

MSP300 type

Stainless steel pressure sensor

Apply

- Pumps and compressors
- Hydraulic and pneumatic systems
- Energy and water treatment systems
- automatic monitoring system
- Chilling equipment (Freon or ammonia)
- Agricultural machinery

Product Description

The MSP300 series of pressure sensors set a new performance-to-price benchmark for mass production, low cost, and consumer and industrial applications. These products are widely used for monitoring 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 using a single-piece stainless steel structure with 17-4PH grade. Its standard pressure interface features a 1/4NPT external thread connector, ensuring excellent sealing performance. The product's key advantages include zero O-ring seals, no welding, and absence of silicone oil or other organic materials, making it exceptionally durable.

The MSI sensor employs micro-melting technology, incorporating aerospace-grade innovation to fuse precision-engineered silicon piezoresistive strain gauges onto stainless steel diaphragms using high-temperature glass. This glass bonding process effectively prevents degradation from temperature fluctuations, humidity exposure, mechanical stress, and material interactions with adhesives, thereby enhancing long-term stability in industrial environments. Furthermore, it eliminates the P-N junction effect commonly observed in sensors manufactured through conventional machining processes.

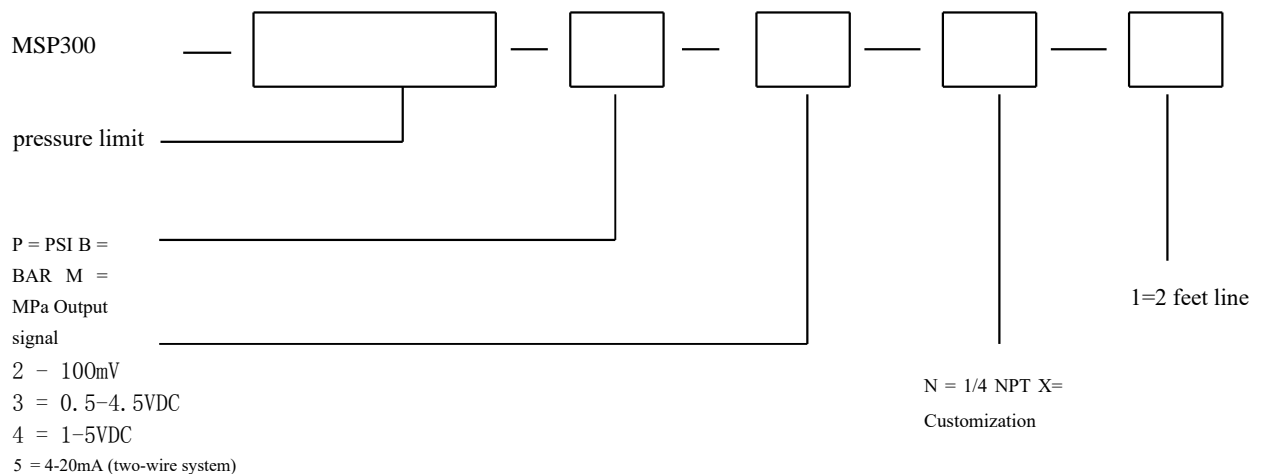
This product is particularly suitable for OEM customers' medium and large-scale applications. This standard product can be widely used in a variety of applications. In order to ensure the requirements of batch applications, our engineering design team is ready to customize products with special requirements for customers.



Product Features

- Solid, durable and low price
- Stainless steel single piece integrated structure
- Pressure range up to 10,000PSI (700BAR 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
无硅油、无焊缝

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 ~ 7, 1.7, 3.5, 7, 17.5, 35, 70 MPa	
Accuracy (including nonlinearity, repeatability and hysteresis)	<1%FS	
Medium compatibility	17~4PH stainless steel	
Pressure interface	1/4" NPT	
forced circulation	More than 10 ⁶ times of full pressure cycles	
Overload pressure	Double rated pressure	
breakdown pressure	Five times rated pressure or 20000PSI (whichever is smaller)	
Long-term stability (1 year)	± 0.25% FS (typical value)	
behaviour of electricity		
Power Supply Voltage	5VDC	10~30 VDC
supply current	<10mA	<15mA
output signal	0~100 mVDC, proportional output (2) 0.5V to 4.5 VDC, proportional output (3)	1-5VDC, fixed output (4) 4~20mA, two-line system (5)
Electrical connections	2ft cable	
Zero-point deviation	3%FS (0-100mV output type) Civilian 2 per cent FS	
Range deviation	Civilian 2% FS	
output loading	1MΩ (millivolt output type), minimum 5KΩ (voltage output type) 0Ω @ 10V, 1100Ω @ 30V (4-20mA output type)	
noise	<2mVRMS (zoom in)	
Bandwidth (-3dB)	DC up to 1kHz (scale)	

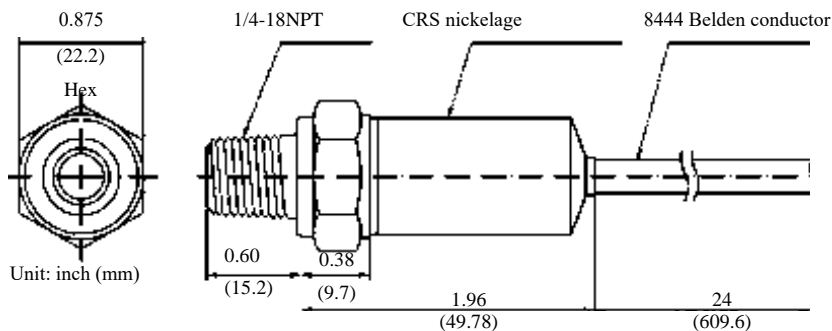
Electrical Connections

2	3 / 4	5
Red input + Red input+ Red input+		
Black input-Black ground wire-Black input-		
White Output-White Output		
Green Output +		

Environmental Requirements

operating temperature range	-20 °C ~ 85 °C
Compensation temperature range	0 °C ~ 55 °C
Effect of zero temperature	<± 2% FS
Temperature effects over a range of quantities	<± 2% 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 (refer to MIL standard 810C, procedure 514.2, Figure 514.2-4, curve L)

outline dimension



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