Proline Promag P 300  
Electromagnetic Flowmeter  

High-temperature flowmeter for process applications with a compact, easily accessible transmitter

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): ±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** 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 (F316L); Alloy C22, 2.4602 (UNS N06022); Tantalum; Platinum; Titanium

Field of application: Promag P is dedicated to chemical and process applications with corrosive liquids and highest medium temperatures. With its compact transmitter Promag P 300 offers a high flexibility in terms of operation and system integration: access from one side, remote...
display and improved connectivity options. Heartbeat Technology ensures compliance and process safety at all times.

**Features and specifications**

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<th>Liquids</th>
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| **Measuring principle**  
Electromagnetic |
| **Product headline**  
High-temperature flowmeter for process applications with a compact, easily accessible transmitter.  
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. |
| **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.  
Liner made of PTFE or PFA. Compact dual-compartment housing with up to 3 I/Os. Backlit display with touch control and WLAN access. Remote display available. |
| **Nominal diameter range**  
DN 15 to 600 (½ to 24") |
| **Wetted materials**  
Liner: PFA; PTFE  
Electrodes: 1.4435 (F316L); Alloy C22, 2.4602 (UNS N06022); Tantalum; Platinum; Titanium |
**Proline Promag P 300 / 5P3B**

**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**
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 (½ to 12”): AlSi10Mg, coated
DN 350 to 600 (14 to 24”): Carbon steel with protective varnish

**Transmitter housing material**
AlSi10Mg, coated; 1.4409 (CF3M) similar to 316L; stainless steel for hygenic transmitter design

**Degree of protection**
Standard: 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
Remote display available
**Liquids**

**Outputs**
- 3 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, 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)
- 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

More information [www.us.endress.com/5P3B](http://www.us.endress.com/5P3B)