

# PCM90D Monocrystalline Silicon Differential Pressure Component with Clamp Block

## Features

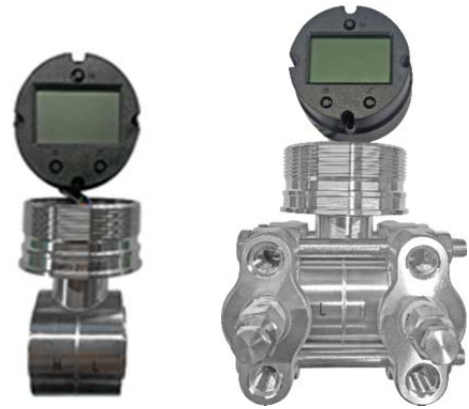
- Advanced monocrystalline silicon differential pressure sensor adopted
- Wide pressure range covering  $-0.1\text{kPa}\sim 3\text{MPa}$
- Double-wire mode,  $4\sim 20\text{mA}$ , HART protocol
- Intelligent LCD gauge outfit with backlight
- With both the remote transmission and the local zero and pressure range adjustment
- Complete varieties, high accuracy, good stability
- High static pressure, high overload protection
- Patented double overload protection diaphragm design

## 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.



## Product overview

PCM90D Monocrystalline Silicon Differential Pressure Component with Clamp Block adopt the world advanced monocrystalline silicon pressure sensor technology and the patented packaging process. This product adopts the patented double overload protection diaphragm design, with the internal circuit surge protection design, and can accurately measure the gauge pressure, absolute pressure flow, vacuum degree, liquid-level and density.

### 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

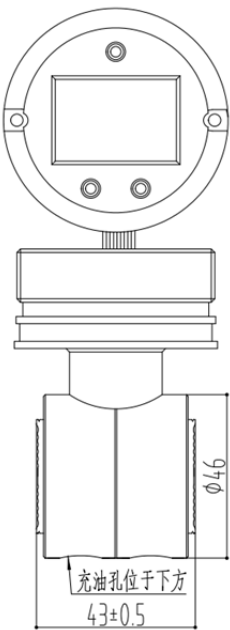
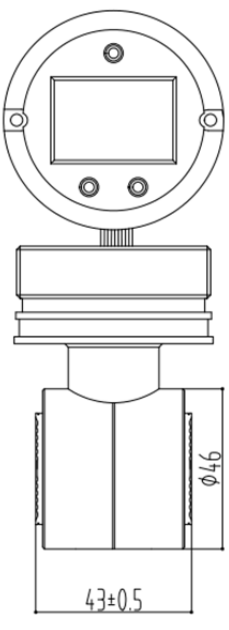
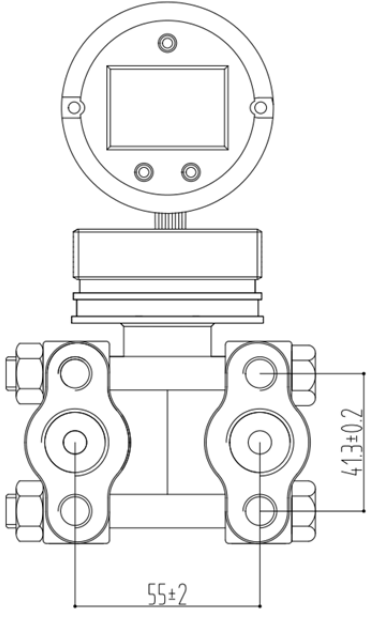
Pressure range	$\pm 1\text{kPa}$ ; $\pm 6\text{kPa}$ ; $\pm 40\text{kPa}$ ; $\pm 100\text{kPa}$ ; $\pm 250\text{kPa}$ ; $\pm 1\text{MPa}$ ; $\pm 3\text{MPa}$
Excitation	$12\text{VDC}\sim 32\text{VDC}$ , $24\text{VDC}$ is recommended
Output	$4\sim 20\text{mA}+\text{HART}$ protocol

