PC33 Monocrystalline Silicon Pressure Sensor

Features

- Imported MEMS monocrystalline silicon pressure die
- High accuracy and excellent overpressure resistance
- High performance, all solid state, high reliability
- 316L stainless steel all welded integrated structure
- Gauge pressure type applicable to negative pressure measurement
- Weldable seal

Applications

- Provide OEM for industrial transmitter manufacturers

Notes:

1 Do not touch the diaphragm with hard objects, which may cause damage to the diaphragm.

2 Please read the Instruction Manual of the product carefully before installation and check the relevant information of the product.

3 Strictly follow the wiring method for wiring, otherwise it may cause product damage or other potential faults.

4 Misuse of the product may cause danger or personal injury.

Overview

PC33 Monocrystalline Silicon Pressure Sensor adopts German imported MEMS monocrystalline silicon pressure die, achieves international leading overpressure performance and ensures the excellent stability of signal. It is assembled in all-welded seal structure and filled with silicon oil in high vacuum. Diaphragm of different materials isolates measuring medium and pressure die, meanwhile, the sensor performs long-term reliable measurement of differential pressure signals of various strong corrosive media.

PC33 Monocrystalline Silicon Pressure Sensor allows measured pressure to act directly on the diaphragm of sensor. Then the diaphragm produces a microdisplacement proportional to the pressure, which can be detected with integrated electronic circuit and converted to output a standard measurement signal of the corresponding pressure.

Notes:

1 Do not misuse documentation.

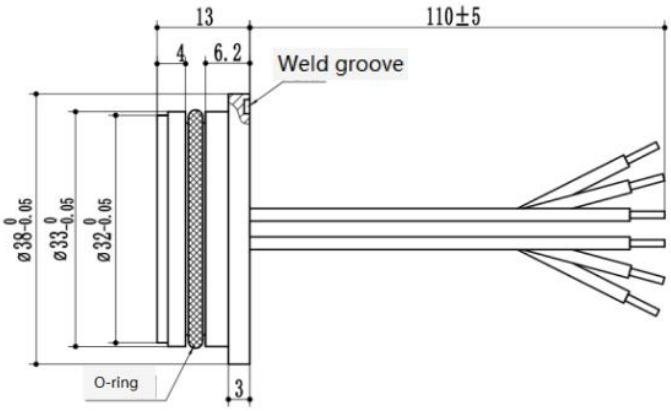
2 The information presented in this product sheet is for reference only. Do not use this document as a product installation guide.

3 Complete installation, operation, and maintenance information is provided in the instructions of the product.

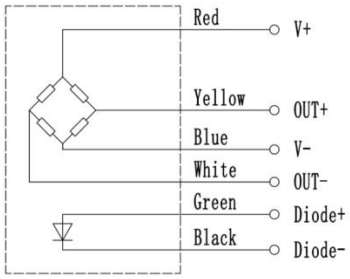
4 Misuse of the product may cause danger or personal injury.

Performance parameters	
Excitation	5V Constant voltage
Operating temp.	-40~125℃
Storage temp.	-40~125℃
Output	60~140mV
Zero temp. coefficient	±0.1%FS/℃
Temp. hysteresis	±0.05%FS(Range≥10kPa); ±0.1%FS(Range<10kPa)
Pressure hysteresis	±0.05%FS
Long-term drift	±0.05%FS / Year
Nonlinearity	±0.3%FS(Range≥10kPa); ±1.5%FS(Range<10kPa)
Diaphragm material	Stainless steel 316L, Hastelloy C

Structure & dimension（in mm)



