MDT500 Multivariable Digital Transmitter

A Complete Flow Solution for Air and Gas Measurement

MDT500 Mounted to Meriam 50MC Series LFE
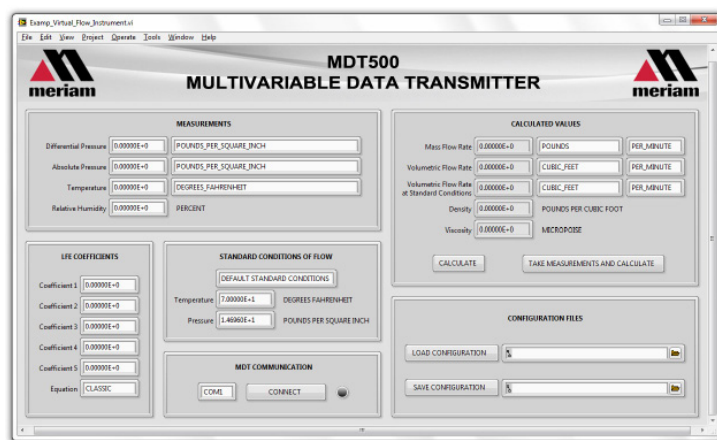
Screenshot of LabVIEW® Program (included)

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
± .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

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

Absolute Sensor
Media compatible with 316 SS

Resistance/Temperature Measurement

NIST Traceable Accuracy
± .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®
C#

Application Programming Interface (API) Supporting

> .NET (C# / VB)
> LabVIEW®
> 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
¼" 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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