# MSP300

## Pressure Transducer

## SPECIFICATIONS

- **Analog Output or 14-Bit Digital Pressure with 11-Bit Temperature Output**
- **One Piece Stainless Steel Construction**
- **Low Cost**
- **17-4PH or 316L Stainless Steel**
- **Customizable**

## FEATURES

- One Piece Stainless Steel Construction
- Ranges up to 15kpsi
- Digital Pressure and Temperature Output or Analog mV/Amplified Output
- ±1 %Span Accuracy
- UL Certification (analog only)

## APPLICATIONS

- Pumps and Compressors
- Hydraulic/Pneumatic Systems
- Automotive Test Systems
- Energy and Water Management
- Medical Gas Pressure
- Leak Detection
- Remote Measuring Systems
- General Pressure Measurements

The MSP300 pressure transducer from the Microfused line of TE 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 17-4PH or 316L stainless steel. The standard version includes a 1/4 NPT pipe thread allowing a leak-proof, all metal sealed system. With excellent durability, there are no o-rings, welds or organics exposed to the pressure media.

TE's 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 towards industrial and commercial OEMs for small to high volume applications. Standard configurations are suitable for many applications. Please contact factory for your customization needs.

## STANDARD RANGES (ALL INTERMEDIATE RANGES ARE STANDARD)

| Range (psi) | Range (Bar) | Gage/Compound |
|---|---|---|
| 0 to 100 | 0 to 007 | • |
| 0 to 200 | 0 to 010 | • |
| 0 to 300 | 0 to 020 | • |
| 0 to 500 | 0 to 035 | • |
| 0 to 01k | 0 to 070 | • |
| 0 to 03k | 0 to 200 | • |
| 0 to 05k | 0 to 350 | • |
| 0 to 10k | 0 to 700 | • |
| 0 to 15k | 0 to 01k | • |

## PERFORMANCE SPECIFICATIONS (ANALOG)

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

| PARAMETERS | MIN | TYP | MAX | UNITS | NOTES |
|---|---|---|---|---|---|
| Pressure Accuracy (RSS combined Non Linearity, Hysteresis & Repeatability) | -1 | | 1 | %Span | BFSL @ 25°C |
| Pressure Cycles | 1.00E+6 | | | 0~F.S. Cycles | |
| Proof Pressure | 2X | | | Rated | |
| Burst Pressure | 5X | | | Rated | |
| Isolation, Body to Any Lead | 50 | | | MΩ | @ 250Vdc |
| Long Term Stability (1 year) | -0.25 | | 0.25 | %Span | |
| Zero Thermal Error | -2.0 | | 2.0 | %Span | Over comp. temp |
| Span Thermal Error | -2.0 | | 2.0 | %Span | Over comp. temp |
| Zero Offset (mV Output) | -3.0 | | 3.0 | %Span | @ 25°C |
| Zero Offset (V Output) | -2.0 | | 2.0 | %Span | @ 25°C |
| Span Tolerance | -2.0 | | 2.0 | %Span | @ 25°C |
| Compensated Temperature | 0 | | 55 | °C | |
| Operating Temperature | -20 | | +85 | °C | |
| Storage Temperature | -40 | | +85 | °C | |
| Load Resistance ($R_L$, mV Output) | 1 | | | MΩ | |
| Load Resistance ($R_L$, V Output) | 5 | | | KΩ | |
| Response Time | | 1 | | ms | |
| 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 | | | | |
| Wetted Material (except elastomer seal) | 17-4PH or 316L Stainless Steel | | | | |

**For custom configurations, consult factory.**