PCM3051-RD/RG Intelligent Remote Differential Pressure Transmitter

Features

- Adopting advanced monocrystalline silicon differential pressure sensors
- 2-wire, 4~20mA analog output, HART® protocol digital communication
- Intelligent LCD gauge with backlight
- Support remote transmission, local zero and pressure range adjustment
- Complete varieties, high accuracy, good stability
- Explosion-proof housing structure with strong anti-frequency conversion interference capability
- High static pressure, high overload protection
- Patented dual overload protection diaphragm design
- Built-in lightning protection circuit design

Applications

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

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-RD/RG intelligent remote differential pressure transmitters adopt advanced monocrystalline silicon sensing technology and packaging process for superior performance. Designed with dual overload protection diaphragms and internal surge protection circuits, it measures level, density, pressure and flow of liquid, gas and steam, and convert signals into 4~20mA+HART standard output.

Notes:

1 Do not misuse documentation.

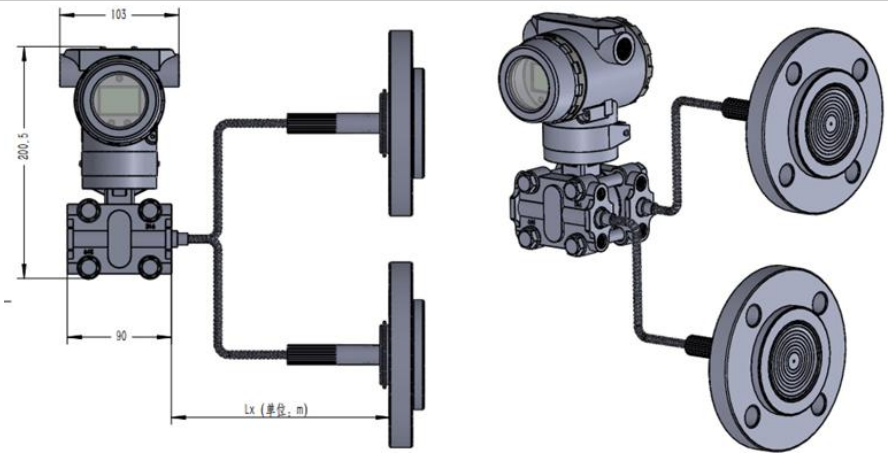
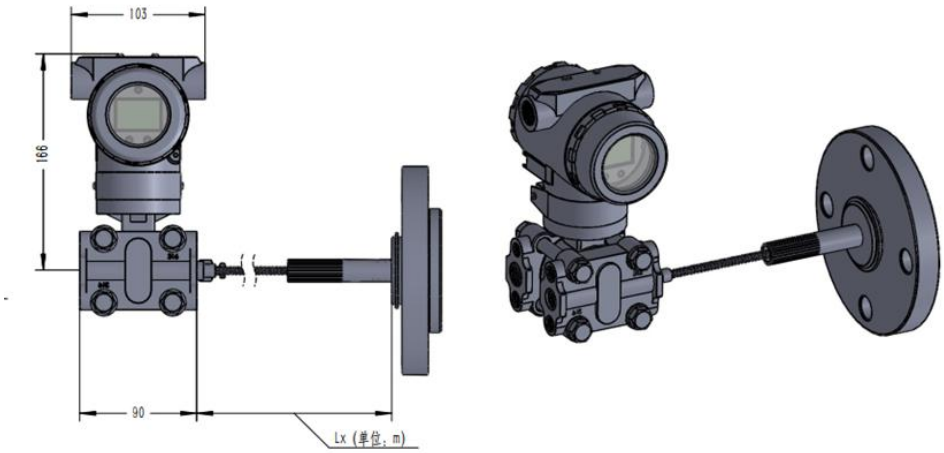
2 The information presented in this product sheet is for reference only. Do not use this document as a product installation guide.

