

## MSP-310

### Stainless Steel Isolated Pressure Transducer With Temperature Output


  
**ISO  
9002**

- **Low Cost OEM**
- **100% Leak Proof**  
No "O" Rings, No Silicone Oil, No Welds

#### Features

Rugged, Reliable, Low Cost  
 One-piece Stainless Steel Construction  
 Ranges up to 10,000 PSI or 700 BAR  
 Pressure and Temperature Outputs  
 Excellent Accuracy  
 Wide Operating Temperature Range

#### Applications

Pumps and Compressors  
 Hydraulic/Pneumatic Systems  
 Off Road  
 Energy and Water Management  
 Pressure Instrumentation  
 CNG (compressed natural gas)  
 Transmissions

#### 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**

**Performance at 77°F (25°C):**

Pressure range	0 to 100, 250, 500, 1000, 2500, 5000, 10000 PSI (0 to 7, 17, 35, 70, 175, 350, 700 BAR)
Accuracy (combined linearity, hysteresis and repeatability)	<± 1% 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 20000 PSI whichever is less
Long term stability (1 year)	± 0.25% FS Span (Typical)

**Temperature**

Output	10mV/°K
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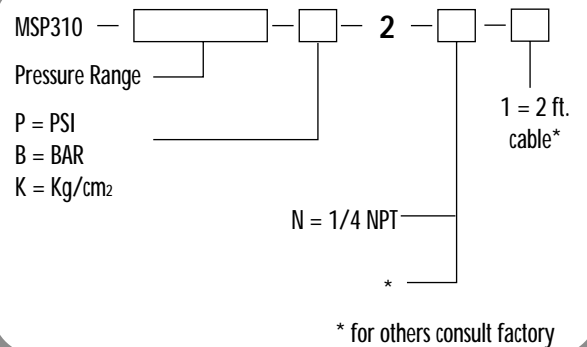
**Electrical:**

Supply voltage	5VDC
Supply current	<10mA
Output	0-100mVDC, ratiometric to supply (2)
Interface	2 ft. PVC jacketed cable (for other options consult factory)
Zero offset	± 3% of FS Span
Span tolerance	± 2% of FS Span
Output load	1M Ohm
Bandwidth (-3dB)	DC to 1KHz min

**ENVIRONMENTAL**

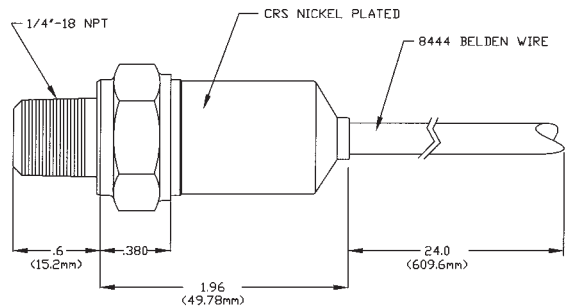
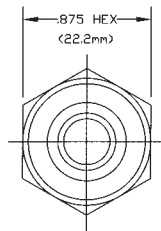
Operating temperature range	-4 to 185°F (-20 to 85°C), (For other temperature ranges consult factory)
Compensated temperature range	30 to 130°F (0 to 55°C)
Zero thermal error	< ± 2% of FS Span
Span thermal error	< ± 2% of FS Span
Storage temperature range	-20 to 185°F (-30 to 85°C)
Shock	100G, 1/2 sine, 11msec
Vibration	10G, 20 to 2000Hz

**ORDERING**



**Electrical Connections:**

- Red +Supply
- Black -Supply
- White -Output
- Green +Output
- Brown Temperature output



MEASUREMENT  
SPECIALTIES

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