

## Promass 83A



Thông tin thêm và mức tính giá hiện tại:

[www.apsc.endress.com/83A](http://www.apsc.endress.com/83A)

### Lợi ích:

- 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 – software for filling & dosing, density & concentration, advanced diagnostics
- Flexible data transfer options – numerous communication types
- Automatic recovery of data for servicing

### Tổng quan về thông số kỹ thuật

- **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)

**Phạm vi ứng dụng:** 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 83 transmitter with touch control, four line display and extended functionality like software options for filling and dosing, concentration measurement or advanced diagnostics, Promass 83A measures accurately smallest quantities of liquids and gases for a wide range of very demanding applications.

### Tín năng và thông số kỹ thuật

## Density

**Measuring principle**

Coriolis

**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 absolute**

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

**Wetted parts**

904L/1.4539  
Alloy C22/2.4602

**Output**

4...20mA  
Pulse/Frequency (10KHz), active/passive  
Relays/Status

**Certificates / Approvals**

ATEX  
FM  
CSA

## Gas

**Measuring principle**

Coriolis

## Gas

**Product headline**

The single - tube flowmeter for smallest quantities with extended transmitter 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 1 to 4 ( $\frac{1}{24}$  to  $\frac{1}{8}$ " ). Process pressure up to 400 bar (5800 psi).

**Transmitter features**

Quality – software for filling & dosing, density & concentration, advanced diagnostics. 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 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, concentration

**Max. measurement error**

Mass flow (liquid):  $\pm 0.1$  %  
Volume flow (liquid):  $\pm 0.1$  %  
Mass flow (gas):  $\pm 0.5$  %  
Density (liquid):  $\pm 0.0005$  g/cm<sup>3</sup>

**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)

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**Medium temperature range**

-50 to +200 °C (-58 to +392 °F)

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**Ambient temperature range**

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

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

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**Sensor housing material**

1.4301 (304), corrosion resistant

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**Transmitter housing material**

Powder - coated die - cast aluminium

1.4301 (304), sheet

CF3M (316L), cast

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**Degree of protection**

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

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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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**Outputs**

4 modular outputs:

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

Pulse/frequency/switch output (passive)

Relay

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**Inputs**

2 modular inputs:

Status

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

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**Digital communication**

HART, PROFIBUS PA/DP, FOUNDATION Fieldbus, Modbus RS485,  
EtherNet/IP

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## Gas

**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

## Density/Concentration

**Measuring principle**

Coriolis

## Density/Concentration

### Product headline

The single - tube flowmeter for smallest quantities with extended transmitter functionality. Measuring accurately smallest quantities of liquids and gases for continuous process control.

### Sensor features

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### 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, concentration

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Mass flow (liquid):  $\pm 0.1$  %  
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Density (liquid):  $\pm 0.0005$  g/cm<sup>3</sup>

### Measuring range

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

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**Density/Concentration****Max. process pressure**

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

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**Medium temperature range**

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**Ambient temperature range**

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

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**Sensor housing material**

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**Transmitter housing material**

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Pulse/frequency/switch output (passive)

Relay

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**Inputs**

2 modular inputs:

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

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**Digital communication**

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## Density/Concentration

### 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)

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### Hazardous area approvals

ATEX, IECEx, FM, CSA, NEPSI

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### Product safety

CE, C-tick, EAC marking

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### Functional safety

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### Metrological approvals and certificates

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### Pressure approvals and certificates

CRN

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### Material certificates

3.1 material

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### Hygienic approvals and certificates

3-A

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## Liquids

### Measuring principle

Coriolis

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## Liquids

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### 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

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## Liquids

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### Ambient temperature range

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### Material certificates

3.1 material

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### Hygienic approvals and certificates

3-A

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