MSP300 Pressure Transducer



- **OEM and End User**
- **One Piece Pressure Port Construction**
- **No O-Rings**
- **No Silicon Oil**
- **No Welds**

DESCRIPTION

The MSP300 pressure transducer from the Microfused™ line of MEAS sets a new price performance standard for low cost, 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 PN 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
- Excellent Accuracy
- Wide Operating Temperature Range

APPLICATIONS

- Pumps and Compressors
- Hydraulic/Pneumatic Systems
- Automotive Test Systems
- Energy and Water Management
- Agriculture – Sprayers and Dusters
- Refrigeration – Freon and Ammonia Based
- General Pressure Measurements

STANDARD RANGES

Range	psig	Range	Barg
0 to 100	•	0 to 7	•
0 to 250	•	0 to 17	•
0 to 500	•	0 to 35	•
0 to 1000	•	0 to 70	•
0 to 2500	•	0 to 175	•
0 to 5000	•	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
Zero Offset (mV Output)	-3.0		3.0	%F.S.	
Zero Offset (V Output)	-2.0		2.0	%F.S.	
Span Tolerance	-2.0		2.0	%F.S.	
Accuracy (combined non linearity, hysteresis, and repeatability)	-1.0		1.0	%F.S.	1
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.	2
Temperature Error – Span	-2.0		2.0	%F.S.	2
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				

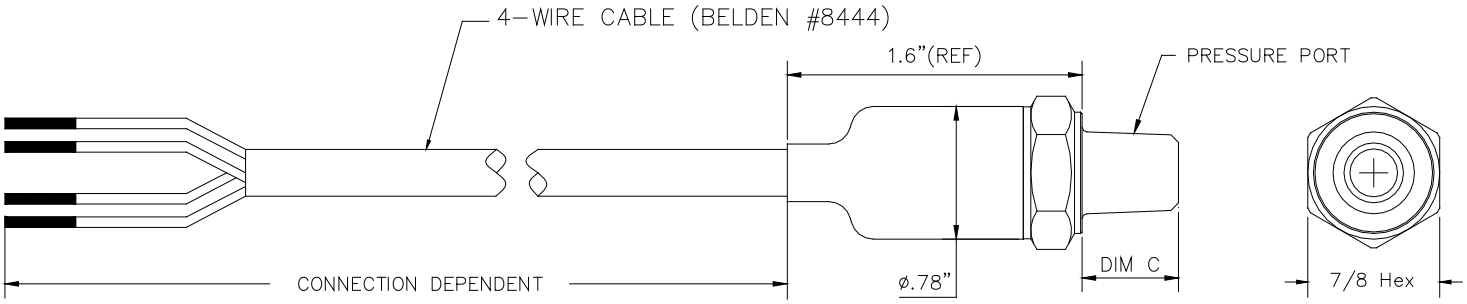
For custom configurations, consult factory.

Notes

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

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DIMENSIONS



PRESSURE PORT

CODE	PORT	DIM C
2	1/4–19 BSPP	0.453 [11.50]
5	1/4–18 NPT	0.596 [15.14]
6	1/8–27 NPT	0.475 [12.06]

OUTPUT OPTIONS

		Supply (V)		
Code	**Output**	**MIN**	**TYP**	**MAX**
2	0 – 100mV (ratiometric)	2.5	5	12
3	0.5 – 4.5V (ratiometric)	4.75	5	5.25
4	1 – 5V	8		30
5	4 – 20mA	9		30

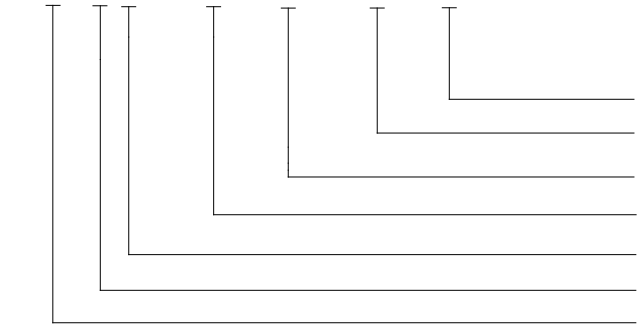
Wiring Color Code

Code	Output	Red	Black	Green	White
2	0 – 100mV (ratiometric)	+Supply	-Supply	+Output	-Output
3	0.5 – 4.5V (ratiometric)	+Supply	Common	Cut Off	+Output
4	1 – 5V	+Supply	Common	Cut Off	+Output
5	4 – 20mA	+Supply	-Supply	Cut Off	Cut Off

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ORDERING INFORMATION

M3021-000005- 100PG



Type (G = Gage)
Pressure Range (See Standard Ranges Table)
Pressure Port (2 = 1/4-19 BSPP, 5 = 1/4-18NPT, 6 = 1/8-27NPT)
Specials (nnnnn = Custom Design)
Connection (1 = 2ft Cable, 2 = 4ft Cable)
Output (See Output Options Table)
Model

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