

Proline Promass P 300 Coriolis flowmeter

Specialist for life sciences with a compact,
easily accessible transmitter



More information and current pricing:

www.us.endress.com/8P3B

Benefits:

- Highest process quality – fully compliant to industry requirements
- Fewer process measuring points – multivariable measurement (flow, density, temperature)
- Space-saving installation – no in/outlet run needs
- 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

Specs at a glance

- **Max. measurement error** Mass flow (liquid): $\pm 0.10\%$ Volume flow (liquid): $\pm 0.10\%$ Mass flow (gas): $\pm 0.50\%$ Density (liquid): $\pm 0.0005 \text{ g/cm}^3$
- **Measuring range** 0 to 70 000 kg/h (0 to 2570 lb/min)
- **Medium temperature range** Standard: -50 to $+150$ °C (-58 to $+302$ °F) Option: -50 to $+205$ °C (-58 to $+401$ °F)
- **Max. process pressure** PN 40, Class 150, 20K
- **Wetted materials** Measuring tube: 1.4435 (316L) Connection: 1.4435 (316L); 1.4404 (316/316L)

Field of application: Promass P is the specialist for sterile processes in the life sciences industry. It is dedicated to biotech applications requiring highest compliance with guidelines and regulations. With its compact transmitter Promass P 300 offers high flexibility in terms of operation and system integration: access from one side, remote display and improved connectivity options. Heartbeat Technology ensures compliance and process safety at all times.

Features and specifications

Liquids

Measuring principle

Coriolis

Product headline

Specialist for life sciences with a compact, easily accessible transmitter. Dedicated to applications under sterile conditions in the life sciences industry.

Sensor features

Highest process quality – fully compliant to industry requirements. Fewer process measuring points – multivariable measurement (flow, density, temperature). Space - saving installation – no in-/outlet run needs. ASME BPE, 3 - A and EHEDG conform & low delta ferrite. Electropolished measuring tube in 1.4435 (316L). Fast recovery from CIP/SIP.

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 hygienic dual-compartment housing with IP69 and up to 3 I/Os. Backlit display with touch control and WLAN access. Remote display available.

Nominal diameter range

DN 8 to 50 ($\frac{3}{8}$ to 2")

Wetted materials

Measuring tube: 1.4435 (316L)

Connection: 1.4435 (316L); 1.4404 (316/316L)

Measured variables

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

Liquids

Max. measurement error

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

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

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

Density (liquid): $\pm 0.0005\text{ g/cm}^3$

Measuring range

0 to 70 000 kg/h (0 to 2570 lb/min)

Max. process pressure

PN 40, Class 150, 20K

Medium temperature range

Standard: -50 to $+150\text{ }^\circ\text{C}$ (-58 to $+302\text{ }^\circ\text{F}$)

Option: -50 to $+205\text{ }^\circ\text{C}$ (-58 to $+401\text{ }^\circ\text{F}$)

Ambient temperature range

Standard: -40 to $+60\text{ }^\circ\text{C}$ (-40 to $+140\text{ }^\circ\text{F}$)

Option: -50 to $+60\text{ }^\circ\text{C}$ (-58 to $+140\text{ }^\circ\text{F}$)

Sensor housing material

1.4301 (304), corrosion resistant

Transmitter housing material

AlSi10Mg, coated; stainless steel for hygienic transmitter design

Degree of protection

IP66/67, type 4X enclosure

IP69

Display/Operation

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

Configuration via local display and operating tools possible

Remote display available"

Liquids

Outputs

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

Inputs

Status input

4-20 mA input

Digital communication

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

Power supply

DC 24 V

AC 100 to 230 V

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

Hazardous area approvals

ATEX, IECEx, cCSAus, NEPSI, INMETRO, EAC, UK Ex

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)

Liquids

Pressure approvals and certificates

PED, CRN

Material certificates

3.1 material

Hygienic approvals and certificates

3-A, EHEDG, ASME BPE, ISPE, cGMP

Gas

Measuring principle

Coriolis

Product headline

Specialist for life sciences with a compact, easily accessible transmitter. Dedicated to applications under sterile conditions in the life sciences industry.

Hygienic approvals and certificates

cGMP

Density

Measuring principle

Coriolis

Product Headline

Specialist for life sciences with a compact, easily accessible transmitter. Dedicated to applications under sterile conditions in the life sciences industry.

Sensor features

Highest process quality – fully compliant to industry requirements. Fewer process measuring points – multivariable measurement (flow, density, temperature). Space - saving installation – no in-/outlet run needs. ASME BPE, 3 - A and EHEDG conform & low delta ferrite. Electropolished measuring tube in 1.4435 (316L). Fast recovery from CIP/SIP.

Density

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 hygienic dual-compartment housing with IP69 and up to 3 I/Os. Backlit display with touch control and WLAN access. Remote display available.

Density/Concentration

Measuring principle

Coriolis

Product headline

Specialist for life sciences with a compact, easily accessible transmitter. Dedicated to applications under sterile conditions in the life sciences industry.

Sensor features

Highest process quality – fully compliant to industry requirements. Fewer process measuring points – multivariable measurement (flow, density, temperature). Space - saving installation – no in-/outlet run needs.

ASME BPE, 3 - A and EHEDG conform & low delta ferrite.

Electropolished measuring tube in 1.4435 (316L). Fast recovery from CIP/SIP.

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 hygienic dual-compartment housing with IP69 and up to 3 I/Os. Backlit display with touch control and WLAN access. Remote display available.

Nominal diameter range

DN 8 to 50 ($\frac{3}{8}$ to 2")

Density/Concentration**Wetted materials**

Measuring tube: 1.4435 (316L)

Connection: 1.4435 (316L); 1.4404 (316/316L)

Measured variablesMass flow, density, temperature, volume flow, corrected volume flow, reference density, concentration

Max. measurement errorMass flow (liquid): $\pm 0.10\%$ Volume flow (liquid): $\pm 0.10\%$ Mass flow (gas): $\pm 0.50\%$ Density (liquid): $\pm 0.0005\text{ g/cm}^3$

Measuring range0 to 70 000 kg/h (0 to 2570 lb/min)

Max. process pressurePN 40, Class 150, 20K

Medium temperature rangeStandard: $-50\text{ to }+150\text{ }^\circ\text{C}$ ($-58\text{ to }+302\text{ }^\circ\text{F}$)Option: $-50\text{ to }+205\text{ }^\circ\text{C}$ ($-58\text{ to }+401\text{ }^\circ\text{F}$)

Ambient temperature rangeStandard: $-40\text{ to }+60\text{ }^\circ\text{C}$ ($-40\text{ to }+140\text{ }^\circ\text{F}$)Option: $-50\text{ to }+60\text{ }^\circ\text{C}$ ($-58\text{ to }+140\text{ }^\circ\text{F}$)

Sensor housing material1.4301 (304), corrosion resistant

Transmitter housing materialAlSi10Mg, coated; stainless steel for hygienic transmitter design

Degree of protection

IP66/67, type 4X enclosure

IP69

Density/Concentration**Display/Operation**

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

Outputs

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

Inputs

Status input
4-20 mA input

Digital communication

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

Power supply

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

Hazardous area approvals

ATEX, IECEx, cCSAus, NEPSI, INMETRO, EAC, UK Ex

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, ASME BPE, ISPE, cGMP

More information www.us.endress.com/8P3B