

코리올리스 유량계 Proline Promass F 100

초소형 트랜스미터가 장착된 정확하고 견고한 유량계



추가 정보 및 현재 가격:

www.kr.endress.com/8F1B

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
- 공간 절약형 트랜스미터 - 최소한의 공간에서 모든 기능 구현
- 추가적인 소프트웨어와 하드웨어가 필요 없어 현장 운영 시간 절약 - 통합 웹 서버
- 통합/자가 검증 - 하트비트 기술(Heartbeat Technology)

사양 정보

- **Max. measurement error** Mass flow (liquid): $\pm 0.1\%$ (standard), 0.05% (option) Volume flow (liquid): $\pm 0.1\%$ Mass flow (gas): $\pm 0.25\%$ Density (liquid): $\pm 0.0005 \text{ g/cm}^3$
- **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)

적용 분야: Promass F는 오랫동안 다양한 프로세스 조건에서 매우 정확한 계기로 인정받아 왔습니다. 광범위한 어플리케이션에서 사용할 수 있을 뿐만 아니라 초소형 트랜스미터 하우징과 함께 최소한의 공간에서 모든 기능을 구현합니다. Promass F 100은 시스템 통합업체, 스킴 빌더 및 장비 제조업체에 적합한 솔루션으로, 초소형 스테인리스강 위생 하우징과 함께 가장 컴팩트한 설비에도 설치할 수 있습니다.

특징 및 사양

Liquids

측정 원리

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 $\pm 0.05\%$ (PremiumCal). Medium temperature up to $+240\text{ }^{\circ}\text{C}$ ($+464\text{ }^{\circ}\text{F}$). Nominal diameter: DN 8 to 250 ($\frac{3}{8}$ 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 ($\frac{3}{8}$ 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)

Measured variables

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

Liquids

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)

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

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, 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

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

Liquids

Density/Concentration

측정 원리

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Nominal diameter range

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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)

Measured variables

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

Density/Concentration

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)

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

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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

Outputs

4 - 20 mA HART (active)

Pulse/frequency/switch output (passive)

Density/Concentration**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

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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

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

Steam

측정 원리

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Connection: 1.4404 (316/316L); Alloy C22, 2.4602 (UNS N06022)

Measured variables

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

Steam**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 range0 to 2 200 000 kg/h (0 to 80 840 lb/min)

Max. process pressurePN 100, Class 600, 63K

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Sensor housing material1.4301/1.4307 (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

No local operation

Configuration via web browser and operating tools possible

Outputs

4 - 20 mA HART (active)

Pulse/frequency/switch output (passive)

Steam

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

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BV approval

CCS approval

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

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Steam

Gas

측정 원리

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Measured variables

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

Gas

Max. measurement error

Mass flow (liquid): ± 0.1 % (standard), 0.05 % (option)

Volume flow (liquid): ± 0.1 %

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Pulse/frequency/switch output (passive)

Gas

Inputs

None

Digital communication

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Power supply

DC 20 to 30 V

Hazardous area approvals

ATEX, IECEx, cCSAus, NEPSI, INMETRO, EAC

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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

Gas

추가 정보 www.kr.endress.com/8F1B