

MSP-320

Stainless Steel Isolated Low Pressure Transducer



**ISO
9002**

- Low Cost OEM
- 100% Leak Proof
 - No "O" Rings, No Silicone Oil, No Welds

Features

- One-piece Stainless Steel Construction
- Ranges 0-25 to 75 PSI
 - 0-1.5 to 6 BAR
- Amplified Outputs, 1-5v or 4-20mA
- Excellent Accuracy
- Wide Operating Temperature Range

Applications

- Pneumatic Systems
- Automotive Test Systems
- Energy and Water Management
- Pressure Instrumentation
- Refrigeration — Freon and Ammonia Based
- Diesel Fuel Management
- Tank Level Metering



- No Leaks
- No Welds
- No "O" Rings
- No Silicone Oil

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.

Performance at 77°F (25°C):

| | |
|---|--|
| Pressure range | 0–25, 50, 75 PSI, (consult factory for compound ranges) 0–1.5, 3.0, 6 BAR |
| Accuracy (combined linearity, hysteresis and repeatability) | <± 1% of FS Span (for higher accuracy consult factory) |
| Media compatibility | 17-4 PH stainless steel (for other material consult factory) |
| Pressure ports | 1/4" NPT (for other ports consult factory) |
| Pressure cycles | >10 ⁸ full pressure cycles |
| Pressure overload | 2X rated pressure |
| Burst pressure | 10 times or 500 PSI whichever is less |
| Long term stability (1 year) | ± 0.50% FS Span (Typical) |

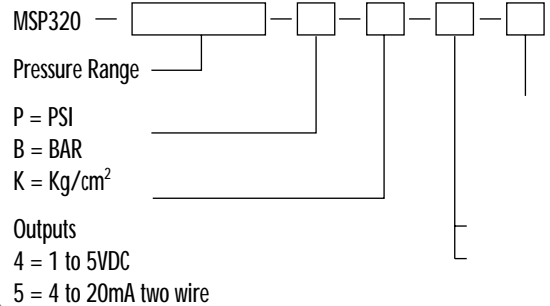
Electrical:

| | |
|------------------|--|
| Supply voltage | 10-30VDC |
| Supply current | <15mA max |
| Outputs | 1-5VDC, fixed (4) 4-20mA two wire (5) |
| Interface | 2 ft. of PVC jacketed cable (for other options consult factory) |
| Zero offset | ± 2% of FS Span |
| Span tolerance | ± 2% of FS Span |
| Output load | 5K Ohm (min) for high level voltage 0 Ohms @ min 10V (1100 Ohms @ 30V) for 4-20mA |
| Noise | < 2mVRMS |
| Bandwidth (-3dB) | DC to 1KHz (Typical) |

ENVIRONMENTAL

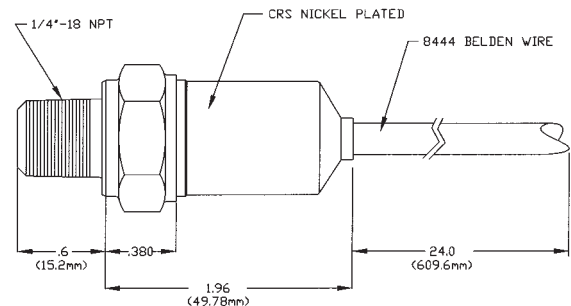
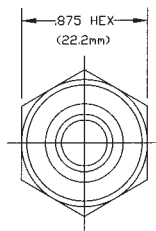
| | |
|-------------------------------|---|
| Operating temperature range | -4 to 185°F (-20 to 85°C), (For other temperature ranges consult factory) |
| Compensated temperature range | 30 to 130°F (0 to 55°C) |
| Zero thermal error | < ± 2% of FS Span |
| Span thermal error | < ± 2% of FS Span |
| Storage temperature range | -20 to 185°F (-30 to 85°C) |
| Shock | 100G, 1/2 sine, 11msec |
| Vibration | 10G, 20 to 2000Hz |

ORDERING



Electrical Connections:

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



**MEASUREMENT
SPECIALTIES**

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传真：0755-83376182 (0) 13902971329 MSN: SUNS8888@hotmail.com

邮编：518033 E-mail:szss20@163.com QQ: 195847376

深圳赛格展销部：深圳华强北路赛格电子市场 2583 号 电话：0755-83665529 25059422

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西安分公司：西安高新开发区 20 所(中国电子科技集团导航技术研究所)

西安劳动南路 88 号电子商城二楼 D23 号

TEL: 029-81022619 13072977981 FAX:029-88789382