

Proline Promag H 500 electromagnetic flowmeter

Specialist for hygienic applications, as remote version with up to 4 I/Os



Benefits:

- Multivariable measurement for flow, temperature and conductivity
- Flexible installation concept – numerous hygienic process connections
- 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)
- **Measuring range** 0.06 dm³/min to 600 m³/h (0.015 gal/min to 2 650 gal/min)
- **Medium temperature range** -20 to +150 °C (-4 to +302 °F)
- **Max. process pressure** PN 40, Class 150, 20K
- **Wetted materials** Liner: PFA Electrodes: 1.4435 (316L); Alloy C22, 2.4602 (UNS N06022); Tantalum; Platinum Process Connections: stainless steel, 1.4404 (F316L); PVDF; PVC adhesive sleeve Seals: O-ring seal (EPDM, FKM, Kalrez), aseptic molded seal (EPDM, FKM, silicone) Grounding Rings: stainless steel, 1.4435 (316L); Alloy C22, 2.4602 (UNS N06022); tantalum

Field of application: Promag H is the preferred sensor for hygienic applications with highest requirements in the food and beverage and life sciences industries. With its innovative remote transmitter Promag H

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

Specialist for hygienic applications, as remote version with up to 4 I/Os. Dedicated to demanding applications in the food and beverage as well as in life sciences industries.

Sensor features

Flexible installation concept – numerous hygienic process connections. Energy-saving flow measurement – no pressure loss due to cross section constriction. Maintenance-free – no moving parts. Liner made of PFA. Sensor housing made of stainless steel (3-A, EHEDG). Wetted materials CIP, SIP cleanable.

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.

Nominal diameter range

DN 2 to 150 ($\frac{1}{12}$ to 6")

Liquids

Wetted materials

Liner: PFA

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

Tantalum; Platinum

Process Connections: stainless steel, 1.4404 (F316L); PVDF; PVC adhesive sleeve

Seals: O-ring seal (EPDM, FKM, Kalrez), aseptic molded seal (EPDM, FKM, silicone)

Grounding Rings: stainless steel, 1.4435 (316L); Alloy C22, 2.4602 (UNS N06022); tantalum

Measured variables

Volume flow, temperature, conductivity, mass flow, corrected volume flow, corrected conductivity

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)

Measuring range

0.06 dm³/min to 600 m³/h (0.015 gal/min to 2 650 gal/min)

Max. process pressure

PN 40, Class 150, 20K

Medium temperature range

-20 to +150 °C (-4 to +302 °F)

Ambient temperature range

-40 to +60 °C (-40 to +140 °F)

Sensor housing material

1.4301 (304), corrosion resistant

Sensor connection housing (standard): AlSi10Mg, coated

Sensor connection housing (option): 1.4301 (304); 1.4409 (CF3M), similar to 316L

Transmitter housing material

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

Liquids

Degree of protection

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

Sensor remote version (option): IP69. 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

Outputs

4 outputs:

4-20 mA HART (active/passive)

4-20 mA (active/passive)

Pulse/frequency/switch 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

EHEDG, 3-A, liner and seals acc. to FDA, cGMP



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