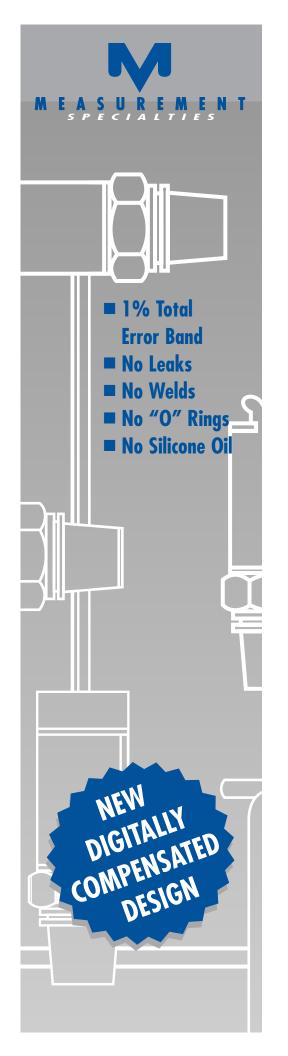
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# MSP-600 New High Accuracy, Digitally Compensated EMI/RFI Protected Stainless Steel Isolated Pressure Transducer



- 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



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.

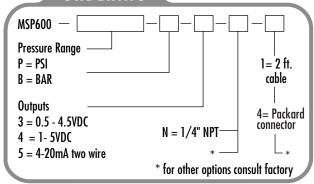
#### **SPECIFICATIONS**

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				
(0-3, 6, 7, 17, 35, 70, 175, 350, 525, 700 BAR)  Accuracy, % of FS Span (combined linearity, hysterisis and repeatability)  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)  ectrical: 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	formance at 25°C (77°F):			
(combined linearity, hysterisis and repeatability)  Media compatibility 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)  ectrical: Supply voltage 4.75 to 5.25VDC 10 - 30VDC Supply current Output 0.5 to 4.5V, at 5V (3) 1 - 5V, three wires (4) 4 - 20mA, two wires (5) Load impedance  17-4 PH stainless steel (optional 316L stainless) 10 million, minimum 2 times rated pressure 4 times full scale or 20,000 PSI, whichever is less 4 times full scale or 20,000 PSI, whichever is less 4 times full scale or 20,000 PSI, whichever is less 4 times full scale or 20,000 PSI, whichever is less 4 times full scale or 20,000 PSI, whichever is less 4 times full scale or 20,000 PSI, whichever is less 4 times full scale or 20,000 PSI, whichever is less 4 times full scale or 20,000 PSI, whichever is less 4 times full scale or 20,000 PSI, whichever is less 4 times full scale or 20,000 PSI, whichever is less 4 times full scale or 20,000 PSI, whichever is less 4 times full scale or 20,000 PSI, whichever is less 4 times full scale or 20,000 PSI, whichever is less 4 times full scale or 20,000 PSI, whichever is less 4 times full scale or 20,000 PSI, whichever is less 4 times full scale or 20,000 PSI, whichever is less 4 times full scale or 20,000 PSI, whichever is less 4 times full scale or 20,000 PSI, whichever is less 4 times full scale or 20,000 PSI, whichever is less 4 times full scale or 20,000 PSI, whichever is less 4 times full scale or 20,000 PSI, whichever is less 4 times full scale or 20,000 PSI, whichever is less 4 times full scale or 20,000 PSI, whichever is less 4 times full scale or 20,000 PSI, whichever is less 4 times full scale or 20,000 PSI, whichever is less 4 times full scale or 20,000 PSI, whichever is less 4 times full scale or 20,000 PSI, whichever is less 4 times full scale or 20,000 PSI, whichever is less 4 times full scale or 20,000 PSI, whichever is less 4 times full scale or 20,000 PSI, whic	Pressure range			
Pressure cycles Pressure overload Pressure overload Burst pressure  Burst pressure  Long term stability (1 year)  Ectrical:  Supply voltage Supply voltage  Output  Output  Load impedance  10 million, minimum  2 times rated pressure  4 times full scale or 20,000 PSI, whichever is less  ± 0.25% FS Span (Typical)  Non-Ratiometric  Non-Ratiometric  Non-Ratiometric  10 - 30VDC  10		$\pm$ 0.25% BSL, max (per ISA S37.2)		
Pressure overload  Burst pressure  Long term stability (1 year)  ectrical:  Supply voltage  Supply current  Output  Load impedance  2 times rated pressure  4 times full scale or 20,000 PSI, whichever is less  ± 0.25% FS Span (Typical)  Ratiometric  Non-Ratiometric  10 - 30VDC  10 -	Media compatibility	17-4 PH stainless steel (optional 316L stair	nless)	
Burst pressure 4 times full scale or 20,000 PSI, whichever is less  Long term stability (1 year) ± 0.25% FS Span (Typical)  ectrical: 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 (4) 4 - 20	Pressure cycles	10 million, minimum		
Long term stability (1 year) ± 0.25% FS Span (Typical)  Ectrical: 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	Pressure overload	,		
Ratiometric Supply voltage 4.75 to 5.25VDC 10 - 30VDC Supply current <10mA Output 0.5 to 4.5V, at 5V (3) 1 - 5V, three wires (4) 4 - 20mA, two wires (4) Load impedance > 100k Ohms for quoted performance	Burst pressure			
Supply voltage         4.75 to 5.25VDC         10 - 30VDC           Supply current         <10mA	Long term stability (1 year)	$\pm$ 0.25% FS Span (Typical)		
Supply current         <10mA	ctrical:	Ratiometric	Non-Ratiometric	
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	Supply voltage	4.75 to 5.25VDC	10 - 30VDC	
4 - 20mA, two wires (2 Load impedance > 100k Ohms for quoted performance	Supply current	<10mA	<25mA	
Load impedance > 100k Ohms for quoted performance	Output	0.5 to 4.5V, at 5V (3)	1 - 5V, three wires (4)	
			4 - 20mA, two wires (5)	
f = 4 20-4 0 05//	Load impedance	l impedance > 100k Ohms for quoted performance		
tor 4 - ZUMA; U.U.J (VSUPPLY-1 U)K Units (maximum)		for 4 - 20mA; 0.05(Vsupply-10)k Ohms (mo	ıximum)	
Bandwidth DC to 1KHz (Typical)	Bandwidth	DC to 1KHz (Typical)		
Standard connector options Packard connector - Metri-pack 150, 3 pins	Standard connector options	Packard connector - Metri-pack 150, 3 pins		
Cable - 24" length		Cable - 24" length		
		(Additional connectors available upon reque		

#### ENVIRONMENTAL

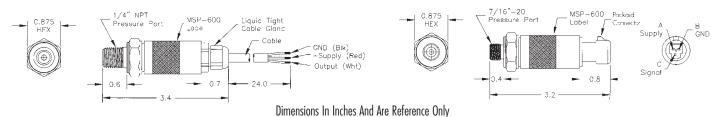
1	Operating temperature range	-40° to 100°C (125°C available, consult factory)
Г	Compensated temperature range	-20° to 85°C (125°C available, consult factory)
١	Total error band (over compensated temperature range)	$<\pm$ 1% of FS (75-10,000 PSI) $<\pm$ 1.5% of FS (25-50 PSI)
Γ	Storage temperature range	-45° to 100°C
	Shock	50g, 11 msec half sine shock per MIL standard 202F, method 213B, condition A
	Vibration	$\pm 20$ g 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 Black White	+Supply Ground Output	Red Black	+Supply Output



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