



PRO Series | TCMP 3100 Coriolis Mass Flow Meter

FEATURES

- Robust, no moving parts
- Customized installation length
- Excellent repeatability (better than $\pm 0.05\%$), accuracy ($\pm 0.1\%$)
- Advanced transmitter technology
Upgrade/modernize in place

BENEFITS

- ▶ Increased productivity
- ▶ Considerable cost savings for installation
- ▶ Increased product quality
- ▶ Optimized lifecycle management

FLOW RATE

Mass Flow Rate (max.):	3,100 kg/h [114 lb/min]
Volumetric Flow Rate (max.):	3,100 l/h [13.65 gpm, 468 oil bbl/d (US)]
Nominal Meter Size:	DN6 [1/4"]

PRESSURE RATING

200 bar [2,900 psi]
Option:
345 bar [5,000 psi]

ACCURACY (LIQUIDS)¹⁾

Basic Accuracy (Mass Flow):	$\pm 0.1\%$ of flow rate
Repeatability (Mass Flow):	better than $\pm 0.05\%$ of flow rate
Basic Accuracy (Volume Flow):	$\pm 0.15\%$ of flow rate
Repeatability (Volume Flow):	better than $\pm 0.05\%$ of flow rate
Zero Stability:	$\pm 0.01\%$ of full scale

ACCURACY (GASES)

Basic Accuracy (Mass Flow):	$\pm 0.5\%$ of flow rate
Repeatability (Mass Flow):	$\pm 0.25\%$ of flow rate

DENSITY

Density Range:	up to 2,500 kg/m ³ [2.5 g/cm ³]
Density Accuracy ²⁾ :	± 1.0 kg/m ³ [± 0.001 g/cm ³]
Density Repeatability:	± 0.5 kg/m ³ [± 0.0005 g/cm ³]

TEMPERATURE

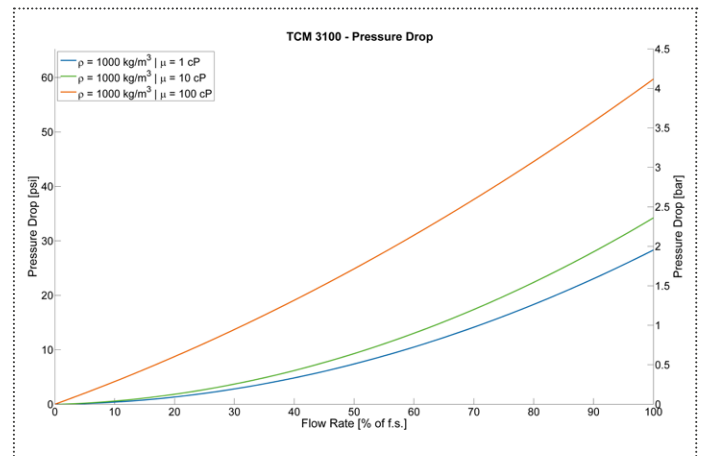
Process Temperature Range:	-60 °C ... +200 °C [-76 °F ... +392 °F]
Temperature Accuracy:	± 1 °C $\pm 0.5\%$ of reading [± 1.8 °F $\pm 0.5\%$ of reading]
Temperature Repeatability:	± 0.2 °C [± 0.36 °F]

MATERIALS (WETTED PARTS)

Tubes:	1.4404 [AISI 316L]
Case:	1.4404 [AISI 316L]
Flow Splitter:	1.4404 [AISI 316L]
Brazing Alloy:	BNi-2

