



# MTD Series Digital Flow, Pressure & Temperature Transmitter

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State of the Art 5-in-1 Flow  
Meter for Liquid or Gas  
Applications

## FEATURES

- Provides fluid upstream & differential pressures, volumetric & mass<sup>1</sup> flow rate and fluid temperature in a single compact unit.
- Innovative design provides ease of mount and maintenance.
- 50: 1 turndown ratio; 0.25% repeatability.
- 1/4" Female NPT and ANSI/ISA-76 compliant versions available.
- Digital protocols:
  - » Modbus RTU intrinsically safe digital bus (Class 1, Division 1, and ATEX Zone 0)<sup>2</sup>.
  - » CANbus intrinsically safe digital bus (Class 1, Division 1, and ATEX Zone 0)<sup>2</sup>.
- Robust industrial design, all stainless steel construction, IP65 (pending) for corrosive and high temperature environments.
- Cleanable flow elements clog resistant design using Flow Configuration Modules (FCM). Extra FCM cartridges available for the rebuilding or re-ranging.
- Status indication LED's, field addressable and embedded electronic data sheet.
- Factory calibrated unit delivered, plug-and-play.

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## SPECIFICATIONS

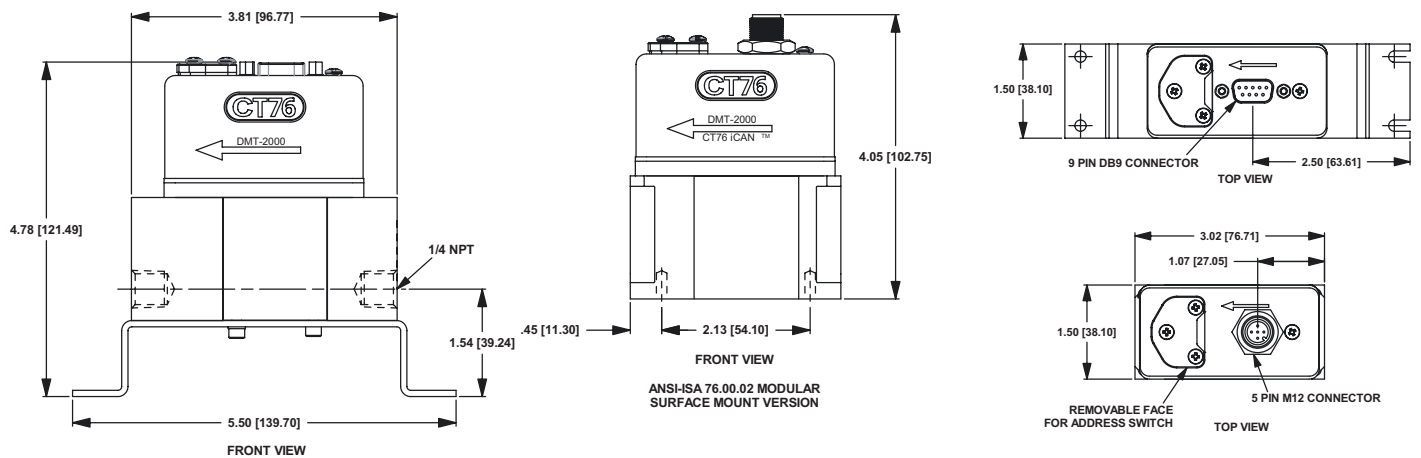
<b>ACCURACY</b>	± 2% Full Scale for flow
<b>REPEATABILITY</b>	± 1% for pressure and temperature
<b>LEAK INTEGRITY</b>	<0.25% Full scale range
<b>FLOW RANGES LIQUID (H<sub>2</sub>O EQUIVALENT)<sup>3</sup></b>	<1x10 <sup>-5</sup> alm-cc/sec of Helium {external}
<b>FLOW RANGE GAS (AIR EQUIVALENT)<sup>3</sup></b>	MAX: 500 ccm (.13gpm) MIN: 5 ccm (0.08gpm) Higher and lower ranges available, consult factory
<b>FLUID TYPES</b>	Low viscosity (<59cP) liquid and gas
<b>MAX COMMON MODE PRESSURE</b>	500 psig (34.5 bar) (Higher operational pressures available, consult factory)
<b>DIFFERENTIAL PRESSURE RANGE</b>	MAX: 15 psid TYPICAL: 5 psid
<b>FLUID CONNECTIONS</b>	ANSI / ISA-76 (Surface mount) 1/4" FNPT (inlet and outlet) industrial mount
<b>TEMPERATURE RANGE</b>	0 - 70°C (32 - 158°F)
<b>POWER</b>	30 mA@, 9.5 VDC± 10% (must be entity approved poer supply)
<b>ELECTRICAL CONNECTIONS</b>	M12 (5-pin, male) DB9 (9-pin, male)
<b>DIGITAL BUS PROTOCOLS</b>	CANbus (CT76 iCAN™ protocol) <sup>4</sup> Modbus RTU (Serial RS485)
<b>TURN DOWN RATION (FLOW RATE)</b>	50:1 (typically) (10:1 turndown at flow lower than 50 ccm)
<b>ENVIRONMENTAL PROTECTION</b>	IP65
<b>HAZARDOUS AREA AND ELECTRICAL COMPLIANCE</b>	CSA Class 1, Divisions 1 & 2, Group A, B, C, D; T4 ATEX/IEC EX: Zones 0 & 1 EX ia IIC; T4 EN 61326-1: 1998
<b>WETTED MATERIAL</b>	316SS body, sensor & valve internals PEEK or 316SS flow restriction Viton or Kalrez o-rings
<b>FLOW RESTRICTION OPTIONS</b>	Multi-stack Flow Configuration Modules (FCM) Porous Flow Module (PFM)

