

Proline Promass F 200 Coriolis-flowmeter

Robuuste flowmeter met originele lusgevoede technologie



Meer informatie en actuele prijzen:

www.be.endress.com/8F2B

Voordelen:

- Maximale procesveiligheid – ongevoelig voor wisselende en zware omstandigheden
- Minder procesmeetpunten – multivariabele meting (flow, dichtheid, temperatuur)
- Ruimtebesparende installatie – geen in-/uitlaatlengten
- Handige instrumentbedrading – gescheiden aansluitcompartiment
- Veilige bediening – geen noodzaak om het instrument te openen dankzij display met aanraakbediening en achtergrondverlichting
- Geïntegreerde verificatie – Heartbeat Technology

Overzicht specificaties

- **Max. meetfout** Mass flow (liquid): $\pm 0.1\%$ 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 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)

Toepassingsgebied: De Promass F staat al lang bekend als een zeer nauwkeurig instrument. Het instrument is geschikt voor een breed scala aan toepassingen. De Promass F 200 biedt bovendien originele, industrie-conforme tweedraads technologie. Hierdoor is een naadloze systeemintegratie in bestaande infrastructuren mogelijk. Bijkomende voordelen zijn de hoge operationele veiligheid in explosiegevaarlijke omgevingen dankzij het intrinsiek veilige ontwerp (Ex ia) en de hoge

procesveiligheid die te allen tijde wordt gegarandeerd door de Heartbeat Technology.

Kenmerken en specificaties

Liquids

Meetprincipe

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 ($\frac{3}{8}$ 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 ($\frac{3}{8}$ 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)

Liquids

Measured variables

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

Max. meetfout

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

Liquids

Outputs

4-20 mA HART (passive)

4-20 mA (passive)

Pulse/frequency/switch output (passive)

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, UK Ex

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

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

Gas

Meetprincipe

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

Gas

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

Max. meetfout

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

Gas

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)

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, UK Ex

Product safety

CE, C-Tick, EAC marking

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)

Gas**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

Density/Concentration**Meetprincipe**

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

Density/Concentration**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

Max. meetfout

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

Density/Concentration**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)

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, UK Ex

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)

Density/Concentration

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

Meer informatie www.be.endress.com/8F2B