

Promass 80A



More information and current pricing:

www.dk.endress.com/80A

Benefits:

- Highest process safety – self-drainable measuring tube design
- Fewer process measuring points – multivariable measurement (flow, density, temperature)
- Space-saving installation – no in/outlet run needs
- Cost-effective – dedicated design for standard applications
- Safe operation – display provides easy readable process information
- Fully industry compliant – IEC/EN/NAMUR

Specs at a glance

- **Max. measurement error** Mass flow (liquid): $\pm 0.15\%$ Volume flow (liquid): $\pm 0.15\%$ Mass flow (gas): $\pm 0.5\%$ Density (liquid): $\pm 0.0005 \text{ g/cm}^3$
- **Measuring range** to 450 kg/h (0 to 16.5 lb/min)
- **Medium temperature range** -50 to $+200 \text{ }^\circ\text{C}$ (-58 to $+392 \text{ }^\circ\text{F}$)
- **Max. process pressure** PN 40, Class 300, 20K, 400 bar (5800 psi)
- **Wetted materials** Measuring tube: 1.4539 (904L); Alloy C22, 2.4602 (UNS N06022) Connection: 1.4539 (904L); Alloy C22, 2.4602 (UNS N06022); 1.4404 (316/316L)

Field of application: Promass A is known for its highly accurate measurement of small quantities of liquids and gases for high pressure and low pressure. Combined with the proven Promass 80 transmitter with push buttons, Promass 80A measures accurately smallest quantities of liquids and gases for continuous process control.

Features and specifications

Liquids

Measuring principle

Coriolis

Liquids

Product headline

The single-tube flowmeter for smallest flow quantities with a compact or remote transmitter. Measuring accurately smallest quantities of liquids and gases for continuous process control.

Sensor features

Highest process safety – self-drainable measuring tube design. Fewer process measuring points – multivariable measurement (flow, density, temperature). Space-saving installation – no in/outlet run needs. Nominal diameter: DN 1 to 4 ($\frac{1}{24}$ to $\frac{1}{8}$ "). Process pressure up to 400 bar (5800 psi).

Transmitter features

Cost-effective – dedicated design for standard applications. Safe operation – display provides easy readable process information. Fully industry compliant – IEC/EN/NAMUR. 2-line backlit display with push buttons. Device in compact or remote version.

Nominal diameter range

DN 1 to 4 ($\frac{1}{24}$ to $\frac{1}{8}$ ")

Wetted materials

Measuring tube: 1.4539 (904L); Alloy C22, 2.4602 (UNS N06022)
Connection: 1.4539 (904L); Alloy C22, 2.4602 (UNS N06022); 1.4404 (316/316L)

Measured variables

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

Max. measurement error

Mass flow (liquid): ± 0.15 %
Volume flow (liquid): ± 0.15 %
Mass flow (gas): ± 0.5 %
Density (liquid): ± 0.0005 g/cm³

Measuring range

to 450 kg/h (0 to 16.5 lb/min)

Liquids

Max. process pressure

PN 40, Class 300, 20K, 400 bar (5800 psi)

Medium temperature range

-50 to +200 °C (-58 to +392 °F)

Ambient temperature range

Standard: -20 to +60 °C (-4 to +140 °F)

Option: -40 to +60 °C (-40 to +140 °F)

Sensor housing material

1.4301 (304), corrosion resistant

Transmitter housing material

Powder-coated die-cast aluminium

1.4301 (304), sheet

CF3M (316L), cast

Degree of protection

IP67, type 4X enclosure. Remote transmitter: IP67, type 4X enclosure

Display/Operation

2-line backlit display with push buttons

Configuration via local display and operating tools possible

Outputs

3 outputs:

0-20 mA (active)/4-20 mA (active/passive)

Pulse/frequency/switch output (passive)

Inputs

Status input

Digital communication

HART

PROFIBUS PA

Liquids

Power supply

DC 16 to 62 V

AC 85 to 260 V (45 to 65 Hz)

AC 20 to 55 V (45 to 65 Hz)

Hazardous area approvals

ATEX, IECEx, FM, CSA, NEPSI

Other approvals and certificates

3.1 material, calibration performed on accredited calibration facilities (acc. to ISO/IEC 17025), NAMUR, SIL

CRN

3-A

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

Pressure approvals and certificates

CRN

Material certificates

3.1 material

Hygienic approvals and certificates

3-A

Gas

Measuring principle

Coriolis

Gas

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Gas

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Density

Measuring principle

Coriolis

Density**Characteristic / Application**

The single-tube system for highest measuring accuracy with minimal flow rates

Ambient temperature

-20...65°C
(-4...140°F)

Process temperature

-50...+200°C
(-58...+392°F)

Process pressure

PN 16...400
CI 150...600
JIS 10...63K

Wetted parts

904L/1.4539
Alloy C-22/2.4602

Certificates / Approvals

ATEX
FM
CSA

Density/Concentration**Measuring principle**

Coriolis

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Density/Concentration

Sensor features

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