

## Proline Promass A 300 / 8A3B



Več informacij in aktualne cene:

[www.si.endress.com/8A3B](http://www.si.endress.com/8A3B)

### Prednosti:

- 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
- 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

### Lastnosti na dlani

- **Max. measurement error** Mass flow (liquid):  $\pm 0.10\%$  Volume flow (liquid):  $\pm 0.10\%$  Mass flow (gas):  $\pm 0.50\%$  Density (liquid):  $\pm 0.0005 \text{ g/cm}^3$
- **Measuring range** 0 to 450 kg/h (0 to 16.5 lb/min)
- **Medium temperature range**  $-50$  to  $+205 \text{ }^\circ\text{C}$  ( $-58$  to  $+401 \text{ }^\circ\text{F}$ )
- **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)

**Področje uporabe:** The self-drainable Promass A accurately measures lowest flow rates of liquids and gases, also under high pressure. It enables continuous process control for a wide range of very demanding applications. With its compact transmitter Promass A 300 offers high flexibility in terms of operation and system integration: access from one side, remote display, improved connectivity options. Heartbeat Technology ensures compliance and process safety at all times.

### Lastnosti in specifikacije

## Gas

**Merlini princip**

Coriolis

**Product headline**

The single-tube flowmeter for smallest flow quantities with a compact, easily accessible 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). Medium temperature up to +205 °C (+401 °F).

**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.

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 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

## Gas

**Max. measurement error**Mass flow (liquid):  $\pm 0.10\%$ Volume flow (liquid):  $\pm 0.10\%$ Mass flow (gas):  $\pm 0.50\%$ Density (liquid):  $\pm 0.0005\text{ g/cm}^3$ **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  $+205\text{ }^\circ\text{C}$  ( $-58$  to  $+401\text{ }^\circ\text{F}$ )**Ambient temperature range**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  $+140\text{ }^\circ\text{F}$ )**Sensor housing material**

1.4301 (304), corrosion resistant

**Transmitter housing material**

AlSi10Mg, coated; 1.4409 (CF3M) similar to 316L; stainless steel for hygenic transmitter design

**Degree of protection**

IP66/67, type 4X enclosure

IP69

**Display/Operation**

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

Configuration via local display and operating tools possible

Remote display available"

**Gas****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

**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, NEPSI, INMETRO, EAC

**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 traceable verification according to ISO 9001:2008 – Section 7.6 a (TÜV SÜD attestation)"

## Gas

**Pressure approvals and certificates**

CRN

**Material certificates**

3.1 material

**Hygienic approvals and certificates**

3-A, EHEDG

## Density/Concentration

**Merilni princip**

Coriolis

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The single-tube flowmeter for smallest flow quantities with a compact, easily accessible transmitter.

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**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.

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

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**Density/Concentration****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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**Measured variables**

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

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**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>

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**Measuring range**

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

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**Max. process pressure**

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

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**Medium temperature range**

-50 to +205 °C (-58 to +401 °F)

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**Ambient temperature range**

Standard: -40 to +60 °C (-40 to +140 °F)  
Option: -50 to +60 °C (-58 to +140 °F)

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**Sensor housing material**

1.4301 (304), corrosion resistant

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**Transmitter housing material**

AlSi10Mg, coated; 1.4409 (CF3M) similar to 316L; stainless steel for hygienic transmitter design

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**Degree of protection**

IP66/67, type 4X enclosure  
IP69

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**Density/Concentration****Display/Operation**

4-line backlit display with touch control (operation from outside)  
Configuration via local display and operating tools possible  
Remote display available

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**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

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**Inputs**

Status input  
4-20 mA input

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**Digital communication**

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

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**Power supply**

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

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**Hazardous area approvals**

ATEX, IECEx, cCSAus, NEPSI, INMETRO, EAC

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**Product safety**

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**Functional safety**

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

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CRN

**Material certificates**

3.1 material

**Hygienic approvals and certificates**

3-A, EHEDG

**Density****Merilni princip**

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## Density

### 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.

Compact dual-compartment housing with up to 3 I/Os. Backlit display with touch control and WLAN access. Remote display available.

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## Liquids

### Merilni princip

Coriolis

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### Nominal diameter range

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

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## Liquids

### 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

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### Max. measurement error

Mass flow (liquid):  $\pm 0.10$  %  
Volume flow (liquid):  $\pm 0.10$  %  
Mass flow (gas):  $\pm 0.50$  %  
Density (liquid):  $\pm 0.0005$  g/cm<sup>3</sup>

### 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 +205 °C (-58 to +401 °F)

### Ambient temperature range

Standard: -40 to +60 °C (-40 to +140 °F)  
Option: -50 to +60 °C (-58 to +140 °F)

### Sensor housing material

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### Transmitter housing material

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### Degree of protection

IP66/67, type 4X enclosure  
IP69

## Liquids

### Display/Operation

4-line backlit display with touch control (operation from outside)  
Configuration via local display and operating tools possible  
Remote display available

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### 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

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### Inputs

Status input  
4-20 mA input

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### Digital communication

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

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### Power supply

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

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### Hazardous area approvals

ATEX, IECEx, cCSAus, NEPSI, INMETRO, EAC

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### Product safety

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## Liquids

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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, EHEDG

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