



MDT500 Mounted to Meriam 50MC Series LFE

## Impressive Accuracy In Less Time

- Flow rate accuracy of +/- 0.8% of Reading
- Response time of less than 0.1 seconds
- Flow rate calculations of 10 per second

## Pressure Measurement

## NIST Traceable Accuracy

<u>+</u> .025 % of full scale including all effects of linearity, repeatability, hysteresis, and temperature (-20°C to +50°C)

**Operating Temperature** -4°F to +122°F (-20°C to +50°C)

## **Pressure Update Rate**

7 readings per second from both differential and absolute pressure sensors

# **Optional Pressure Ranges**

Differential Sensor 28 inches water column 10 inches water column

Absolute Sensor 38 psia 100 psia

# **Over Range Limits**

Differential Sensor 2x range when pressurized on P1 (HI) side only; 150 psi when applied simultaneously to P1 (HI) & P2 (LO) sides

Absolute Sensor 2x range

# MDT500 Multivariable Digital Transmitter

A Complete Flow Solution for Air and Gas Measurement

		MDT50	00	
		MULTIVARIABLE DAT		
neriam		MOLTIVARIABLE DAT	ATRANSMITTER	meria
	MEASUREMENTS		CALCULATED VALUES	
Differential Pressure	0.00000E+0	POUNDS_PER_SQUARE_INCH	Mass Row Rate 0.00000E+0	PER_MINUTE
Absolute Pressure	0.00000E+0	POUNDS_PER_SQUARE_INCH	Volumetric Flow Rate 0.00000E+0	
Temperature	0.00000E+0	DEGREES_FAHRENHEIT	Volumetric Flow Rate at Standard Conditions	
Relative Humidity	0.00000E+0	PERCENT	Density 0.00000E+0 POUNDS PER	CUBIC FOOT
		J	Viscosity 0.0000E+0 MECROPOISE	
LFE COEFFICIENTS		STANDARD CONDITIONS OF FLOW	CALCULATE TAKE MEASUREN	IENTS AND CALCULATE
Coefficient 1 0.00000	-0	DEFAULT STANDARD CONDITIONS		
Coefficient 2 0.00000		Temperature 7.00000E+1 DEGREES FAHRENHEIT		
Coefficient 3 0.00000E+0		Pressure 1.46960E+1 POUNDS PER SQUARE INCH	CONFIGURATION FILES	
Coefficient 4 0.00000	-0			
Coefficient 5 0.00000	+0	MDT COMMUNICATION	Leve controllering (12	
Equation CLASSIC	quation CLASSIC COML CONNECT		SAVE CONFIGURATION	

Screenshot of LabVIEW<sup>®</sup> Program (included)

## **Media Compatibility**

Differential Sensor Clean, dry, non-corrosive gases only (brass, 316 SS, Viton<sup>®</sup>, Silicon gel)

Absolute Sensor Media compatible with 316 SS

#### Resistance/Temperature Measurement

**NIST Traceable Accuracy** <u>+</u> .01 % of reading + .075 ohms including all effects of linearity, repeatability, hysteresis, and temperature

**Operating Temperature** -4°F to +122°F (-20°C to +50°C)

**Temperature Update Rate** 14 readings per second

## **Overall Technical Specifications**

Material Base Plate is 6061-T6 Aluminum

**Power** Powered via USB (5 volts)

**Media Compatibility** Clean, dry, non-corrosive gases only (brass, 316 SS, Viton, Silicon gel)

**Connections** Pressure: ¼" FNPT Power & Communications: USB – receptacle type Mini B RTD: M12 Connector

Software Supported Operating Systems Windows XP Windows 7

# Software Development Kit (SDK)

Example Programs with Source Code in LabVIEW<sup>®</sup> C# Application Programming Interface (API) Supporting

> .NET (C# / VB) LabVIEW<sup>®</sup> COM Interop

## Temperature Sensor Specifications

**Accuracy** Class AA Tolerance Class (per IEC 60751)

**Temperature Range** -58°F to +482°F (-50°C to +250°C) Connector is +185°F (+85°C Max)

Material 316L Stainless Steel Sheath and Housing

Temperature Probe Pt100 (100 Ohms at 0°C, .00385 TCR (alpha))

Probe Dimensions 1/4" diameter, 6" long

**Connection** 5 meter M12 molded cordset

## Enclosure Dimensions

Weight 1.5 lbs. (Hook up fittings add .26 lbs.)

Height 5.6" L x 3.6" W x 2.6" H

Compatible with All Meriam Laminar Flow Element Models Including







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