

# Proline Promass O 300 Przepływomierz masowy Coriolisa

Wytrzymały, wysokociśnieniowy przepływomierz masowy z innowacyjnym, wygodnym w obsłudze przetwornikiem.



## Korzyści:

- Maksymalne bezpieczeństwo – najwyższa odporność na korozję naprężeniową
- Mniej procesowych punktów pomiarowych – jednoczesny pomiar wielu parametrów (przepływu, gęstości, temperatury)
- Oszczędność miejsca – nie są wymagane proste odcinki rurociągu przed i za przepływomierzem
- Pełny dostęp do informacji o procesie oraz diagnostyki - liczne, swobodnie konfigurowalne kombinacje wejść/wyjść oraz protokołów komunikacyjnych
- Uniwersalność i funkcjonalność – swoboda w konfiguracji i funkcjonalności modułów We/Wy
- Wbudowane funkcje weryfikacji i diagnostyki – Technologia Heartbeat

Więcej informacji i aktualne ceny:

[www.pl.endress.com/803B](http://www.pl.endress.com/803B)

## Kluczowe parametry

- **Maksymalny błąd pomiaru** Mass flow (liquid):  $\pm 0.10\%$  (standard),  $0.05\%$  (option) Volume flow (liquid):  $\pm 0.10\%$  Mass flow (gas):  $\pm 0.35\%$  Density (liquid):  $\pm 0.0005\text{ g/cm}^3$
- **Zakres pomiarowy** 0 to 800 000 kg/h (0 to 29 400 lb/min)
- **Zakres temperatury medium**  $-40$  to  $+205\text{ }^\circ\text{C}$  ( $-40$  to  $+401\text{ }^\circ\text{F}$ )
- **Maks. ciśnienie procesu** PN 250, Class 1500
- **Materiały w kontakcie z medium** Measuring tube: 25Cr duplex (Super Duplex), 1.4410 (UNS S32750) Connection: 25Cr duplex (Super Duplex), 1.4410 (F53)

**Zastosowanie:** Promass O 300 to wysokociśnieniowy, odporny na korozję przepływomierz masowy, który spełnia wszystkie wymagania bezpieczeństwa stawiane w przemyśle naftowym, gazowym i na

platformach morskich. Kompaktowy przetwornik z dwukomorową obudową charakteryzuje wysoka elastyczność: wygodne opcje dostępu, zdalny wyświetlacz, dostęp do sieci WLAN i możliwość obsługi w strefie zagrożonej wybuchem. 3 konfigurowalne moduły We/Wy, protokoły komunikacyjne, przemysłowy Ethernet oraz WirelessHART umożliwiają łatwą integrację w systemie sterowania. Heartbeat Technology pozwala przeprowadzić diagnostykę i weryfikację bez przerywania pomiaru.

## Funkcje i specyfikacja

### Density/Concentration

#### Zasada pomiaru

Coriolis

#### Product headline

Robust high-pressure flowmeter with a compact, easily accessible transmitter. For premium accuracy at highest process pressures, fully suitable for offshore conditions.

#### Sensor features

Maximum safety – highest resistance to stress corrosion cracking. Fewer process measuring points – multivariable measurement (flow, density, temperature). Space-saving installation – no in/outlet run needs. Measuring tube in 25Cr Duplex, 1.4410 (UNS S32750). Process pressure up to PN 250 (Class 1500).

#### Transmitter features

Full access to process and diagnostic information – numerous, freely combinable I/Os and fieldbuses. Reduced complexity and variety – freely configurable I/O functionality. Integrated verification – Heartbeat Technology. Compact dual-compartment housing with up to 3 I/Os. Backlit display with touch control and WLAN access.