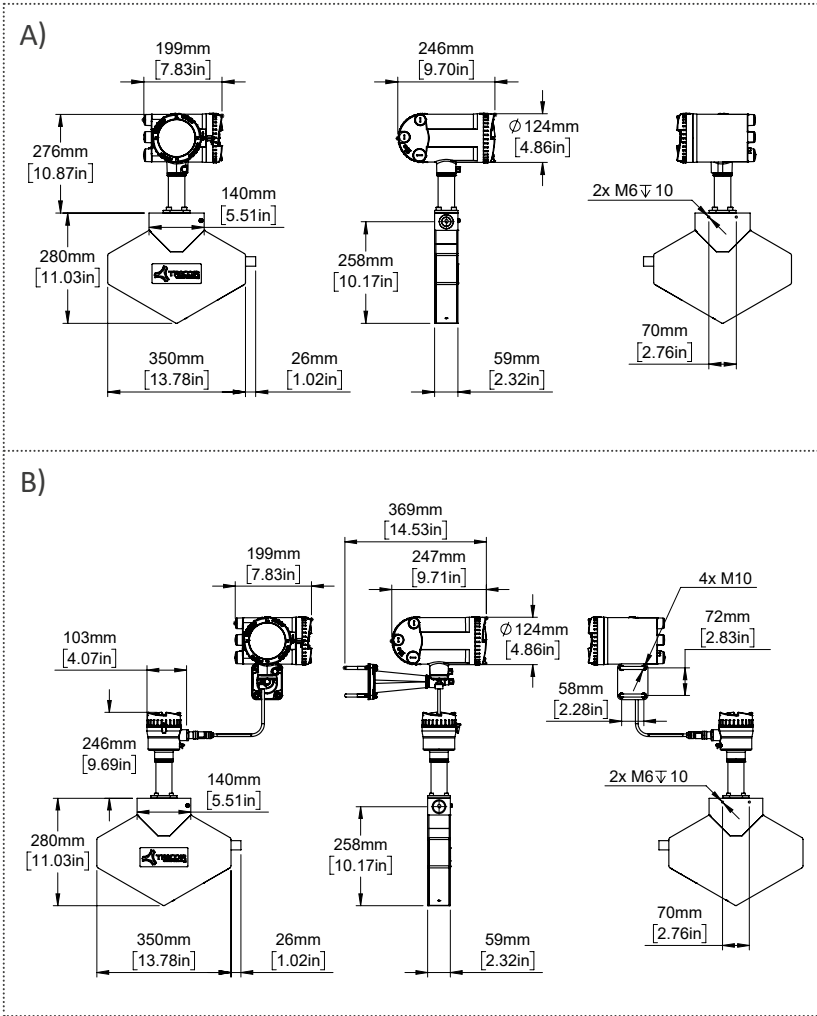
¹⁾ Stated flow accuracy combines the effects of repeatability, linearity and hysteresis.

²⁾ The specifications refer to standard conditions (for further information see TCMP PRO series manual).





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METER DIMENSIONS³⁾ AND WEIGHTS

A) Compact Version

Weight: 13.2 kg [29.1 lb]

With meter mount in aluminum diecast housing

B) Remote Version

Weight: 15.7 kg [34.6 lb]

With junction box and remote field mount

Standard Process Connection

G $\frac{1}{2}$ " thread (others on request)

EX-CERTIFICATIONS⁴⁾

ATEX	Zone 1:	Ex db ia [ia Ga] IIC T* Gb
	Zone 2:	II 3G nR nA IIC T4
IECEx		Ex db ia [ia Ga] IIC T* Gb
cCSAus	Canadian Marking:	Ex db ia [ia Ga] IIC T* Gb
	US Zones Marking:	Cl. 1, Zone 1 AEx db ia [ia Ga] IIC T4-T3 Gb
	US Divisions Marking:	Cl. 1, Div. 1 Groups A, B, C and D, T*

BASIC TRANSMITTER⁵⁾



REMOTE MOUNT



COMPACT MOUNT



DISPLAY ELECTRONICS

Power Supply: 20 ... 27 V DC

100 ... 240 V AC

Graphical Display: 240 x 160 pixels

Configurable I/O: Analog, Digital, Frequency, Relay

Interfaces: PROFIBUS PA, PROFIBUS DP,

HART 7.5, Modbus RTU

Enclosure Material: Aluminum

Cable Gland: $\frac{1}{2}$ " NPT

³⁾ Drawing of the meter dimensions reflects one standard connection, other connections on request (Installation length can vary depending on selected connection).

⁴⁾ T* refer to Ex-certificate.

⁵⁾ Specification basic transmitter: see special TCD 9010 spec sheet.

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