Proline Cubemass C 300
Coriolis flowmeter

Compact sensor for smallest quantities with a compact, easily accessible transmitter

Benefits:
- Space-saving installation – compact single-tube design
- Fewer process measuring points – multivariable measurement (flow, density, temperature)
- Suitable for skids – lightweight sensor
- Full access to process and diagnostic information – numerous, freely combinable I/Os and Ethernet
- Reduced complexity and variety – freely configurable I/O functionality
- Integrated verification – Heartbeat Technology

Specs at a glance
- **Max. measurement error** Mass flow (liquid): ±0.10 % Volume flow (liquid): ±0.10 % Mass flow (gas): ±0.50 % Density (liquid): ±0.0005 g/cm³
- **Measuring range** 0 to 1000 kg/h (0 to 37 lb/min)
- **Medium temperature range** −50 to +205 °C (−58 to +401 °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. With its compact transmitter Cubemass C 300 offers high flexibility in terms of operation and system integration: access from one side, remote display, improved connectivity options. Heartbeat Technology ensures measurement reliability and compliant verification.

More information and current pricing: www.endress.com/8C3B
# Features and specifications

## Liquids

**Measuring principle**
Coriolis

**Product headline**
Compact sensor for smallest quantities with a compact, easily accessible transmitter.
Measuring accurately smallest quantities of liquids and gases.

**Sensor features**
Nominal diameter: DN 1 to 6 (¹⁄₂₄ to ¹⁄₄”). 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 6 (¹⁄₂₄ to 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
Liquids

Max. measurement error
Mass flow (liquid): ±0.10 %
Volume flow (liquid): ±0.10 %
Mass flow (gas): ±0.50 %
Density (liquid): ±0.0005 g/cm³

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
AlSi10Mg, coated; 1.4409 (CF3M) similar to 316L

Degree of protection
IP66/67, type 4X enclosure

Display/Operation
4-line backlit display with touch control (operation from outside)
Configuration via local display and operating tools possible
Remote display available
## 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, PROFINET over Ethernet-APL, 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, UK Ex

## 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 measurement traceability according to ISO 9001:2015 – Section 7.1.5.2 a (TÜV SÜD attestation)
**Liquids**

**Pressure approvals and certificates**
CRN

**Material certificates**
3.1 material

**Gas**

**Measuring principle**
Coriolis

**Product headline**
Compact sensor for smallest quantities with a compact, easily accessible transmitter.
Measuring accurately smallest quantities of liquids and gases.

**Sensor features**
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**
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 6 (\(\frac{1}{24}\) to \(\frac{1}{4}\)“)

**Wetted materials**
Measuring tube: 1.4539 (904L)
Connection: 1.4539 (904L); 1.4404 (316/316L)
**Gas**

**Measured variables**
Mass flow, density, temperature, volume flow, corrected volume flow, reference density, concentration

**Max. measurement error**
Mass flow (liquid): ±0.10 %
Volume flow (liquid): ±0.10 %
Mass flow (gas, Tantalum only): ±0.50 %
Density (liquid): ±0.0005 g/cm³

**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**
Tantalum: –50 to +150 °C (–58 to +302 °F)
Zirconium: –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**
AlSi10Mg, coated; 1.4409 (CF3M) similar to 316L

**Degree of protection**
IP66/67, type 4X enclosure

**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/sensor 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, PROFINET over Ethernet-APL, 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, UK Ex

**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 measurement traceability according to ISO 9001:2015 – Section 7.1.5.2 a (TÜV SÜD attestation)
Gas

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Density/Concentration

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Density/Concentration

Outputs
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4-20 mA WirelessHART
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Double pulse output (active/passive)
Relay output

Inputs
Status input
4-20 mA input

Digital communication
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AC 100 to 230 V
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**Material certificates**

- 3.1 material

More information [www.endress.com/8C3B](http://www.endress.com/8C3B)