

PCM3051-DP Intelligent Differential Pressure Transmitter

Features

- Advanced monocrystalline silicon differential pressure sensor adopted
- Wide pressure range coverage $\pm 3\text{MPa}$
- Double-wire mode, 4~20mA analog output, HART® protocol data communication
- Intelligent LCD gauge head with backlight
- With both the remote transmission and the local zero and pressure range adjustment
- Complete varieties, high accuracy, good stability
- Isolation ex-proof housing structure, strong resistance to the frequency conversion interference
- High static pressure, high overload protection
- Double overload protection diaphragm design
- Lightning protection circuit 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

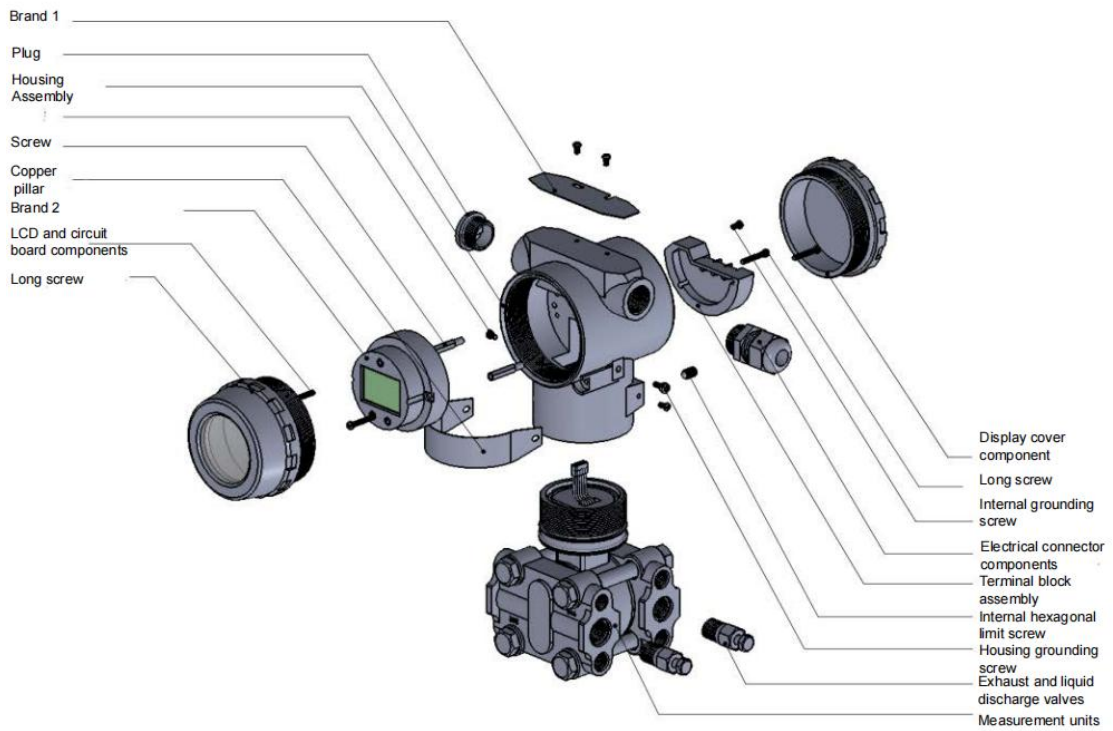
PCM3051-DP intelligent differential pressure transmitter is a well-developed high performance pressure transmitter based on the international leading technology, adopting the world advanced monocrystalline silicon pressure sensor technology and the patented packaging process. This product adopts the 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:

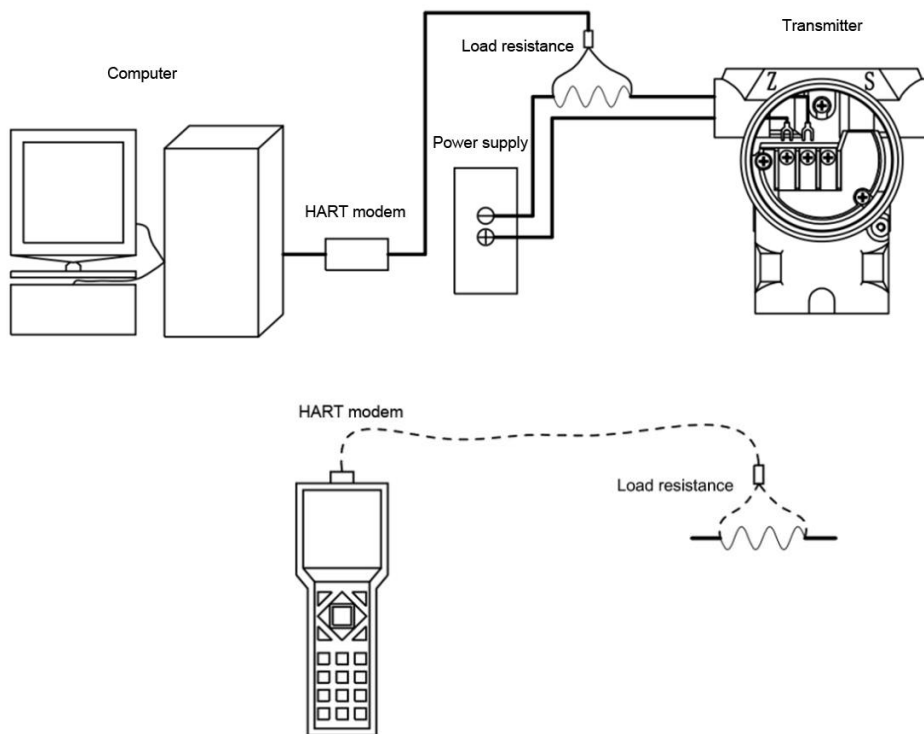
- 1 Do not misuse documentation.
- 2 The information presented in this product sheet is for reference only. Do not use this document as a product installation guide.
- 3 Complete installation, operation, and maintenance information is provided in the instructions of the product.

Performance parameters	
Pressure range	±1kPa; ±6kPa; ±40kPa; ±100kPa; ±250kPa; ±1MPa; ±3MPa
Pressure reference	Differential pressure
Power supply	12VDC~32VDC, 24VDC recommended
Output	4~20mA+HART® protocol
Accuracy	±1kPa: ±0.2%FS; ±6kPa: ±0.1%FS; Other pressure ranges: ±0.075%FS (Standard pressure ranges, 25±5°C)
Temperature drift	±0.5%FS (±1kPa); ±0.3%FS (±6kPa); ±0.25%FS (Other pressure ranges); @-20°C~70°C
Ambient temperature	-30°C~80°C; with LCD gauge outfit -30°C~70°C;
Medium temp.	-40°C~120°C
Protection grade	IP67
Ex-proof grade	Exd IIC T6 Gb
Static pressure range	±1kPa; ±6kPa; ±40kPa static pressure resistance 16MPa; ±100kPa; -100~250kPa static pressure resistance 25MPa; -0.1~1MPa; -0.1~3MPa static pressure resistance 40MPa
Overpressure limitation	16MPa
Long-term stability	±0.1%FS/year
Diaphragm material	316L, Hastelloy C
Relief valve	304
O-ring	Silicone rubber (in contact with the measurement medium)
Sealing liquid	Silicon oil
Splint	304
Housing material	Shell die-casting aluminum alloy, painted with epoxy resin coating
Electrical connection	M20×1.5, NPT1/2
Pressure connection	M20×1.5 with welded pipe, NPT1/4(F), NPT1/2, NPT1/2(F), G1/2 with welded pipe, G1/4, tri-valve set M20×1.5 with welded pipe (304/316 optional), tri-valve set NPT1/4F (304/316 optional)
Weight	3.5kg (not including the optional accessory)

