Shown with Packard Connector

RoHS

MSP340

Pressure Transducer

SPECIFICATIONS

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

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

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 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.

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	•

Intermediary Ranges also available.

PERFORMANCE SPECIFICATIONS

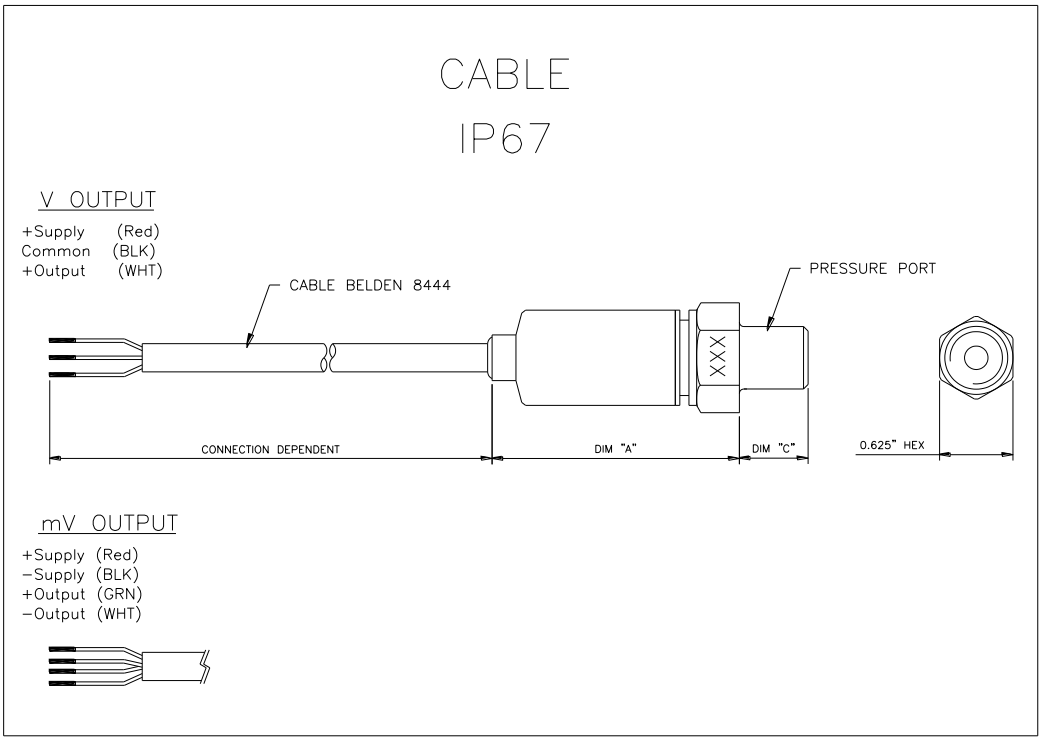
Unless otherwise specified: Supply Voltage: 5.0V, Ambient Temperature: 25°C

