

## Cubemass DCI Coriolis flowmeter

Compact sensor for smallest quantities with seamless system integration



More information and current pricing:

[www.dk.endress.com/8CN](http://www.dk.endress.com/8CN)

### Benefits:

- Measuring accurately smallest quantities of liquids and gases
- Space-saving installation – compact single-tube design
- Fewer process measuring points – multivariable measurement (flow, density, temperature)
- Suitable for skids – lightweight sensor
- High flexibility in system integration – wide range of communication interfaces
- Fast commissioning – pre-configured devices
- 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 1000 kg/h (0 to 37 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, 10K, 400 bar (5800 psi)
- **Wetted materials** Measuring tube: 1.4539 (904L) Connection: 1.4539 (904L); 1.4404 (316/316L)

**Field of application:** Cubemass DCI is the proven sensor for the measurement of smallest flow rates in skids, test rigs and industrial robotics, e.g. in applications like lacquering or surface finishing. Neither high pressure nor alternating flow conditions compromise its accuracy. Equipment manufacturers value Cubemass DCI as compact Coriolis sensor with various communication possibilities.

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## Features and specifications

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### Liquids

**Measuring principle**

Coriolis

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**Product headline**

Compact sensor for smallest quantities with seamless system integration. Measuring accurately smallest quantities of liquids and gases.

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**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 +200 °C (+392 °F).

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**Transmitter features**

High flexibility in system integration – wide range of communication interfaces. Fast commissioning – pre-configured devices. Automatic recovery of data for servicing.

Device as compact or remote version. Flexible outputs. Modbus RS485.

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**Nominal diameter range**

DN 1 to 6 ( $\frac{1}{2}$ " to  $\frac{1}{4}$ ")

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**Wetted materials**

Measuring tube: 1.4539 (904L)

Connection: 1.4539 (904L); 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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## Liquids

**Measuring range**

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

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**Max. process pressure**

PN 40, Class 300, 10K, 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

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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), phase-shifted pulse

Relay

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**Inputs**

1 modular input: status

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**Digital communication**

HART, Modbus RS485

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## Liquids

### 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, NEC/CEC, NEPSI

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### Other approvals and certificates

3.1 material, calibration performed on accredited calibration facilities (acc. to ISO/IEC 17025), NAMUR, SIL  
CRN

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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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### Metrological approvals and certificates

Calibration performed on accredited calibration facilities (acc. to ISO/IEC 17025), NAMUR

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### Material certificates

3.1 material

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## Gas

### Measuring principle

Coriolis

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### Product headline

Compact sensor for smallest quantities with seamless system integration. Measuring accurately smallest quantities of liquids and gases.

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### 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 +200 °C (+392 °F).

## Gas

**Transmitter features**

High flexibility in system integration – wide range of communication interfaces. Fast commissioning – pre-configured devices. Automatic recovery of data for servicing.

Device as compact or remote version. Flexible outputs. Modbus RS485.

**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):  $\pm 0.1$  %

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 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 +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

## Gas

**Transmitter housing material**

Powder-coated die-cast aluminium

**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

**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**

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3.1 material, calibration performed on accredited calibration facilities  
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