3 Complete installation, operation, and maintenance information is provided in the instructions of the product.

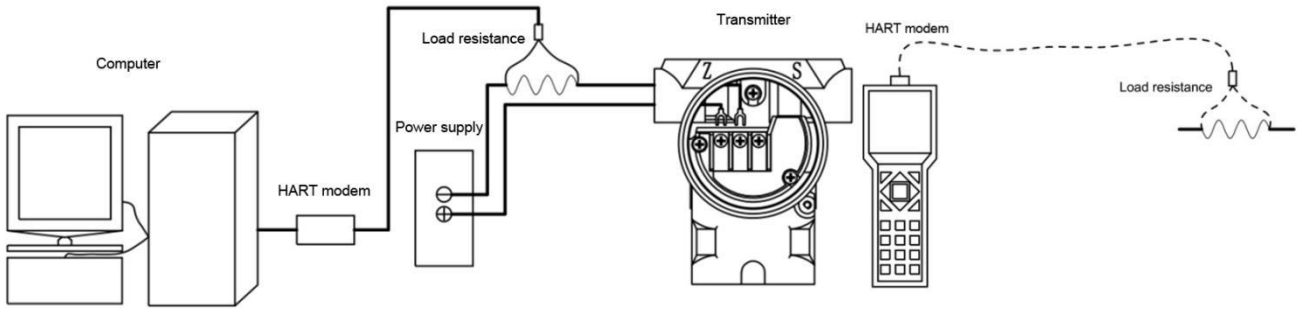
Performance parameters	
Pressure range	-6~6kPa, -40~40kPa, -100~100kPa, -100~250kPa, -0.1~1MPa, -0.1~3MPa
Pressure reference	Differential Pressure
Power supply	12~32V, 24V recommended
Output signal	4~20mA+HART protocol
Accuracy	±0.1%F.S. (standard ranges)
Temp. drift	0.25%F.S. (-20ºC~70ºC, standard ranges)
Ambient temp.	-30ºC~80ºC; with LCD -30ºC~70ºC
Medium temp.	-40ºC~125ºC
Storage temp.	-20ºC~70ºC
Insulation resistance	≥200MΩ/250VDC
Protection	IP67
Ex-proof grade	Ex db IIC T6 Gb
Static pressure effect	Zero: 0.15%F.S./4MPa Span: 0.25%F.S./4MPa
Long-term stability	±0.2%F.S./2 years

Structural performance	
Diaphragm material	316L, Hastelloy C, tantalum; other materials need to be customized
Vent / Drain Valve	Stainless steel
O-ring	Fluororubber
Oil filling	Silicon oil
Clamp block	SS304
Flange	316
Housing material	Die-cast aluminum alloy with epoxy resin coating
Electrical connection	M20×1.5, NPT1/2 female
Pressure connection	RD/RG High-pressure end: DN25 PN40, DN40 PN40, DN50 PN40, DN80 PN16, 2 inch tri-clamp (outer diameter 50.4mm), 2.5 inch tri-clamp (outer diameter 64mm) options Flanges comply with the GB/T 9119-2010 standard, other standards can be customized
	RD Low-pressure end: DN25 PN40, DN40 PN40, DN50 PN40, DN80 PN16, 2 inch tri-clamp (outer diameter 50.4mm), 2.5 inch tri-clamp (outer diameter 64mm) options Flanges comply with the GB/T 9119-2010 standard, other standards can be customized
	RG Low-pressure end: M20x1.5 with welded pipe, NPT1/4(F), NPT1/2, NPT1/2(F), G1/2 with welded pipe, G1/4

