

MSP340 Pressure Transducer



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



Shown with Packard Connector

DESCRIPTION

The MSP340 pressure transducer from the Microfused™ line of MEAS is great for 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 10kpsi or 700Bar
- 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	•

MSP340 Pressure Transducer

PERFORMANCE SPECIFICATIONS

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

PARAMETERS	MIN	TYP	MAX	UNITS	NOTES
Zero Offset Tolerance	-2.0		2.0	%F.S.	1
Span Tolerance	-2.0		2.0	%F.S.	1
Accuracy (combined non linearity, hysteresis, and repeatability)	-1.0		1.0	%F.S.	2
Long Term Stability (1 year)	-0.25		0.25	%F.S.	
Isolation, Body to Any Lead (@250Vdc)	50			MΩ	
Temperature Error – Zero	-2.0		2.0	%F.S.	
Temperature Error – Span	-2.0		2.0	%F.S.	
Compensated Temperature	0		55	°C	
Operating Temperature	-20		+85	°C	
Storage Temperature	-40		+85	°C	
Pressure Cycles (Zero to Full Scale)	10			Million	
Proof Pressure	2X			Rated	
Burst Pressure	5X			Rated	
Load Resistance (RL, mV Output)		RL > 1		MΩ	
Load Resistance (RL, V Output)		RL > 5		KΩ	
Bandwidth	DC to 1KHz (typical)				
Shock	50g, 11 msec Half Sine Shock per MIL-STD-202G, Method 213B, Condition A				
Vibration	±20g, MIL-STD-810C, Procedure 514.2-2, Curve L				

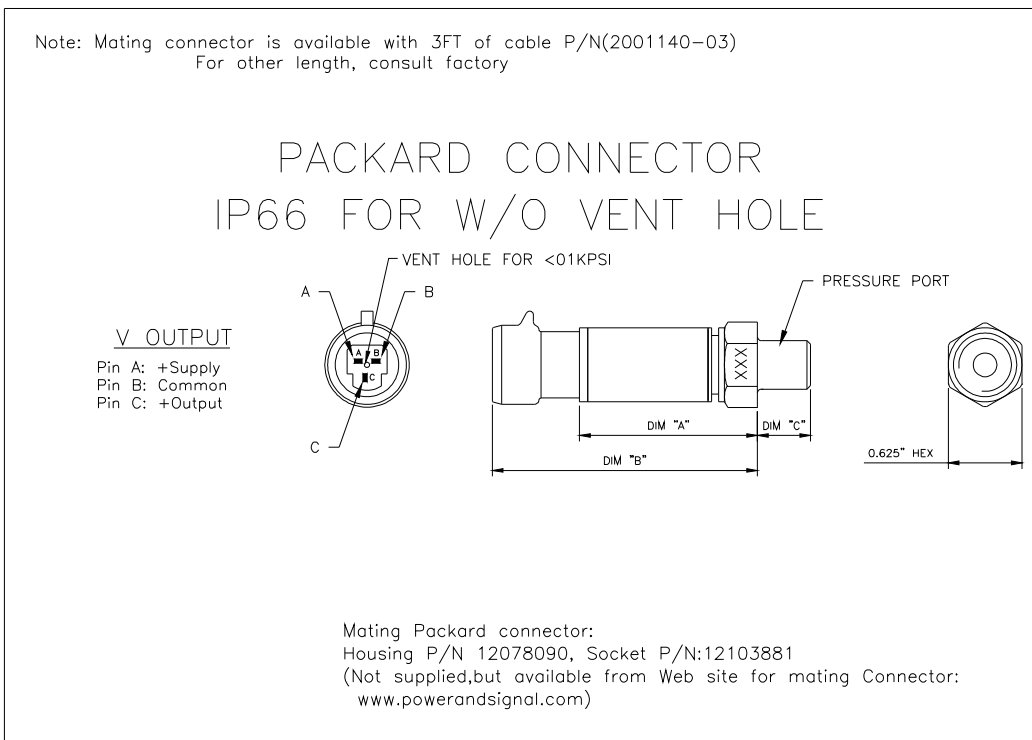
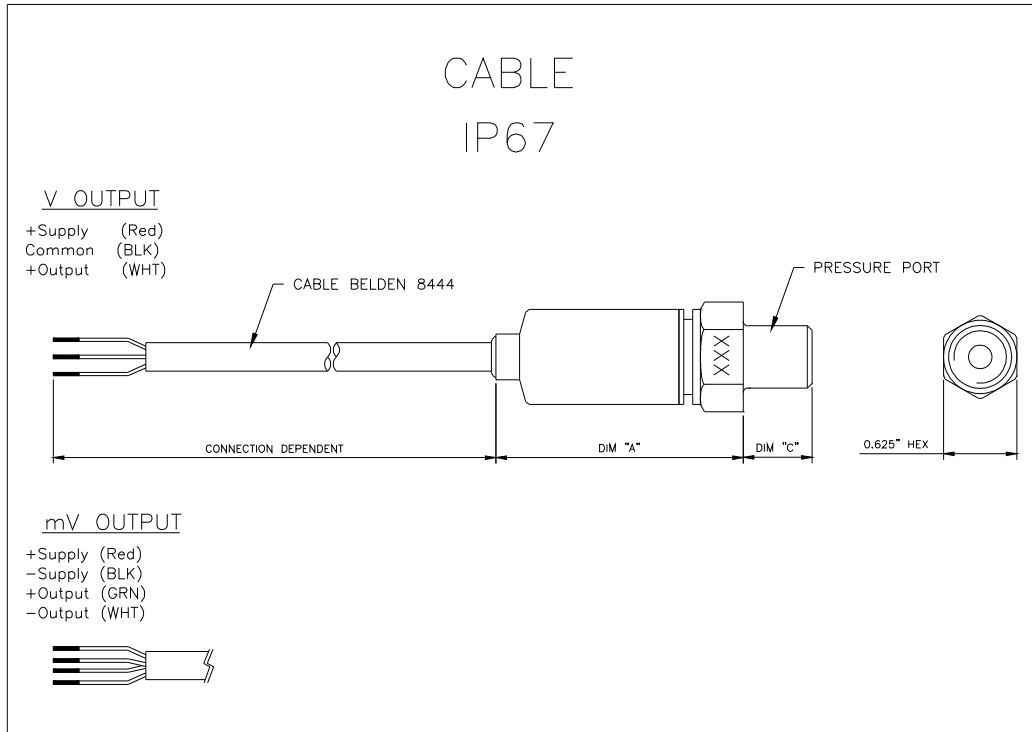
For custom configurations, consult factory.

