

MSP400 Type

Stainless Steel Pressure Sensor

Apply

- Pumps and compressors
- Hydraulic and pneumatic systems
- go-anywhere vehicle
- Energy and water treatment systems
- pressure instrument
- refrigerating equipment
- Agricultural machinery
- Lorry brake system

product description

The MSP400 series of pressure sensors set a new performance-to-price benchmark for mass production, cost-effective products for both civilian and industrial applications. These sensors are widely used to monitor pneumatic and hydraulic pressure, even in harsh media environments such as sewage, steam, light corrosive liquids, and gases.

The pressure chamber of this product is manufactured from a single piece of 17-4PH stainless steel. Its standard pressure port features a 1/4 NPT external thread connector, ensuring excellent sealing performance. This product stands out with its zero-ring design, no welding, and absence of silicone oil or other organic materials, making it exceptionally durable.

The MSI uses the micro-melting technology, which is introduced from aviation applications, to melt the micro-processed silicon piezoresistive strain gauge on the stainless steel isolation diaphragm with high temperature glass.

The bonding process avoids the influence of temperature, humidity, mechanical fatigue and medium on the adhesive and materials, thus improving the long-term stability of the sensor in the industrial environment, and also avoids the P-N junction effect phenomenon that occurs in the traditional mechanical processing and manufacturing process of the sensor.

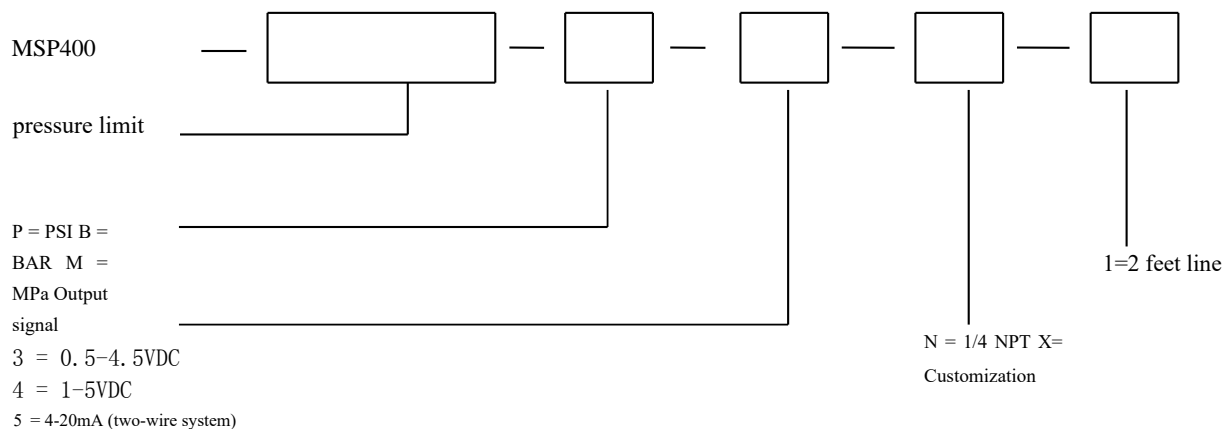
This product is particularly suitable for OEM customers for medium and large batch applications. This standard product can be widely used in a variety of purposes to ensure the requirements of batch applications. Our engineering design team is also ready to customize products with special requirements for customers.



Product Features

- Stainless steel single piece integrated structure
- Pressure range up to 10,000PSI (700 BAR or 70MPa)
- millivolts or amplify the output signal
- high-accuracy
- Wide operating temperature range

Ordering Method

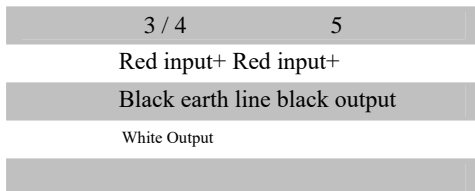


防泄漏
低成本OEM
无“0”形圈
抗电磁、射频干扰

performance parameter

| | | |
|---|--|---|
| Performance (reference temperature 25°C) | | |
| pressure limit | 0~100,250,500,1000,2500,5000,10000 PSI 0~7,17,35,70,175,350,700 BAR 0~0.7,1.7,3.5,7,17.5,35,70 MPa | |
| Accuracy (including nonlinearity, repeatability and hysteresis) | ±0.5%FS | |
| Medium compatibility | 17~4PH stainless steel | |
| Pressure interface | 1/4"NPT | |
| forced circulation | More than 10 ⁴ times of full pressure cycles | |
| Pressure limits | Double rated pressure | |
| breakdown pressure | Five times the rated pressure or 20,000 PSI (whichever is smaller) | |
| Long-term stability (1 year) | ±0.25% FS (typical) | |
| behaviour of electricity | | |
| Power Supply Voltage | 5VDC | 10 ~ 30 VDC |
| supply current | <10 mA | <15 mA |
| output signal | 0.5-4.5 VDC, proportional to the input (3) | 1-5 VDC fixed output (4); 4-20 mA two-wire (5) |
| Electrical connections | 2ft cable | |
| Zero-point deviation | Civilian 2% FS | |
| Range deviation | Civilian 2 per cent FS | |
| output loading | Minimum 5k Ω (voltage output type) 0Ω @ 10V, 1100Ω @30V (4-20 mA output type) | |
| noise | < 2mVRMS | |
| Bandwidth (-3dB) | DC up to 1kHz (typical) | |

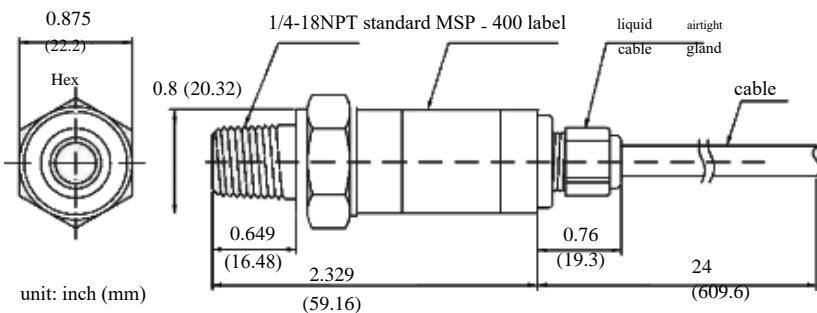
Electrical Connections



Environmental Requirements

| | |
|---|---|
| operating temperature range | -40 °C ~ 85 °C |
| Compensation temperature range | 0 °C ~ 70 °C |
| Effect of zero temperature | <± 1.5% FS |
| Temperature effects over a range of quantities | <± 1.5% FS |
| Storage temperature range | -40 °C ~ 85 °C |
| lash | 50g, 11msec, 1/2 sine wave (Reference MIL standard 202F, method 213B, condition A) |
| vibrate | ± 20g (Reference MIL standard 810C, procedure 514.2, Figure 514.2-4, curve L) |
| Anti-electromagnetic/radio frequency interference | EN 50081-2 EN 50082-2 (10V/M, 26-1000MHz) EN 61326 |

outline dimension



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