

# P20 Monocrystalline Silicon Pressure Sensor

## Features

- MEMS monocrystalline silicon pressure chip imported from Germany
- High accuracy, super overpressure resistance
- High performance, all solid, high reliability
- Stainless steel 316L all welded structure
- Gauge pressure type can be used for negative pressure measurement

## Applications

- Provide OEM parts for industrial pressure transmitter manufacturers



## Product overview

P20 monocrystalline silicon pressure sensor adopts MEMS monocrystalline silicon pressure chip imported from Germany to achieve international leading overpressure performance and ensure the signal stability. Assembled with all-welded seal structure and filled with silicone oil under high vacuum, diaphragm of different materials isolates measuring medium and differential pressure die, meanwhile, the sensor performs long-term reliable measurement of differential pressure signals of various strong corrosive media.

The measured pressure acts directly on the diaphragm of the sensor, so that the diaphragm produces a small displacement proportional to the pressure. With integrated electronic circuit to detect the change, it converts and outputs a standard measurement signal corresponding to the pressure.

### 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.

### Notes:

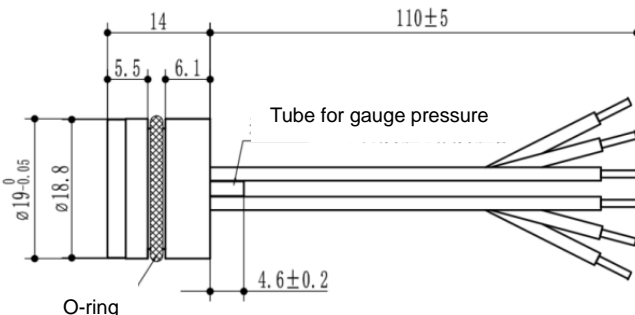
- 1 Do not misuse documentation.
- 2 The information presented in this product sheet is for reference only. Do not use this document as a product installation guide.
- 3 Complete installation, operation, and maintenance information is provided in the instructions of the product.
- 4 Misuse of the product may cause danger or personal injury.

## Performance parameters

Excitation	5V constant voltage
Operating temp.	-40℃～85℃
Storage temp.	-50℃～125℃
Output	200～300mV(@10MPa A) 60～140 mV (other ranges)
Zero temp. coefficient	±0.05%FS/℃
Temperature hysteresis	±0.1%FS(pressure range≥100kPa)
Pressure hysteresis	±0.05%FS
Long-term drift	±0.05%FS /year
Nonlinearity	±0.5%FS(pressure range≥100kPa)
Maximum overpressure	Refer to pressure range selection
Diaphragm material	316L, Hastelloy C

## Structure and dimensions

In mm

Pressure range	Dimensional drawing
≥100kPa	

## Electrical connection

Electrical schematic diagram	Wire color	Wiring definitions
	Red	Excitation+ (IN+)
	Blue	Excitation- (IN-)
	Yellow	Output+ (OUT+)
	White	Output- (OUT-)
	Green	Temperature +(Diode+)
	Black	Temperature -(Diode-)

### Pressure range selection

Pressure Code	Minimum Pressure	Pressure reference	Pressure range	Overpressure
100kG	25kPa	G	-100~100kPa	1MPa
100kA	25kPa	A	0~100kPa	1MPa
250kG	60kPa	G	-100~250kPa	2MPa
250kA	60kPa	A	0~250kPa	2MPa
1MG	250kPa	G	-0.1~1MPa	6MPa
3MG	0.8MPa	G	-0.1~3MPa	15MPa
10MA	1MPa	A	0~10MPa	20MPa
20MA	5MPa	A	0~20MPa	60MPa
40MA	10MPa	A	0~40MPa	80MPa

Note: G: Gauge pressure, A: Absolute pressure

### How to order

P20 - 250kG - 6w

Pressure range selection:

100kG=100kPa G  
 100kA=100kPa A  
 250kG=250kPa G  
 250kA=250kPa A  
 500kG=500kPa G  
 1MG=1MPa G  
 3MG=3MPa G  
 10MA=10MPa A  
 20MA=20MPa A  
 40MA=40MPa A

Electrical connection:

6w: 6 wires  
 L: 2x4P terminal  
 Z: 1x7P terminal

Example: P20-250kG6w

Refer to PC20 pressure sensor, pressure range 250kPa, gauge pressure, with 6 wire electrical connection.

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