

Proline Promag P 300 electromagnetic flowmeter

High-temperature flowmeter for process applications with a compact, easily accessible transmitter



More information and current pricing:

www.endress.com/5P3B

Benefits:

- Diverse applications – wide variety of wetted materials
- Accurate measurement independent of disturbed flow profiles after obstacles in the pipe thanks to 0 x DN full-bore option
- Energy-saving flow measurement – no pressure loss due to cross-section constriction
- Maintenance-free – no moving parts
- Full access to process and diagnostic information – numerous, freely combinable I/Os and Ethernet
- Reduced complexity and variety – freely configurable I/O functionality
- Integrated verification – Heartbeat Technology

Specs at a glance

- **Max. measurement error** Volume flow (standard): $\pm 0.5\%$ o.r. ± 1 mm/s (0.04 in/s) Volume flow (option): $\pm 0.2\%$ o.r. ± 2 mm/s (0.08 in/s), Flat Spec
- **Measuring range** 4 dm³/min to 9600 m³/h (1 gal/min to 44 000 gal/min)
- **Medium temperature range** Liner material PFA: -20 to +150 °C (-4 to +302 °F) Liner material PFA high-temperature: -20 to +180 °C (-4 to +356 °F) Liner material PTFE: -40 to +130 °C (-40 to +266 °F)
- **Max. process pressure** PN 40, Class 300, 20K
- **Wetted materials** Liner: PFA; PTFE Electrodes: 1.4435 (F316L); Alloy C22, 2.4602 (UNS N06022); Tantalum; Platinum; Titanium

Field of application: Promag P is dedicated to chemical and process applications with corrosive liquids and highest medium temperatures. With its compact transmitter Promag P 300 offers a high flexibility in terms of operation and system integration: access from one side, remote display and improved connectivity options. Heartbeat Technology enables compliance and process safety at all times.

Features and specifications

Liquids

Measuring principle

Electromagnetic

Product headline

High-temperature flowmeter for process applications with a compact, easily accessible transmitter.

Dedicated to chemical and process applications with corrosive liquids and high medium temperatures.

Sensor features

Diverse applications – wide variety of wetted materials. Energy-saving flow measurement – no pressure loss due to cross section constriction.

Maintenance-free – no moving parts.

Nominal diameter: max. DN 600 (24"). All common Ex approvals.

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.

Liner made of PTFE or PFA. Compact dual-compartment housing with up to 3 I/Os. Backlit display with touch control and WLAN access. Remote display available.

Nominal diameter range

DN 15 to 600 (½ to 24")

Liquids

Wetted materials

Liner: PFA; PTFE

Electrodes: 1.4435 (F316L); Alloy C22, 2.4602 (UNS N06022);
Tantalum; Platinum; Titanium

Measured variables

Volume flow, conductivity, mass flow

Max. measurement error

Volume flow (standard): $\pm 0.5\%$ o.r. ± 1 mm/s (0.04 in/s)

Volume flow (option): $\pm 0.2\%$ o.r. ± 2 mm/s (0.08 in/s), Flat Spec

Measuring range

4 dm³/min to 9600 m³/h (1 gal/min to 44 000 gal/min)

Max. process pressure

PN 40, Class 300, 20K

Medium temperature range

Liner material PFA: -20 to $+150$ °C (-4 to $+302$ °F)

Liner material PFA high-temperature: -20 to $+180$ °C (-4 to $+356$ °F)

Liner material PTFE: -40 to $+130$ °C (-40 to $+266$ °F)

Ambient temperature range

Flange material carbon steel: -10 to $+60$ °C ($+14$ to $+140$ °F)

Flange material stainless steel: -40 to $+60$ °C (-40 to $+140$ °F)

Sensor housing material

DN 15 to 300 ($\frac{1}{2}$ to 12"): AlSi10Mg, coated

DN 350 to 600 (14 to 24"): Carbon steel with protective varnish

Transmitter housing material

AlSi10Mg, coated; 1.4409 (CF3M) similar to 316L; stainless steel for
hygienic transmitter design

Degree of protection

Standard: IP66/67, Type 4X enclosure

Liquids

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, PROFINET over Ethernet-APL, 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, INMETRO, NEPSI, EAC; JPN, UK Ex, KC

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

Liquids

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)

Marine approvals and certificates

LR approval, DNV approval, ABS approval, BV approval

Pressure approvals and certificates

PED, CRN

Material certificates

3.1 material

Hygienic approvals and certificates

ACS, NSF 61, WRAS

More information www.endress.com/5P3B