

Diffused Silicon Pressure Sensor

Description

XDB102-3 series diffused silicon pressure sensor cores use high stability diffused silicon chip, the measured medium pressure can be transferred to silicon chips through the diaphragm and silicon oil transfer to the diffusion of silicon chips, the use of diffused silicon piezo-resistive effect principle to achieve the purpose of measuring the size of liquid, gas pressure.

Features

- ◆ CE conformity
- ◆ Range: -100kPa...0kPa~20kPa...3.5MPa
- ◆ Imported chip, Laser trimming
- ◆ Provide OEM, flexible customization
- ◆ ϕ 19mm×5.55mm

Typical applications

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



Specifications

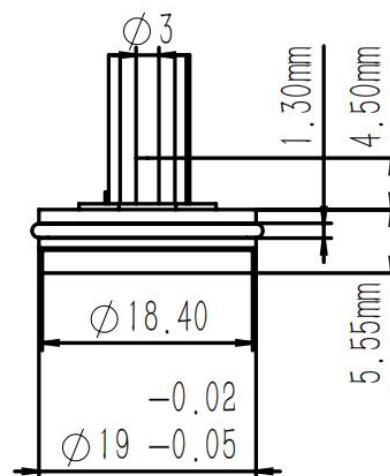
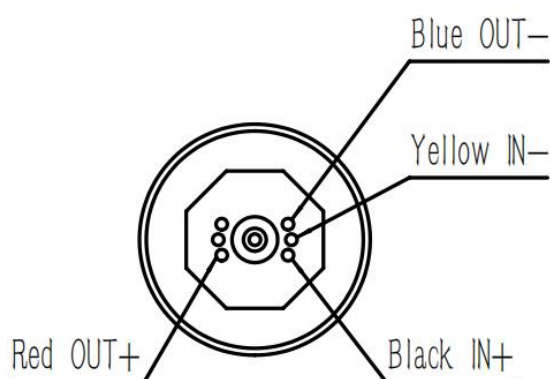
Structure condition			
Diaphragm material	SS 316L	Housing material	SS 316L
Pin wire	Gold-plated karaf/100mm silicone rubber wire	Back pressure tube	SS 316L (gauge and negative pressure only)
Seal ring	Nitrile rubber		
Electrical condition			
Power supply	≤2.0 mA DC	Impedance input	2.5kΩ ~ 5 kΩ
Impedance 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
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		± 0.15	± 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)



Ordering information

XDB102-3							
	Range code	Measurement range	Pressure type	Range code	Measurement range	Pressure type	
	0B	0~(10)20kPa	G	08	0~350kPa	G / A	
	0A	0~35kPa	G	09	0~700kPa	G / A	
	02	0~70kPa	G	10	0~1MPa	G / A	
	03	0~100kPa	G / A	12	0~2MPa	G / A	
	07	0~200kPa	G / A	13	0~3.5MPa	G / A	
		Code	Pressure type				
		G	Gauge pressure				
		A	Absolute 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 ^①			
XDB102-3 -0B-G-1-Y the whole spec ^②							

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

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