

# PC91 Monocrystalline Silicon Pressure Sensor

## Features

- Imported MEMS monocrystalline silicon pressure die
- With overload protection
- 316L stainless steel all welded integrated structure
- Gauge pressure type applicable to negative pressure measurement
- Suitable for a variety of threads and shells

## Applications and industries

- 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.



## Product overview

PC91 Monocrystalline Silicon Pressure Sensor adopts the 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. Measuring diaphragm of different materials isolates measured medium and pressure die, meanwhile, the sensor performs long-term reliable measurement of differential pressure signals of various strong corrosive medium.

PC91 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 the integrated electronic circuit and be converted to output a standard measurement signal of the corresponding pressure.

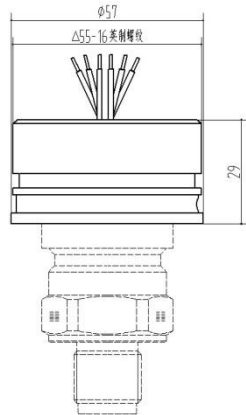
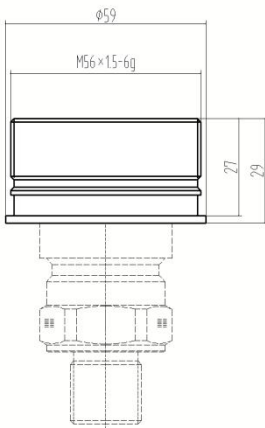
### Notes:

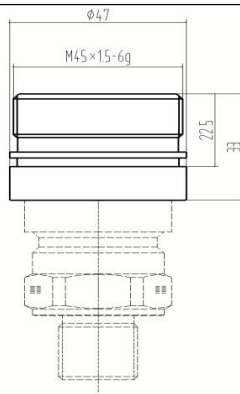
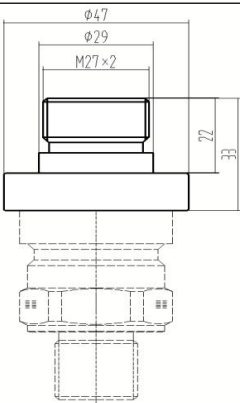
- 1 Do not misuse documentation.
- 2 The information presented in this product sheet is for reference only. Do not use this document as a product installation guide.
- 3 Complete installation, operation, and maintenance information is provided in the instructions of the product.
- 4 Misuse of the product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

### Performance parameters

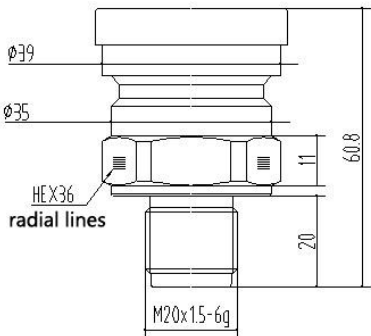
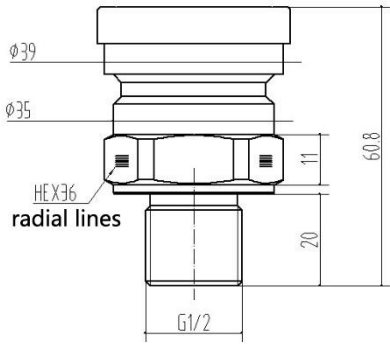
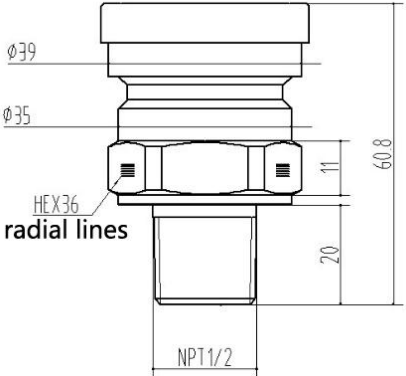
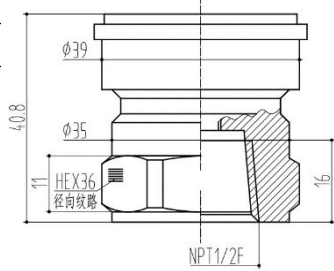
Power supply	Constant voltage
Operating temp.	-40~85℃
Storage temp.	-50~125℃
Output voltage	60~140mV
Zero temp. coefficient	±0.05%FS/℃
Temp. hysteresis	±0.1%FS (Range≥10kPa)
	±0.5%FS (Range<10kPa)
Pressure hysteresis	±0.05%FS
Long-term drift	±0.05%FS/Year
Nonlinearity	±0.5%FS (Range≥10kPa)
	±1.5%FS (Range<10kPa)
Max. overpressure	Refer to “Pressure range selection”
Diaphragm material	Stainless steel 316L, Hastelloy C

### Outline dimension

Rear thread code	Dimensional drawing In: mm
H11:55-16 British thread	
H10:M56×1.5-6g	

<p>H9:M45×1.5-6g</p>	
<p>H2:M27×2</p>	

**Pressure connection**

<p>Thread code</p>	<p>C1: M20×1.5-6g</p>	<p>C2: G1/2</p>
<p>Dimension In mm</p>		
<p>Recommended torque</p>	<p>15~25Nm</p>	
<p>Thread code</p>	<p>C7: NPT1/2</p>	
<p>Dimension In mm</p>		
<p>Recommended torque</p>	<p>15~25Nm</p>	<p>15~25Nm</p>

