



Shown with Packard Connector



MSP340

Pressure Transducer

SPECIFICATIONS

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

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	◆

PERFORMANCE SPECIFICATIONS

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

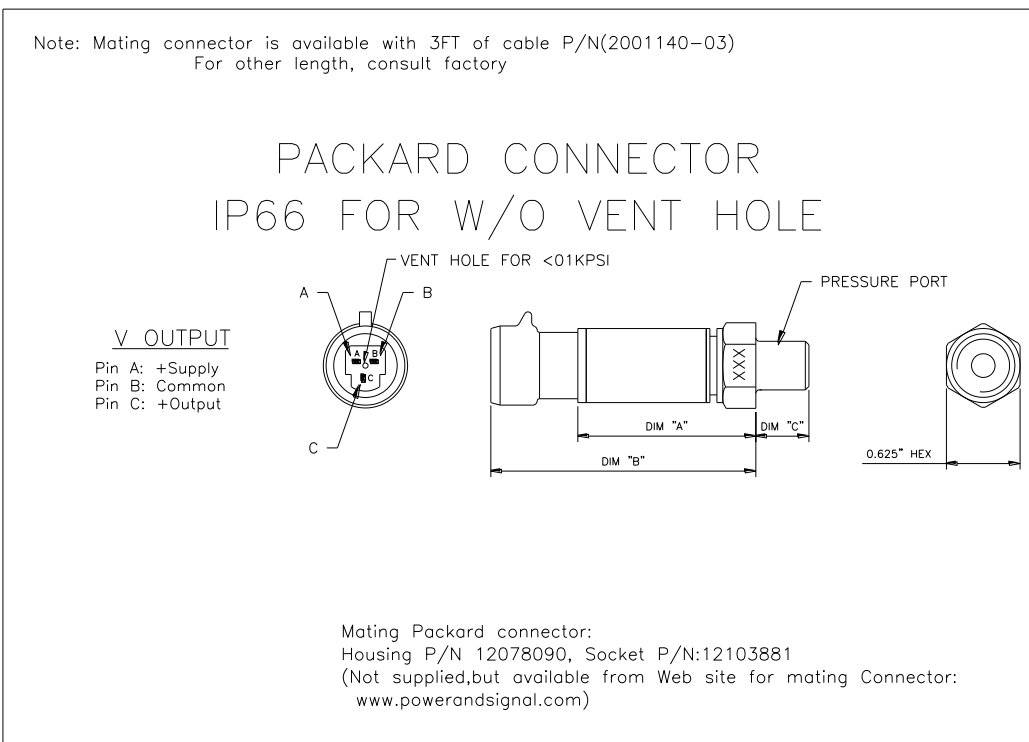
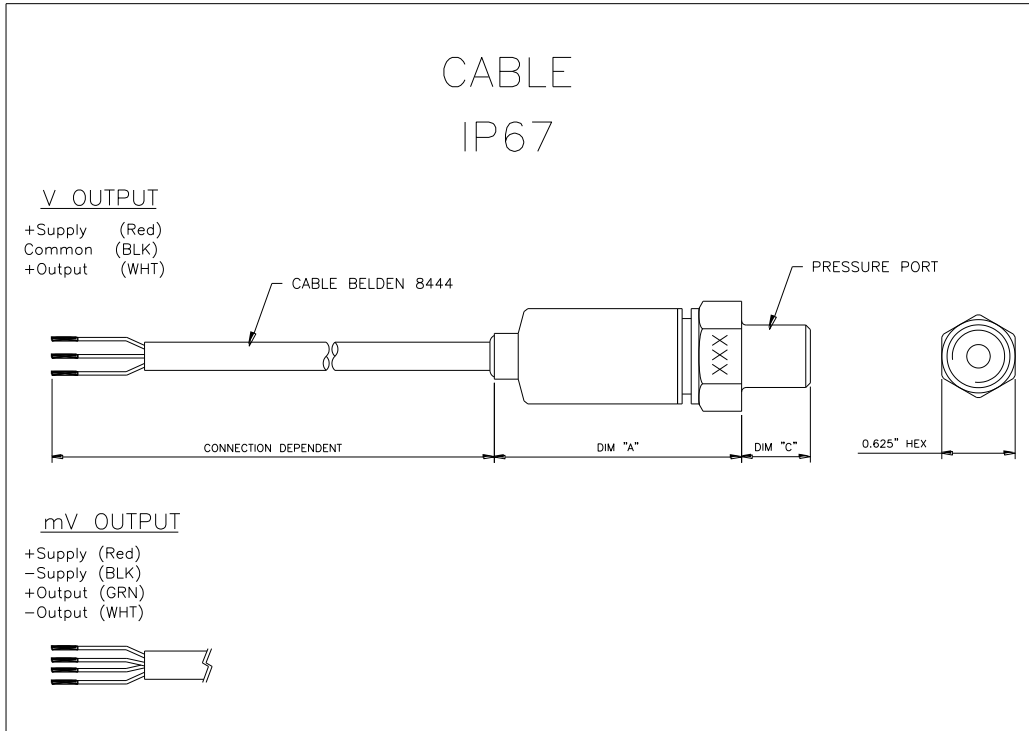
PARAMETERS	MIN	TYP	MAX	UNITS	NOTES
Zero Offset Tolerance	-2.0		2.0	%F.S.	1
Span Tolerance	-2.0		2.0	%F.S.	1
Accuracy (combined non linearity, hysteresis, and repeatability)	-1.0		1.0	%F.S.	2
Long Term Stability (1 year)	-0.25		0.25	%F.S.	
Isolation, Body to Any Lead (@250V _{DC})	50			MΩ	
Temperature 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)	1			Million	
Proof Pressure	2X			Rated	
Burst Pressure	5X			Rated	
Load Resistance (R _L , mV Output)		RL > 1		MΩ	
Load Resistance (R _L , 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.

