

Proline Promass P 500 科里奥利质量流量计

生命科学行业专用流量计，搭配最多带4路输入/输出的分体式变送器



F L E X

优势:

- 最高过程质量：完全满足行业要求
- 较少过程测量点：多参数测量(流量、密度、温度)
- 节省安装空间：无前/后直管段长度要求
- 完整查看过程信息和诊断信息：提供多种用户自定义输入/输出组合方式和现场总线
- 降低复杂性和多样性：用户自定义输入/输出功能
- 自带验证功能：内置Heartbeat Technology (心跳技术)

产品规格参数

- **最大测量误差** Mass flow (liquid): $\pm 0.10\%$ Volume flow (liquid): $\pm 0.10\%$ Mass flow (gas): $\pm 0.50\%$ Density (liquid): $\pm 0.0005 \text{ g/cm}^3$
- **测量范围** 0 to 70 000 kg/h (0 to 2570 lb/min)
- **介质温度范围** Standard: -50 to $+150 \text{ }^\circ\text{C}$ (-58 to $+302 \text{ }^\circ\text{F}$) Option: -50 to $+205 \text{ }^\circ\text{C}$ (-58 to $+401 \text{ }^\circ\text{F}$)
- **最大过程压力** PN 40, Class 150, 20K
- **接液部件材质** Measuring tube: 1.4435 (316L) Connection: 1.4435 (316L); 1.4404 (316/316L)

详细信息和最新价格参见:

www.endress.com.cn/8P5B

应用领域: Promass P是生命科学领域的无菌过程专家，专门针对要求最高合规性的生物技术应用。Promass P 500配备了创新型分体式变送器，最大限度地提高了苛刻环境中的安装灵活性和操作安全性。心跳技术 (Heartbeat Technology) 始终确保合规性与过程安全。

特征和规格

Density/Concentration

测量原理

科里奥利质量流量

产品标题

Specialist for life sciences, as remote version with up to 4 I/Os.
Dedicated to applications under sterile conditions in the life sciences industry.

传感器特点

Highest process quality – fully compliant to industry requirements. Fewer process measuring points – multivariable measurement (flow, density, temperature). Space - saving installation – no in-/outlet run needs. ASME BPE, 3 - A and EHEDG conform & low delta ferrite. Electropolished measuring tube in 1.4435 (316L).

变送器特点

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.
Fast recovery from CIP/SIP. Remote version with up to 4 I/Os; hygienic sensor connection housing with IP69. Backlit display with touch control and WLAN access.

公称口径范围

DN 8 to 50 ($\frac{3}{8}$ to 2")

接液部件材质

Measuring tube: 1.4435 (316L)
Connection: 1.4435 (316L); 1.4404 (316/316L)

测量变量

Mass flow, density, temperature, volume flow, corrected volume flow, reference density, concentration

Density/Concentration**最大测量误差**Mass flow (liquid): $\pm 0.10\%$ Volume flow (liquid): $\pm 0.10\%$ Mass flow (gas): $\pm 0.50\%$ Density (liquid): $\pm 0.0005\text{ g/cm}^3$

测量范围0 to 70 000 kg/h (0 to 2570 lb/min)

最大过程压力PN 40, Class 150, 20K

介质温度范围Standard: -50 to $+150\text{ }^\circ\text{C}$ (-58 to $+302\text{ }^\circ\text{F}$)Option: -50 to $+205\text{ }^\circ\text{C}$ (-58 to $+401\text{ }^\circ\text{F}$)

环境温度范围Standard: -40 to $+60\text{ }^\circ\text{C}$ (-40 to $+140\text{ }^\circ\text{F}$)Option: -50 to $+60\text{ }^\circ\text{C}$ (-58 to $+140\text{ }^\circ\text{F}$)

传感器外壳材质

1.4301 (304), corrosion resistant

Sensor connection housing (standard): AlSi10Mg, coated

Sensor connection housing (option): 1.4301 (304); 1.4404 (316L)

变送器外壳材质AlSi10Mg, coated; 1.4409 (CF3M) similar to 316L; Polycarbonat

防护等级

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

Sensor remote version (option): IP69. Transmitter remote version:

IP66/67, Type 4X enclosure

显示/操作

4-line backlit display with touch control (operation from outside)

Configuration via local display and operating tools possible

Density/Concentration**输出**

4 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

输入

Status input

4-20 mA input

数字通信

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

电源

DC 24 V

AC 100 to 230 V

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

防爆认证

ATEX, IECEx, cCSAus, NEPSI, INMETRO, EAC

产品安全性

CE, C-tick, EAC marking

功能安全性

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

计量认证和证书

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)

Density/Concentration**压力认证和证书**

PED, CRN

材料证书

3.1 material

卫生型认证和证书

3-A, EHEDG, ASME BPE, ISPE, cGMP

液体**测量原理**

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公称口径范围DN 8...50 ($\frac{3}{8}$...2")

液体

接液部件材质

测量管：1.4435 (316L)

连接部件：1.4435 (316L)、1.4404 (316/316L)

测量变量

质量流量、密度、温度、体积流量、校正体积流量、参考密度、浓度

最大测量误差

质量流量（液体）：±0.10 %

体积流量（液体）：±0.10 %

质量流量（气体）：±0.50 %

密度（液体）：±0.0005 g/cm³**测量范围**

0...70 000 kg/h (0...2570 lb/min)

最大过程压力

PN 40, Cl. 150, 20K

介质温度范围

标准：-50...+150 °C (-58...+302 °F)

可选：-50...+205 °C (-58...+401 °F)

环境温度范围

标准：-40...+60 °C (-40...+140 °F)

可选：-50...+60 °C (-58...+140 °F)

传感器外壳材质

1.4301 (304), 耐腐蚀

传感器接线盒（标准）：铝合金AlSi10Mg涂层

传感器接线盒（可选）：1.4301 (304)、1.4404 (316L)

变送器外壳材质

铝合金AlSi10Mg涂层；1.4409 (CF3M), 类同316L；聚碳酸酯

防护等级

分体式传感器（标准）：IP66/67, Type 4X

分体式传感器（可选）：IP69。分体式变送器：IP66/67, Type 4X

液体

显示/操作

四行背光显示，触摸键操作（外部操作）
通过现场显示单元和调试软件设置

输出

4路输出：
4...20 mA HART（有源/无源）
4...20 mA WirelessHART
4...20 mA（有源/无源）
脉冲/频率/开关量输出（有源/无源）
双脉冲输出（有源/无源）
继电器输出

输入

状态输入
4...20 mA输入

数字通信

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

电源

24 VDC
100...230 VAC
100...230 VAC / 24 VDC（非危险区）

防爆认证

ATEX、IECEX、cCSAus、NEPSI、INMETRO、EAC

产品安全性

CE认证、C-tick认证、EAC认证

功能安全性

功能安全遵循IEC 61508标准，允许在IEC 61511标准规定的安全应用中
使用

液体	<p>计量认证和证书 在认证标定装置上执行标定（符合ISO/IEC 17025标准） Heartbeat Technology（心跳技术）符合ISO 9001:2008标准章节7.6 a 的溯源校验要求（TÜV认证）</p> <hr/> <p>压力认证和证书 PED、CRN</p> <hr/> <p>材料证书 3.1材料证书</p> <hr/> <p>卫生型认证和证书 3-A、EHEDG、ASME BPE、ISPE</p>
密度	<p>测量原理 科里奥利质量流量</p> <hr/> <p>产品标题 Specialist for life sciences, as remote version with up to 4 I/Os. Dedicated to applications under sterile conditions in the life sciences industry.</p> <hr/> <p>传感器特点 Highest process quality – fully compliant to industry requirements. Fewer process measuring points – multivariable measurement (flow, density, temperature). Space - saving installation – no in-/outlet run needs. ASME BPE, 3 - A and EHEDG conform & low delta ferrite. Electropolished measuring tube in 1.4435 (316L).</p> <hr/> <p>变送器特点 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. Fast recovery from CIP/SIP. Remote version with up to 4 I/Os; hygienic sensor connection housing with IP69. Backlit display with touch control and WLAN access.</p>

密度

气体

测量原理

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卫生型认证和证书

cGMP

更多信息 www.endress.com.cn/8P5B