

# MSP-100

## Ultra Low Cost Stainless Steel Pressure Sensors

**The MSP-100-MicroButton™**, series pressure transducers from the Microfused™ line of MEAS, 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 are customer specific. The small size vs. performance and media compatibility are provided through solid-state MicroFused™ technology.



### 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™ technology

### APPLICATIONS

- ◆ Beverage dispensing systems
- ◆ Severe pressure cycle applications
- ◆ Ink jet & paint spraying systems
- ◆ Liquid dispensing
- ◆ High volume custom pressure/flow systems

### static performance specifications

	Units	mV output Compensated			Notes
		Min.	Typ.	Max.	
Offset	%FS	-2%	0mV	2%	1,2,3
Span	%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	2.5	5	10	
Supply Current	mA	1	1.25	1.75	6
Output Load	K ohms	100	-	-	2
Input Impedance	K ohms	3	4	6	
Output Impedance	K ohms	-	2	5	
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
- 6) Ratiometric with supply.

### environmental performance

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

- 1) With reference to 25°C
- 2) Other temperature ranges available
- 3) Tighter temperature calibration available

## mechanical specifications

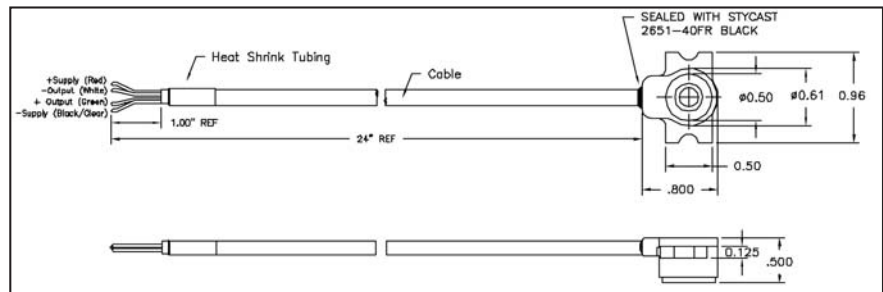
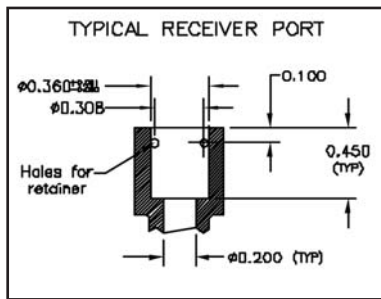
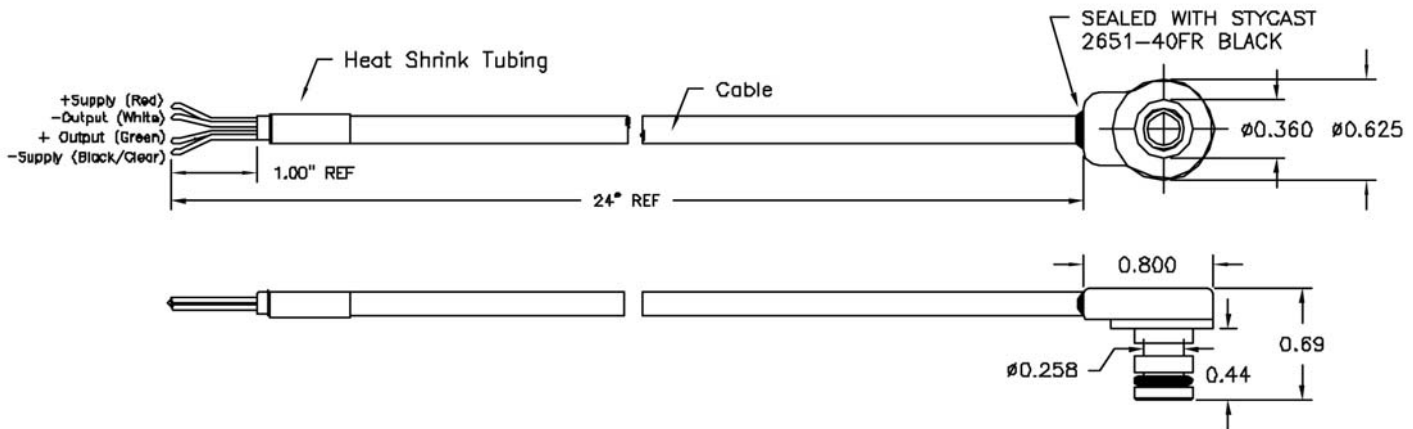
Specification	Value
Proof pressure	1.5x rated pressure
Burst pressure	3x rated pressure
Vibration	±20G MIL-STD-810 C, Procedure 514.2, Figure 514.2-2, Curve L
Shock	50G 11sec 1/2 sine per Mil std 202F method 213B cond. A
Pressure cycles	10 million cycles 0 to full scale
Media compatibility	All materials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

## ordering information for model MSP-100

MS1	Output X	Connection X —	Specials 00000	Port Type X —	Pressure range XXXX	Pressure unit X
	2=.0 to 100mV	1= cable 2 feet	Specials are designated by a 5 digit number.	U = -10 o-ring seal (.36" hole required)  X= special port	100P=0 to 100psi 250P=0 to 250psi 500P=0 to 500psi	G = gauge
	X=Special output	X=Special connection				
For ratiometric output, span changes with input voltage (see supply voltage specifications) Specifications subject to change without notice						

Example: MS121-00000U-100PG is a MSP100 with .0 to 100mV output, 2 feet of cable, -10 o-ring pressure port and 100 psi gage.

## mechanical dimensions



Custom package option available consult factory