# 전자 유량계
# Proline Promag P 300

## 컴팩트하고 접근이 용이한 트랜스미터가 장착된 프로세스 어플리케이션용 고온 유량계


추가 정보 및 현재 가격:
www.kr.endress.com/5P3B

**장점:**

- 다양한 용도 – 다양한 접액부 재질
- 에너지 절약형 유량 측정 – 교차부 수축으로 압력 손실이 없음
- 유지보수 불필요 – 구동부가 없음
- 완전한 프로세스 및 진단 정보 액세스 – I/O와 Fieldbus를 자유롭게 결합
- 복잡성 및 변동성 최소화 – I/O 기능의 자유로운 구성
- 통합/자가 검증 – 하트비트(Heartbeat) 기술

### 사양 정보

- **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)
- **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

**적용 분야:** Promag P는 부식성 액체와 고온 유체를 사용하는 화학 및 프로세스 어플리케이션을 위한 유량계입니다. 컴팩트한 트랜스미터가 장착된 Promag P 300은 한쪽 액세스, 원격 디스플레이, 향상된 연결 옵션 등 작동과 시스템 통합 측면에서 매우 유연합니다. 또한 하트비트(Heartbeat) 기술을 통해 지속적으로 규정 준수와 프로세스 안전을 보장합니다.

## 특징 및 사양

## Liquids

**측정 원리**

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

**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)

## Liquids

**Measuring range**
4 $dm^3$/min to 9600 $m^3$/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

**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

## Liquids

**Inputs**
Status input
4-20 mA input

**Digital communication**
HART, PROFIBUS DP, PROFIBUS PA, FOUNDATION Fieldbus, Modbus RS485, Profinet, 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)

**Marine approvals and certificates**
LR approval, DNV GL approval, ABS approval, BV approval

**Pressure approvals and certificates**
PED, CRN

**Material certificates**
3.1 material

Liquids

**Hygienic approvals and certificates**
ACS, NSF 61, WRAS

추가 정보 www.kr.endress.com/5P3B

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