

Promass 84A



More information and current pricing:

www.dk.endress.com/84A

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
- Quality – designed for custody transfer; featuring worldwide recognized metrological approvals
- Flexible data transfer options – numerous communication types
- Automatic recovery of data for servicing

Specs at a glance

- **Max. measurement error** Mass flow (liquid): $\pm 0.1\%$ Volume flow (liquid): $\pm 0.1\%$ Mass flow (gas): $\pm 0.5\%$ Density (liquid): $\pm 0.0005 \text{ g/cm}^3$
- **Measuring range** 0 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 Promass 84 transmitter with touch control and a four line display Promass 84A measures accurately smallest quantities of liquids and gases for a wide range of very demanding applications. It will be the preferred solution for customers needing custody transfer measurement and using advanced functionalities like pulsating flow or fieldbuses.

Features and specifications

Liquids

Measuring principle

Product headline

The single-tube flowmeter for smallest quantities with custody transfer functionality. 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 2 to 4 ($\frac{1}{2}$ to $\frac{1}{8}$ "). Process pressure up to 400 bar (5800 psi).

Transmitter features

Quality – designed for custody transfer; featuring worldwide recognized metrological approvals. Flexible data transfer options – numerous communication types. Automatic recovery of data for servicing. 4-line backlit display with touch control. Device in compact or remote version.

Nominal diameter range

DN 2 to 4 ($\frac{1}{2}$ 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): ± 0.1 %
Volume flow (liquid): ± 0.1 %
Mass flow (gas): ± 0.5 %
Density (liquid): ± 0.0005 g/cm³

Liquids

Measuring range

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

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

4-line backlit display with touch control

(operation from outside)

Configuration via local display and operating tools possible

Outputs

4 modular outputs:

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

Pulse/frequency/switch output (passive),

phase-shifted pulse

Relay

Inputs

1 modular input: status

Liquids

Digital communication

HART
Modbus RS485

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, EAC

Other approvals and certificates

3.1 material, calibration performed on accredited calibration facilities (acc. to ISO/IEC 17025), NAMUR, custody transfer, CRN, 3-A

Product safety

CE, C-tick, EAC marking

Metrological approvals and certificates

Calibration performed on accredited calibration facilities (acc. to ISO/IEC 17025), NAMUR
Custody transfer approvals: MI-002 (gas), MI-005 (liquid) , PTB 7.251 (gas)

Pressure approvals and certificates

CRN

Material certificates

3.1 material

Hygienic approvals and certificates

3-A

Gas

Measuring principle

Gas

Product headline

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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 2 to 4 ($\frac{1}{12}$ to $\frac{1}{8}$ "). Process pressure up to 400 bar (5800 psi).

Transmitter features

Quality – designed for custody transfer; featuring worldwide recognized metrological approvals. Flexible data transfer options – numerous communication types. Automatic recovery of data for servicing. 4-line backlit display with touch control. Device in compact or remote version.

Nominal diameter range

DN 2 to 4 ($\frac{1}{12}$ 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)

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

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Mass flow (liquid): ± 0.1 %
Volume flow (liquid): ± 0.1 %
Mass flow (gas): ± 0.5 %
Density (liquid): ± 0.0005 g/cm³

Measuring range

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

Gas

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)

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Degree of protection

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Display/Operation

4-line backlit display with touch control

(operation from outside)

Configuration via local display and operating tools possible

Outputs

4 modular outputs:

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

Pulse/frequency/switch output (passive),
phase-shifted pulse

Relay

Inputs

1 modular input: status

Digital communication

HART

Modbus RS485

Gas

Power supply

DC 16 to 62 V

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Metrological approvals and certificates

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Custody transfer approvals: MI-002 (gas), MI-005 (liquid), PTB 7.251 (gas)

Pressure approvals and certificates

CRN

Material certificates

3.1 material

Hygienic approvals and certificates

3-A

Density

Measuring principle**Characteristic / Application**

Coriolis mass flowmeter for custody transfer application.

Density

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

Output

4...20mA
Pulse/Frequency (10KHz, 90° phase shifted, active/
passive)

Certificates / Approvals

ATEX
FM
CSA
TIIS

Density/Concentration

Measuring principle**Product headline**

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Density/Concentration

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Density/Concentration

Ambient temperature range

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Display/Operation

4-line backlit display with touch control

(operation from outside)

Configuration via local display and operating tools possible

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Density/Concentration

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Material certificates

3.1 material

Hygienic approvals and certificates

3-A

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