

# Proline Promag H 500 electromagnetic flowmeter

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



More information and current pricing:

[www.be.endress.com/5H5B](http://www.be.endress.com/5H5B)

## 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 fieldbuses
- 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.  $\pm 1$  mm/s (0.04 in/s) Volume flow (option)  $\pm 0.2\%$  o.r.  $\pm 2$  mm/s (0.08 in/s)
- **Measuring range** 0.06 dm<sup>3</sup>/min to 600 m<sup>3</sup>/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 ensures 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 (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.  $\pm 1$  mm/s (0.04 in/s)

Volume flow (option)  $\pm 0.2\%$  o.r.  $\pm 2$  mm/s (0.08 in/s)

### Measuring range

0.06 dm<sup>3</sup>/min to 600 m<sup>3</sup>/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

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## Liquids

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### 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

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### Display/Operation

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

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### Outputs

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

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### Inputs

Status input  
4-20 mA input

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### Digital communication

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

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### Power supply

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

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### Hazardous area approvals

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

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### Product safety

CE, C-tick, EAC marking

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### Functional safety

Functional safety according to IEC 61508, applicable in safety-relevant  
applications in accordance with IEC 61511

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## 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)

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### **Marine approvals and certificates**

LR approval, DNV GL approval, ABS approval, BV approval

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### **Pressure approvals and certificates**

PED, CRN

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### **Material certificates**

3.1 material

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### **Hygienic approvals and certificates**

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

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