Proline Promass I 300
Masowy przepływomierz Coriolisa

Jednoczesny pomiar lepkości i przepływu z kompaktowym, wygodnym w obsłudze przetwornikiem

Więcej informacji i aktualne ceny:
www.pl.endress.com/8I3B

Korzyści:

- Oszczędność energii – niska strata ciśnienia wynikająca z konstrukcji rury o pełnym przekroju
- Mniej procesowych punktów pomiarowych – jednoczesny pomiar wielu parametrów (przepływu, gęstości, lepkości, 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 elastyczność – swoboda w konfiguracji i funkcjonalności modułów We/Wy
- Wbudowane funkcje weryfikacji i diagnostyki – Heartbeat Technology

Kluczowe parametry

- **Maksymalny błąd pomiaru** Mass flow (liquid): ±0.10 % Volume flow (liquid): ±0.10 % Mass flow (gas): ±0.50 % Density (liquid): ±0.0005 g/cm³
- **Zakres pomiarowy** 0 to 180 000 kg/h (0 to 6600 lb/min)
- **Zakres temperatury medium** −50 to +150 °C (−58 to +302 °F)
- **Maks. ciśnienie procesu** PN 100, Class 600, 63K
- **Materiały w kontakcie z medium** Measuring tube: Titanium grade 9 Connection: Titanium grade 2

Zastosowanie: Promass I 300 to przepływomierz masowy Coriolisa z jedną, prostą rurą pomiarową. Umożliwia pomiar przepływu z pomiarem lepkości i gęstości. Jego kompaktowy przetwornik z dwukomorową obudową charakteryzuje wysoka elastyczność: wygodny dostęp z jednej

strony, zdalny wyświetlacz, dostęp do sieci WLAN i możliwość obsługi w strefie zagrożonej wybuchem. Różnorodne możliwości połączenia, 3 konfigurowalne moduły We/Wy, protokoły komunikacyjne, przemysłowy Ethernet oraz WirelessHART umożliwiają łatwą integrację w systemie sterowania. Heartbeat Technology gwarantuje ciągłą oraz weryfikowalną zgodność i bezpieczeństwo procesu produkcji.

Funkcje i specyfikacja

Lepkość

Zasada pomiaru

Coriolis

Product headline

Combines in-line viscosity and flow measurement with a compact, easily accessible transmitter. Measuring liquids and gases in applications requiring low pressure loss and gentle fluid treatment.

Sensor features

Energy-saving – full bore design enables minimal pressure loss. Fewer process measuring points – multivariable measurement (flow, density, temperature). Space-saving installation – no in/outlet run needs. Straight, easy-to-clean single-tube system. TMB technology.

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 8 to 80 (⅜ to 3")

Materiały w kontakcie z medium

Measuring tube: Titanium grade 9
Connection: Titanium grade 2

Lepkość

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

Maksymalny błąd pomiaru
Mass flow (liquid): ±0.10 %
Volume flow (liquid): ±0.10 %
Mass flow (gas): ±0.50 %
Density (liquid): ±0.0005 g/cm³

Zakres pomiarowy
0 to 180 000 kg/h (0 to 6600 lb/min)

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

Zakres temperatury medium
−50 to +150 °C (−58 to +302 °F)

Temperatura otoczenia
Standard: −40 to +60 °C (−40 to +140 °F)
Option: −50 to +60 °C (−58 to +140 °F)

Materiał obudowy czujnika
1.4301/1.4307 (304L), corrosion resistant

Materiał obudowy przetwornika
AlSi10Mg, coated; 1.4409 (CF3M) similar to 316L; stainless steel for hygenic transmitter design

Stopień ochrony
" IP66/67, type 4X enclosure
IP69"

Wyświetlacz
4-line backlit display with touch control (operation from outside)
Configuration via local display and operating tools possible
Remote display available

Lepkość

Wyjścia

3 outputs:
4-20 mA HART (active/passive)
4-20 mA (active/passive)
Pulse/frequency/switch 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)

Pressure approvals and certificates

PED, CRN

Lepkość

Material certificates
3.1 material

Hygienic approvals and certificates
3-A, EHEDG, cGMP

Gęstość

Zasada pomiaru
Coriolis

Product Headline
Combines in-line viscosity and flow measurement with a compact, easily accessible transmitter. Measuring liquids and gases in applications requiring low pressure loss and gentle fluid treatment.

Density/Concentration

Zasada pomiaru
Coriolis

Product headline
Combines in-line viscosity and flow measurement with a compact, easily accessible transmitter. Measuring liquids and gases in applications requiring low pressure loss and gentle fluid treatment.

