MSP600 type

High performance stainless steel pressure sensor

- Prevent leakage
- low cost OEM
- EMR/RFI
- High precision / digital compensation

Should need

Pump and compressor hydraulic and pneumatic system off-road vehicle

Energy and water treatment systems

Pressure instrument refrigeration equipment agricultural machinery equipment locomotive brake system

product description

The MSP600 series of pressure sensors set a new performance-to-price example for mass production, low cost, and consumer and industrial applications. The series is widely used for monitoring air pressure 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 stands out by eliminating O-rings, welding, silicone oil, and other organic materials, making it exceptionally durable.

The MSI sensor employs micro-melting technology, incorporating aerospace-grade innovation. This process uses high-temperature glass to fuse precision-engineered silicon piezoresistive strain gauges onto stainless steel isolation diaphragms. The glass bonding technique effectively prevents degradation from temperature fluctuations, humidity exposure, mechanical stress, and material interactions with adhesives, thereby enhancing long-term stability in industrial environments. Additionally, it eliminates the P-N junction effect commonly observed in sensors manufactured through traditional 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 meet the requirements of batch applications, our engineering design team is ready to customize products with special requirements for customers.

Product Features

- High precision, digital compensation
- Stainless steel single piece integrated structure
- EMR/RFI
- Boost output
- Up to 10,OOOPSI (700BAR or 7OMPa)
- Wide operating temperature range

Ordering Method

MSP600 — [ ] — [ ] — [ ] — [ ] — [ ]

pressure limit

P = PSI B = BAR M = MPa Output signal

3 = 0.5-4.5VDC

4 = 1-5VDC

5 = 4-20mA (two-wire system)

N = 1/4 NPT X= Customization

1=2 feet line

performance parameter

Performance (reference temperature 25℃)		
pressure limit	0～25,50,75,100,250,500,1000,2500,5000,7500,10000 PSI 0～3,6,7,17,35,70,175,350,525,700 BAR 0～0.3,0.6,0.7,1.7,3.5,7,17.5,35,52.570 MPa	
Accuracy (including nonlinearity, repeatability and hysteresis)	±0. 25% BSL	
Medium compatibility	17～4PH stainless steel (316L stainless steel optional)	
forced circuiation	More than 10^8 full pressure cycles	
Overload pressure	Double rated pressure	
breakdown pressure	Four times the rated pressure or 20,000 PSI/1400 BAR /140 Mpa (whichever is smaller)	
Long-term stability (1 year)	±0.25% FS (typical)	
behaviour of electricity	Proportional output	Non-proportional output
Power Supply Voltage	4. 75-2. 25 VDC	10 ～ 30 VDC
supply current	<10 mA	<25 mA
output	0.5-4.5 VDC, 5V power supply (3)	1-5 VDC three wire (4); 4-20 mA two-wire (5)
output loading	> 100k Ω (reference performance) 0Ω@ 10V,1100Ω@30V (4-20 mA output type)	
Bandwidth (-3dB)	DC up to 1kHz (typical)	
Electrical interface	Parkard connector (Metri-park 150 type, 3-pin) or cable-standard length 24 inches	

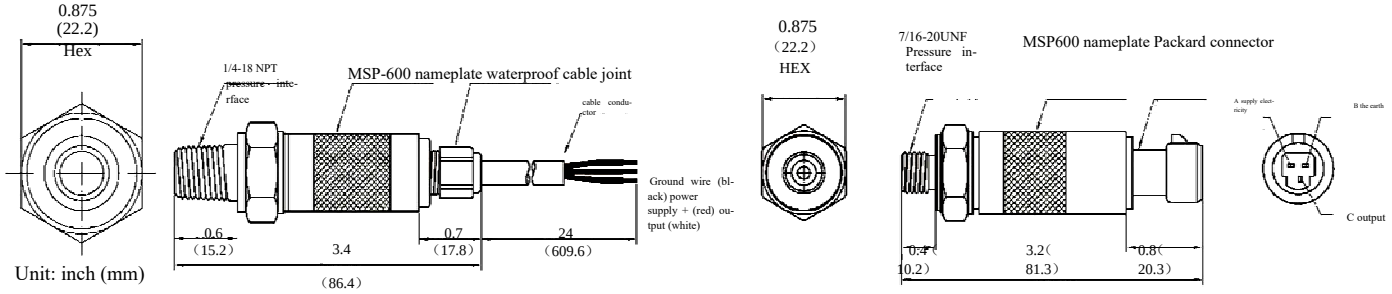
Electrical Connections

3 / 4	5
Red input + Red input +	
Black earth line black output	
White Output	

Environmental requirements

operating temperature range	-40℃ ~ 100℃ (optional 125℃)
Compensation temperature range	-20℃ ~ 85℃ (optional 125℃)
Total error (over the compensation temperature range)	<±1%FS (75-10,000 PSI/6-700 BAR/0.6-70 Mpa) <±1.5%FS (25-50PSI/3 BAR/0.3 Mpa)
Storage temperature range	-45 ℃ ～ 100 ℃
lash	50g,11msec, 1/2 sine wave (Reference MIL standard 202F, method 213B, condition A)
vibrate	± 20g (Reference to 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
humidity	95% relative humidity

Outline Dimension



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