TCM 3100 TRICOR Coriolis Mass Flow Meter

Common Uses

The TCM 3100 Coriolis flow meter with a Diamond-shape tube design offers the best overall performance of any tube shape, including the best signal-to-noise ratio and reduced effects from external vibration. This results in improved zero stability. These features plus the robust, no moving parts design make this meter well suited to many applications, including:

- Fuel consumption monitoring
- Paint processes
- Additive blending



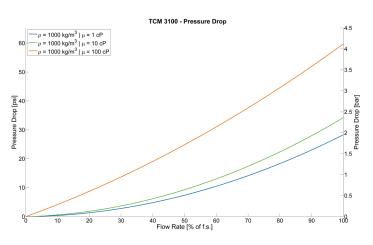
Technical Specifications

Nominal Line Size	1/4" DN6 mm
Maximum Flow Rate	3100 kg/hr 114 lbs/min 3100 l/hr 13.65 gpm 468 bbl/d (US)
Pressure Rating	2,900 psi 200 bar
Measuring Accuracy*	$\pm 0.1\%$ of flow rate (Liquids) $\pm 1.0\%$ of flow rate (Gases)
Repeatability	$\pm 0.05\%$ of flow rate (Liquids) $\pm 0.25\%$ of flow rate (Gases)
Zero Stability	±0.01% of full scale
Density Range	up to 2,500 kg/m ³ (2.5 g/cm ³)
Process Temperature Range	Standard: -40°F to 212°F (-40°C to 100°C) Optional: -76°F to 392°F (-60°C to 200°C)
Temperature Accuracy	± 1.8 °F $\pm 0.5\%$ of reading ± 1.0 °C $\pm 0.5\%$ of reading
Temperature Repeatability	±0.36°F ±0.2°C
Calibration	5-point logarithmic calibration
Standard Process Connection	Female thread 0.5" NPT

*Stated flow accuracy combines the effects of repeatability, linearity and hysteresis. The specifications refer to standard conditions (for further information see TCM CLASSIC series manual).

Materials of Construction (Wetted Parts)

Tubes	316L Stainless Steel (DIN 1.4404)
Case	316L Stainless Steel (DIN 1.4404)
Flow Splitter	316L Stainless Steel (DIN 1.4404)
Brazing Alloy	BNi-2





TCM 3100 TRICOR Coriolis Mass Flow Meter

5.8in (147mm)

> 16.54ir (420mn

2 TRICOR

13.78in (350mm

Remote Model

ATEX

IECEx

KGS

(Korean)

EAC (TR-CU)

Weight: 18.3 lb (8.3 kg)

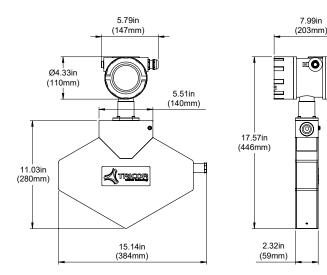
5.51in

(140mm)

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Meter Dimensions* & Weights

*Drawing of the Meter Dimensions reflects one standard connection, other connections on request (Installation length can vary depending on selected connection).



Compact Model

(with meter mount in aluminum diecast housing) Weight: 15.4 lb (7 kg)

Certifications

CSA*	Compact: Cl. I, Div. 1: Groups A-D: T4 (US, Can) Ex db ia IIC T4 Gb (Can) Cl. I, Zone 1, AEx db ia IIC T4 Gb
	Remote: Sensor: Cl. I, Div. 1, Groups A-D: T4T2 (US, Can) Ex ia IIC T4T2 Ga (Can) Cl. I, Zone 0, AEx ia IIC T4T2 Ga (US)
	Transmitter: Cl. I, Div. 1, Groups A-D: T4 (US, Can) Ex db [ia Ga] IIC T4 Gb (Can) Cl. I, Zone 1, AEx db[ia Ga] IIC T4 Gb (US)

*CSA certification is only available in diecast aluminum housing.

Electronics

	Power Supply	24 V DC ±20% or 90 264 V AC
	Outputs	Analog, Frequency, Pulse, Status
	Interfaces	RS485 RTU (Modbus), HART®
	Cable Gland	M20 1/2" NPT
3D STEP Models are available upon request of factory. Products may be subject to change without potice. Co		

3D STEP Models are available upon request of factory. Products may be subject to change without notice. Contact factory for the most up-to-date product information.



7.99ir (203mr

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0

2.32in

9mm

10.17in (258mm)

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Ø3.33ir (85mm

14.99in (381mm)

1.26in (32mm)

(with junction box and remote field mount transmitter)

Zone 1: <u>Compact:</u> II 2G Ex db ia IIC T4 Gb <u>Remote</u>: Sensor: II 1G Ex ia IIC T4...T2 Ga Transmitter: II 2(1)G Ex db [ia Ga] IIC T4 Gb

Zone 2 (All): II 3G Ex nA IIC T4 Gc

<u>Compact</u>: Ex db ia IIC T4 Gb <u>Remote</u>: Sensor: Ex ia IIC T4...T2 Ga Transmitter: Ex db [ia Ga] IIC T4 Gb

Group IIC or IIB, T2...T4

Compact: Ex d (ai) IIC T4

<u>Remote:</u> Sensor: Ex ia IIC T4 Transmitter: Ex d (ia) IIC T4