  $\pm 0.50\%$  Density (liquid):  $\pm 0.0005 \text{ g/cm}^3$
- **Measuring range** 0 to 180 000 kg/h (0 to 6600 lb/min)
- **Medium temperature range**  $-40$  to  $+150^\circ\text{C}$  ( $-40$  to  $+302^\circ\text{F}$ )
- **Max. process pressure** PN 100, Class 600, 63K
- **Wetted materials** Measuring tube: 1.4539 (904L) Connection: 1.4404 (316/316L)

**Field of application:** The robust Promass E has a long-standing reputation as reliable solution accurately measuring liquids and gases in a wide range of standard applications. Its ultra-compact transmitter delivers full performance on the smallest footprint and enables seamless system integration, making Promass E 100 the preferred choice for skid builders, equipment manufacturers and system integrators. Heartbeat Technology enables measurement reliability and compliant verification.

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## Features and specifications

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### Liquids

**Measuring principle**

Coriolis

**Product headline**

Flowmeter with minimized total cost of ownership and an ultra-compact transmitter.

Accurate measurement of liquids and gases for a wide range of standard applications.

**Sensor features**

Cost-effective – multi-purpose device; an alternative to conventional volumetric flowmeters. Fewer process measuring points – multivariable measurement (flow, density, temperature). Space-saving installation – no in-/outlet run needs.

Compact dual-tube sensor. Medium temperature up to +150 °C (+302 °F). Process pressure up to 100 bar (1450 psi).

**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 80 ( $\frac{3}{8}$  to 3")

**Wetted materials**

Measuring tube: 1.4539 (904L)

Connection: 1.4404 (316/316L)

**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):  $\pm 0.15\%$  (standard),  $\pm 0.10\%$  (option)

Volume flow (liquid):  $\pm 0.15\%$

Mass flow (gas):  $\pm 0.50\%$

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

**Measuring range**

0 to 180 000 kg/h (0 to 6600 lb/min)

**Max. process pressure**

PN 100, Class 600, 63K

**Medium temperature range**

$-40$  to  $+150\text{ }^{\circ}\text{C}$  ( $-40$  to  $+302\text{ }^{\circ}\text{F}$ )

**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  $+140\text{ }^{\circ}\text{F}$ )

**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)

## Liquids

### 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 measurement traceability according to ISO 9001:2015 – Section 7.1.5.2 a (TÜV SÜD attestation)

### 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

### Hygienic approvals and certificates

3-A, EHEDG, cGMP

## Gas

### Measuring principle

Coriolis

## Gas

**Product headline**

Flowmeter with minimized total cost of ownership and an ultra-compact transmitter.

Accurate measurement of liquids and gases for a wide range of standard applications.

**Sensor features**

Cost-effective – multi-purpose device; an alternative to conventional volumetric flowmeters. Fewer process measuring points – multivariable measurement (flow, density, temperature). Space-saving installation – no in-/outlet run needs.

Compact dual-tube sensor. Medium temperature up to +150 °C (+302 °F). Process pressure up to 100 bar (1450 psi).

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**Nominal diameter range**

DN 8 to 80 ( $\frac{3}{8}$  to 3")

**Wetted materials**

Measuring tube: 1.4539 (904L)

Connection: 1.4404 (316/316L)

**Measured variables**

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

**Max. measurement error**

Mass flow (liquid):  $\pm 0.15$  % (standard),  $\pm 0.10$  % (option)

Volume flow (liquid):  $\pm 0.15$  %

Mass flow (gas):  $\pm 0.50$  %

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

## Gas

**Measuring range**

0 to 180 000 kg/h (0 to 6600 lb/min)

**Max. process pressure**

PN 100, Class 600, 63K

**Medium temperature range**

−40 to +150 °C (−40 to +302°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

## Gas

**Power supply**

DC 20 to 30 V

**Hazardous area approvals**

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3.1 material

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3-A, EHEDG, cGMP

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