

MSP-600

New High Accuracy, Digitally Compensated EMI/RFI Protected Stainless Steel Isolated Pressure Transducer

ISO
9001

- High Accuracy
- Low Cost OEM
- 100% Leak Proof

Features

High Accuracy
Digitally Compensated
One-piece Stainless Steel Construction
Ranges up to 10,000 PSI or 700 BAR
Amplified Outputs
Wide Operating Temperature Range
Low Pressure Configuration

Applications

Pumps and Compressors
Hydraulic/Pneumatic Systems
Off Road/Mobile Equipment
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.

■ 1% Total
Error Band

■ No Leaks

■ No Welds

■ No "O" Rings

■ No Silicone Oil

NEW
DIGITALLY
COMPENSATED
DESIGN

SPECIFICATIONS

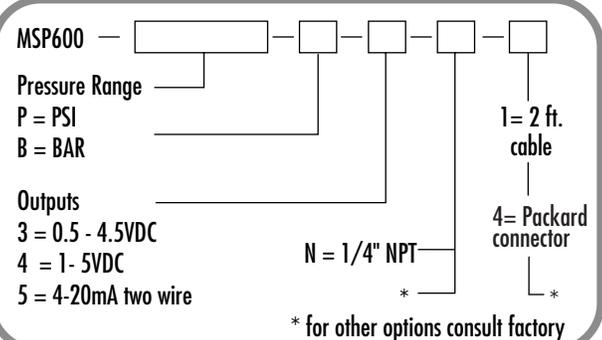
Performance at 25°C (77°F):

Pressure range	0-25, 50, 75, 100, 250, 500, 1000, 2500, 5000, 7500, 10000 PSI (0-3, 6, 7, 17, 35, 70, 175, 350, 525, 700 BAR)	
Accuracy, % of FS Span (combined linearity, hysteresis and repeatability)	± 0.25% BSL, max (per ISA S37.2)	
Media compatibility	17-4 PH stainless steel (optional 316L stainless)	
Pressure cycles	10 million, minimum	
Pressure overload	2 times rated pressure	
Burst pressure	4 times full scale or 20,000 PSI, whichever is less	
Long term stability (1 year)	± 0.25% FS Span (Typical)	
Electrical:	Ratiometric	Non-Ratiometric
Supply voltage	4.75 to 5.25VDC	10 - 30VDC
Supply current	<10mA	<25mA
Output	0.5 to 4.5V, at 5V (3)	1 - 5V, three wires (4) 4 - 20mA, two wires (5)
Load impedance	> 100k Ohms for quoted performance for 4 - 20mA; 0.05(Vsupply-10)k Ohms (maximum)	
Bandwidth	DC to 1KHz (Typical)	
Standard connector options	Packard connector - Metri-pack 150, 3 pins Cable - 24" length (Additional connectors available upon request)	

ENVIRONMENTAL

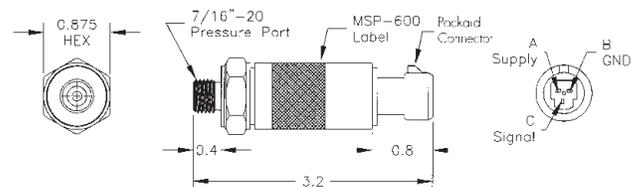
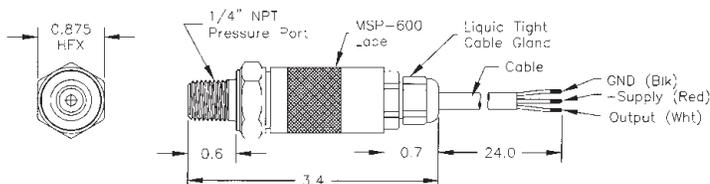
Operating temperature range	-40° to 100°C (125°C available, consult factory)
Compensated temperature range	-20° to 85°C (125°C available, consult factory)
Total error band (over compensated temperature range)	< ± 1% of FS (75-10,000 PSI) < ± 1.5% of FS (25-50 PSI)
Storage temperature range	-45° to 100°C
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)
Humidity	95% RH, condensing

ORDERING



Electrical Connections:

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



Dimensions In Inches And Are Reference Only

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