

Piezoresistive Welded Pressure Sensor

Description

XDB102-7 series Piezoresistive pressure sensor is a sensor encapsulating the isolation film sensor core in the stainless steel shell, with SS 316L diaphragm and stainless steel shell and interface. It has good media compatibility, reliable and stable performance with G1/2 or M20*1.5 external thread. The back-end interface is M27*2 external thread, which is convenient for customers to directly install and use.

XDB102-7 is suitable for a variety of gas, liquid medium pressure measurements. It can be widely used in petroleum, chemical, marine, hydraulic systems and other industries process control and measurement.

Typical applications

- ◆ Petroleum, chemical industry
- ◆ Urban water supply, heating
- ◆ Process control system
- ◆ Hydraulic industry

Features

- ◆ CE conformity
- ◆ Range: -100kPa...0kPa ~ 20kPa...70MPa
- ◆ High precision, high stability
- ◆ Standard thread pressure measurement
- ◆ Provide OEM, flexible customization



Specifications

Structure condition			
Diaphragm material	SS 316L	Housing material	SS 316L
Seal ring	Nitrile rubber		
Electrical condition			
Power supply	≤ 2.0mA DC	Impedance input	2.5 kΩ ~ 5 kΩ
Impedance output	2.5 kΩ ~ 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
All tests are in accordance with relevant national standards, including GB / T2423-2008, GB / T8170-2008, GJB150.17A- 2009, etc., and also comply with the Company's "Pressure Sensor Enterprise Standards" provisions of the relevant content.			

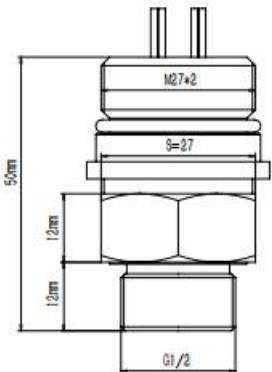
Parameter (@1.5 mA DC)

Item	Min.	Typ.	Max.	Units
Linearity		± 0.2	± 0.25	%FS, B FSL
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.

Electrical connection

Electrical connection	Wire color	
+OUT	Red	
-OUT	Blue	
-IN	Yellow	
+IN	Black	

Ordering information

XDB102-7							
	Range code	Measurement range	Pressure type	Range code	Measurement range	Pressure type	
	0B	0~20kPa	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			
			2	100mm Silicone rubber leads			
			Code	Other specifications			
			Y	Gauge pressure type can be used to measure negative pressure			

XDB102-7-0B-G-2-Y the whole spec

Notes:

When using Gauge type to measure negative pressure, it will affect the zero and full scale value of the sensor,
Please follow-up on their own circuit to the desired value.