

MSP 430

High Pressure EMI/RFI Protected Stainless Steel Isolated Pressure Transducer

Low Cost OEM; 100 Percent Leak Proof

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

The MSP 430 expands the MSP series of pressure transducers to offer an EMI/RFI protected pressure transducer for high pressure off road, diesel and industrial applications. This capability, combined with a transducer pressure cavity machined from a solid piece of 17-4 PH stainless steel, provides the OEM customer with a leak-proof, low cost, quality pressure transducer.

Measurement Specialties achieves the reliable, low drift MSP-430 with advances in sensor technology and a simple, elegant industrial package design. Durability is demonstrated by excellent shock, vibration and thermal insensitivities and overage protection to 37,500 psi. There are no O rings, welds or organics exposed to the pressure. No fluids are used. The diaphragm is part of the single piece, machined stainless steel body. Even difficult media such as contaminated water, steam, and mildly corrosive fluids or gases are handled to standardize all your needs, and realize savings, with a single product.

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
- ◆ EMI/RFI Protection
- ◆ Amplified Outputs
- ◆ Excellent Accuracy
- ◆ Wide Operating Temperature Range
- ◆ Vibration, Shock and Thermal
- ◆ Resistance

APPLICATIONS

- ◆ Diesel Injection
- ◆ Hydraulic Systems
- ◆ Off Road
- ◆ Water Jetting
- ◆ Test Stands
- ◆ Downhole
- ◆ Industrial Systems

Environmental Performance

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 thermal error	<±1.5% of FS
Storage temperature range	-40 to 212°F (-40 to 100°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
EMI/RFI Immunity	100V/n, 150kHz to 230 MHz (EN61000-4-6)

msisensors
innovation • performance • reliability

Schaevitz
ICSensors
Microfused
Piezo Film

mechanical specifications

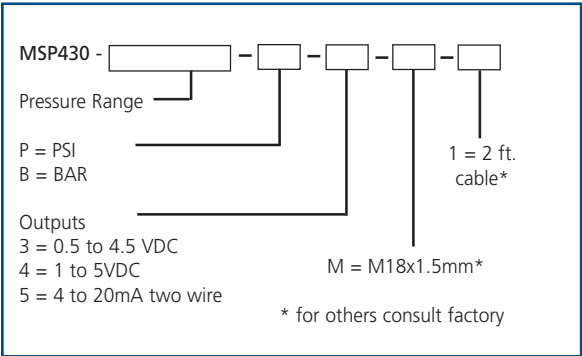
Performance at 77° F (26° C)

Pressure range	0 to 26,000 PSI (1800 BAR)
Accuracy (combined linearity, hysteresis and repeatability)	±.5% of FS (for higher accuracy consult factory)
Media compatibility	17-4 PH stainless steel (for other material consult factory)
Pressure ports	M18x1.5mm (for custom ports consult factory)
Pressure cycles	>10 ⁸ full pressure cycles
Pressure overland	37,500 PSI
Burst pressure	55,000 PSI
Long term stability (1 year)	±0.25% FS (Typical)

Electrical:

Supply voltage	5VDC	10-30VDC
Supply current	<10mA	<15mA
Outputs	0.5-4.5V DC, ratiometric to supply (3)	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 (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)	

ordering information



Electrical Connections:

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

mechanical dimensions

