

**MP402  
PRESSURE TRANSMITTER**

Micron's Model MP402 is a miniature, low cost, general use pressure sensor that automatically compensates for line resistance and power supply changes. This transducer is made of corrosive resistant titanium (6AL4V) and utilizes high reliability bulk type semiconductor strain gages bonded directly to the inside surface of the machined diaphragm.

Absolute or sealed reference sensors are available as an option.

The hermetic header is located just behind the strain gage diaphragm section of the sensor, sealing the sensitive gages to an inert environment which dramatically increases stability and reliability.

Consult the factory for special temperature or pressure ranges and high-vibration resistant options. Long term stability versions are available.



**APPLICATIONS**

- TEST & MEASUREMENT EQUIPMENT
- PRODUCTION EQUIPMENT & CONTROLS
- ENERGY CONTROLS
- LABORATORY INSTRUMENTS & EQUIPMENT
- LIQUID LEVEL
- CALIBRATION EQUIPMENT

**PERFORMANCE OPTIONS (ALL VALUES MAXIMUM)**

	A	B	C	D	Units
Balance (Zero)	4.00±0.50	4.00±0.30	4.00±0.20	4.00±0.20	mA
Full Scale Sensitivity	16.00±0.50	16.00±0.30	16.00±0.20	16.00±0.20	mA
Static Error Band	±0.50	±0.25	±0.25	±0.25	%FS <sup>*BFSL</sup>
Thermal Balance	±0.02	±0.01	±0.01	±0.005	%FS/°F
Thermal Sensitivity	±0.02	±0.01	±0.01	±0.005	%FS/°F
Long Term Stability	±2.00	±2.00	±2.00	±2.00	%FS/year

\*BFSL=Best Fit Straight Line

**MECHANICAL**

Standard Pressure Ranges	25, 50, 100, 200, 300, 500, 1K, 2K, 3K, 5K,
Non Standard Pressure Ranges	5, 10, 15, 20, 30, 150 PSI
Other ranges possible	Consult Factory
Over Pressure (No change out of spec.)	2.0x Range
Usable Pressure (Small change in balance)	3.0x Range
Burst Pressure	6.0x Range

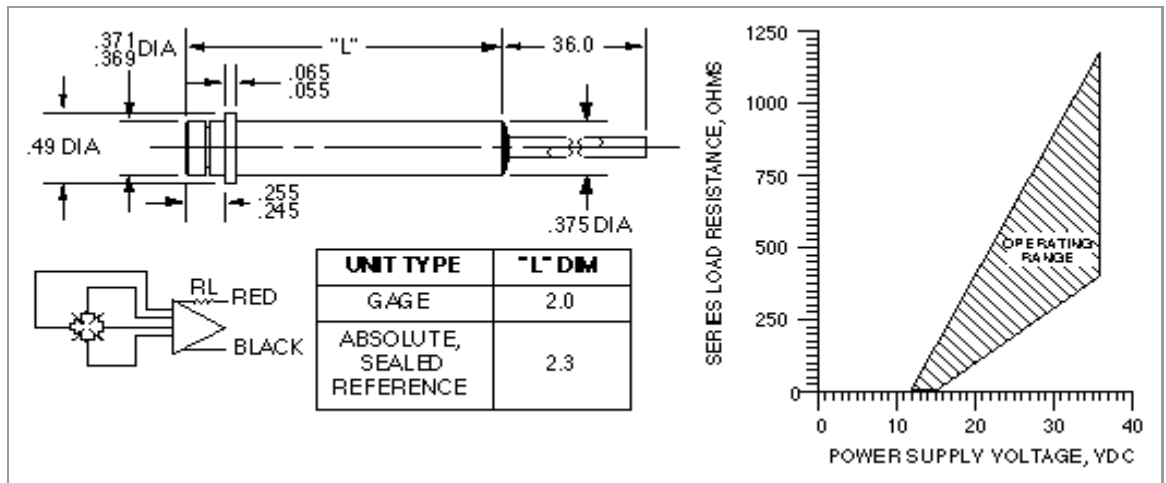
**ENVIRONMENTAL**

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

**ELECTRICAL**

Input Voltage (Standard)	24 VDC
Input Load Resistance (Standard)	500 Ohms
Maximum Input Voltage	30 V for short periods
Insulation Resistance Minimum	50 MOhms @ 50 VDC

**SCHEMATIC**



Ordering Guidelines	Example										
<p>A → B → C → D → E</p>	<p>MP402 → C → 500 → A → L2</p>										
<p><b>A.</b> Model (MP402)</p>	<p><b>Model MP402-C-500-A-L2</b> Is a model Transducer with a C performance option. Pressure range 500 psiA that has a sealed back end to Absolute, with a long term stability option added.</p> <table border="1"> <thead> <tr> <th colspan="2">Long Term Stability Options</th> </tr> </thead> <tbody> <tr> <td>L1</td> <td>&lt; 0.10% FS/Year</td> </tr> <tr> <td>L2</td> <td>&lt; 0.20% FS/Year</td> </tr> <tr> <td>L5</td> <td>&lt; 0.50% FS/Year</td> </tr> <tr> <td>L10</td> <td>&lt; 1.00% FS/Year</td> </tr> </tbody> </table>	Long Term Stability Options		L1	< 0.10% FS/Year	L2	< 0.20% FS/Year	L5	< 0.50% FS/Year	L10	< 1.00% FS/Year
Long Term Stability Options											
L1		< 0.10% FS/Year									
L2		< 0.20% FS/Year									
L5		< 0.50% FS/Year									
L10	< 1.00% FS/Year										
<p><b>B.</b> Performance Specification</p>											
<p><b>C.</b> Pressure Range PSI</p>											
<p><b>D.</b> Header Option                      G = Gage (No Header)                      A = Absolute                      R = Sealed Reference</p>											
<p><b>E.</b> Long Term Stability Option » (If Required)</p>											

Date Issued: May 2005