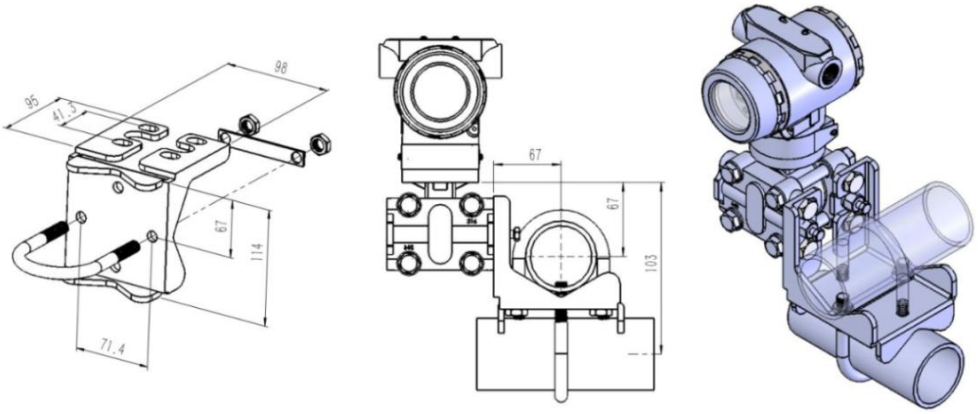
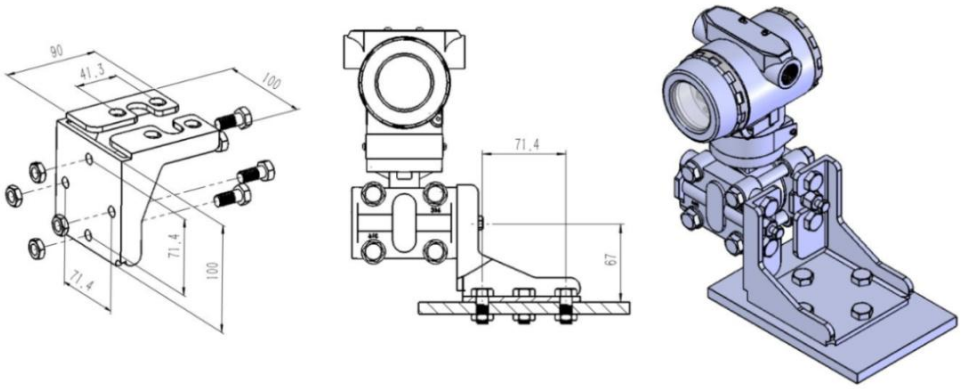
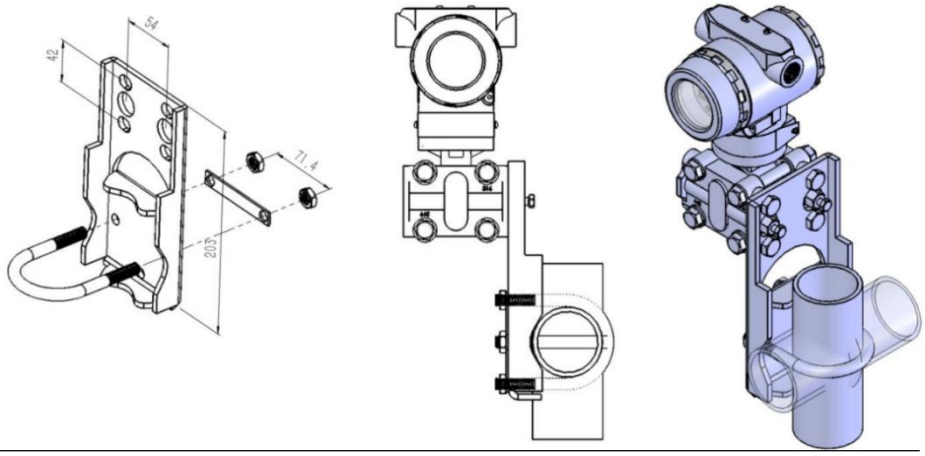
Structure and dimensions (in mm)