#### Średnica nominalna

DN 80 to 150 (3 to 6")

#### Materiały w kontakcie z medium

Measuring tube: 25Cr duplex (Super Duplex), 1.4410 (UNS S32750)  
Connection: 25Cr duplex (Super Duplex), 1.4410 (F53)

**Density/Concentration****Wielkości mierzone**

Mass flow, density, temperature, volume flow, corrected volume flow (API tables), reference density, concentration

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**Maksymalny błąd pomiaru**

Mass flow (liquid):  $\pm 0.10$  % (standard), 0.05 % (option)

Volume flow (liquid):  $\pm 0.10$  %

Mass flow (gas):  $\pm 0.35$  %

Density (liquid):  $\pm 0.0005$  g/cm<sup>3</sup>

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**Zakres pomiarowy**

0 to 800 000 kg/h (0 to 29 400 lb/min)

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**Maks. ciśnienie procesu**

PN 250, Class 1500

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**Zakres temperatury medium**

-40 to +205 °C (-40 to +401 °F)

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**Temperatura otoczenia**

Standard: -40 to +60 °C (-40 to +140 °F)

Option: -50 to +60 °C (-58 to +140 °F)

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**Materiał obudowy czujnika**

1.4404 (316L), highest corrosion resistance

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**Materiał obudowy przetwornika**

AlSi10Mg, coated; 1.4409 (CF3M) similar to 316L

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**Stopień ochrony**

IP66/67, type 4X enclosure

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**Wyświetlacz**

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

Configuration via local display and operating tools possible

Remote display available

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**Density/Concentration****Wyjścia**

3 outputs:

4-20 mA HART (active/passive)

4-20 mA WirelessHART

4-20 mA (active/passive)

Pulse/frequency/switch output (active/passive)

Double pulse output (active/passive)

Relay output

**Wejścia**

Status input

4-20 mA input

**Komunikacja cyfrowa**

HART, PROFIBUS DP, PROFIBUS PA, FOUNDATION Fieldbus, Modbus RS485, Profinet, Ethernet/IP, OPC-UA

**Zasilacz**

DC 24 V

AC 100 to 230 V

AC 100 to 230 V / DC 24 V (non-hazardous area)

**Dopuszczenia do stosowania w strefach zagrożonych wybuchem**

ATEX, IECEx, cCSAus, NEPSI, INMETRO, EAC

**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

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**Density/Concentration****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)

MI-005 Liquids other than water (Hydrocarbons)

MI-002, PTB

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**Marine approvals and certificates**

LR approval, DNV GL approval, ABS approval, BV approval

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**Pressure approvals and certificates**

PED, CRN, AD 2000

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**Material certificates**

3.1 material

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

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**Gaz****Zasada pomiaru**

Coriolis

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**Product headline**

Robust high-pressure flowmeter with a compact, easily accessible transmitter. For premium accuracy at highest process pressures, fully suitable for offshore conditions.

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**Sensor features**

Maximum safety – highest resistance to stress corrosion cracking. Fewer process measuring points – multivariable measurement (flow, density, temperature). Space-saving installation – no in/outlet run needs. Measuring tube in 25Cr Duplex, 1.4410 (UNS S32750). Process pressure up to PN 250 (Class 1500).

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## Gaz

**Transmitter features**

Full access to process and diagnostic information – numerous, freely combinable I/Os and fieldbuses. Reduced complexity and variety – freely configurable I/O functionality. Integrated verification – Heartbeat Technology. Compact dual-compartment housing with up to 3 I/Os. Backlit display with touch control and WLAN access.

**Średnica nominalna**

DN 80 to 150 (3 to 6")

**Materiały w kontakcie z medium**

Measuring tube: 25Cr duplex (Super Duplex), 1.4410 (UNS S32750)  
Connection: 25Cr duplex (Super Duplex), 1.4410 (F53)

**Wielkości mierzone**

Mass flow, density, temperature, volume flow, corrected volume flow (API tables), reference density, concentration

**Maksymalny błąd pomiaru**

Mass flow (liquid):  $\pm 0.10$  % (standard), 0.05 % (option)  
Volume flow (liquid):  $\pm 0.10$  %  
Mass flow (gas):  $\pm 0.35$  %  
Density (liquid):  $\pm 0.0005$  g/cm<sup>3</sup>

**Zakres pomiarowy**

0 to 800 000 kg/h (0 to 29 400 lb/min)

**Maks. ciśnienie procesu**

PN 250, Class 1500

**Zakres temperatury medium**

-40 to +205 °C (-40 to +401 °F)

**Temperatura otoczenia**

Standard: -40 to +60 °C (-40 to +140 °F)  
Option: -50 to +60 °C (-58 to +140 °F)

