Piezo-resistive Differential Pressure Sensor

Description

XDB102-5 series Piezo-resistive differential pressure sensor cores use stainless steel material, there are also stainless steel corrugated diaphragm on both high and low pressure side to protect sensitive chip. The product's shape and structure are the same with the similar products overseas, with good interchangeability, can be reliably applied to a variety of differential pressure measurements of the occasion.

Typical applications

- Gas, liquid pressure measurement
- Differential pressure measurement
- Industrial process control
- Venturi and Vortex Flowmeters

Features

- CE conformity
- Measuring Range: 0kPa~20kPa---3.5MPa
- Import MEMS pressure sensitive chip
- Provide OEM, flexible customization
- General appearance and structure and assembly dimensions

Specifications

Structure condition			
Diaphragm material	SS 316L	Housing material	SS 316L
Pin wire	Kovar/100mm silicone rubber wire	Seal ring	Nitrile rubber
Electrical condition			
Power supply	≤2.0 mA DC	Impedance input	3 kΩ ~ 8 kΩ
Impedance output	3.5kΩ ~6 kΩ	Response	(10%～90%) :<1ms
Insulation resistance	100MΩ,100V DC	Maximum static pressure	15MPa
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.			

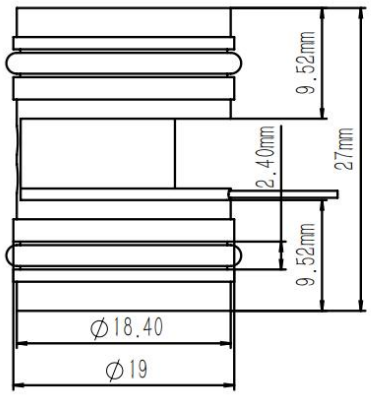
Parameter

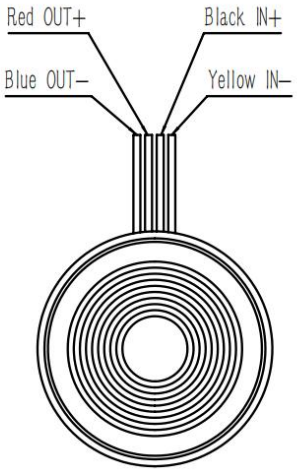
Item	Min.	Typ.	Max.	Units
Linearity		±0.2	±0.25	%FS, BFSL
Repeatability		±0.05	±0.075	%FS
Hysteresis		±0.05	±0.075	%FS
Zero output			±2.0	mV DC
FS output	45	130		mV DC
Compensated temp. range	0~50			℃
Working temp. range	-40~125			℃
Storage temp. range	-55~150			℃
Zero temp. error		±0.75	±1.0	%FS@25℃
Full temp. error		±0.75	±1.0	%FS@25℃
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.

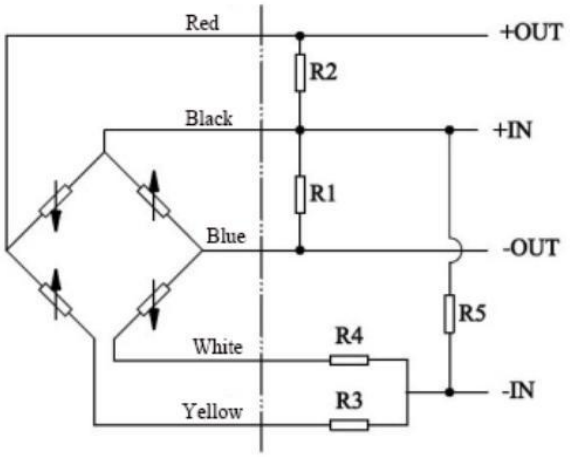
Dimension (unit: mm)





Electrical connection

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



Ordering information

XDB102-5				
	Code	Range	Positive allowable Overpressure	Negative allowable overpressure
	0B	0~20kPa	70kPa	20kPa
	0A	0~35kPa	70kPa	35kPa
	02	0~70kPa	150kPa	70kPa
	03	0~100kPa	200kPa	100kPa
	07	0~200kPa	400kPa	200kPa
	08	0~350kPa	700kPa	350kPa
	09	0~700kPa	1400kPa	700kPa
	10	0~1MPa	2.0 MPa	1000kPa
	12	0~2MPa	4.0 MPa	1000kPa
	13	0~3.5MPa	7.0 MPa	1000kPa
			Code	Temperature compensation method
			M	Provide compensation resistance (standard)
			Code	Electrical connections
			2	100mm silicone rubber flexible wire
XDB102-5-03-M-2 the whole spec				

We can provide the assembled products, and you need to provide sketches, once confirmed, we can provide the finished products.

Order notes

1. The differential pressure sensor is suitable for the customer to use by assembling the shell, when installing, please avoid pressing the front and back faces of the sensor to ensure the sensor to be stable.
2. When you weld the sensor core to the pressure base, improper methods will cause irreparable damage, at this time, please contact us to offer the welding of components directly.

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