Proline Promass F 100
Coriolis flowmeter

The flowmeter with premium accuracy, robustness and an ultra-compact transmitter

More information and current pricing:
www.endress.com/8F1B

Benefits:

- Highest process safety – immune to fluctuating and harsh environments
- 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 % (standard), 0.05 % (option) Volume flow (liquid): ±0.1 % Mass flow (gas): ±0.25 % Density (liquid): ±0.0005 g/cm³
- **Measuring range** 0 to 2 200 000 kg/h (0 to 80 840 lb/min)
- **Medium temperature range** Standard: −50 to +150 °C (−58 to +302 °F) Option: −50 to +240 °C (−58...+464 °F)
- **Max. process pressure** PN 100, Class 600, 63K
- **Wetted materials** Measuring tube: 1.4539 (904L); 1.4404 (316/316L); Alloy C22, 2.4602 (UNS N06022) Connection: 1.4404 (316/316L); Alloy C22, 2.4602 (UNS N06022)

Field of application: Promass F has a long standing reputation as a highly accurate device under varying process conditions. It is suited for broadest range of applications. Combined with the smallest transmitter housing available today it delivers full performance on the smallest footprint. Promass F 100 will be the preferred choice for system integrators, skid builders and equipment manufacturers. Available with

an extra-compact stainless steel hygienic housing it can be placed even into the most compact rigs.

Features and specifications

Liquids

Measuring principle
Coriolis

Product headline
Flowmeter with premium accuracy, robustness and an ultra-compact transmitter.
Highest measurement performance for liquids and gases under varying, demanding process conditions.

Sensor features
Highest process safety – immune to fluctuating and harsh environments. Fewer process measuring points – multivariable measurement (flow, density, temperature). Space - saving installation – no in-/outlet run needs.
Mass flow: measurement error ±0.05 % (PremiumCal). Medium temperature up to +240 °C (+464 °F). Nominal diameter: DN 8 to 250 (⅜ to 10").

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 250 (⅜ to 10")

Wetted materials
Measuring tube: 1.4539 (904L); 1.4404 (316/316L); Alloy C22, 2.4602 (UNS N06022)
Connection: 1.4404 (316/316L); Alloy C22, 2.4602 (UNS N06022)

Liquids

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

Max. measurement error
Mass flow (liquid): ±0.1 % (standard), 0.05 % (option)
Volume flow (liquid): ±0.1 %
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Density (liquid): ±0.0005 g/cm³

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Max. process pressure
PN 100, Class 600, 63K

Medium temperature range
Standard: −50 to +150 °C (−58 to +302 °F)
Option: −50 to +240 °C (−58...+464 °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
1.4301/1.4307 (304L), corrosion resistant

Transmitter housing material
Compact: AlSi10Mg, coated
Compact/ultra - compact: 1.4301 (304), 1.4404 (316L)

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

Liquids

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, NEPSI, INMETRO, 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
ABS (American Bureau of Shipping)
BV (Bureau Veritas)
LR (Lloyds Register)
BV approval
CCS approval

Pressure approvals and certificates
PED, CRN, AD 2000

Liquids

Material certificates

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

Hygienic approvals and certificates

3-A, EHEDG, cGMP

Density/Concentration

Measuring principle

Coriolis

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Density/Concentration

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Measuring tube: 1.4539 (904L); 1.4404 (316/316L); Alloy C22, 2.4602 (UNS N06022)
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Density/Concentration

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4 - line backlit display available (no local operation)
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4 - 20 mA HART (active)
Pulse/frequency/switch output (passive)

Inputs
None

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Power supply
DC 20 to 30 V

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BV approval, CCS approval

Pressure approvals and certificates
PED, CRN, AD 2000

Density/Concentration

Material certificates

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

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3-A, EHEDG, cGMP

Steam

Measuring principle

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No local operation
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