Accuracy	$\pm 1\text{kPa}$ : $\pm 0.2\%\text{FS}$ ; $\pm 6\text{kPa}$ : $\pm 0.1\%\text{FS}$ ; other range: $\pm 0.075\%\text{FS}$
Temp. coefficient	$\pm 1\text{kPa}$ : $\pm 0.5\%\text{FS}$ ; $\pm 6\text{kPa}$ : $\pm 0.3\%\text{FS}$ ; other range: $\pm 0.25\%\text{FS}$ ( $-20^{\circ}\text{C} \sim 70^{\circ}\text{C}$ )
Insulation resistance	$\geq 200\text{M}\Omega / 250\text{VDC}$
Ambient temperature	non-explosion zone: $-30^{\circ}\text{C} \sim 80^{\circ}\text{C}$ ; with LCD gauge outfit: $-30^{\circ}\text{C} \sim 70^{\circ}\text{C}$
Medium temp.	$-40^{\circ}\text{C} \sim 125^{\circ}\text{C}$
Static pressure range	$\pm 1\text{kPa}$ ; $\pm 6\text{kPa}$ ; $\pm 40\text{kPa}$ static pressure 16MPa; $\pm 100\text{kPa}$ ; $-100 \sim 250\text{kPa}$ static pressure 25MPa; $-0.1 \sim 1\text{MPa}$ ; $-0.1 \sim 3\text{MPa}$ static 40MPa
Overpressure limitation	16MPa
Protection grade	IP65
Ambient humidity	5~95%RH
Long-term stability	$\pm 0.1\%\text{FS}/\text{year}$ (standard range)

### Structural performance

Diaphragm material	316L, Hastelloy C
Exhaust/Drain valve	304
O-ring	Silicone rubber
Filling liquid	Silicon oil
Clamp block	304
Pressure connection	M20×1.5 with welded pipe, NPT1/4 (Female), NPT1/2 (Male), NPT1/2 (Female), G1/2 (Male) with welded pipe, G1/4 (Male), 304 tri-valve set NPT1/4F (304/316 available), tri-valve set M20×1.5 with welded pipe (304/316 available),

### Outline dimension

Product model	PCM90D $\pm 1\text{kPa}$	PCM90D Other range	PCM90D Component with Clamp Block
Outline dimension	 <p>充油孔位于下方 <math>43 \pm 0.5</math></p>	 <p><math>43 \pm 0.5</math></p>	 <p><math>41.3 \pm 0.2</math> <math>55 \pm 2</math></p>

PCM90D - 40k H11 K0 Z

Product model:  
PCM90D

Pressure range selection:  
1k: ±1kPa  
6k: ±6kPa  
40k: ±40kPa  
100k: ±100kPa  
250k: ±250kPa  
1M: ±1MPa  
3M: ±3MPa

Combined option (Non-rotation gauge outfit by default)  
Z: ZR  
K0: Ordinary clamp block component