Product model	Dimensions
PCM3051-RD	
PCM3051-RG	

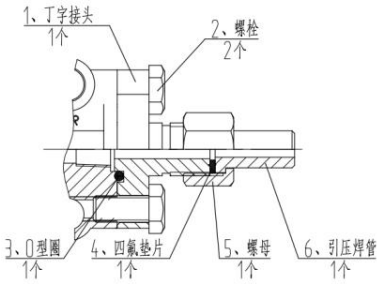
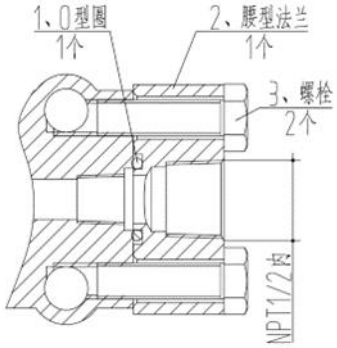
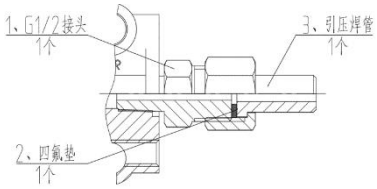
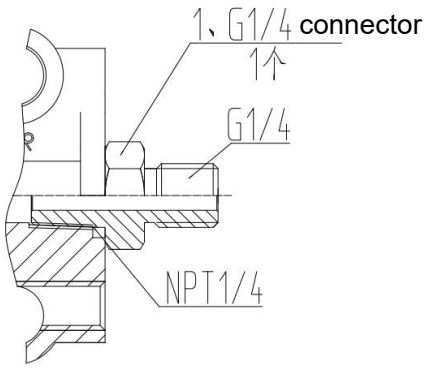
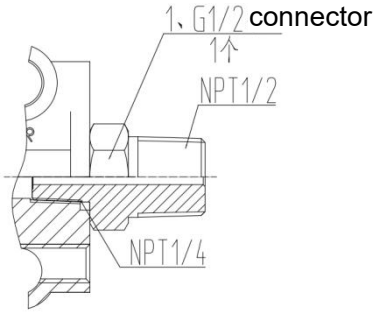
HART communication connection diagram



RD/RG General accessories selection (in mm)

Pipe bent bracket: B1 (100040700006)	
Panel bent bracket : B2 (100040700007)	
Pipe flat bracket: B3 (100040700008)	

RG Low-pressure end accessories selection

C1	**M20×1.5 with welded pipe**		1. T shape connector	1pc
			2. bolt	2pcs
			3. O-ring	1pc
			4. PTFE gasket	1pc
			5. Nut	1pc
			6. Pressure welded pipe	1pc
C7F	**NPT1/2(F) Waist flange**		1. O-ring	1pc
			2. Waist flange	1pc
			3. Bolt	2pcs
C2	**G1/2 with welded pipe**		1. G1/2 adaptor	1pc
			2. PTFE gasket	1pc
			3. Pressure welded pipe	1pc
C3	**G1/4**			
C5	**NPT1/2**			

Ordering information

PCM3051- RG - 100k - F1 - M1 - J12X

	Housing material
J8X	3051 housing with display (M20×1.5)
J12X	3051 ex-proof housing with display (M20×1.5)
J22X	3051 ex-proof housing with display (NPT1/2)

	Diaphragm		Diaphragm		Diaphragm
M1	Hastelloy C	M2	tantalum	M4	316L

	Flange		Flange
F1	316 DN25 PN40 RF	F2	316 DN40 PN40 RF
F3	316 DN50 PN40 RF	F4	316 DN80 PN16 RF

	Pressure range		Pressure range		Pressure range
6K	0~6kPa	40K	0~40kPa	100K	0~100kPa
250K	0~250kPa	1M	0~1MPa	3M	0~3MPa

	Product model
PCM3051-RD	Double-Flange Intelligent Remote Differential Pressure Transmitter
PCM3051-RG	Single-Flange Intelligent Remote Differential Pressure Transmitter

Example of ordering information: PCM3051- RG - 100k - F1 - M1 - J12X

Product model: PCM3051-RG, 100k: pressure range is 0~100kPa and output signal is 4~20mA+HART protocol, M1: flange is 316 DN25 PN40 RF, M1: diaphragm material is Hastelloy C, J12X: electrical connection is 3051 Blue Ex-proof housing with display (M20×1.5).

Accessory selection: B1: Pipe bent bracket; RG low-pressure process connection: M20×1.5 with welded pipe.(Accessories optional)

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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