DIMENSIONS



PRESSURE PORT

CODE	PORT	DIM C
2	1/4-19 BSPP	0.47[11.94]
3	1/8-28 BSPP	.315[8.00]
4	7/16-20 UNF MALE SAE J514 STRAIGHT THREAD O-RING BUNA-n70SH-904 D8.92mm X W1383mm	0.385[9.70]
5	1/4-18 NPT	0.45[11.43]
6	1/8-27 NPT	0.45[11.43]
Q	M10X1.0mm	0.420[10.67]

Connection Type

Code	Connection	Dimensions	
1	Cable, 4 wire Belden #8444, 2 feet	Dim A	1.63[41.15]
2	Cable, 4 wire Belden #8444, 4 feet	Dim A	1.63[41.15]
3	Cable, 4 wire Belden #8444, 10 feet	Dim A	1.63[41.15]
M	Cable, 4 wire Belden #8444, 1 meter	Dim A	1.63[41.15]
N	Cable, 4 wire Belden #8444, 2 meter	Dim A	1.63[41.15]
P	Cable, 4 wire Belden #8444, 5 meter	Dim A	1.63[41.15]
R	Cable, 4 wire Belden #8444, 10 meter	Dim A	1.63[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

ORDERING INFORMATION

M34 2 N - 0 0000 2 - 100 P G

Output	
Code	Output
2	0 to 100mV Ratiometric
3	0.5 to 4.5V Ratiometric
4	1 to 5V

Connection	
Code	Connection
1	Cable, 4 wire Belden#8444, 2 feet
2	Cable, 4 wire Belden#8444, 4 feet
3	Cable, 4 wire Belden#8444, 10 feet
M	Cable, 4 wire Belden#8444, 1 meter
N	Cable, 4 wire Belden#8444, 2 meter
P	Cable, 4 wire Belden#8444, 5 meter
R	Cable, 4 wire Belden#8444, 10 meter
4	Packard Metri-Pack Connector

Port Material	
Code	Description
0	17-4PH Stainless Steel
W	Wetted 316 Stainless Steel

Pressure Reference	
G	Gauge
C	Compound

Pressure Range		
PSI STD	BAR STD	BAR DIN
100P	007B	006B
200P	010B	010B
300P	020B	016B
500P	035B	025B
01KP	070B	040B
03KP	200B	060B
05KP	350B	100B
10KP	700B	160B
		250B
		400B
		600B
		01KB

Pressure Port	
Code	Port
2	1/4-19 BSPP
3	1/8-28 BSPP
4	7/16-20 UNF Male SAE J514 Straight Thread O-Ring Buna 70SH-904 ID8.92mm x W1383mm
5	1/4-18 NPT
6	1/8-27 NPT
Q	M10X1.0

NORTH AMERICA

Measurement Specialties, Inc.,
a TE Connectivity Company
Phone: +1 800-522-6752
Email: customercare.frm1@te.com

EUROPE

Measurement Specialties (Europe), Ltd.,
a TE Connectivity Company
Phone: +31-73-624-6999
Email: customercare.lcsb@te.com

ASIA

Measurement Specialties (China), Ltd.,
a TE Connectivity Company
Phone: +86 0400-820-6015
Email: customercare.shzn@te.com

TE.com/sensorsolutions

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