Diaphragm material:  
Default: Stainless steel 316L  
M1=Hastelloy C

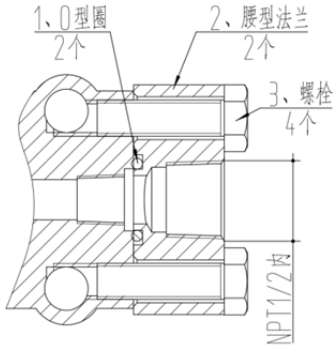
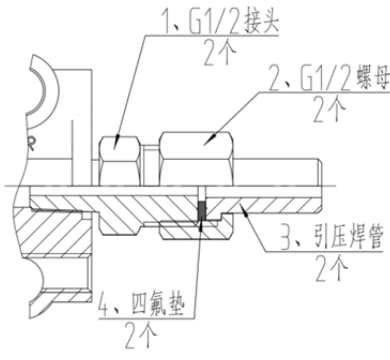
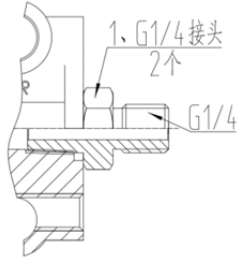
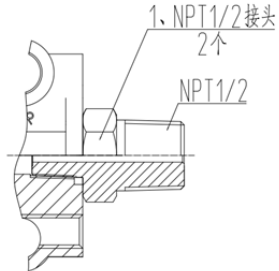
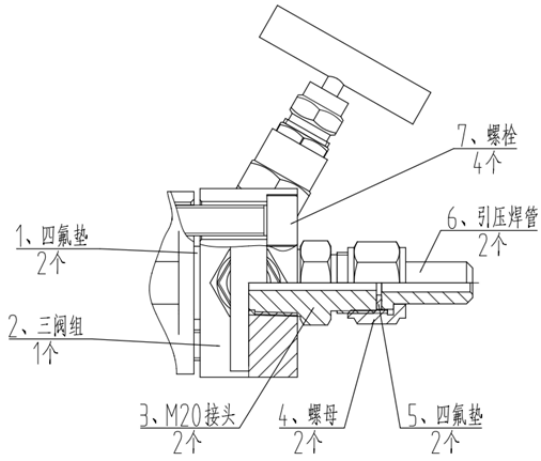
Rear thread connection:  
H2: M27×2  
H9: M45×1.5  
H10: M56×1.5  
H11: 55-16 Inch thread

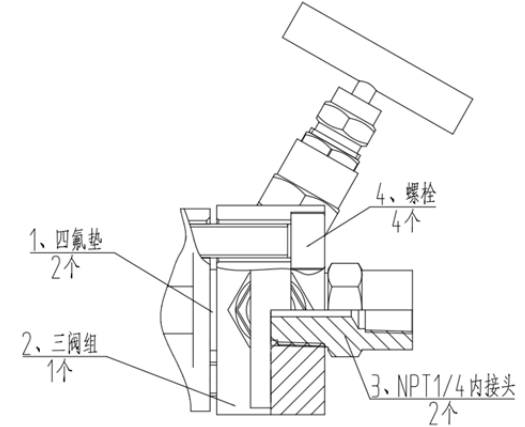
Example: PCM90D-40kH11M1-ZK0

Refer to product model: PCM90D, pressure range: ±40kPa, rear thread connection: 55-16 Inch thread, diaphragm: Hastelloy C, gauge: ZR, Clamp block component: Ordinary clamp block component.

Accessory selection

Accessory code	Detailed information		Drawing
	Name	Quantity	
C1: M20×1.5 with welded pipe	T shape connector	2	
	M10×20 bolt	4	
	O-ring	2	
	PTFE gasket	2	
	M20 nut	2	
	Φ14×4 welded pipe	2	

C7F: NPT1/2 (F) Waist flange	O-ring	2	
	Waist flange	2	
	M10×35 bolt	4	
	-	-	
	-	-	
C2: G1/2 with welded pipe	NPT1/4 to G1/2 adapter	2	
	G1/2 bolt	2	
	φ14×4 welded pipe	2	
	PTFE gasket	2	
	-	-	
C3:G1/4	NPT1/4 to G1/4 adapter	2	
	-	-	
	-	-	
	-	-	
C7:NPT1/2	NPT1/4 to NPT1/2 adapter	2	
	-	-	
	-	-	
	-	-	
SFZC1: Tri-Valve Set -M20 with welded pipe 304/316 available	PTFE gasket	2	
	Tri-Valve Set	1	
	M20×1.5 connector	2	
	M20×1.5 bolt	2	
	PTFE gasket	2	
	φ14×4 welded pipe	2	
	M10×35 bolt	4	

SFZC5F: Tri-Valve Set -NPT1/4 female 304/316 available	PTFE gasket	2	
	Tri-Valve Set	1	
	NPT1/4 connector	2	
	M10×35 bolt	4	
	-	-	
	-	-	

Example: SFZC5F

Accessory: Tri-Valve Set -NPT1/4 female

### Ordering tips:

Accessory needs to be order separately.