MSP 340 Pressure Transducer

- **Low Cost OEM**
- **100% Leak Proof**
- **No O-Rings**
- **No Silicon Oil**
- **No Welds**

Shown with Packard Connector

DESCRIPTION

The MSP 340 series pressure transducers from the Microfused™ line of MEAS, 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.

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.

MEAS' 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 while providing an exceptionally stable sensor without the p-n junctions of conventional micromachined sensors.

This product is geared to the OEM customer who uses 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
- Ranges up to 10k psi or 700 Bar
- mV or Amplified Outputs
- Ultra Compact Construction
- Hermetically Isolated Sensor Technology

APPLICATIONS

- Pumps and Compressors
- Hydraulic/Pneumatic Systems
- After Market Automotive
- Tank Pressure in Breathing Apparatuses
- Agriculture – Sprayers and Dusters
- Refrigeration – Freon and Ammonia Based

STANDARD RANGES

Range	psig	Range	Barg
0 to 50	•	0 to 3	•
0 to 100	•	0 to 7	•
0 to 300	•	0 to 20	•
0 to 500	•	0 to 35	•
0 to 1k	•	0 to 70	•
0 to 3k	•	0 to 200	•
0 to 5k	•	0 to 350	•
0 to 10k	•	0 to 700	•

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PERFORMANCE SPECIFICATIONS

Supply Voltage: 5.0V, Ambient Temperature: 25°C (unless otherwise specified)

PARAMETERS	MIN	TYP	MAX	UNITS	NOTES
Span Setting	-2		2	%Span	1
Accuracy (combined non linearity, hysteresis, and repeatability)	-1		1	%Span	2
Temperature Error –Zero	-2		2	%Span	
Temperature Error –Span	-2		2	%Span	
Supply Current (0 – 100mV, 0.5 – 4.5V)			10	mA	
Supply Current (1 – 5V)			15	mA	
Long Term Stability (1 year)	0.25		0.25	%Span	
Output Load	100			kΩ	
Compensated Temperature	0		55	°C	
Operating Temperature	-20		+85	°C	3
Storage Temperature	-40		+125	°C	3
Burst Pressure	5X			Rated	
Vibration	±20			g	4
Shock (11ms)	50			g	5
Pressure Cycles (Zero to Full Scale)	10			Million	
Pressure Overload	2X			Rated	
Output Noise			2	mVRMS	
Bandwidth (-3dB)	1			kHz	
Weight				grams	
Media Compatibility	All Materials Compatible with 17-4 Stainless Steel				

For custom configurations, consult factory.

Notes

1 Ratiometric to supply.
2 Best fit straight line.
3 Maximum temperature range for product with standard cable is -20°C to +105°C.
4 Per MIL-STD-810C, Procedure 514.2, Figure 514.2-2, Curve L.
5 1/2 sine per MIL-STD 202F Method 213B condition A.