Component diagram

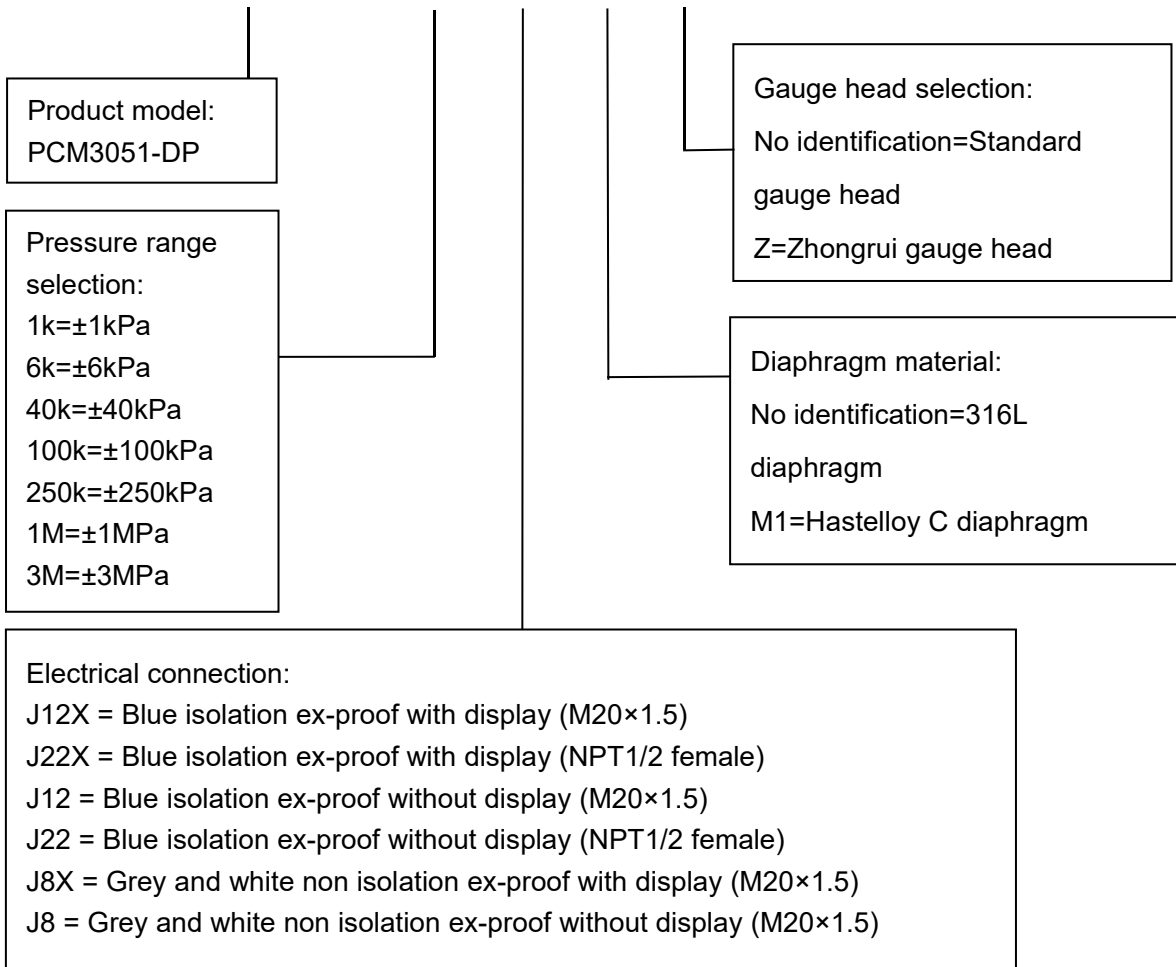


HART communication connection diagram



How to order

PCM3051-DP - 6k J8X M1 - Z



Example: PCM3051-DP-6kJ8XM1 -Z

Refer to product model: PCM3051-DP; pressure range selection: ±6kPa; output: 4~20mA+HART; electrical connection: 3051 housing with display (M20×1.5 female); diaphragm material: Hastelloy C diaphragm; gauge head option: Zhongrui gauge head

