

Diffused Silicon Pressure Sensor

Description

XDB102-1(A) series diffused silicon pressure sensor cores have the same shape, assembly size and sealing methods as the mainstream similar products abroad, and can be directly replaced. The production of each product has adopts strict aging, screening and testing processes to ensure excellent quality and high reliability.

Features

- ◆ CE conformity
- ◆ Measuring Range: -100kPa...0kPa ~ 20kPa...70MPa
- ◆ Imported chip, Laser trimming
- ◆ ϕ 19mm×15mm standard OEM pressure sensor
- ◆ Provide OEM, flexible customization
- ◆ SS 316L, Hastelloy C, titanium, tantalum and other materials for special applications

Typical applications

- ◆ Industrial process control
- ◆ Gas, liquid and vapor pressure detection
- ◆ Level measurement



Specifications

Structure condition			
Diaphragm material	SS 316L	Housing material	SS 316L
Pin wire	Kovar/100mm silicone rubber wire	Back pressure tube	SS 316L (gauge and negative pressure only)
Seal ring	Nitrile rubber		
Electrical condition			
Power supply	≤2.0 mA DC	Impedance input	2.5kΩ ~ 5 kΩ
Impedance output	2.5kΩ ~ 5 kΩ	Response	(10%~90%) :<1ms
Insulation resistance	100MΩ,100V DC	Over pressure	2 times FS, (0C/0B/0A/02 5times FS)
Environment condition			
Media applicability	Fluid that is not corrosive to stainless steel and nitrile rubber	Shock	No change at 10gRMS, (20 ~ 2000)Hz
Impact	100g, 11ms	Position	Deviate 90° from any direction, zero change ≤ ±0.05%FS
Basic condition			
Environment temperature	(25±1)℃	Humidity	(50%±10%)RH
Atmospheric pressure	(86~106) kPa	Power supply	(1.5±0.0015) mA DC

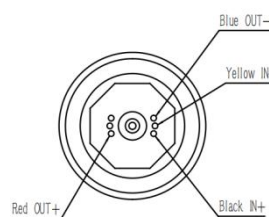
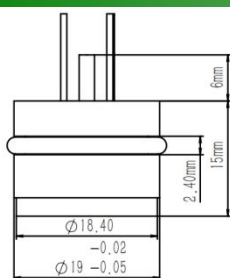
Parameter (@1.5 mA DC)

Item	Min.	Typ.	Max.	Units
Linearity		±0.1	±0.25	% FS, B F S L
Repeatability		±0.05	±0.075	% FS
Hysteresis		±0.05	±0.075	% FS
Zero output			±2.0	mV DC
FS output	45	100		mV DC
Compensated temp. range	0~70			°C
Working temp. range	-40~125			°C
Storage temp. range	-55~150			°C
Zero temp. error		±0.75	±1.0	% FS @ 25 °C
Full temp. error		±0.75	±1.0	% FS @ 25 °C
Long term stability error		±0.2		% FS / year

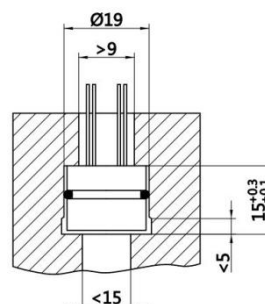
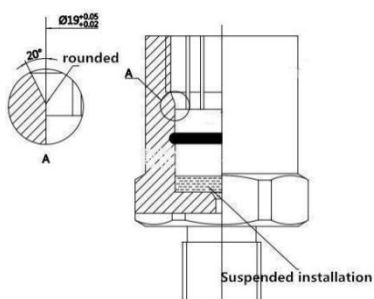
Note: 1.The above performance indicators are tested under the benchmark conditions.

2.The temperature range for temperature drift test is the compensation temperature range.