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## DMT PRODUCT MATRIX

SERIES-MODEL	OUTPUT OPTION	O-RING MATERIAL	PROCESS CONNECTOR	FLUID PHASE	SENSOR PROTECTION	OPTIONS	DESCRIPTION OF PRODUCT CODE
<b>DMT</b>							DMT Series Multivariable Flow Meter
<b>2000</b>							2000 Model, flow meter with multistack FCM
<b>2100</b>							2100 Model flow meter with laminar flow Element for low flow applications <sup>5</sup>
	<b>I</b>						Can bus (CT76 iCAN™)
	<b>M</b>						Modbus RTU
		<b>V</b>					Viton® O-rings
		<b>K</b>					Kalrez® O-rings
			<b>S</b>				Surface mount ANSI/ISA-76.00.02 compliant
			<b>N</b>				1/4" Female NPT connections
				<b>L</b>			Liquid phase
				<b>G</b>			Gas phase
					<b>N</b>		No bypass (default) (other options, consult factory)
						<b>(XXX)</b>	Option code (from factory)

Ordering Instructions: Application requirements must be specified at time of order with an online or downloadable application questionnaire, go to [www.CT76.com](http://www.CT76.com) or contact a CT76 customer service representative.



**Footnotes:**

1. Mass ow indication is possible in the DMT-2000/2100 by using pressure and temperature data to determine gas/vapor density. The chemical species/mixture/composition must be constant and must be known at time of calibration.
2. All hazardous area installations are dependent on using the proper entity approved equipment on stated in CT76 supplied hazardous area installation drawings. Please refer to associated product materials or contact CT76 for more information.
3. Maximum ow rates attainable under gas and liquid service are dependent on the uid viscosity, density, and the upstream and downstream pressures available. Please contact CT76 for more exact information.
4. CT76 protocol is compliant with the CAN bus Bosch 2.0b and ISO-11898 CAN bus standards which require low power in accordance with CAN in Automation OA 103 draft standard.
5. The DMT-2100 comes with porous ow module, Contact CT76 for an element which can meet your specification.



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CT76 markets to industries which require rugged, value-added, low-ow uid control devices, intrinsically-safe communication and sensors. Our markets include petrochemical, rening, biopharm, process analytical support and a wide variety of engineered OEM solutions. CT76 separates itself from the competition by oering highly engineered components that deliver critical safety and customer value.

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