

Proline Cubemass C 100 Coriolis flowmeter

Compact sensor for smallest quantities with an ultra-compact transmitter



More information and current pricing:

www.endress.com/8C1B

Benefits:

- Space-saving installation – compact single-tube design
- Fewer process measuring points – multivariable measurement (flow, density, temperature)
- Suitable for skids – lightweight sensor
- Space-saving transmitter – full functionality on the smallest footprint
- Time-saving local operation without additional software and hardware – integrated web server
- Integrated verification – Heartbeat Technology

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 1000 kg/h (0 to 37 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, 10K, 400 bar (5800 psi)
- **Wetted materials** Measuring tube: 1.4539 (904L) Connection: 1.4539 (904L); 1.4404 (316/316L)

Field of application: Cubemass C is the ideal sensor for the measurement of smallest flow rates in skids, test rigs and industrial robotics. Neither high pressure nor alternating flow conditions compromise its accuracy. The ultra-compact transmitter delivers full performance on the smallest footprint and enables seamless system integration. Heartbeat Technology ensures measurement reliability and compliant verification.

Features and specifications

Liquids

Measuring principle

Coriolis

Product headline

Compact sensor for smallest quantities with an ultra-compact transmitter.

Measuring accurately smallest quantities of liquids and gases.

Sensor features

Space-saving installation – compact single-tube design. Fewer process measuring points – multivariable measurement (flow, density, temperature). Suitable for skids – lightweight sensor.

Nominal diameter: DN 1 to 6 ($\frac{1}{24}$ to $\frac{1}{4}$ "). Process pressure up to 400 bar (5800 psi). Medium temperature up to +205 °C (+401 °F).

Transmitter features

Space-saving transmitter – full functionality on the smallest footprint. Time-saving local operation without additional software and hardware – integrated web server. Integrated verification – Heartbeat Technology. Robust, ultra-compact transmitter housing. Pre-configured plug connector. Local display available.

Nominal diameter range

DN 1 to 6 ($\frac{1}{24}$ to $\frac{1}{4}$ ")

Wetted materials

Measuring tube: 1.4539 (904L)

Connection: 1.4539 (904L); 1.4404 (316/316L)

Measured variables

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

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 1000 kg/h (0 to 37 lb/min)

Max. process pressure

PN 40, Class 300, 10K, 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

1.4301 (304), corrosion resistant

Transmitter housing material

Compact: AlSi10Mg, coated

Compact/ultra-compact: 1.4301 (304)

Degree of protection

Standard: IP66/67, type 4X enclosure

Display/Operation

4-line backlit display available (no local operation)

Configuration via web browser and operating tools possible

Outputs

4-20 mA HART (active)

Pulse/frequency/switch output (passive)

Inputs

None

Digital communication

HART, Modbus RS485, EtherNet/IP, PROFIBUS DP, PROFINET

Power supply

DC 20 to 30 V

Liquids

Hazardous area approvals

ATEX, IECEx, cCSAus, INMETRO, NEPSI

Product safety

CE, C-Tick

Metrological approvals and certificates

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)

Pressure approvals and certificates

CRN

Material certificates

3.1 material

Gas

Measuring principle

Coriolis

Product headline

Compact sensor for smallest quantities with an ultra-compact transmitter.

Measuring accurately smallest quantities of liquids and gases.

Sensor features

Space-saving installation – compact single-tube design. Fewer process measuring points – multivariable measurement (flow, density, temperature). Suitable for skids – lightweight sensor.

Nominal diameter: DN 1 to 6 ($\frac{1}{2}$ " to $\frac{1}{4}$ "). Process pressure up to 400 bar (5800 psi). Medium temperature up to +205 °C (+401 °F).

Gas

Transmitter features

Space-saving transmitter – full functionality on the smallest footprint.
Time-saving local operation without additional software and hardware – integrated web server. Integrated verification – Heartbeat Technology.
Robust, ultra-compact transmitter housing. Pre-configured plug connector. Local display available.

Nominal diameter range

DN 1 to 6 ($\frac{1}{24}$ to $\frac{1}{4}$ "

Wetted materials

Measuring tube: 1.4539 (904L)

Connection: 1.4539 (904L); 1.4404 (316/316L)

Measured variables

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

Max. measurement error

Mass flow (liquid): ± 0.1 %

Volume flow (liquid): ± 0.1 %

Mass flow (gas): ± 0.5 %

Density (liquid): ± 0.0005 g/cm³

Measuring range

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Max. process pressure

PN 40, Class 300, 10K, 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

1.4301 (304), corrosion resistant

Gas

Transmitter housing material

Compact: AlSi10Mg, coated

Compact/ultra-compact: 1.4301 (304)

Degree of protection

Standard: IP66/67, type 4X enclosure

Display/Operation

4-line backlit display available (no local operation)

Configuration via web browser and operating Tools possible

Outputs

4-20 mA HART (active)

Pulse/frequency/switch output (passive)

Inputs

None

Digital communication

HART, Modbus RS485, EtherNet/IP, PROFIBUS DP, PROFINET

Power supply

DC 20 to 30 V

Hazardous area approvals

ATEX, IECEx, cCSAus, INMETRO, NEPSI

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Density/Concentration

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Nominal diameter range

DN 1 to 6 ($\frac{1}{24}$ to $\frac{1}{4}$ ")

Wetted materials

Measuring tube: 1.4539 (904L)

Connection: 1.4539 (904L); 1.4404 (316/316L)

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

Density/Concentration**Max. measurement error**Mass flow (liquid): ± 0.1 %Volume flow (liquid): ± 0.1 %Mass flow (gas): ± 0.5 %Density (liquid): ± 0.0005 g/cm³

Measuring range0 to 1000 kg/h (0 to 37 lb/min)

Max. process pressurePN 40, Class 300, 10K, 400 bar (5800 psi)

Medium temperature range-50 to +205 °C (-58 to +401 °F)

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Sensor housing material1.4301 (304), corrosion resistant

Transmitter housing material

Compact: AlSi10Mg, coated

Compact/ultra-compact: 1.4301 (304)

Degree of protectionStandard: IP66/67, type 4X enclosure

Display/Operation

4-line backlit display available (no local operation)

Configuration via web browser and operating tools possible

Outputs

4-20 mA HART (active)

Pulse/frequency/switch output (passive)

InputsNone

Density/Concentration

Digital communication

HART, Modbus RS485, EtherNet/IP, PROFIBUS DP, PROFINET

Power supply

DC 20 to 30 V

Hazardous area approvals

ATEX, IECEx, cCSAus, INMETRO, NEPSI

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