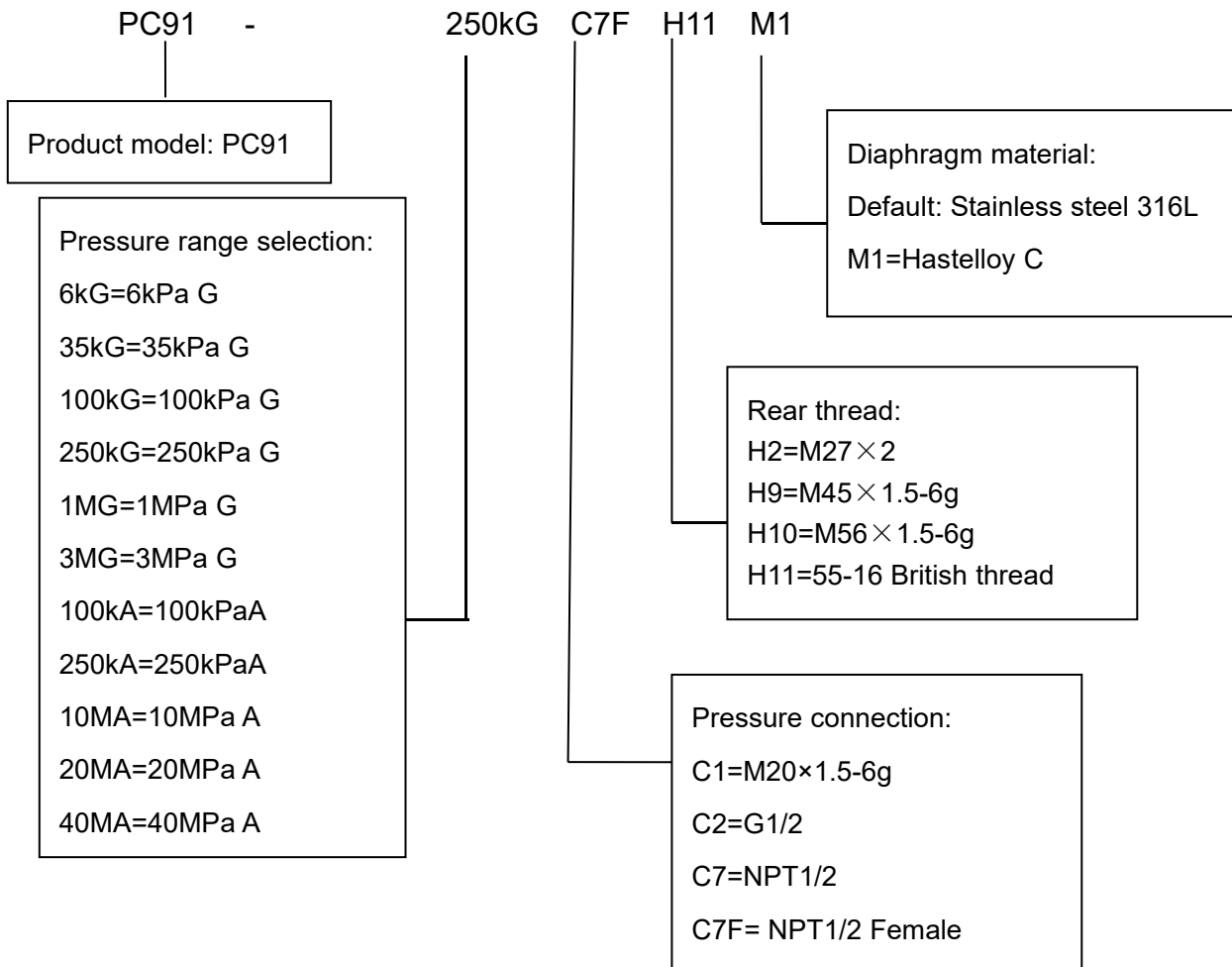
## Electrical connection

Electrical schematic diagram 1*	Wire color	Wire connection
	Red Blue Yellow White Green Black	Excitation+ (IN+) Excitation- (IN-) Output+ (OUT+) Output- (OUT-) Temperature (T) or Temperature+ (Diode+) Temperature- (Diode-)

## Pressure range selection

Pressure range code	Min. pressure range	Pressure reference	Pressure range	Overpressure
6kG	600Pa	Gauge pressure	0~6kPa	400kPa
35kG	3.5kPa	Gauge pressure	0~35kPa	1MPa
100kG、100kA	10kPa	Gauge pressure 、 Absolute pressure	0~100kPa	2MPa
250kG、250kA	25kPa	Gauge pressure 、 Absolute pressure	0~250kPa	4MPa
1MG	100kPa	Gauge pressure	0~1MPa	6MPa
3MG	300kPa	Gauge pressure	0~3MPa	15MPa
10MA	1MPa	Absolute pressure	0~10MPa	20MPa
20MA	2MPa	Absolute pressure	0~20MPa	60MPa
40MA	4MPa	Absolute pressure	0~40MPa	80MPa

## How to order



Example: PC91-250kGC7FH11

Refer to product model PC91, with pressure range 250kPa, pressure reference gauge pressure, pressure connection NPT1/2 Female, rear thread 55-16 British thread, diaphragm material stainless steel 316L.

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.

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