Sensor features
Energy-saving – full bore design enables minimal pressure loss. Fewer process measuring points – multivariable measurement (flow, density, temperature). Space-saving installation – no in/outlet run needs. Straight, easy-to-clean single-tube system. TMB technology.

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.

Density/Concentration

Średnica nominalna
DN 8 to 80 (⅜ to 3")

Materiały w kontakcie z medium
Measuring tube: Titanium grade 9
Connection: Titanium grade 2

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

Maksymalny błąd pomiaru
Mass flow (liquid): ±0.10 %
Volume flow (liquid): ±0.10 %
Mass flow (gas): ±0.50 %
Density (liquid): ±0.0005 g/cm³

Zakres pomiarowy
0 to 180 000 kg/h (0 to 6600 lb/min)

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

Zakres temperatury medium
−50 to +150 °C (−58 to +302 °F)

Temperatura otoczenia
Standard: −40 to +60 °C (−40 to +140 °F)
Option: −50 to +60 °C (−58 to +140 °F)

Materiał obudowy czujnika
1.4301/1.4307 (304L), corrosion resistant

Materiał obudowy przetwornika
AlSi10Mg, coated; 1.4409 (CF3M) similar to 316L; stainless steel for hygenic transmitter design

Density/Concentration

Stopień ochrony

IP66/67, type 4X enclosure
IP69

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 (active/passive)
Pulse/frequency/switch 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

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)

Pressure approvals and certificates

PED, CRN

Material certificates

3.1 material

Hygienic approvals and certificates

3-A, EHEDG, cGMP

Gaz

Zasada pomiaru

Coriolis

Product headline

Combines in-line viscosity and flow measurement with a compact, easily accessible transmitter. Measuring liquids and gases in applications requiring low pressure loss and gentle fluid treatment.

Sensor features

Energy-saving – full bore design enables minimal pressure loss. Fewer process measuring points – multivariable measurement (flow, density, temperature). Space-saving installation – no in/outlet run needs. Straight, easy-to-clean single-tube system. TMB technology.

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.

Gaz

Średnica nominalna
DN 8 to 80 (⅜ to 3")

Materiały w kontakcie z medium
Measuring tube: 1.4539 (904L)
Connection: 1.4404 (316/316L)

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

Maksymalny błąd pomiaru
Mass flow (liquid): ±0.15 % (standard), ±0.10 % (option)
Volume flow (liquid): ±0.15 %
Mass flow (gas): ±0.75 %
Density (liquid): ±0.0005 g/cm³

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

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

Zakres temperatury medium
–40 to +150 °C (–40 to +302 °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

Materiał obudowy przetwornika
AlSi10Mg, coated; 1.4409 (CF3M) similar to 316L; stainless steel for hygenic transmitter design

Gaz

Stopień ochrony
Standard: IP66/67, Type 4X enclosure
Option: IP69

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 (active/passive)
Pulse/frequency/switch 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

Gaz

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

Material certificates

3.1 material

Hygienic approvals and certificates

3-A, EHEDG, cGMP

Ciecze

Zasada pomiaru

Coriolis

Product headline

Combines in-line viscosity and flow measurement with a compact, easily accessible transmitter. Measuring liquids and gases in applications requiring low pressure loss and gentle fluid treatment.

Sensor features

Energy-saving – full bore design enables minimal pressure loss. Fewer process measuring points – multivariable measurement (flow, density, temperature). Space-saving installation – no in/outlet run needs. Straight, easy-to-clean single-tube system. TMB technology.

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.

Ciecze

Średnica nominalna
DN 8 to 80 (⅜ to 3")

Materiały w kontakcie z medium
Measuring tube: Titanium grade 9
Connection: Titanium grade 2

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

Maksymalny błąd pomiaru
Mass flow (liquid): ±0.10 %
Volume flow (liquid): ±0.10 %
Mass flow (gas): ±0.50 %
Density (liquid): ±0.0005 g/cm³

Zakres pomiarowy
0 to 180 000 kg/h (0 to 6600 lb/min)

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

Zakres temperatury medium
−50 to +150 °C (−58 to +302 °F)

Temperatura otoczenia
Standard: −40 to +60 °C (−40 to +140 °F)
Option: −50 to +60 °C (−58 to +140 °F)

Materiał obudowy czujnika
1.4301/1.4307 (304L), corrosion resistant

Materiał obudowy przetwornika
AlSi10Mg, coated; 1.4409 (CF3M) similar to 316L; stainless steel for hygenic transmitter design

Ciecze

Stopień ochrony
IP66/67, type 4X enclosure
IP69

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 (active/passive)
Pulse/frequency/switch 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

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)

Pressure approvals and certificates

PED, CRN

Material certificates

3.1 material

Hygienic approvals and certificates

3-A, EHEDG, cGMP

Więcej informacji **www.pl.endress.com/8I3B**