

# Proline Promag W 500

## Electromagnetic flowmeter

Specialist for demanding water and wastewater applications as remote version with up to 4 I/Os



### Benefits:

- Reliable measurement at constant accuracy with 0 x DN inlet run and no pressure loss
- Flexible engineering – sensor with welded or lap-joint process connections
- Application fitness – EN ISO 12944 corrosion protection for underground or underwater installation
- Improved plant availability – sensor compliant with industry-specific requirements
- 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

More information and current pricing:

[www.id.endress.com/5W5B](http://www.id.endress.com/5W5B)

### 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), Flat Spec
- **Measuring range** 9 dm<sup>3</sup>/min to 162 000 m<sup>3</sup>/h (2.5 gal/min to 100 000 gal/min)
- **Medium temperature range** Liner material hard rubber: 0 to +80 °C (+32 to +176 °F) Liner material polyurethane: -20 to +50 °C (-4 to +122 °F)
- **Max. process pressure** PN 40, Class 300, 20K
- **Wetted materials** Liner material hard rubber: 0 to +80 °C (+32 to +176 °F) Liner material polyurethane: -20 to +50 °C (-4 to +122 °F)

°F) Liner material PTFE: –20 to +90 °C (–4 to +194 °F) Electrodes:  
1.4435 (316L); Alloy C22, 2.4602 (UNS N06022); Tantalum

**Field of application:** The premium device for water and wastewater measurement Promag W 500 was designed for reliable use in hazardous areas and under harsh conditions. Its innovative remote transmitter maximizes installation flexibility and operational safety in demanding environments. Heartbeat Technology ensures measurement reliability and compliant verification.

## Features and specifications

### Liquids

#### Measuring principle

Electromagnetic

#### Product headline

Specialist for demanding water and wastewater applications as remote version with up to 4 I/Os.

Reliable measurement at constant accuracy with 0 x DN inlet run and no pressure loss.

Dedicated to the measurement of industrial or municipal water and wastewater .

#### Sensor features

Flexible engineering – sensor with fixed or lap-joint process connections.  
Application fitness – EN ISO 12944 corrosion protection for underground or underwater installation. Improved plant availability – sensor compliant with industry-specific requirements.

International drinking water approvals. Degree of protection IP68 (Type 6P enclosure).

## Liquids

### 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.

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### Nominal diameter range

DN 25 to 2400 (1 to 90")

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### Wetted materials

Liner material hard rubber: 0 to +80 °C (+32 to +176 °F)

Liner material polyurethane: –20 to +50 °C (–4 to +122 °F)

Liner material PTFE: –20 to +90 °C (–4 to +194 °F)

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

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### Measured variables

Volume flow, conductivity, mass flow

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### Max. measurement error

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

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

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### Measuring range

9 dm<sup>3</sup>/min to 162 000 m<sup>3</sup>/h (2.5 gal/min to 100 000 gal/min)

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### Max. process pressure

PN 40, Class 300, 20K

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### Medium temperature range

Liner material hard rubber: 0 to +80 °C (+32 to +176 °F)

Liner material polyurethane: –20 to +50 °C (–4 to +122 °F)

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### 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)

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## Liquids

### Sensor housing material

DN 25 to 300 (1 to 12"): AlSi10Mg, coated

DN 25 to 2400 (1 to 90"): Carbon steel with protective varnish

Sensor connection housing (standard): AlSi10Mg, coated

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

### Transmitter housing material

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

### Degree of protection

Compact version: IP66/67, type 4X enclosure

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

Sensor remote version (option): IP68, type 6P enclosure, with protective varnish according to EN ISO 12944 C5-M/Im1/Im2/Im3

### 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)

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

## Liquids

### 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, 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), NAMUR

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 GL approval, ABS approval, BV approval

### Pressure approvals and certificates

CRN

### Material certificates

3.1 material

### Hygienic approvals and certificates

ACS, KTW/W270, NSF 61, WRAS BS 6920

More information [www.id.endress.com/5W5B](http://www.id.endress.com/5W5B)