

MP502 Pressure Transmitter

4-20mA Output, Threaded Mount

Introduction

Piezo-Metrics Model MP502 is a miniature, low cost, general use pressure transmitter that automatically compensates for line resistance and power supply changes. These transmitters are made of corrosion resistant titanium (6AL4V). They utilize high reliability semiconductor strain gages bonded directly to the inside surface of the machined diaphragm.

Pressure on the diaphragm is applied through the hole in the 10-32 threaded nose which is then converted to an electric signal proportional to the pressure.

The Model MP502 is available in either Gage (PSIG), Absolute (PSIA), or Sealed Reference (PSIR) pressure configurations. The Absolute and Sealed Reference configurations utilize a welded Titanium hermetic header. The hermetic header is located just behind the strain gage diaphragm section of the sensor and seals the sensitive gages in a vacuum which dramatically increases stability and reliability. Long term stability versions are available.



Applications

- Test & measurement equipment
- Production equipment & controls
- Energy Controls
- Laboratory instruments & equipment
- Liquid level
- Calibration Equipment

Performance Options (4-20mA Output) *

	A	C	Units
Balance (Zero) **	4.00 ± 0.50	4.00 ± 0.20	mA
Full Scale Sensitivity	16.00 ± 0.50	16.00 ± 0.20	mA
Static Error Band (Best Fit Straight Line)	± 0.50	± 0.25	%FS (BFSL)
Thermal Balance (Zero) Shift	± 0.02	± 0.01	%FS/°F
Thermal Sensitivity Shift	± 0.02	± 0.01	%FS/°F

Standard Long Term Stability	± 2.00 %FS/Year Max.				
Long Term Stability Options	L10 = <1.0	L5 = <0.5	L2 = <0.2	L1 = <0.1	%FS/year

Mechanical

Pressure Ranges	50, 100, 200, 300, 500, 1k, 2k, 3k, 5k, 7K * PSI
Other ranges possible	Consult Factory
Over Pressure (No change out of spec.)	2.0x Range
Burst Pressure	6.0x Range

Electrical

Input Voltage (Standard)	24.0 Volts DC
Input Voltage Range (Operational)	12.0 - 30.0 Volts DC (See Load Chart)
Maximum Input Voltage	32 V for short periods
Input Load Resistance (Standard)	500 Ohms (See Load Chart)
Insulation Resistance Minimum	50 Megohms @ 50 VDC

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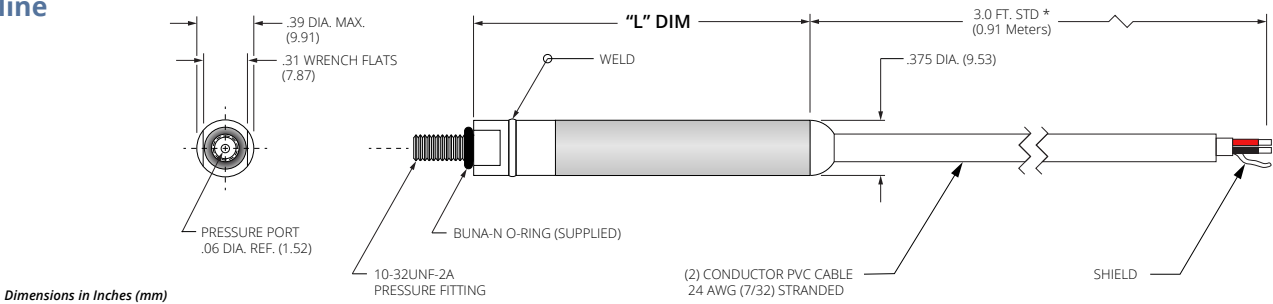


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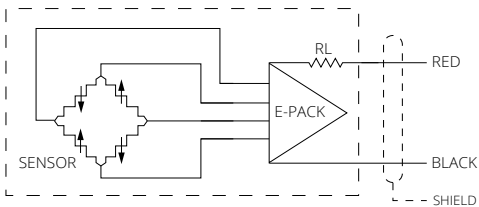
Environmental

Storage and Operating Temperature	0° to 180°F
Compensated Temperature Range	30° to 130°F *
Other Temperature Compensated Ranges	Consult Factory
Acceleration	100g's any axis
Media Compatibility (wetted surface)	Liquids & Gases compatible with Titanium 6AL4V

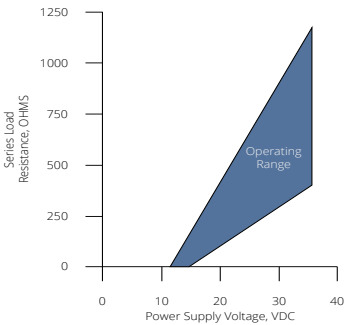
Outline



Schematic



Voltage vs Load



Unit Type	"L" DIM
Gage	2.50 MAX. (63.5)
Absolute or Sealed Reference	2.80 MAX. (71.2)

Ordering Format

Model MP502X - XXXX - X

Performance Specification XXXX

Pressure Range PSI XXXX

Header Option X

G = Gage (No Header)
A = Absolute (With Header)
R = Sealed Reference (With Header)

Long-term Stability Option X

MP502C - 500A - L5

LTS < 0.50 %FS/yr (Leave blank if no LTS)

Absolute Pressure

0 - 500 PSI

C Performance Options

Model MP502

Example

* Custom Performance Options and special cable length available - Consult Factory.
** Balance (Zero) set point: Gage (PSIG) & Sealed Reference (PSIR) - (Zero) set at "0"PSIG atmospheric pressure. Absolute (PSIA) - (Zero) set at "0"PSIA pressure relative to an absolute vacuum.