How to order for accessories

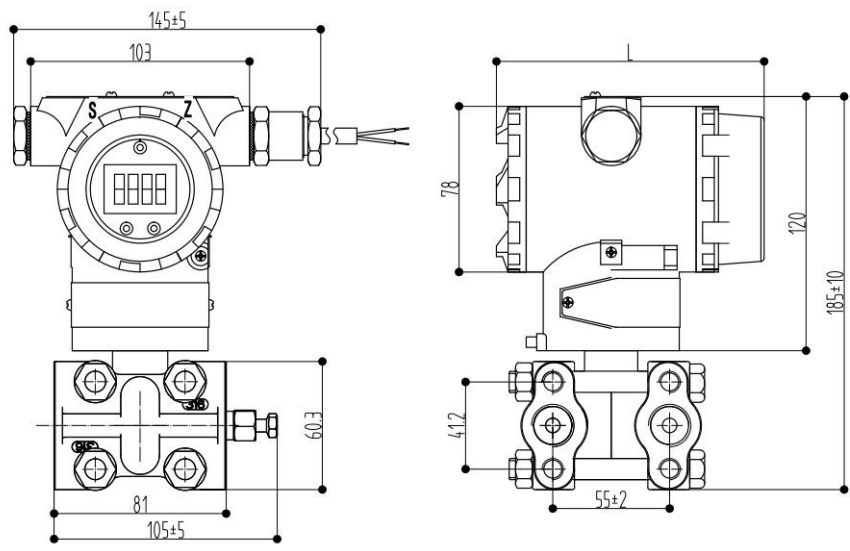
C1

Pressure connection:
C1=M20×1.5 with welded pipe
C2=G1/2 with welded pipe
C3=G1/4 male
C5F=NPT1/4 (Female) (By default)
C7=NPT1/2
C7F=NPT1/2 (Female)
SFZC1=Tri-valve set M20×1.5 with welded pipe
SFZC5F=Tri-valve set NPT1/4 (Female)

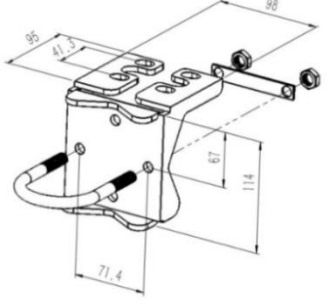
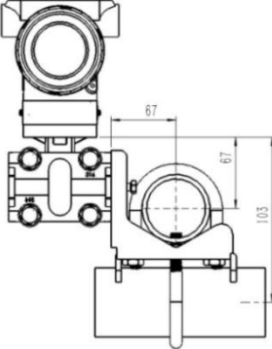
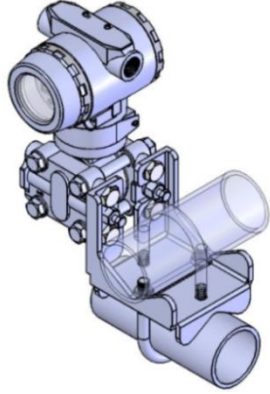
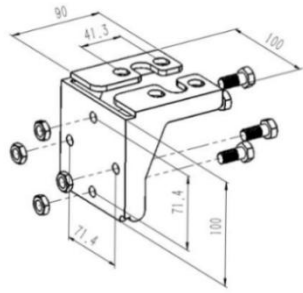
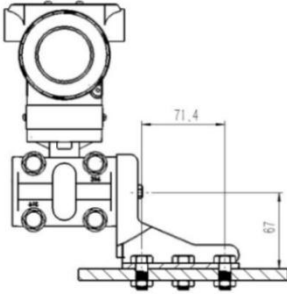
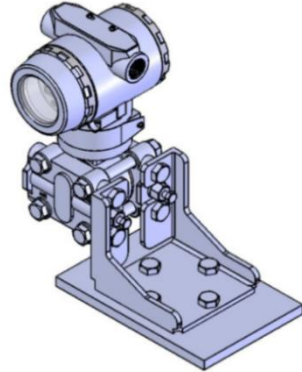
B3

Mounting bracket:
B1=Pipe installation bending bracket
B2=Board mounted bracket
B3=Pipe installation flat bracket

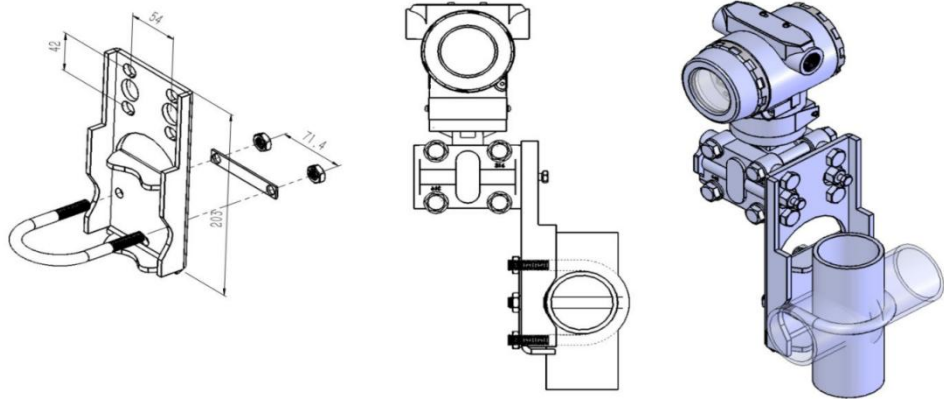
Outline dimension

Product model	Dimension drawing	In: mm
<p>PCM3051-DP (Without accessories)</p>	 <p>Note: With display L=126±5mm Without display L=108±5mm</p>	

