

PCM91 Monocrystalline Silicon Gauge/Absolute Pressure Component

Features

- Advanced monocrystalline silicon gauge/absolute pressure sensor adopted
- Wide pressure range covering 0~6kPa...40MPa
- 2 wire, 4~20mA@HART protocol
- Intelligent LCD gauge with backlight
- With both remote transmission and local zero and pressure range adjustment
- Complete varieties, high accuracy, good stability

Applications and industries

- Process control fields for the industries such as petroleum, chemical industry, metallurgy, electricity, food, papermaking, medicine, machine manufacturing, scientific experiment and military aviation etc.

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

The internal chip of PCM91 monocrystalline silicon gauge/absolute pressure component adopts MEMS monocrystalline silicon pressure chip imported from Germany. The sensor signal is converted into a standard signal output through a special signal processing module. After long-term aging and stability screening, the product performance is stable and reliable, and it can display pressure on site. Zero and span adjustable.

PCM91 monocrystalline silicon gauge/absolute pressure component installation connection can be processed according to the user's requirements, and can also be made compatible with other brands of transmitters. This series of products are widely used in industrial process control, petroleum, chemical, metallurgy and other industries.

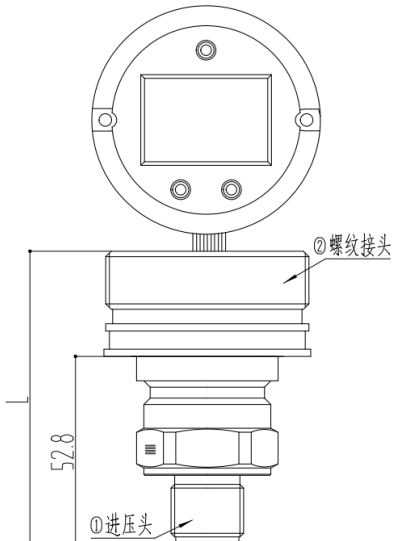
Notes:

- 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.

Performance parameters

Pressure range	$\pm 6\text{kPa G}$, $\pm 40\text{kPa G}$, $\pm 100\text{kPa G}$, $-100\sim 250\text{kPa G}$, $0\sim 100\text{kPa A}$, $0\sim 250\text{kPa A}$, $-0.1\sim 1\text{MPa G}$, $-0.1\sim 3\text{MPa G}$, $0\sim 10\text{MPa S}$, $0\sim 20\text{MPa S}$, $0\sim 40\text{MPa S}$
Pressure reference	Gauge pressure, Absolute pressure, Sealed gauge pressure
Supply	12V~32V, Recommend 24V
Output	4~20mA+HART
Accuracy	6kPa: $\pm 0.1\%\text{FS}$; Other ranges: $\pm 0.075\%\text{FS}$
Temp. coefficient	$\pm 6\text{kPa}$: $\pm 0.3\%\text{FS}$; Other ranges: $\pm 0.25\%\text{FS}$ (-20~70°C)
Ambient temperature	-30°C~80°C; -30°C~70°C if with LCD
Medium temp.	-40°C~104°C
Storage temp.	-30°C~70°C
Insulation resistance	$\geq 200\text{M}\Omega / 250\text{VDC}$
Mechanical vibration	20g(20~5000Hz)
Shock	100g(11ms)
Overpressure	Refer to "Pressure range selection"
Long-term stability	$\pm 0.2\%\text{FS}/\text{Year}$
Material	Isolation diaphragm 316L, Hastelloy C($\leq 10\text{MPa}$)
Medium compatibility	Various media compatible with 316L, Viton

Dimensional drawing

Model	Dimensional drawing	Unit: mm
PCM91	 <p>Note 1: ①Pressure port: M20x1.5, G1/2, NPT1/2, NPT1/2 female Note 2: ②Housing connection: 55-16 British thread, M56x1.5, M45x1.5, M27x2 Note 3: M45x1.5, M27x2 L=85.8mm; 55-16 British thread, M56x1.5 L=81.8mm</p>	

PCM91 - 100kG C1 H11 M1

Model:
PCM91

Range:
 6kG=6kPa Gauge(GP)
 40kG=40kPa Gauge (GP)
 100kG=100kPa Gauge (GP)
 250kG=250kPa Gauge (GP)
 100kA=100kPa Absolute(AP)
 250kA=250kPa Absolute (AP)
 1MG=1MPa Gauge (GP)
 3MG=3MPa Gauge (GP)
 10MS=10MPa Sealed gauge (SP)
 20MS=20MPa Sealed gauge (SP)
 40MS=40MPa Sealed gauge (SP)

Diaphragm material:
 NA: 316L
 M1: Hastelloy C (≤ 10 MPa)

Housing connection:
 H2: M27×2
 H9: M45×1.5
 H10: M56×1.5
 H11: 55-16 British thread

Pressure connection:
 C1=M20×1.5
 C2=G1/2
 C7=NPT1/2
 C7F=NPT1/2 Female

Example: PCM91-100kC1H11 refers to product model PCM91, range ± 100 kPa Gauge pressure, output: 4~20mA@HART protocol, pressure port M20*1.5, housing connection 55-16 British thread and diaphragm 316L.

Pressure connection

Thread code	C1: M20x1.5-6g	C2: G1/2
Dimensional drawing Unit: mm		
Recommended torque	15~25Nm	15~25Nm

Thread code	C7: NPT1/2	C7F: NPT1/2 (Female)
Dimensional drawing Unit: mm		
Recommended torque	15~25Nm	15~25Nm

Housing connection

Thread code	H11: 55-16 British thread	H10: M56x1.5
Dimensional drawing Unit: mm		
Thread code	H9: M45x1.5	C7F: NPT1/2 (Female)
Dimensional drawing Unit: mm		

Pressure range selection

Range code	Pressure range	Overpressure
6kG	±6kPa	300kPa
40kG	±40kPa	1MPa
100kG	±100kPa	2MPa
250kG	-100~250kPa	4MPa
100kA	0~100kPa A	2MPa
250kA	0~250kPa A	2MPa
1MG	-0.1~1MPa	6MPa



3MG	-0.1~3MPa	12MPa
10MS	0~10MPa	20MPa
20MS	0~20MPa	40MPa
40MS	0~40MPa	60MPa

Ordering tips:

Accessory needs to be order separately.