Notes

1. Over compensated temperature range.
2. Best fit straight line.

MSP340 Pressure Transducer

DIMENSIONS



MSP340 Pressure Transducer

PRESSURE PORT		
CODE	PORT	DIM C
2	1/4-19 BSPP	0.47 [11.94]
3	1/8-28 BSPP	0.315 [8.00]
4	7/16-20 UNF MALE SAE J514 STRAIGHT THREAD O-RING BUNA-N 70SH -904 ID8.92mmXW1.83 mm	0.385 [9.70]
5	1/4-18 NPT	0.45 [11.43]
6	1/8-27 NPT	0.45 [11.43]

CODE	CONNECTION	DIMENSIONS	
1	CABLE,4 WIRE BELDEN#8444, 2 FEET	DIM A	1.62[41.15]
2	CABLE,4 WIRE BELDEN#8444, 4 FEET	DIM A	1.62[41.15]
4	PACKARD Metri-Pack CONNECTOR	DIM A	1.68[42.67]
		DIM B	2.43[61.72]

OUTPUT OPTIONS

Code	Output	Supply(V)		
		MIN	TYP	MAX
2	0 – 20mV/V (ratiometric)	2.5	5	12
3	0.5 – 4.5V (ratiometric)	4.75	5	5.25
4	1 – 5V	10		30

Packard connector not available with mV output.

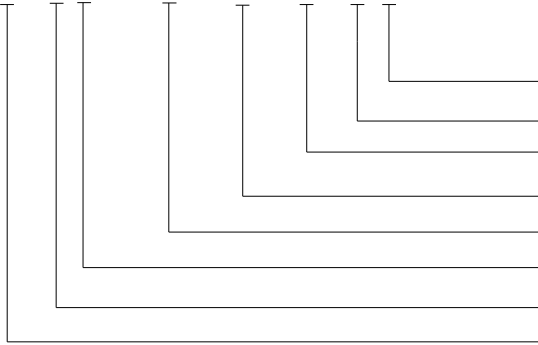
Wiring Code

Code	Output	+Supply	-Supply	+Out	-Out
2	0 – 20mV/V (ratiometric)	Red	Black	Green	White
3	0.5 – 4.5 V (ratiometric)	Pin A	Pin B [Common]	Pin C	N/A
4	1 – 5 V	Pin A	Pin B [Common]	Pin C	N/A

MSP340 Pressure Transducer

ORDERING INFORMATION

M3421-000002-050PG



Type (G = Gage)
Units (P = psi, B = Bar)
Pressure Range (See Standard Ranges Table)
Pressure Port (See Pressure Port Table)
Specials (nnnnn = Custom Drawing)
Electrical Connection (1 = 2ft Cable, 2 = 4ft Cable, 4 = Packard Metri-Pack)
Output (See Output Options Table)
Model

NORTH AMERICA

Measurement Specialties
45738 Northport Loop West
Fremont, CA 94538
Tel: 1-800-767-1888
Fax: 1-510-498-1578
Sales: pfg.cs.amer@meas-spec.com

EUROPE

Measurement Specialties
(Europe), Ltd.
26 Rue des Dames
78340 Les Clayes-sous-Bois, France
Tel: +33 (0) 130 79 33 00
Fax: +33 (0) 134 81 03 59
Sales: pfg.cs.emea@meas-spec.com

ASIA

Measurement Specialties
(China), Ltd.
No. 26 Langshan Road
Shenzhen High-Tech Park (North)
Nanshan District, Shenzhen 518057
China
Tel: +86 755 3330 5088
Fax: +86 755 3330 5099
Sales: pfg.cs.asia@meas-spec.com

The information in this sheet has been carefully reviewed and is believed to be accurate; however, no responsibility is assumed for inaccuracies. Furthermore, this information does not convey to the purchaser of such devices any license under the patent rights to the manufacturer. Measurement Specialties, Inc. reserves the right to make changes without further notice to any product herein. Measurement Specialties, Inc. makes no warranty, representation or guarantee regarding the suitability of its product for any particular purpose, nor does Measurement Specialties, Inc. assume any liability arising out of the application or use of any product or circuit and specifically disclaims any and all liability, including without limitation consequential or incidental damages. Typical parameters can and do vary in different applications. All operating parameters must be validated for each customer application by customer's technical experts. Measurement Specialties, Inc. does not convey any license under its patent rights nor the rights of others.