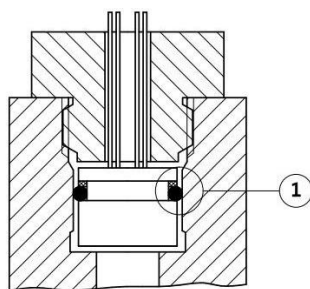
Dimension (unit: mm)



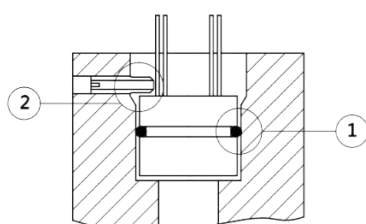
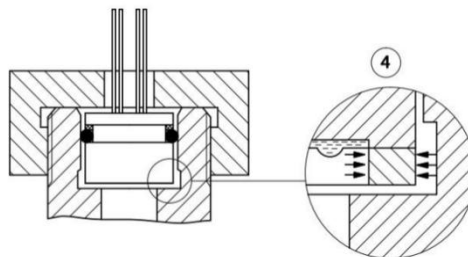
Recommended installation structure (unit: mm)



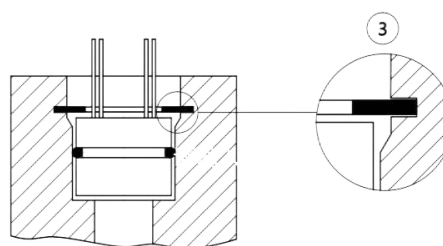
Recommended installation structure (unit: mm)



installation for $\geq 7\text{MPa}$



installation for $\leq 700\text{KPa}$



installation for $\leq 3.5\text{MPa}$

Description:

- ①When installing O-ring or PTFE ring, keep PTFE ring installed in the side without pressure
- ②Screw cannot be lifted to the sensor housing
- ③The figure shows the installation of elastic ring with holes
- ④The picture shows the pressure transmitter suspension installation, and make sure there is a gap between the radial and axial of the sensor ring and the base to avoid pressure is transmitted to the sensor diaphragm.

Electrical connection

Pin	Electrical connection	Wire color
4	+OUT	Red
10	-OUT	Blue
11	-IN	Yellow
12	+IN	Black

Ordering information

XDB102-1 (A)								
	Range code	Measurement range	Pressure type	Range code	Measurement range	Pressure type		
	0B	0~10/20kPa	G	12	0~2MPa	G / A		
	0A	0~35kPa	G	13	0~3.5MPa	G / A		
	02	0~70kPa	G	14	0~7MPa	A / S		
	03	0~100kPa	G / A	15	0~15MPa	A / S		
	07	0~200kPa	G / A	17	0~20MPa	A / S		
	08	0~350kPa	G / A	18	0~35MPa	A / S		
	09	0~700kPa	G / A	19	0~70MPa	A / S		
	10	0~1MPa	G / A					
		Code	Pressure type					
		G	Gauge pressure					
		A	Absolute pressure					
		S	Sealed gauge pressure					
			Code	Electrical connection				
			1	Gold-plated kovar pin				
			2	100mm Silicone rubber leads				
			Code	Special measurement				
	Y		Gauge pressure type can be used to measure negative pressure Note ^①					
XDB102-1(A) -0B-G-1-Y the whole spec Note ^②								

Note^①: When the gauge pressure is measured, it will affect the zero and full value of the sensor. At this time, it is different from the value specified in the parameter table, and it will be fine-tuned on the follow-up circuit.

Note^②: We can provide assembly or welding products once we confirmed the sketches you offered.

Order notes

1. To avoid sensor instability, please pay attention to the installation size and installation process to avoid pressing the sensor front within 3 seconds to avoid heat transfer to the sensor
2. When using a gold-plated cotter pin on a wire, please use a soldering iron below 25W under low temperature soldering

📍 #98 Rongyang Rd, Songjiang, SH, 201613, CHINA

📞 +86 19921910756

🌐 www.xdbsensor.com

☎ +86 021 37623075

✉ info@xdbsensor.com

🏢 Xidibei Sensor & Control