

MSP-320 Stainless Steel Isolated Low Pressure Transducer

ISO
9002

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

Features

One-piece Stainless Steel Construction
Ranges 0-25 to 75 PSI
0-1.5 to 6 BAR
Amplified Outputs, 1-5v or 4-20mA
Excellent Accuracy
Wide Operating Temperature Range

Applications

Pneumatic Systems
Automotive Test Systems
Energy and Water Management
Pressure Instrumentation
Refrigeration — Freon and Ammonia Based
Diesel Fuel Management
Tank Level Metering

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.

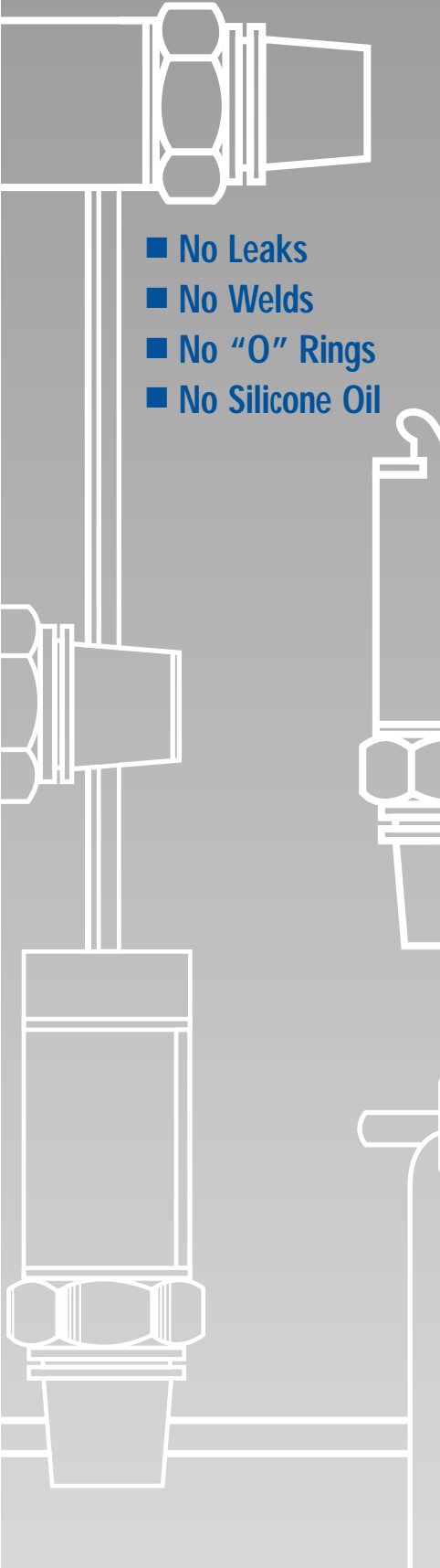
The transducer pressure cavity is machined from a solid piece of 17-4 PH stainless steel. The standard version includes a 1/4 NPT pipe thread allowing a leak-proof, all metal sealed system. There are no o-rings, welds or organics exposed to the pressure media. The durability is excellent.

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	0–25, 50, 75 PSI, (consult factory for compound ranges) 0–1.5, 3.0, 6 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 ⁸ full pressure cycles
Pressure overload	2X rated pressure
Burst pressure	10 times or 500 PSI whichever is less
Long term stability (1 year)	± 0.50% FS Span, (Typical)

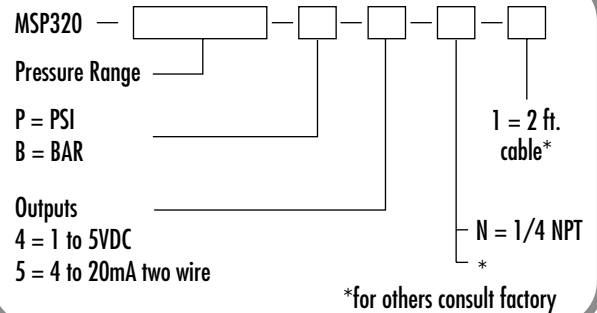
Electrical:

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

ENVIRONMENTAL

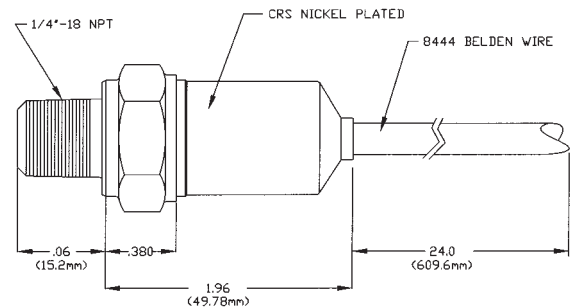
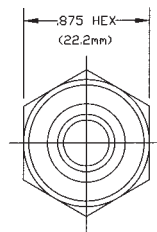
Operating temperature range	-4 to 185°F (-20 to 85°C), (For other temperature ranges consult factory)
Compensated temperature range	30 to 130°F (0 to 55°C)
Zero thermal error	< ± 2% of FS Span
Span thermal error	< ± 2% of FS Span
Storage temperature range	-20 to 185°F (-30 to 85°C)
Shock	50g, 11msec 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

ORDERING



Electrical Connections:

Outputs:	4	5
Red	+Supply	Red +Supply
Black	Ground	Black Output
White	Output	



UNITED STATES
Measurement Specialties, Inc.
PO Box 799
Valley Forge, PA 19482
Tel: (610) 650-1500 Fax: (610) 650-1509
Email: sensors@msiusa.com
Web site: www.msiusa.com

P/N: 2001314 10/00

M
MEASUREMENT
SPECIALTIES