**Materiał obudowy czujnika**

1.4404 (316L), highest corrosion resistance

## Gaz

**Materiał obudowy przetwornika**

AlSi10Mg, coated; 1.4409 (CF3M) similar to 316L

**Stopień ochrony**

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**

3 outputs:

4-20 mA HART (active/passive)

4-20 mA WirelessHART

4-20 mA (active/passive)

Pulse/frequency/switch output (active/passive)

Double pulse output (active/passive)

Relay output

**Wejścia**

Status input

4-20 mA input

**Komunikacja cyfrowa**

HART, PROFIBUS DP, PROFIBUS PA, FOUNDATION Fieldbus, Modbus

RS485, Profinet, Ethernet/IP, OPC-UA

**Zasilacz**

DC 24 V

AC 100 to 230 V

AC 100 to 230 V / DC 24 V (non-hazardous area)

**Dopuszczenia do stosowania w strefach zagrożonych wybuchem**

ATEX, IECEx, cCSAus, NEPSI, INMETRO, EAC

**Product safety**

CE, C-tick, EAC marking

## Gaz

**Functional safety**

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

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**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)

MI-005 Liquids other than water (Hydrocarbons)

MI-002, PTB

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**Marine approvals and certificates**

LR approval, DNV GL approval, ABS approval, BV approval

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**Pressure approvals and certificates**

PED, CRN, AD 2000

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**Material certificates**

3.1 material

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

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## Ciecze

**Zasada pomiaru**

Coriolis

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**Product headline**

Robust high-pressure flowmeter with a compact, easily accessible transmitter. For premium accuracy at highest process pressures, fully suitable for offshore conditions.

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## Ciecze

### Sensor features

Maximum safety – highest resistance to stress corrosion cracking. Fewer process measuring points – multivariable measurement (flow, density, temperature). Space-saving installation – no in/outlet run needs. Measuring tube in 25Cr Duplex, 1.4410 (UNS S32750). Process pressure up to PN 250 (Class 1500).

### Transmitter features

Full access to process and diagnostic information – numerous, freely combinable I/Os and fieldbuses. Reduced complexity and variety – freely configurable I/O functionality. Integrated verification – Heartbeat Technology. Compact dual-compartment housing with up to 3 I/Os. Backlit display with touch control and WLAN access.

### Średnica nominalna

DN 80 to 150 (3 to 6")

### Materiały w kontakcie z medium

Measuring tube: 25Cr duplex (Super Duplex), 1.4410 (UNS S32750)  
Connection: 25Cr duplex (Super Duplex), 1.4410 (F53)

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Mass flow, density, temperature, volume flow, corrected volume flow (API tables), reference density, concentration

### Maksymalny błąd pomiaru

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Mass flow (gas):  $\pm 0.35$  %  
Density (liquid):  $\pm 0.0005$  g/cm<sup>3</sup>

### Zakres pomiarowy

0 to 800 000 kg/h (0 to 29 400 lb/min)

### Maks. ciśnienie procesu

PN 250, Class 1500

### Zakres temperatury medium

-40 to +205 °C (-40 to +401 °F)

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## Ciecze

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### Temperatura otoczenia

Standard: -40 to +60 °C (-40 to +140 °F)

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### Materiał obudowy czujnika

1.4404 (316L), highest corrosion resistance

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### Materiał obudowy przetwornika

AlSi10Mg, coated; 1.4409 (CF3M) similar to 316L

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### Stopień ochrony

IP66/67, type 4X enclosure

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### Wyświetlacz

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

Configuration via local display and operating tools possible

Remote display available

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### Wyjścia

3 outputs:

4-20 mA HART (active/passive)

4-20 mA WirelessHART

4-20 mA (active/passive)

Pulse/frequency/switch output (active/passive)

Double pulse output (active/passive)

Relay output

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### Wejścia

Status input

4-20 mA input

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### Komunikacja cyfrowa

HART, PROFIBUS DP, PROFIBUS PA, FOUNDATION Fieldbus, Modbus

RS485, Profinet, Ethernet/IP, OPC-UA

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**Ciecze****Zasilacz**

DC 24 V

AC 100 to 230 V

AC 100 to 230 V / DC 24 V (non-hazardous area)