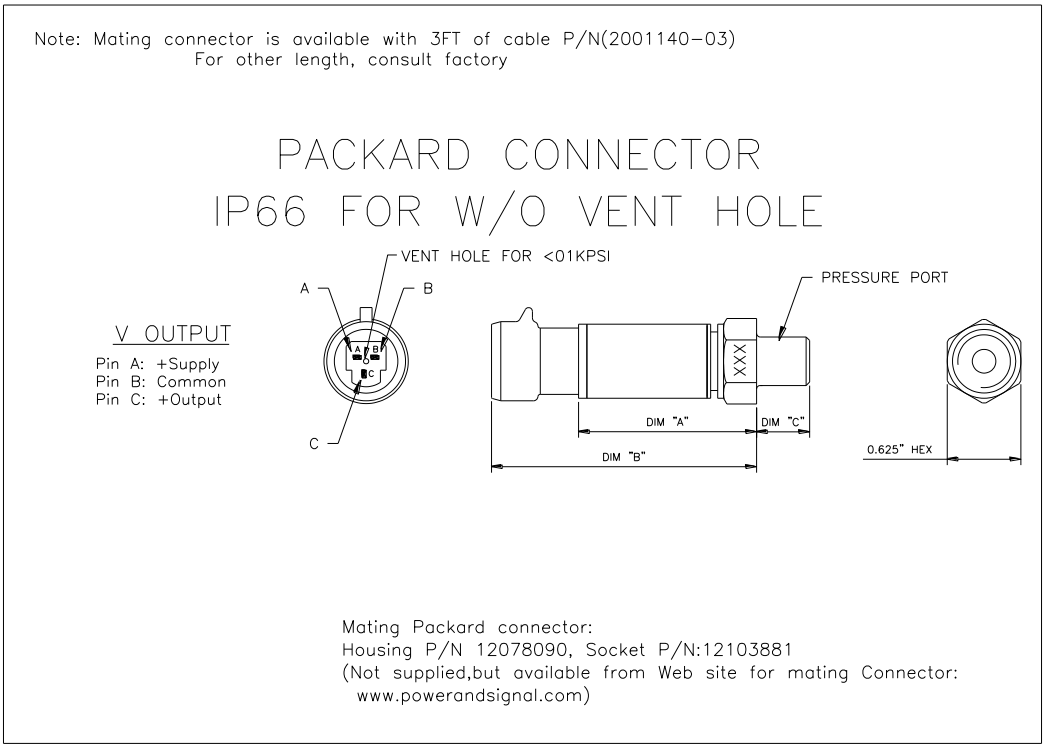
PARAMETERS	MIN	TYP	MAX	UNITS	NOTES
Zero Offset Tolerance	-2.0		2.0	%F.S.	1
Span Tolerance	-2.0		2.0	%F.S.	1
Accuracy (combined non linearity, hysteresis, and repeatability)	-1.0		1.0	%F.S.	2
Long Term Stability (1 year)	-0.25		0.25	%F.S.	
Isolation, Body to Any Lead (@250V_{DC})	50			MΩ	
Temperature 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		20000PSI	Rated	Whichever is less
Load Resistance (R_L, mV Output)	R_L > 1			MΩ	
Load Resistance (R_L, V Output)	R_L > 5			KΩ	
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


CABLE
IP67
V OUTPUT
+Supply (Red)
Common (BLK)
+Output (WHT)
CABLE BELDEN 8444
PRESSURE PORT
CONNECTION DEPENDENT
DIM "A"
DIM "C"
0.625" HEX
mV OUTPUT
+Supply (Red)
−Supply (BLK)
+Output (GRN)
−Output (WHT)


Note: Mating connector is available with 3FT of cable P/N(2001140−03)
For other length, consult factory
PACKARD CONNECTOR
IP66 FOR W/O VENT HOLE
VENT HOLE FOR <01KPSI
A
B
C
V OUTPUT
Pin A: +Supply
Pin B: Common
Pin C: +Output
PRESSURE PORT
DIM "A"
DIM "C"
DIM "B"
0.625" HEX
Mating Packard connector:
Housing P/N 12078090, Socket P/N:12103881
(Not supplied,but available from Web site for mating Connector:
www.powerandsignal.com)

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-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	0.394 [10.00]

Connection Type

Code	Connection	Dimensions	
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	Dim A	1.62 [41.15]
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	Dim A	1.78 [45.212]
		Dim B	2.52 [64.008]

OUTPUT OPTIONS

		Supply(V)		
Code	**Output**	**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 – 100P G

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

Current consumption <10mA

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

Compound Pressure range is -14.7 to XXXpsig or -1 to xxxbarg
Ex: 200PC: -14.7 to 200psig, 020BC: -1 to 20barg

Pressure Range	
PSI STD	**BAR STD**
100P	**007B**
200P	**010B**
300P	**020B**
500P	**035B**
01KP	**070B**
03KP	**200B**
05KP	**350B**
07KP	**500B**
10KP	**700B**

Intermediate Ranges available between 7 bar and 700 bar. Consult factory.

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