

Proline Promag P 500 electromagnetic flowmeter

High-temperature flowmeter for process applications as remote version with up to 4 I/Os



Benefits:

- Diverse applications – wide variety of wetted materials
- 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 (316L); Alloy C22, 2.4602 (UNS N06022); Tantalum; Platinum; Titanium; Duplex 1.4462 (UNS S31803)

Field of application: Promag P is dedicated to chemical and process applications with corrosive liquids and highest medium temperatures. With its innovative remote transmitter Promag P 500 maximizes

installation flexibility and operational safety in demanding environments. 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 as remote version with up to 4 I/Os.

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. Liner made of PTFE or PFA.

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. Standard cable between sensor and transmitter.

Nominal diameter range

DN 15 to 600 (½ to 24")

Wetted materials

Liner: PFA; PTFE

Electrodes: 1.4435 (316L); Alloy C22, 2.4602 (UNS N06022);

Tantalum; Platinum;

Titanium; Duplex 1.4462 (UNS S31803)

Liquids

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

Sensor connection housing (standard): AlSi10Mg, coated

Sensor connection housing (option): 1.4409 (CF3M) similar to 316L

Transmitter housing material

AlSi10Mg, coated; 1.4409 (CF3M) similar to 316L; Polycarbonat

Degree of protection

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

Transmitter remote version: IP66/67, Type 4X enclosure

Display/Operation

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

Configuration via local display and operating tools possible

Liquids

Outputs

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

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

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

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



info@lenntech.com Tel. +31-152-610-900

www.lenntech.com Fax. +31-152-616-289