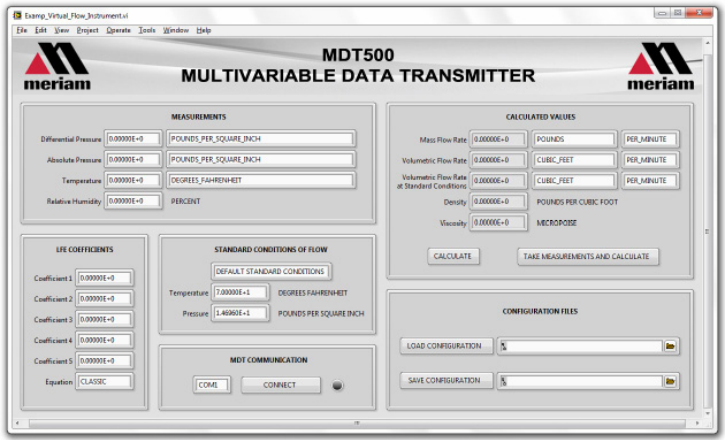
MDT500 Multivariable Digital Transmitter

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

Optional Pressure Ranges
Differential Sensor:
12 inches water column at 20°C
Absolute Sensor:
38 psia
100 psia

NIST Traceable Accuracy
Differential: ±0.05 % of full scale including all effects of linearity, repeatability, hysteresis, and temperature (-20°C to +50°C)
Absolute: ± 0.025 % 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)

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

Pressure Update Rate
7 readings per second from both differential and absolute pressure sensors

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
± 1 °F including all effects of linearity, repeatability, hysteresis, and temperature with Pt100 Probe connected.

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
USB: high power (500 mA) USB port or USB hub

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
Vista
Windows XP
Windows 7

Software Development Kit (SDK)
Example Programs with Source Code in LabVIEW® and C#
Supporting .NET (C# / VB)

Temperature Sensor Specifications

Accuracy
Class A 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
H x 2.6", W x 3.6", L x 5.6"
H x 66 mm, W x 91 mm, L x 142 mm

Compatible with All Meriam Laminar Flow Element Models Including

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