



M E A S U R E M E N T
SPECIALTIES

- 1% Total Error Band
- No Leaks
- No Welds
- No "O" Rings
- No Silicone Oil

**NEW
DIGITALLY
COMPENSATED
DESIGN**

Microfused Technology

MSP-600

New High Accuracy, Digitally Compensated EMI/RFI Protected Stainless Steel Isolated Pressure Transducer

**ISO
9001**

- High Accuracy
- Low Cost OEM
- 100% Leak Proof

Features

High Accuracy
Digitally Compensated
One-piece Stainless Steel Construction
Ranges up to 10,000 PSI or 700 BAR
Amplified Outputs
Wide Operating Temperature Range
Low Pressure Configuration

Applications

Pumps and Compressors
Hydraulic/Pneumatic Systems
Off Road
Energy and Water Management
Pressure Instrumentation
Refrigeration Equipment
Agriculture Equipment
Train Braking Systems



Description

The MSP series pressure transducers set 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 or gases.

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.

Measurement Specialties 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 providing an exceptionally stable sensor without the p-n junctions of conventional micromachined sensors.

This product is geared to the OEM customer using 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.

SPECIFICATIONS

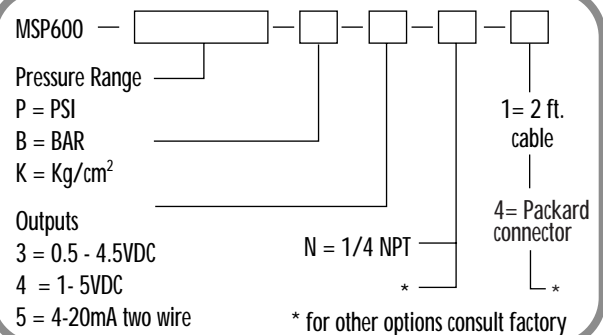
Performance at 25°C (77°F):

| | | |
|--|--|--|
| Pressure range | 0-25, 50, 75, 100, 250, 500, 1000, 2500, 5000, 7500, 10000 PSI (0-1.5, 3, 6, 7, 17, 35, 70, 175, 350, 525, 700 BAR) | |
| Accuracy, % of FS Span (combined linearity, hysteresis and repeatability) | ± 0.25% BSL, max (per ISA S37.2) | |
| Media compatibility | 17-4 PH stainless steel (optional 316L stainless) | |
| Pressure cycles | 10 million, minimum | |
| Pressure overload | 2 times rated pressure | |
| Burst pressure | 10 times up to 1,000 PSI, 5 times above 1,000 PSI | |
| Long term stability (1 year) | ± 0.25% FS Span (Typical) | |
| Electrical: | Ratiometric | Non-Ratiometric |
| Supply voltage | 4.75 to 5.25VDC | 10 - 32VDC |
| Supply current | <10mA | <25mA |
| Output | 0.5 to 4.5V, at 5V | 1 - 5V, three wires 4 - 20mA, two wires |
| Output impedance | 100 Ohms max for voltage output, 0-1100 Ohm for 4-20mA | |
| Bandwidth | DC to 1KHz (Typical) | |
| Standard connector options | Packard connector - Metri-pack 150, 3 pins Cable - 24" length (Additional connectors available upon request) | |

ENVIRONMENTAL

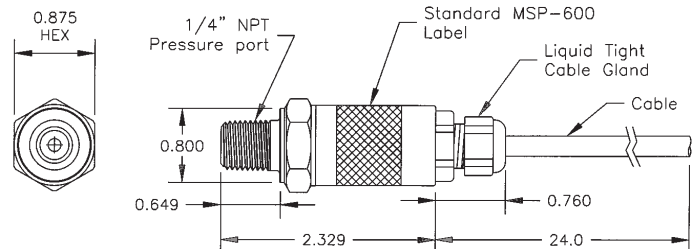
| | |
|--|---|
| Operating temperature range | -40° to 100°C |
| Compensated temperature range | -20° to 85°C |
| Total error band (over compensated temperature range) | < ± 1% of FS (75 -10,000 PSI) < ± 1.5% of FS (25-50 PSI) |
| Storage temperature range | -45° to 100°C |
| Shock | 100G, 1/2" sine, 11msec (per MIL-STD-202) |
| Vibration | 10G random, 10Hz to 2500Hz |
| EMI/RFI Immunity | EN 50081, Part 2 EN 50082, Part 2 |
| Humidity | 95% RH, condensing |

ORDERING



Electrical Connections:

| | | |
|-----------------|--------------|--------------|
| Outputs: | 3/4 | 5 |
| | Red +Supply | Red +Supply |
| | Black Ground | Black Output |
| | White Output | |



DIMENSIONS IN INCHES AND ARE REFERENCE ONLY.