코리올리스 유량계
Proline Promass F 200

루프 전력 기술이 탑재된 견고한 유량계

추가 정보 및 현재 가격:
www.kr.endress.com/8F2B

장점:

- 최고의 프로세스 안정성 – 유량 급변 및 열악한 환경에서도 정상 작동
- 프로세스 측정 개소 수 감소 – 다변수 측정(유량, 밀도, 온도)
- 좁은 공간에도 설치 가능 – 전/후단 직관부가 필요하지 않음
- 편리한 계기 배선 – 분리된 연결 구역
- 안전한 작동 – 터치 동작과 배경 조명 표시로 계기 개폐가 불필요
- 통합/자가 검증 – 하트비트 기술(Heartbeat Technology)

사양 정보

- **Max. measurement error** Mass flow (liquid): ±0.1 % Volume flow (liquid): ±0.1 % Mass flow (gas): ±0.25 % Density (liquid): ±0.0005 g/cm³
- **Measuring range** 0 to 70 000 kg/h (0 to 2570 lb/min)
- **Medium temperature range** Standard: –50 to +150 °C (–58 to +302 °F) Option: –50 to +205 °C (–58 to +401 °F)
- **Max. process pressure** PN 100, Class 600, 63K
- **Wetted materials** Measuring tube: 1.4539 (904L); 1.4404; Alloy C22, 2.4602 (UNS N06022) Connection: 1.4404 (316/316L); Alloy C22, 2.4602 (UNS N06022)

적용 분야: Promass F는 오랫동안 매우 정확한 계기로 인정받아 왔고 광범위한 어플리케이션에서 사용할 수 있습니다. Promass F 200에는 산업 규정을 준수하는 2선식 기술이 탑재되어 기존 인프라에 원활하게 통합됩니다. 뿐만 아니라, 하트비트 기술(Heartbeat Technology)을 통해 지속적으로 본질 안전 설계(Ex ia)와 프로세스 안전성을 보장해 방폭 지역에서 작동 안전성이 뛰어납니다.

특징 및 사양

Liquids

측정 원리

Coriolis

Product headline

Robust flowmeter with genuine loop-powered technology.
Highest measurement performance for liquids and gases in a wide range of applications.

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: measured error ±0.1 %. Medium temperature up to +205 °C (+401 °F). Nominal diameter: DN 8 to 80 (⅜ to 3").

Transmitter features

Convenient device wiring – separate connection compartment. Safe operation – no need to open the device due to display with touch control, background lighting. Integrated verification – Heartbeat Technology. Loop-powered technology. Robust dual-compartment housing. Plant safety: worldwide approvals (SIL, Haz. area).

Nominal diameter range

DN 8 to 80 (⅜ to 3")

Wetted materials

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

Measured variables

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

Liquids

Max. measurement error

Mass flow (liquid): ±0.1 %
Volume flow (liquid): ±0.1 %
Mass flow (gas): ±0.25 % Density (liquid): ±0.0005 g/cm³

Measuring range

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

Max. process pressure

PN 100, Class 600, 63K

Medium temperature range

Standard: −50 to +150 °C (−58 to +302 °F)
Option: −50 to +205 °C (−58 to +401 °F)

Ambient temperature range

−40 to +60 °C (−40 to +140 °F)

Sensor housing material

1.4301/1.4307 (304L), corrosion resistant

Transmitter housing material

AlSi10Mg, coated, 1.4404 (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

Outputs

4 - 20 mA HART (passive)
4 - 20 mA (passive)
Pulse/frequency/switch output (passive)

Liquids

Inputs
None

Digital communication
HART, PROFIBUS PA, FOUNDATION Fieldbus

Power supply
DC 18 to 35 V (4 - 20 mA HART with/without pulse/frequency/switch)
DC 18 to 30 V (20 mA HART, 4 - 20 mA)
DC 9 to 32 V (PROFIBUS PA)

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

Product safety
CE, C-TICK

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

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, AD 2000

Material certificates
3.1 material

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

Liquids

Hygienic approvals and certificates
3-A, EHEDG, cGMP

Gas

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Coriolis

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

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

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

Gas

Max. measurement error
Mass flow (liquid): ±0.1 %
Volume flow (liquid): ±0.1 %
Mass flow (gas): ±0.25 % Density (liquid): ±0.0005 g/cm³

Measuring range
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Max. process pressure
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Standard: –50 to +150 °C (–58 to +302 °F)
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Outputs
4 - 20 mA HART (passive)
4 - 20 mA (passive)
Pulse/frequency/switch output (passive)

Gas

Inputs
None

Digital communication
HART, PROFIBUS PA, FOUNDATION Fieldbus

Power supply
DC 18 to 35 V (4 - 20 mA HART with/without pulse/frequency/switch)
DC 18 to 30 V (20 mA HART, 4 - 20 mA)
DC 9 to 32 V (PROFIBUS PA)

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

Product safety
CE, C-Tick, EAC marking

Functional safety
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Material certificates
3.1 material

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

Gas

Hygienic approvals and certificates
3-A, EHEDG, cGMP

Density/Concentration

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Coriolis

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

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Configuration via local display and operating tools possible
Remote display available

Outputs
4 - 20 mA HART (passive)
4 - 20 mA (passive)
Pulse/frequency/switch output (passive)

Inputs
None

Density/Concentration

Digital communication
HART, PROFIBUS PA, FOUNDATION Fieldbus

Power supply
DC 18 to 35 V (4 - 20 mA HART with/without pulse/frequency/switch)
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Hazardous area approvals
ATEX, IECEx, cCSAus, INMETRO, NEPSI, JPN

Product safety
CE, C-TICK

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

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PED, CRN, AD 2000

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

추가 정보 www.kr.endress.com/8F2B