Proline Promag W 500 electromagnetic flowmeter

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

More information and current pricing:
www.apsc.endress.com/5W5B

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

Specs at a glance

- **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
- **Measuring range** 9 dm³/min to 162 000 m³/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) 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.

Nominal diameter range

DN 25 to 2400 (1 to 90")

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

Measured variables

Volume flow, conductivity, mass flow

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

Measuring range

9 dm^3/min to 162 000 m^3/h (2.5 gal/min to 100 000 gal/min)

Max. process pressure

PN 40, Class 300, 20K

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)

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)

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.apsc.endress.com/5W5B**