

## MSP-400

### EMI/RFI Protected Stainless Steel Isolated Pressure Transducer


  
**ISO  
9002**

- **Low Cost OEM**
- **100% Leak Proof**

#### Features

**One-piece Stainless Steel Construction**  
**Ranges up to 10,000 PSI or 700 BAR**  
**Amplified Outputs**  
**Excellent Accuracy**  
**Wide Operating Temperature Range**

#### Applications

**Pumps and Compressors**  
**Hydraulic/Pneumatic Systems**  
**Off Road**  
**Energy and Water Management**  
**Pressure Instrumentation**  
**Refrigeration Equipment**  
**Agriculture Equipment**  
**Train Braking Systems**

#### Description

The MSP series pressure transducers set a new price-performance standard for low cost, high volume, commercial and industrial applications. This series is suitable for measurement of liquid or gas pressure, even for difficult media such as contaminated water, steam, and mildly corrosive fluids or gases.

The transducer pressure cavity is machined from a solid piece of 17-4 PH stainless steel. The standard version includes a 1/4 NPT pipe thread allowing a leak-proof, all metal sealed system. There are no o-rings, welds or organics exposed to the pressure media. The durability is excellent.

Measurement Specialties proprietary Microfused technology, derived from demanding aerospace applications, employs micromachined silicon piezoresistive strain gages, fused with high temperature glass to a stainless steel diaphragm. This approach achieves media compatibility simply and elegantly providing an exceptionally stable sensor without the p-n junctions of conventional micromachined sensors.

This product is geared to the OEM customer using medium to high volumes. The standard version is suitable for many applications, but the dedicated design team at our Transducer Engineering Center stands ready to provide a semi-custom design where the volume and application warrants.



- **No Leaks**
- **No Welds**
- **No "O" Rings**
- **No Silicone Oil**

## SPECIFICATIONS

### Performance at 77°F (25°C):

Pressure range	0 to 100, 250, 500, 1000, 2500, 5000, 10000 PSI (consult factory for compound ranges) (0 to 7, 17, 35, 70, 175, 350, 700 BAR)	
Accuracy (combined linearity, hysteresis and repeatability)	± .5% of FS Span (for higher accuracy consult factory)	
Media compatibility	17-4 PH stainless steel (for other material consult factory)	
Pressure ports	1/4" NPT (for other ports consult factory)	
Pressure cycles	>10 <sup>8</sup> full pressure cycles	
Pressure overload	2X rated pressure	
Burst pressure	5X or 20000PSI whichever is less	
Long term stability (1 year)	± 0.25% FS Span (typical)	

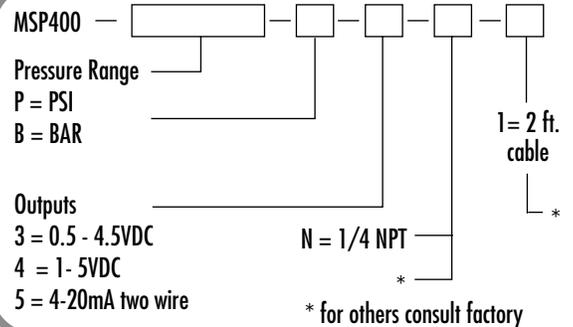
### Electrical:

Supply voltage	5VDC	10-30VDC
Supply current	<10mA	<15mA
Outputs	0.5 - 4.5VDC, ratiometric to supply (3)	1-5VDC, fixed (4) 4-20mA two wire (5)
Interface	2 ft PVC jacketed cable (for other options consult factory)	
Zero offset	± 2% of FS Span (for tighter tolerances consult factory)	
Span tolerance	± 2% of FS Span (for tighter tolerances consult factory)	
Output load	5K Ohm (min) for high level voltage 0 Ohms @ 10V (1100 Ohms @ 32V) for 4-20mA	
Noise	< 2mVRMS	
Bandwidth (-3dB)	DC to 1KHz (Typical)	

## ENVIRONMENTAL

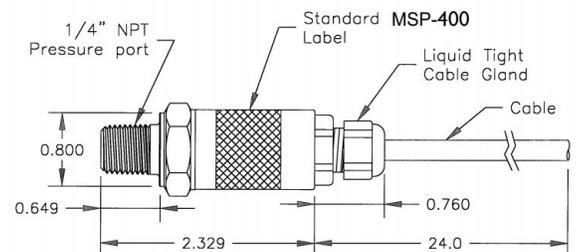
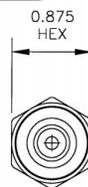
Operating temperature range	-40° to 185°F (-40 to 85°C), (For other temperature ranges consult factory)
Compensated temperature range	30 to 158°F (0 to 70°C)
Zero thermal error	< ± 1.5% of FS Span
Span thermal error	< ± 1.5% of FS Span
Storage temperature range	-40 to 212°F (-40 to 100°C)
Shock	50g, 11 msec half sine shock per MIL standard 202F, method 213B, condition A
Vibration	±20g MIL-STD-810C, Procedure 514.2, Figure 514.2-2, curve L
EMI/RFI Immunity	EN 50081-2 EN 50082-2 (10V/M, 26-1000MHz) EN 61326 (Effective July 1, 2001)

## ORDERING



### Electrical Connections:

<b>Outputs:</b>	<b>3/4</b>	<b>5</b>
Red	+Supply	Red
Black	Ground	Black
White	Output	+Supply Output



DIMENSIONS IN INCHES AND ARE REFERENCE ONLY.

**M**  
MEASUREMENT  
SPECIALTIES