

Proline Prowirl F 200 Przepływomierz wirowy

Uniwersalny przepływomierz wirowy ze zintegrowaną kompensacją ciśnienia i temperatury oraz z funkcją detekcji pary mokrej.



Korzyści:

- Łatwe zarządzanie zużyciem energii – wbudowane czujniki temperatury i ciśnienia pary wodnej i gazów
- Niewielkie wymiary zabudowy – Kompensacja braku odcinków prostych rurociągu przed przepływomierzem
- Czujnik wirowy o liniowej charakterystyce niepewności pomiaru dla płynów już od liczby Reynoldsa równej 10 000
- Stabilność długoterminowa – trwała konstrukcja czujnika: zerowy dryft
- Wygodne połączenie elektryczne - oddzielny przedział podłączeniowy
- Bezpieczna obsługa za pomocą przycisków "Touch control" - brak konieczności otwierania obudowy, podświetlenie tła wyświetlacza
- Funkcje zaawansowanej autodiagnostyki i weryfikacji poprawności działania - Technologia Heartbeat

More information and current pricing:

www.pl.endress.com/7F2C

Kluczowe parametry

- **Maksymalny błąd pomiaru** Volume flow (liquid): $\pm 0.75\%$
Volume flow (optional): $\pm 0.65\%$ Volume flow (steam, gas): $\pm 1.00\%$ Mass flow (saturated steam): $\pm 1.7\%$ (temperature compensated); $\pm 1.5\%$ (temperature/pressure compensated)
Mass flow (superheated steam, gas): $\pm 1.5\%$ (temperature/pressure compensated); $\pm 1.7\%$ (temperature compensated + external pressure compensation) Mass flow (liquid): $\pm 0.85\%$
- **Zakres pomiarowy** Liquid: 0.076 to 2100 m³/h (0.045 to 1300 ft³/min) depending on medium: water with 1 bar a, 20 °C (14.5 psi a, 68° F) Steam, gas: 0.39 to 28000 m³/h (0.23 to 17000 ft³/

min) depending on medium: steam with 180 °C, 10 bar a (356 °F, 145 psi a); air with 25 °C, 4.4 bar a (77 °F, 63.8 psi a)

- **Zakres temperatury medium** Standard: -40 to +260 °C (-40 to +500 °F) High/low temperature (option): -200 to +400 °C (-328 to +752 °F)
- **Maks. ciśnienie procesu** PN 100, Class 600, 20K
- **Materiały w kontakcie z medium** Measuring tube: 1.4408 (C3FM); CX2MW similar to Alloy C22, 2.4602 DSC sensor: 1.4404 (316/316L); UNS N06022 similar to Alloy C22, 2.4602 Process connection: 1.4404/F316/F316L); 2.4602

Zastosowanie: Prowirl F to wieloparametrowy przepływomierz, cechujący się najwyższą jakością pomiaru przepływu pary wodnej, gazów oraz cieczy. Prowirl F 200 jest zasilany z pętli sygnałowej. Zapewnia najwyższe bezpieczeństwo pracy w obszarach zagrożonych wybuchem. Technologia Heartbeat zapewnia niezawodną weryfikację poprawności działania oraz wysokie bezpieczeństwo prowadzonego procesu technologicznego.

Funkcje i specyfikacja

Ciecze

Zasada pomiaru

Vortex

Product headline

Versatile flowmeter with detection of wet steam conditions and best-in-class accuracy. Easy energy management – integrated temperature and pressure measurement for steam and gases. Suitable for a wide range of applications; optimized for steam applications.

Sensor features

Space-saving engineering – inlet run compensation. Same accuracy down to Re 10 000 – most linear Vortex meter body. Long-term stability – robust drift-free capacitive sensor. Wet steam capabilities for DN 25 to 300 (1 to 12"). Flexible positioning of pressure cell.

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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. Display module with data transfer function. Robust dual-compartment housing.

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Średnica nominalna

DN 15 to 300 (½ to 12")

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DSC sensor: 1.4404 (316/316L); UNS N06022 similar to Alloy C22, 2.4602

Process connection: 1.4404/F316/F316L); 2.4602

Wielkości mierzone

Volume flow, mass flow, corrected volume flow, energy flow, heat flow difference, temperature

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Temperatura otoczenia

Compact version (standard): -40 to +80 °C (-40 to +176 °F)

Compact version (option): -50 to +80 °C (-58 to +176 °F)

Remote version (standard): -40 to +85 °C (-40 to +185 °F)

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Materiał obudowy czujnikaSensor connection housing: AlSi10Mg, coated; 1.4408 (CF3M)

Materiał obudowy przetwornikaAlSi10Mg, coated; 1.4404 (316L)

Ciecze

Stopień ochrony

Compact version: IP66/67, type 4X enclosure

Sensor remote version: IP66/67, type 4X enclosure

Transmitter remote version: IP66/67, type 4X enclosure

Wyświetlacz

4 - line backlit display with touch control (operation from outside)

Configuration via local display and operating tools possible

Remote display available

Wyjścia

4 - 20 mA HART (passive)

4 - 20 mA (passive)

Pulse/frequency/switch output (passive)

Wejścia

Current Input 4 - 20 mA (passive)

Komunikacja cyfrowa

HART, PROFIBUS PA, FOUNDATION Fieldbus

Zasilacz

DC 12 to 35 V (4 - 20 mA HART with/without pulse/frequency/switch output)

DC 12 to 30 V (4 - 20 mA HART, 4 - 20 mA)

DC 12 to 35 V (4 - 20 mA HART, pulse/frequency/switch output, 4 - 20 mA input)

DC 9 to 32 V (PROFIBUS PA, pulse/frequency/switch output)

Dopuszczenia do stosowania w strefach zagrożonych wybuchem

ATEX, IECEx, cCSAus, JPN, EAC

Product safety

CE, C-TICK, EAC

Functional safety

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

Ciecze**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, LR, BV

Pressure approvals and certificates

PED, CRN, AD 2000

Material certificates

3.1 material

NACE MR0175/MR0103, PMI (on request); welding test acc. to ISO 15614 - 1, similar to ASME IX (on request)

Para**Zasada pomiaru**

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	Dopuszczenia do stosowania w strefach zagrożonych wybuchem ATEX, IECEx, cCSAus, JPN, EAC
	Product safety CE, C-TICK, EAC
	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)
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