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DIMENSIONS

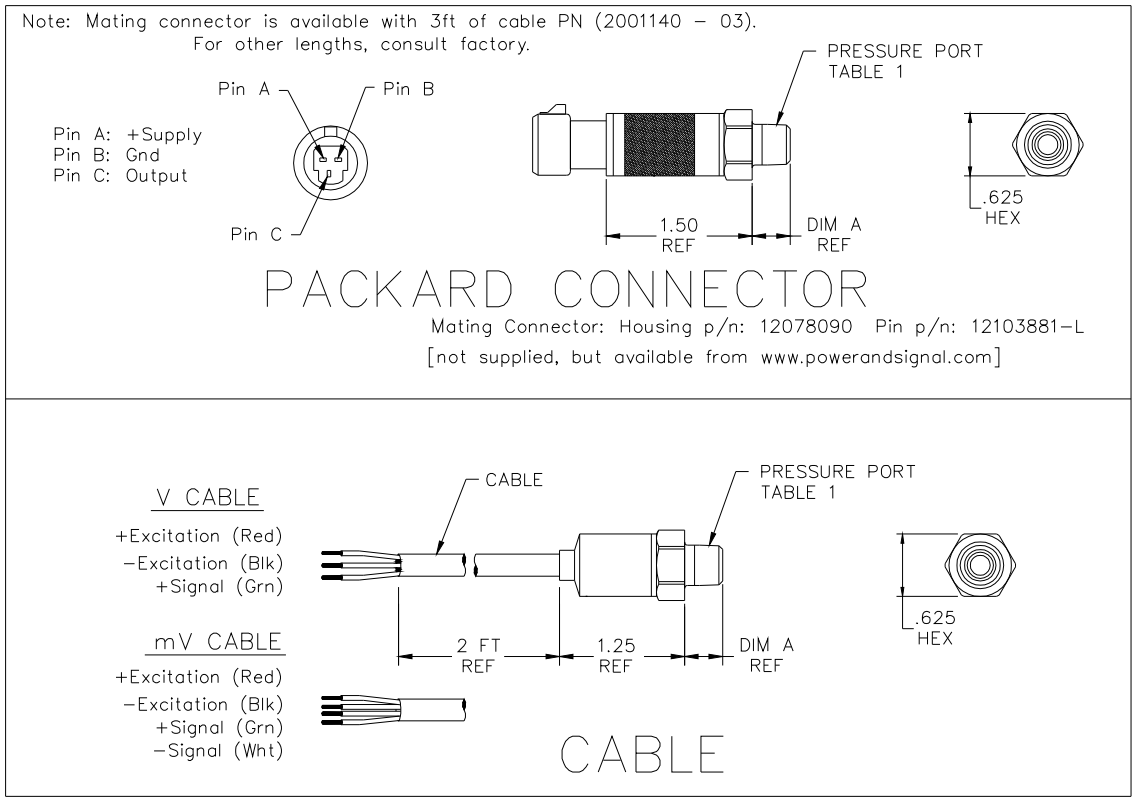

TABLE 1		
PRESSURE PORT		
CODE	PORT	DIM A
2	1/4–19 BSP	0.47 [11.94]
3	1/8 BSP	TBD [TBD]
4	7/16–20UNF MALE O-RING	0.36 [9.14]
5	1/4–18 NPT	0.64 [16.26]
6	1/8–27 NPT	0.53 [13.46]

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OUTPUT OPTIONS

		Supply(V)		
Code	**Output**	**MIN**	**TYP**	**MAX**
2	0 – 100 mV (ratiometric)	2.5	5	12
3	0.5 – 4.5 V (ratiometric)	4.75	5	5.25
4	1 – 5 V	8		30

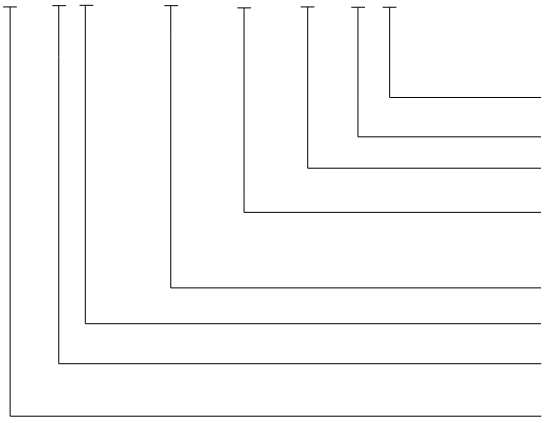
Packard connector not available with mV output.

Wiring Code

Code	**Output**	**+Supply**	**-Supply**	**+Out**	**-Out**
2	0 – 100 mV (ratiometric)	Red	Black	Green	White
3	0.5 – 4.5 V (ratiometric)	Red/Pin A	Black/Pin B	White/Pin C	N/A
4	1 – 5 V	Red/ Pin A	Black/ Pin B	White/Pin C	N/A

ORDERING INFORMATION

M3421-000002-050PG



Type (G = Gage)

Units (P = psi, B = Bar)

Pressure Range (050P = 50psi, 01KP = 1000psi, 10KP = 10,000psi)

Pressure Port (2 = 1/4-19BSP [G1/4], 3 = 1/8BSP [G1/8], 4 = 7/16-20UNF, 5 = 1/4-18NPT, 6 = 1/8-27NPT)

Specials (nnnnn = Custom Drawing)

Electrical Connection (1 = 2ft Cable, 4 = Integral Packard)

Output (2 = 0 - 100mV, 3 = .5 - 4.5V ratio, 4 = 1 - 5V)

Model

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