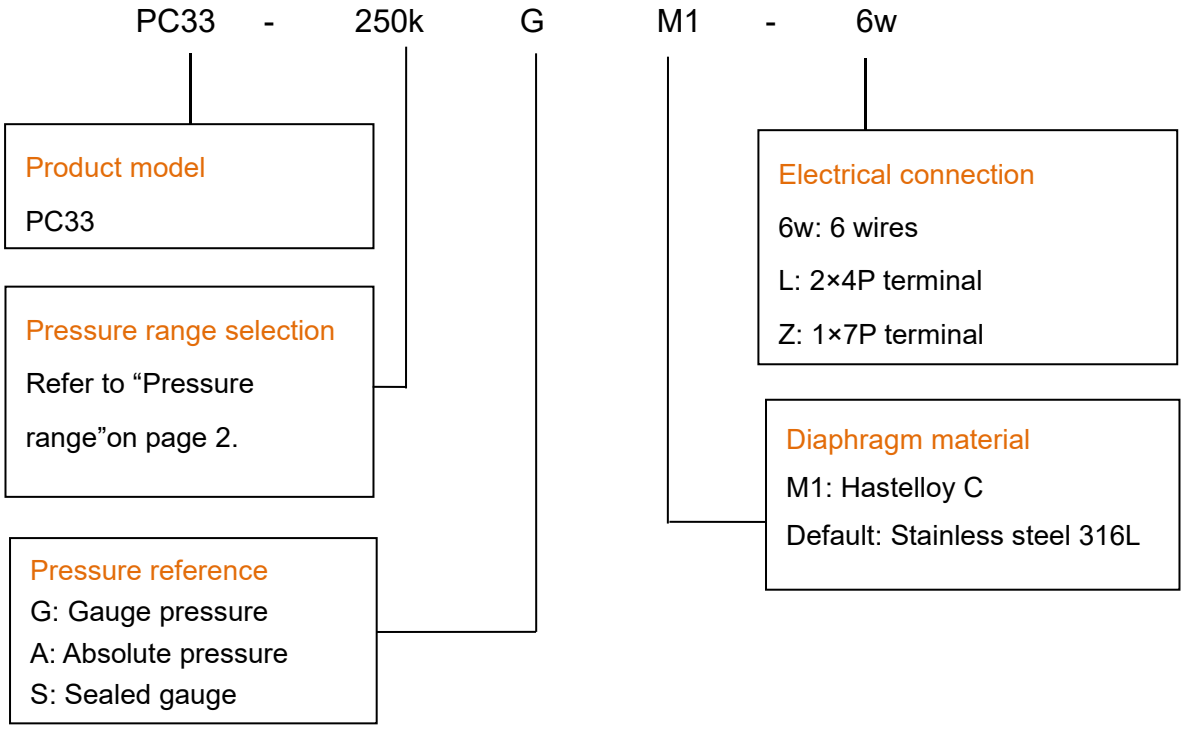
Electrical connection

Electrical schematic diagram	Wire color	Definition
	Red	IN+
	Blue	IN-
	Yellow	OUT+
	White	OUT-
	Green	Diode+
	Black	Diode-

Pressure range selection

Code	Pressure reference	Pressure range	Overpressure	O-ring
6kG	G	-6~6kPa	200kPa	NBR
40kA	G	0~40kPa	400kPa	NBR
40kG	G	-40~40kPa	400kPa	NBR
100kG	G	-100~100kPa	1MPa	NBR
250kG	G	-100~250kPa	2MPa	NBR
1MG	G	-0.1~1MPa	6MPa	NBR
3MG	G	-0.1~3MPa	15MPa	NBR

How to order



Example: PC33-250kGM1-6w

Product model:PC33. 250k:pressure range -100~250kPa. G:gauge pressure. M1: diaphragm material Hastelloy C. 6w: electrical connection 6 wires.

Ordering tips:

1 Pressure range can be selected higher or lower than actual conditions but should be within ±30%FS.

2 Pressure reference consists of gauge pressure, absolute pressure and sealed gauge pressure.

(1) Gauge pressure is based on the current atmospheric pressure. Generally, it refers to the measurement of pressure which is greater than the current atmospheric pressure. Negative pressure is a special case of gauge pressure. It refers that there is such working condition that the pressure of work site is lower than the current atmospheric pressure.

(2) Absolute pressure is based on vacuum.

(3) As for sealed gauge pressure, it uses absolute pressure die for gauge pressure product based on the atmospheric pressure of production site. For pressure range above 6MPa, gauge pressure cannot be selected, but only sealed gauge pressure.

3 Confirm the maximum overload of the applied system, which should be less than the overload protection limit of the sensor, otherwise it will affect the product life or even damage the product.

4 The commonly used compensation of the product is1.5mA constant current compensation. Suggest to select the option with priority.

5 The material and process for manufacturing negative pressure sensors are different from those of positive pressure sensors. So gauge pressure sensors cannot be used as substitute of negative pressure sensors.

6 For special requirements on performance parameters and functions of the product, please contact us.

Wotian reserves the right to make any change in this publication without notice. The information provided is believed to be accurate and reliable as of this product sheet.

Contact us

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