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**Dopuszczenia do stosowania w strefach zagrożonych wybuchem**

ATEX, IECEx, cCSAus, NEPSI, INMETRO, EAC

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**Product safety**

CE, C-tick, EAC marking

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**Functional safety**

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

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**Metrological approvals and certificates**

Calibration performed on accredited calibration facilities (acc. to ISO/IEC 17025)

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MI-005 Liquids other than water (Hydrocarbons)

MI-002, PTB

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**Marine approvals and certificates**

LR approval, DNV GL approval, ABS approval, BV approval

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**Pressure approvals and certificates**

PED, CRN, AD 2000

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**Material certificates**

3.1 material

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

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**Para****Zasada pomiaru**

Coriolis

## Para

**Product headline**

Robust high-pressure flowmeter with a compact, easily accessible transmitter. For premium accuracy at highest process pressures, fully suitable for offshore conditions.

**Sensor features**

Maximum safety – highest resistance to stress corrosion cracking. Fewer process measuring points – multivariable measurement (flow, density, temperature). Space-saving installation – no in/outlet run needs. Measuring tube in 25Cr Duplex, 1.4410 (UNS S32750). Process pressure up to PN 250 (Class 1500).

**Transmitter features**

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**Średnica nominalna**

DN 80 to 150 (3 to 6")

**Materiały w kontakcie z medium**

Measuring tube: 25Cr duplex (Super Duplex), 1.4410 (UNS S32750)  
Connection: 25Cr duplex (Super Duplex), 1.4410 (F53)

**Wielkości mierzone**

Mass flow, density, temperature, volume flow, corrected volume flow (API tables), reference density, concentration

**Maksymalny błąd pomiaru**

Mass flow (liquid):  $\pm 0.10$  % (standard),  $0.05$  % (option)  
Volume flow (liquid):  $\pm 0.10$  %  
Mass flow (gas):  $\pm 0.35$  %  
Density (liquid):  $\pm 0.0005$  g/cm<sup>3</sup>

**Zakres pomiarowy**

0 to 800 000 kg/h (0 to 29 400 lb/min)

## Para

**Maks. ciśnienie procesu**

PN 250, Class 1500

**Zakres temperatury medium**

-40 to +205 °C (-40 to +401 °F)

**Temperatura otoczenia**

Standard: -40 to +60 °C (-40 to +140 °F)

Option: -50 to +60 °C (-58 to +140 °F)

**Materiał obudowy czujnika**

1.4404 (316L), highest corrosion resistance

**Materiał obudowy przetwornika**

AlSi10Mg, coated; 1.4409 (CF3M) similar to 316L

**Stopień ochrony**

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**

3 outputs:

4-20 mA HART (active/passive)

4-20 mA WirelessHART

4-20 mA (active/passive)

Pulse/frequency/switch output (active/passive)

Double pulse output (active/passive)

Relay output

**Wejścia**

Status input

4-20 mA input

Para	<b>Komunikacja cyfrowa</b> HART, PROFIBUS DP, PROFIBUS PA, FOUNDATION Fieldbus, Modbus RS485, Profinet, Ethernet/IP, OPC-UA
	<b>Zasilacz</b> DC 24 V AC 100 to 230 V AC 100 to 230 V / DC 24 V (non-hazardous area)
	<b>Dopuszczenia do stosowania w strefach zagrożonych wybuchem</b> ATEX, IECEx, cCSAus, NEPSI, INMETRO, EAC
	<b>Product safety</b> CE, C-tick, EAC marking
	<b>Functional safety</b> Functional safety according to IEC 61508, applicable in safety-relevant applications in accordance with IEC 61511
	<b>Metrological approvals and certificates</b> 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) MI-005 Liquids other than water (Hydrocarbons) MI-002, PTB
	<b>Marine approvals and certificates</b> LR approval, DNV GL approval, ABS approval, BV approval
	<b>Pressure approvals and certificates</b> PED, CRN, AD 2000
	<b>Material certificates</b> 3.1 material NACE MR0175/MR0103, PMI; welding test acc. to EN ISO, ASME, NORSOK

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