# **MSP-100**

### features

100% 316L stainless steel isolation for harsh chemical measurement

Cable/connector versions standard, contact factory for PCB mountable versions

Low cost, high volume

Custom seal designs available

Drinking water or beverage safe

Calibrated 100mV output

Features Microfused<sup>™</sup> technology

## applications

Beverage dispensing systems Severe pressure cycle applications Ink jet & paint spraying systems Liquid dispensing

High volume custom pressure / flow systems

#### **Ultra Low Cost Stainless Steel Pressure Sensors**

LFUSED SENSORS

The MSP-100-MicroButton<sup>™</sup> from Measurement Specialties provides stainless steel media compatibility for the price of competing plastic sensors. This sensor has no silicone gel or polymeric media isolation methods to fail in contact with water or other harsh chemicals. The all-metal diaphragm design is immune to pressure fluctuations and subsequent damage. The all-metal pressure enclosure has a small round plastic housing and is available with a cable and connector. Pressure connections are provided via an o-ring seal. Both compensated/calibrated and uncompensated versions are available. High volume port options

available. Figh volume po are customer specific. The small size vs performance and media compatibility is provided through solid-state MicroFused<sup>™</sup> technology.

# static performance specifications

	Units	m	/ output Compensa	Notes		
		Min.	Тур.	Max.		
Offset	mV / %FS	-2%	0mV	2%	1,2, 3	
Span	mV / %FS	-2%	100mV	2%	1,2,3	
Accuracy	% Span	5	0.2	+.5	2,4	
Long Term Stability	% Span / yr	-	0.25	-		
Response Time	mS	.1	-	-	5	
Supply Voltage	V	-	5	14		
Supply Current	mA	2.5	3	3.5		
Output Load	K Ohms	100	-	-	2	
Input Impedance	K Ohms	-	4	-		
Output Impedance	K Ohms	-	4	-		
Isolation voltage	M ohm @ 250V	50	-	-		

1) Output loading mV output products will change zero, span and thermal errors (keep min. to 100K Ohms)

2) Room temperature calibration (25C)

3) Custom offset & span calibration available

range - consult factory

4) Combined BFSL linearity, hysteresis & repeatability

5) mV versions 10% to 90% pressure change, consult factory for amplified versions

#### environmental performance

Specification	Units	Uncompensated		Compensated			Notes	
		Min.	Тур.	Max.	Min.	Тур.	Max.	
Thermal effect on Offset 0°C to 45°C	% Span	-		-	-2	-	2	1,2,3,4
Thermal effect on span 0°C to 45°C	% Span	-		-	-2	-	2	1,2,3,4
Operating temperature	Deg. C	0	25	55	0	25	55	

1) With reference to 25°C

2) Other temperature ranges available

3) Tighter temperature calibration available

4) Uncompensated thermal performance somewhat dependent on pressure range, consult factory for more information.







# mechanical specifications

Specification	Value	
Proof pressure	1.5x rated pressure	
Burst pressure	3x rated pressure	
Vibration	±20G MIL-STD-810 C, Procedure 514.2, Figure 514.2-2, Curve L	
Shock	50G 11sec 1/2 sine per Mil std 202F method 213B cond. A	
Pressure cycles	10 million cycles 0 to full scale	
Media compatibility	All materials compatible with 316 stainless steel	

# ordering information

Model	Output	Connection	Specials	port type	Pressure range	Pressure unit
MS1	х	х	- 000000	х -	XXXX	х
Output		Connection	Specials	Port Type	Pressure range	Pressure units
2=.0 to 100	mV	1= cable 2 feet	Specials are designated by a	U = -10 o-ring seal (.36" hole required	100P=0 to 100psi 250P=0 to 250psi	G = gauge
			5 digit number.	j=flat version	500P=0 to 500psi	
X=Special	output	X=Special		o-ring button	01KP=0 to 1Kpsi	
		connection			2K5P=0 to 2.5Kpsi	
				X= special port	05KP=0 to 5Kpsi	

For ratiometric output, span changes with input voltage (see supply voltage specifications) Specifications subject to change without notice

### mechanical dimensions