How to order for accessories

Mounting bracket option	In: mm		
<p>Pipe installation bending bracket: B1</p>			
<p>Board mounted bracket: B2</p>			

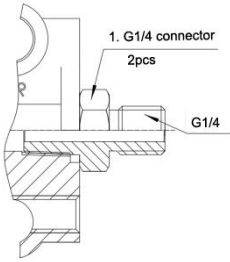
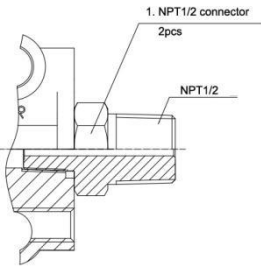
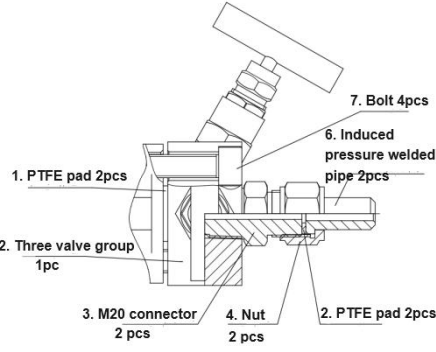
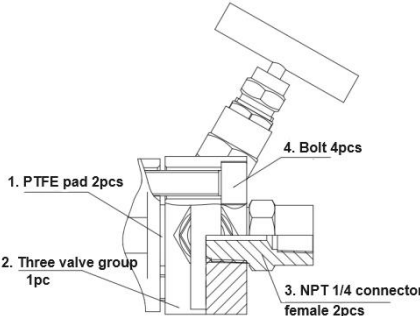
Pipe installation flat bracket: B3



Pressure connection option

Accessory option code	Specification		Assembly drawing
	Name	Qty.	
C1: M20×1.5 with external welded pipe	T shape connector	2	
	M10×20 bolt	4	
	O-ring	2	
	PTFE gasket	2	
	M20 nut	2	
	Φ14×4 induced pressure welded pipe	2	
C7F: NPT1/2(F) Waist type flange	O-ring	2	
	Waist type flange	2	
	M10×35 bolt	4	
	-	-	
	-	-	
C2: G1/2 with welded pipe	NPT1/4 to G1/2 connector	2	
	G1/2 nut	2	
	Φ14×4 induced pressure welded pipe	2	
	PTFE gasket	2	
	-	-	
	-	-	

Pressure connection option (cont.)

C3: G1/4	NPT1/4 to G1/4 connector	2	 <p>1. G1/4 connector 2pcs G1/4</p>
	-	-	
	-	-	
	-	-	
C7: NPT1/2	NPT1/4 to NPT1/2 connector	2	 <p>1. NPT1/2 connector 2pcs NPT1/2</p>
	-	-	
	-	-	
	-	-	
SFZC1: Tri-valve set-M20 with welded pipe 304/316 optional	PTFE gasket	2	 <p>1. PTFE pad 2pcs 2. Three valve group 1pc 3. M20 connector 2 pcs 4. Nut 2 pcs 5. PTFE pad 2pcs 6. Induced pressure welded pipe 2pcs 7. Bolt 4pcs</p>
	Tri-valve set	1	
	M20×1.5 connector	2	
	M20×1.5 nut	2	
	PTFE gasket	2	
	Φ14×4 induced pressure welded pipe	2	
	M10×35 bolt	4	
SFZC5F: Tri-valve set-NPT1/4 female 304/316 optional	PTFE gasket	2	 <p>1. PTFE pad 2pcs 2. Three valve group 1pc 3. NPT 1/4 connector female 2pcs 4. Bolt 4pcs</p>
	Tri-valve set	1	
	NPT1/4 connector	2	
	M10×35 bolt	4	
	-	-	
	-	-	

Ordering tips

1. Accessories need to be ordered separately.



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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