

## Proline Cubemass C 300 Masowy przepływomierz Coriolisa

Ultra kompaktowy czujnik do pomiaru minimalnych strumieni przepływu z innowacyjnym i przyjaznym dla użytkownika przetwornikiem.



Więcej informacji i aktualne ceny:

[www.pl.endress.com/8C3B](http://www.pl.endress.com/8C3B)

### Korzyści:

- Instalacja zajmująca mało miejsca - kompaktowa konstrukcja jednorurowa
- Mniej procesowych punktów pomiarowych – jednoczesny pomiar wielu parametrów (przepływu, gęstości, temperatury)
- Odpowiedni do skidów pomiarowych - lekkie czujniki
- 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

### Kluczowe parametry

- **Maksymalny błąd pomiaru** Mass flow (liquid):  $\pm 0.10$  % Volume flow (liquid):  $\pm 0.10$  % Mass flow (gas):  $\pm 0.50$  % Density (liquid):  $\pm 0.0005$  g/cm<sup>3</sup>
- **Zakres pomiarowy** 0 to 1000 kg/h (0 to 37 lb/min)
- **Zakres temperatury medium** -50 to +205 °C (-58 to +401 °F)
- **Maks. ciśnienie procesu** PN 40, Class 300, 10K, 400 bar (5800 psi)
- **Materiały w kontakcie z medium** Measuring tube: 1.4539 (904L) Connection: 1.4539 (904L); 1.4404 (316/316L)

**Zastosowanie:** Cubemass C to ultrakompaktowy czujnik do pomiaru przepływów o minimalnych wartościach. Nawet w zastosowaniach wysokociśnieniowych gwarantuje bezkompromisową dokładność

pomiaru. Kompaktowy przetwornik pomiarowy Cubemass C 300 oferuje wysoką elastyczność obsługi oraz integracji w systemach sterowania: wygodne opcje dostępu, zdalny wyświetlacz, bogate możliwości komunikacyjne. Heartbeat Technology gwarantuje wiarygodność pomiarów i weryfikację zgodności.

## Funkcje i specyfikacja

### Density/Concentration

#### Zasada pomiaru

Coriolis

#### Product headline

Compact sensor for smallest quantities with a compact, easily accessible transmitter. Measuring accurately smallest quantities of liquids and gases.

#### Sensor features

Space-saving installation – compact single-tube design. Fewer process measuring points – multivariable measurement (flow, density, temperature). Suitable for skids – lightweight sensor. Nominal diameter: DN 1 to 6 ( $\frac{1}{2}$ " to  $\frac{1}{4}$ "). Process pressure up to 400 bar (5800 psi).

#### 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 1 to 6 ( $\frac{1}{2}$ " to  $\frac{1}{4}$ ")

#### Materiały w kontakcie z medium

Measuring tube: 1.4539 (904L)

Connection: 1.4539 (904L); 1.4404 (316/316L)

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

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

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**Maksymalny błąd pomiaru**

Mass flow (liquid):  $\pm 0.10$  % Volume flow (liquid):  $\pm 0.10$  % Mass flow (gas):  $\pm 0.50$  % Density (liquid):  $\pm 0.0005$  g/cm<sup>3</sup>

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**Zakres pomiarowy**

0 to 1000 kg/h (0 to 37 lb/min)

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**Maks. ciśnienie procesu**

PN 40, Class 300, 10K, 400 bar (5800 psi)

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**Zakres temperatury medium**

-50 to +205 °C (-58 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**

1.4301 (304), corrosion resistant

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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

**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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**Density/Concentration****Pressure approvals and certificates**

CRN

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**Material certificates**

3.1 material

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**Gaz****Zasada pomiaru**

Coriolis

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**Średnica nominalna**DN 1 to 6 ( $\frac{1}{2}$ " to  $\frac{1}{4}$ ")

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**Materiały w kontakcie z medium**

Measuring tube: 1.4539 (904L)

Connection: 1.4539 (904L); 1.4404 (316/316L)

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**Wielkości mierzone**

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

## Gaz

**Maksymalny błąd pomiaru**Mass flow (liquid):  $\pm 0.10$  %Volume flow (liquid):  $\pm 0.10$  %Mass flow (gas, Tantalum only):  $\pm 0.50$  %Density (liquid):  $\pm 0.0005$  g/cm<sup>3</sup>**Zakres pomiarowy**

0 to 1000 kg/h (0 to 37 lb/min)

**Maks. ciśnienie procesu**

PN 40, Class 300, 10K, 400 bar (5800 psi)

**Zakres temperatury medium**Tantalum:  $-50$  to  $+150$  °C ( $-58$  to  $+302$  °F)Zirconium:  $-50$  to  $+205$  °C ( $-58$  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**

1.4301 (304), corrosion resistant

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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"

**Gaz****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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**Zasilacz**

DC 24 V

AC 100 to 230 V

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

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**Gaz****Pressure approvals and certificates**

PED, CRN

**Material certificates**

3.1 material

**Ciecze****Zasada pomiaru**

Coriolis

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**Średnica nominalna**DN 1 to 6 ( $\frac{1}{2}$ " to  $\frac{1}{4}$ ")**Materiały w kontakcie z medium**

Measuring tube: 1.4539 (904L)

Connection: 1.4539 (904L); 1.4404 (316/316L)

**Wielkości mierzone**

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



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**Ciecze****Maksymalny błąd pomiaru**Mass flow (liquid):  $\pm 0.10$  %Volume flow (liquid):  $\pm 0.10$  %Mass flow (gas):  $\pm 0.50$  %Density (liquid):  $\pm 0.0005$  g/cm<sup>3</sup>

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**Zakres pomiarowy**0 to 1000 kg/h (0 to 37 lb/min)

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**Maks. ciśnienie procesu**PN 40, Class 300, 10K, 400 bar (5800 psi)

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**Zakres temperatury medium**-50 to +205 °C (-58 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**1.4301 (304), corrosion resistant

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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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## Ciecze

### 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)

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### Wejścia

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Ciecze

**Pressure approvals and certificates**

CRN

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**Material certificates**

3.1 material

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