Proline Promass I 100
Coriolis flowmeter

Combines in-line viscosity and flow measurement with an ultra-compact transmitter

Benefits:
- Energy-saving – full bore design enables minimal pressure loss
- Fewer process measuring points – multivariable measurement (flow, density, temperature)
- Space-saving installation – no in/outlet run needs
- Space-saving transmitter – full functionality on 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): ±0.1 %
  - Volume flow (liquid): ±0.1 %
  - Mass flow (gas): ±0.5 %
  - Density (liquid): ±0.0005 g/cm³
- Measuring range
  - 0 to 180 000 kg/h (0 to 6600 lb/min)
- Medium temperature range
  - −50 to +150 °C (−58 to +302 °F)
- Max. process pressure
  - PN 100, Class 600, 63K
- Wetted materials
  - Measuring tube: Titanium grade 9
  - Connection: Titanium grade 2

Field of application: The straight single-tube design of the Promass I 100, provides the regular Coriolis flowmeter outputs of mass flow, density and temperature, additionally it provides in-line viscosity measurement as an optional output. Combined with the smallest transmitter housing available today it delivers full performance on the smallest footprint. Promass I 100 will be the preferred choice for system integrators, skid builders and equipment manufacturers.
## Features and specifications

### Viscosity

<table>
<thead>
<tr>
<th>Measuring principle</th>
<th>Coriolis</th>
</tr>
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</table>

**Product headline**

**Sensor features**

**Transmitter features**

**Nominal diameter range**
DN 8 to 80 (⅜ to 3”)

**Wetted materials**
Measuring tube: Titanium grade 9
Connection: Titanium grade 2

**Measured variables**
Mass flow, density, temperature, volume flow, corrected volume flow, reference density, concentration, viscosity
Viscosity

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<td>Option: IP69</td>
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<tr>
<th><strong>Display/Operation</strong></th>
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<tbody>
<tr>
<td>4 - line backlit display available (no local operation)</td>
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<td>Configuration via web browser and operating tools possible</td>
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<th><strong>Outputs</strong></th>
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<tr>
<td>Pulse/frequency/switch output (passive)</td>
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### Viscosity

**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)

**Pressure approvals and certificates**

PED, CRN

**Material certificates**

3.1 material

**Hygienic approvals and certificates**

3-A, EHEDG, cGMP

### Gas

**Measuring principle**

Coriolis
**Product headline**

**Sensor features**

**Transmitter features**

**Nominal diameter range**
DN 8 to 80 (⅜ to 3"

**Wetted materials**
Measuring tube: Titanium grade 9
Connection: Titanium grade 2

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

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

**Measuring range**
0 to 180 000 kg/h (0 to 6600 lb/min)
Proline Promass I 100 / 811B

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| **Transmitter housing material** | Compact: AlSi10Mg, coated 
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| **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 |
Gas

**Hazardous area approvals**
ATEX, IECEx, cCSAus, INMETRO, NEPSI

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**Pressure approvals and certificates**
PED, CRN

**Material certificates**
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3-A, EHEDG, cGMP

Density/Concentration

**Measuring principle**
Coriolis

**Product headline**

**Sensor features**
## Density/Concentration

### Transmitter features
Space - saving transmitter – full functionality on smallest footprint.
Time - saving local operation without additional software and hardware
– integrated web server. Integrated verification – Heartbeat Technology.
Robust, ultra - compact transmitter housing. High ingress protection: IP69.

### Nominal diameter range
DN 8 to 80 (⅜ to 3")

### Wetted materials
- Measuring tube: Titanium grade 9
- Connection: Titanium grade 2

### Measured variables
- Mass flow, density, temperature, volume flow, corrected volume flow, reference density, concentration, viscosity

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### Sensor housing material
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### Density/Concentration

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4 - line backlit display available (no local operation)
Configuration via web browser and operating tools possible

**Outputs**
4 - 20 mA HART (active)
Pulse/frequency/sensor 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

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Density-Concentration

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Liquids

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**Pressure approvals and certificates**
PED, CRN

**Material certificates**
3.1 material

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

More information [www.us.endress.com/8I1B](http://www.us.endress.com/8I1B)