

# MSP 320

**Stainless Steel Isolated Pressure Transducer with Temperature Output**

## Low Cost OEM; 100 Percent Leak Proof

No "O" Rings, No Silicone Oil, No Welds

**The MSP 320** 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.

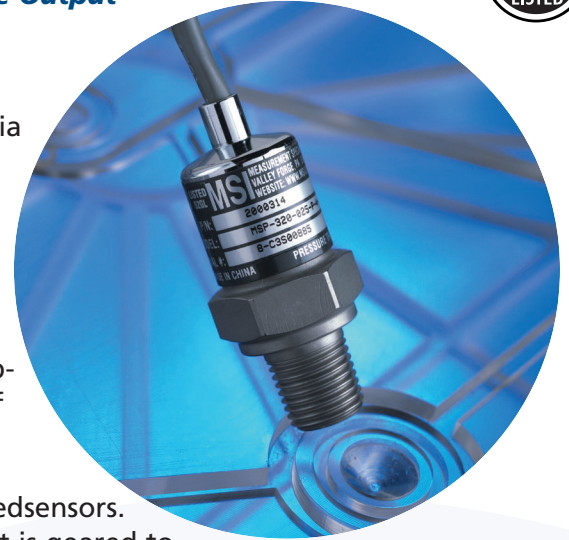
The transducer pressure cavity is machined from a solid piece of 17-4 PH stainless steel. The standard version includes a 1/4 NPT pipe thread allowing a lead-proof, all metal sealed system. There are no o-rings, welds or organics exposed to the pressure media. The durability is excellent.

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.



### 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 & Ammonia Based)
- ◆ Diesel Fuel Management
- ◆ Tank Level Metering

### Environmental Performance

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 thermal error	<±2% of FS
Storage temperature range	-20 to 185°F (-30 to 85°C)
Shock	50g, 11msec half sine shock per MIL standard 202F, method 213 B, condition A
Vibration	±20g MIL-STD-810C, Procedure 514.2, Figure 514.2-2, curve L

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 innovation • performance • reliability

Schaevitz  
 ICSensors  
 Microfused  
 Piezo Film

## mechanical specifications

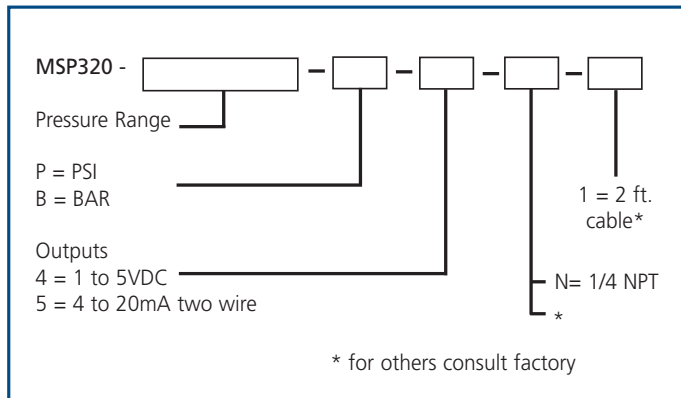
### Performance at 77° F (26° C)

Pressure range	0 to 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 (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	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 <2mVRMS
Noise	DC to 1KHz(Typical)
Bandwidth (-3dB)	

## ordering information



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

## mechanical dimensions

