

Micron's Model MPT40 is a flush mountable, miniature, low cost, general use pressure/temperature transducer. This transducer is made of corrosive resistant titanium (6AL4V). It utilizes high reliability bulk type semi-conductor strain gages and temperature sensors bonded directly to the inside surface of the machined diaphragm.

Titanium hermetic headers permit offering the MPT40 series with absolute or sealed reference options. The hermetic header is located just behind the strain gage diaphragm section of the sensor. Sealing the sensitive gages to an inert environment dramatically increases stability and reliability.

Long term stability versions are available.

For line pressure fittings and calibration adaptors, see Micron's Adaptor brochure.

FEATURES

- Pressure and temperature transducer.
- Made from corrosion resistant titanium.
- Hermetic headers permit offering the MPT 40 series with absolute or sealed reference options.
- Long term stability options are available.



Model MPT 40

APPLICATIONS

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

MECHANICAL

Standard Pressure Ranges	25, 50, 100, 200, 300, 500, 1K, 2K, 3K, 5K, 7K psi
Other pressure options available	Contact Technical Support for Details
Over Pressure (No change in specifications)	2.0x Range
Usable Pressure (Small change in balance)	3.0x Range
Burst Pressure	6.0x Range

PERFORMANCE (PRESSURE) OPTIONS (ALL VALUES MAXIMUM)

	Specification Options				Units
	A	B	C	D	
Balance (Zero)	±3.00	±2.00	±2.00	±2.00	mV
Full Scale Sensitivity	20.0±2.00	20.0±2.00	20.0±2.00	20.0±2.00	mV/V
Static Error Band	±0.50	±0.25	±0.25	±0.25	%FS BFSL*
Thermal Balance (Zero) Shift	±0.02	±0.02	±0.01	0.005	%FS/°F
Thermal Sensitivity Shift	±0.02	±0.02	±0.01	±0.005	%FS/°F
Long Term Stability	± 2.00 %FS/Year Max.				

PERFORMANCE (TEMPERATURE)

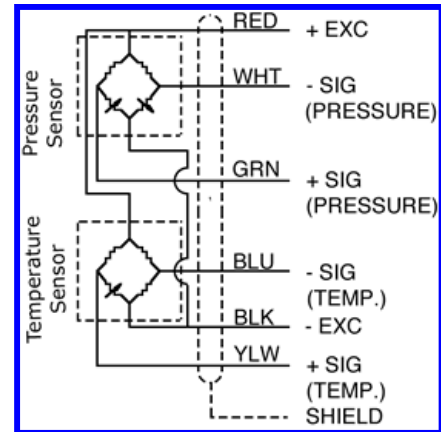
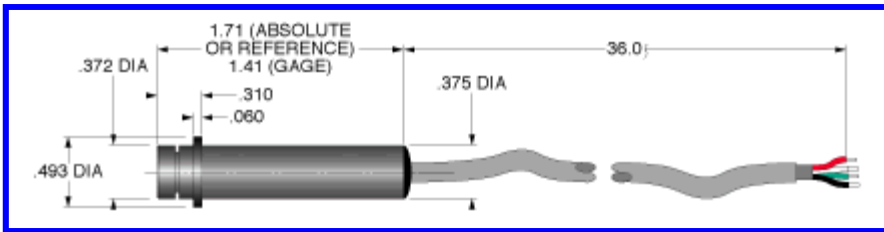
Balance @ 0°C (32°F)	± 2.00 mV
Sensitivity (5.0 VDC excitation)	4.8 ± 0.5 mV/°F
Static Error Band	±0.5 °F
Input Resistance	12K ± 1K Ohms
Output Resistance	11K ± 1K Ohms

*BFSL=Best Fit Straight Line

Model MPT 40

ENVIRONMENTAL	
Storage and Operating Temperature	-50° to +180°F (-45° to +84° C)
Compensated Temperature Range	30° to 130°F (-1° to +55° C)
Other Temperature Compensated Ranges	Contact Technical Support for Details
Acceleration	100g's any axis (Consult factory for high vibration options)
Media Compatibility (wetted surface)	Liquids & Gases compatible with Titanium 6AL4V
ELECTRICAL	
Input	5.0 Volts DC or AC
Maximum Voltage	30 V for short periods
Input Resistance (Nominal) at 78° F	1500 ± 500 Ohms
Pressure Output Resistance (Nominal) at 78° F	850 ± 200 Ohms
Temperature Resistance 78° F	4000 ± Ohms
Insulation Resistance Minimum	50 M Ohms @ 50 VDC

SCHEMATIC AND WIRING DIAGRAM



Ordering Guidelines	Example										
<div style="display: flex; align-items: center; gap: 10px;"> <div style="border: 1px solid black; padding: 5px; text-align: center;">A</div> <div style="font-size: 20px;">➔</div> <div style="border: 1px solid black; padding: 5px; text-align: center;">B</div> <div style="font-size: 20px;">➔</div> <div style="border: 1px solid black; padding: 5px; text-align: center;">C</div> <div style="font-size: 20px;">➔</div> <div style="border: 1px solid black; padding: 5px; text-align: center;">D</div> <div style="font-size: 20px;">➔</div> <div style="border: 1px solid black; padding: 5px; text-align: center;">E</div> </div>	<div style="display: flex; align-items: center; gap: 10px;"> <div style="border: 1px solid black; padding: 5px; text-align: center;">MPT 40</div> <div style="font-size: 20px;">➔</div> <div style="border: 1px solid black; padding: 5px; text-align: center;">C</div> <div style="font-size: 20px;">➔</div> <div style="border: 1px solid black; padding: 5px; text-align: center;">500</div> <div style="font-size: 20px;">➔</div> <div style="border: 1px solid black; padding: 5px; text-align: center;">R</div> <div style="font-size: 20px;">➔</div> <div style="border: 1px solid black; padding: 5px; text-align: center;">L5</div> </div>										
A. Model (MPT 40)	Model MPT40-C-500-R-L5 is a model MPT40 Transducer with a C performance option. The pressure range is 500 psi, R has a sealed reference and an L5 is the long term stability option. <table border="1" style="margin-top: 10px; width: 100%;"> <thead> <tr> <th colspan="2">Long Term Stability Options</th> </tr> </thead> <tbody> <tr> <td>L1</td> <td>< 0.10% FS/Year</td> </tr> <tr> <td>L2</td> <td>< 0.20% FS/Year</td> </tr> <tr> <td>L5</td> <td>< 0.50% FS/Year</td> </tr> <tr> <td>L10</td> <td>< 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										
B. Performance Specification											
C. Pressure Range PSI											
D. Header Option G = Gage (No Header) A = Absolute R = Sealed Reference											
E. Long Term Stability Option » (If Required)											