CT76

BOISWOOD
GAS AND LIQUID CONTROL TECHNOLOGIES
Pressure & Vacuum
Flow
Level & Temperature
Tube & Fittings
HVACR
Custom Services

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[1] 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)[2].
  - » CANbus intrinsically safe digital bus (Class 1, Division 1, and ATEX Zone 0)[2].
- Robust industrial design, all stainless steel construction, IP65 (pending) for corrosive and high temperature environments.
- Cleanable flow elements clog resistant deign 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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CRANE Instrumentation & Sampling, HOKE®
PO Box 4866 • Spartanburg, SC 29305-4866
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SPECIFICATIONS

ACCURACY	± 2% Full Scale for flow
REPEATABILITY	± 1% for pressure and temperature
LEAK INTEGRITY	<0.25% Full scale range
FLOW RANGES LIQUID (H_2O EQUIVALENT)[3]	<$1x10^{-5}$ alm-cc/sec of Helium {external}
FLOW RANGE GAS (AIR EQUIVALENT)[3]	MAX: 500 ccm (.13gpm) MIN: 5 ccm (0.08gpm) Higher and lower ranges available, consult factory
FLUID TYPES	Low viscosity (<59cP) liquid and gas
MAX COMMON MODE PRESSURE	500 psig (34.5 bar) (Higher operational pressures available, consult factory)
DIFFERENTIAL PRESSURE RANGE	MAX: 15 psid TYPICAL: 5 psid
FLUID CONNECTIONS	ANSI / ISA-76 (Surface mount) 1/4" FNPT (inlet and outlet) industrial mount
TEMPERATURE RANGE	0 - 70°C (32 - 158°F)
POWER	30 mA@, 9.5 VDC± 10% (must be entity approved poer supply)
ELECTRICAL CONNECTIONS	M12 (5-pin, male) DB9 (9-pin, male)
DIGITAL BUS PROTOCOLS	CANbus (CT76 iCAN™ protocol)4 Modbus RTU (Serial RS485)
TURN DOWN RATION (FLOW RATE)	50:1 (typically) (10:1 turndown at flow lower than 50 ccm)
ENVIRONMENTAL PROTECTION	IP65
HAZARDOUS AREA AND ELECTRICAL COMPLIANCE	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
WETTED MATERIAL	316SS body, sensor & valve internals PEEK or 316SS flow restriction Viton or Kalrez o-rings
FLOW RESTRICTION OPTIONS	Multi-stack Flow Configuration Modules (FCM) Porous Flow Module (PFM)

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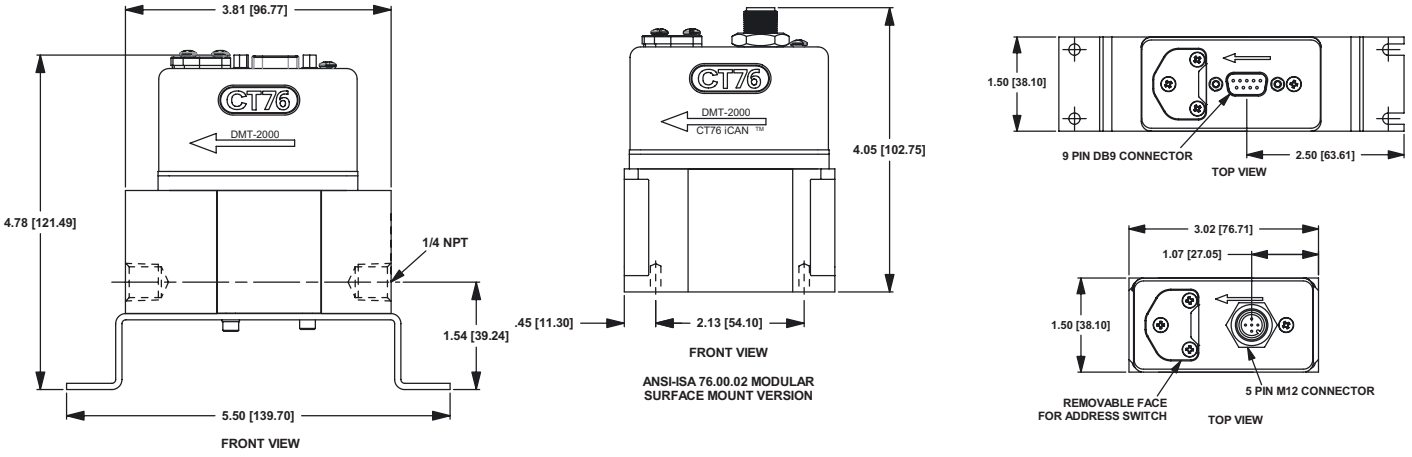
DMT PRODUCT MATRIX

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

Ordering Instructions: Application requirements must be specied at time of order with an online or downloadable application questionnaire, go to 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 protocal 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 specication.

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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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