

# Proline Promass E 500

## Przepływomierz masowy Coriolisa

Ekonomiczny przepływomierz masowy z przetwornikiem w wersji rozdzielnej wyposażonym w nawet 4 moduły We/Wy



### Korzyści:

- Atrakcyjna cena – przyrząd wielofunkcyjny; doskonała alternatywa dla tradycyjnych przepływomierzy objętościowych
- Mniej procesowych punktów pomiarowych – jednoczesny pomiar wielu parametrów (przepływu, gęstości, temperatury)
- Minimalna długość montażowa – 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/8E5B](http://www.pl.endress.com/8E5B)

### Kluczowe parametry

- **Maksymalny błąd pomiaru** Mass flow (liquid):  $\pm 0.15\%$  (standard),  $\pm 0.10\%$  (option) Volume flow (liquid):  $\pm 0.15\%$  Mass flow (gas):  $\pm 0.50\%$  Density (liquid):  $\pm 0.0005\text{ g/cm}^3$
- **Zakres pomiarowy** 0 to 180 000 kg/h (0 to 6615 lb/min)
- **Zakres temperatury medium**  $-40$  to  $+150\text{ }^\circ\text{C}$  ( $-40$  to  $+302\text{ }^\circ\text{F}$ )
- **Maks. ciśnienie procesu** PN 100, Class 600, 63K
- **Materiały w kontakcie z medium** Measuring tube: 1.4539 (904L) Connection: 1.4404 (316/316L)

**Zastosowanie:** Promass E to solidny, atrakcyjny cenowo czujnik, który jest idealnym rozwiązaniem do pomiaru przepływu cieczy i gazów w szerokim zakresie zastosowań w wielu gałęziach przemysłu. Innowacyjny, zdalny przetwornik pomiarowy Promass E 500 oferuje swobodę w

zakresie montażu oraz podnosi bezpieczeństwo obsługi w trudnych warunkach otoczenia. Heartbeat Technology gwarantuje ciągłą oraz weryfikowalną zgodność i bezpieczeństwo procesu produkcji.

## Funkcje i specyfikacja

### Gęstość

#### Zasada pomiaru

Coriolis

#### Product Headline

The flowmeter with minimized total cost of ownership, as remote version with up to 4 I/Os. Accurate measurement of liquids and gases for a wide range of standard applications.

### Density/Concentration

#### Zasada pomiaru

Coriolis

#### Product headline

Flowmeter with minimized total cost of ownership, as remote version with up to 4 I/Os. Accurate measurement of liquids and gases for a wide range of standard applications.

#### Sensor features

Cost-effective – multi-purpose device; an alternative to conventional volumetric flowmeters. Fewer process measuring points – multivariable measurement (flow, density, temperature). Space-saving installation – no in/outlet run needs. Compact dual-tube sensor. Medium temperature up to +150 °C (+302 °F).

#### 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. Remote version with up to 4 I/Os. Backlit display with touch control and WLAN access.

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**Density/Concentration****Średnica nominalna**DN 8 to 80 ( $\frac{3}{8}$  to 3")

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**Materiały w kontakcie z medium**

Measuring tube: 1.4539 (904L)

Connection: 1.4404 (316/316L)

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**Wielkości mierzone**Mass flow, density, temperature, volume flow, corrected volume flow, reference density, concentration

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**Maksymalny błąd pomiaru**Mass flow (liquid):  $\pm 0.15$  % (standard),  $\pm 0.10$  % (option)Volume flow (liquid):  $\pm 0.15$  %Mass flow (gas):  $\pm 0.50$  %Density (liquid):  $\pm 0.0005$  g/cm<sup>3</sup>

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**Zakres pomiarowy**0 to 180 000 kg/h (0 to 6615 lb/min)

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**Maks. ciśnienie procesu**PN 100, Class 600, 63K

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**Zakres temperatury medium**-40 to +150 °C (-40 to +302 °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

Sensor connection housing (standard): AlSi10Mg, coated

Sensor connection housing (option): 1.4301 (304); 1.4404 (316L)

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**Materiał obudowy przetwornika**AlSi10Mg, coated; 1.4409 (CF3M) similar to 316L; Polycarbonat

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**Density/Concentration****Stopień ochrony**

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

Sensor remote version (option): IP69. Transmitter remote version:  
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

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**Wyjścia**

4 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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**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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## Density/Concentration

### **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)

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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

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### **Material certificates**

3.1 material

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### **Hygienic approvals and certificates**

3-A, EHEDG, cGMP

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## Ciecze

### **Zasada pomiaru**

Coriolis

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### **Product headline**

Flowmeter with minimized total cost of ownership, as remote version with up to 4 I/Os. Accurate measurement of liquids and gases for a wide range of standard applications.

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Cost-effective – multi-purpose device; an alternative to conventional volumetric flowmeters. Fewer process measuring points – multivariable measurement (flow, density, temperature). Space-saving installation – no in/outlet run needs. Compact dual-tube sensor. Medium temperature up to +150 °C (+302 °F).

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## Ciecze

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### Średnica nominalna

DN 8 to 80 ( $\frac{3}{8}$  to 3")

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### Materiały w kontakcie z medium

Measuring tube: 1.4539 (904L)

Connection: 1.4404 (316/316L)

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### Wielkości mierzone

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

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### Maksymalny błąd pomiaru

Mass flow (liquid):  $\pm 0.15$  % (standard),  $\pm 0.10$  % (option)

Volume flow (liquid):  $\pm 0.15$  %

Mass flow (gas):  $\pm 0.50$  %

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

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### Zakres pomiarowy

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### Maks. ciśnienie procesu

PN 100, Class 600, 63K

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Status input

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**Ciecze****Zasilacz**

DC 24 V

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**Dopuszczenia do stosowania w strefach zagrożonych wybuchem**

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**Product safety**

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**Functional safety**

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**Pressure approvals and certificates**

PED, CRN

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**Material certificates**

3.1 material

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**Hygienic approvals and certificates**

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**Para****Zasada pomiaru**

Coriolis



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