Stainless Steel Pressure Sensor

Description

XDB105-16 stainless steel pressure sensor core is a specialized device designed to detect and measure the pressure of a given medium. It operates by converting this pressure into usable output signals, following specific predefined rules.

Typically, it comprises sensitive components and conversion elements which are manufactured using high-temperature sintering techniques, which increases resilience to temperature, humidity, and mechanical fatigue, ensuring long-term stability in industrial environments.

Features

- Alloy-film stainless steel technology
- Corrosion-resistant, allowing direct measurement of corrosive media without isolation.
- Exceptional temperature and overload resistance.
- Reliable, stable, and cost-effective.
- Offers OEM and customizable options.

Typical applications

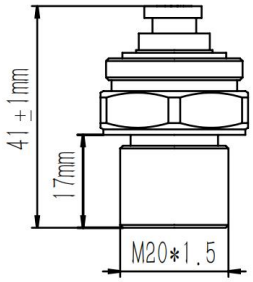
- Petrochemical gear.
- Auto electronics.
- Industrial machinery: hydraulic presses, air compressors, injection molders, water treatment,hydrogen pressure systems, etc.

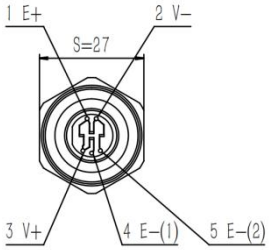
Parameters

Power supply	Constant current 1.5mA; Constant voltage 5-15V (typical 5V)	Bridge arm resistance	5±2KΩ
Material	SS316L	Supply voltage	0-30 VDC (max)
Bridge road impedance	10 KΩ±30%	Pressure range	0-2000bar
Overload pressure	150%FS	Burst pressure	≥4 times range
Insulation resistance	500MΩ (test conditions: 25 ℃, relative humidity of 75%, application of 100VDC)	Working frequency	0-1 KHz
Accuracy	±1.0%FS	Temperature self compensation range	0-70℃
Comprehensive error (linearity, hysteresis, and repeatability)	1.0%FS	Zero point output	0 ± 2mV@5V Power supply (bare version)
Sensitivity range (full scale	1.0-2.5mV/V @ 5V power supply	Zero time drift	≤± 0.05% FS/year (standard

output)	(standard atmospheric environment)	characteristics	atmospheric environment)
Sensitivity range (full scale output) Temperature characteristics	≤±0.02% FS/℃（0-70℃）	Zero position, full range temperature drift	Grade A≤±0.02%FS/℃(0~70℃); Grade B≤±0.05%FS/℃(-10~85℃); Grade C≤±0.1%FS/℃(-10~85℃).
Operating temperature range	-40℃-150℃	Long term stability	≤±0.05% FS/year
Sensor weight	51g		

Dimensions(mm) & electrical connection





How to order

E.g. **XDB105-16-10B -0**

1 Range (Bar)

2 Type of lead
0-tin lined;

1-Solder leads/pins

Model No.	Pressure range(Bar)	Overload pressure(Bar)	Burst pressure(Bar)
XDB105-16-010-0	0~10	20	25
XDB105-16-020-0	0~20	40	50
XDB105-16-050-0	0~50	100	125
XDB105-16-100-0	0~100	200	250
XDB105-16-200-0	0~200	400	500
XDB105-16-400-0	0~400	600	700
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Notes

1. The pressure-sensitive head is welded to the pressure head. Ensure reliable welding using low-temperature, low-heat methods to prevent thermal shock damage to the strain resistance.

2. Post-welding, the product must be thermally annealed before signal conditioning to maintain accuracy.

#98 Rongyang Rd, Songjiang, SH, 201613, CHINA
+86 19921910756
www.xdbsensor.com
+86 021 37623075
info@xdbsensor.com
Xidibei Sensor & Control