

# PCM380 Intelligent Pressure Transmitter

## Features

- HART, RS485-MODBUS
- Adopt digital compensation and nonlinear correction technology
- Support networking application
- Wide pressure ranges including of gauge pressure, sealed gauge pressure, absolute pressure
- No moving parts, reliable performance
- Advanced structure to ensure the reliability of products
- Excellent field interchangeability

## Applications

- Industrial project application
- Scientific experiment
- Leaking monitoring
- Petrochemical process industry
- Fluid pressure accurately measured

### 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

PCM380 intelligent pressure transmitter is an intelligent pressure measuring product with high precision and high stability. The product is developed by all-welded OEM oil-filled core and ADI special chip combined with microprocessor technology. It has the functions of field display, data processing, zero point and full scale software adjustment, permanent storage of setting parameters, output of 4~20mA, and communication function etc. It has small size, high precision, light weight and wide range coverage. It is suitable for the precise measurement of fluid pressure in various industries.

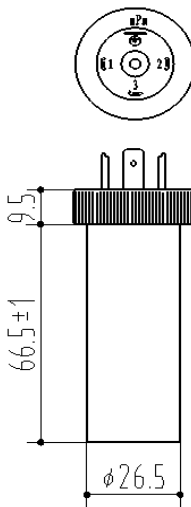
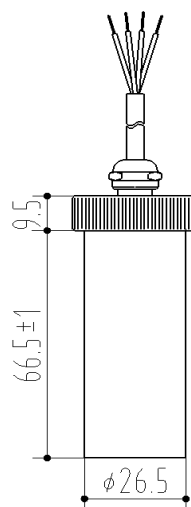
### Notes:

- 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.
- 4 Misuse of the product may cause danger or personal injury.

### Performance parameters

Pressure range	0~35kPa…10MPa
Pressure reference	Gauge pressure   Absolute pressure   Sealed gauge pressure
Output signal	4 to 20mA +HART (12~36V)   RS485-MODBUS (12~36V)
Accuracy	≤± 0.5%FS (typical)
Repeatability & hysteresis	≤± 0.1%FS
Temperature drift	≤± 3%FS (@-10~70°C)
Durability	≥ 10 <sup>6</sup> pressure cycles
Ambient temperature	-20°C ~ 80°C
Medium temperature	-30°C ~ 105°C
Storage temperature	-40°C ~ 120°C
Insulation resistance	≥ 100M Ω /250VDC
Vibration resistance	Sine curve: 20g, 25Hz~2kHz; IEC 60068-2-6
	Random: 7.5grms, 5Hz~1kHz; IEC 60068-2-64
Shock resistance	Shock: 10g/11ms; IEC 60068-2-27
	Free fall : 1m; IEC 60068-2-32
Material	304
Maximum mounting torque	25Nm

### Electrical connection and wiring method

Electrical connection	J5: Hirschmann DIN43650	J3H: Hirschmann DIN43650 with cable
Dimension In mm		
Protection grade	IP65	IP65
Connection mode (4~20mA+HART)	Pin 1: V+ Pin 2: Iout	Red wire: Vin Green wire: Iout
Connection mode (RS485-MODBUS)	Pin 1: V+ Pin 2: V- Pin 3: RS485-A Ground: RS485-B	Red wire: V+ Green wire: V- Yellow wire: RS485-A White wire: RS485-B

## Application of damper

### Application

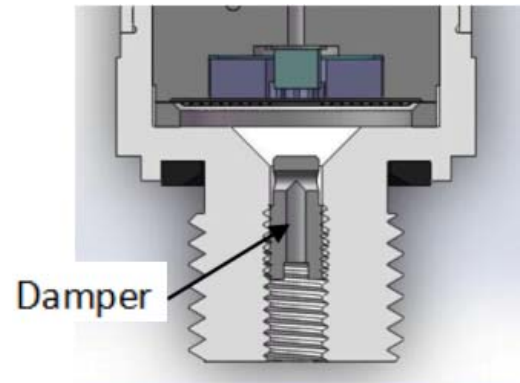
Cavitation, liquid hammer and pressure peak may occur in hydraulic systems with varying flow rates, such as the rapid closing of valve or the start and stop of pump.

Even at relatively low operating pressures, these problems may occur at the entrance and exit.

### Medium condition

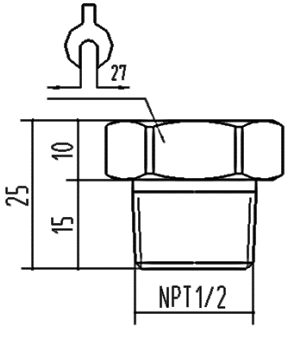
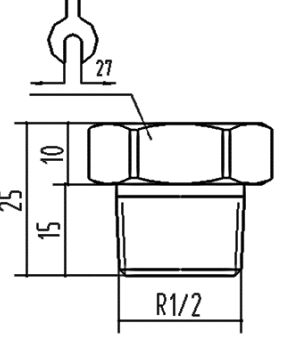
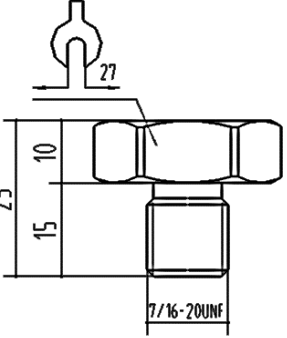
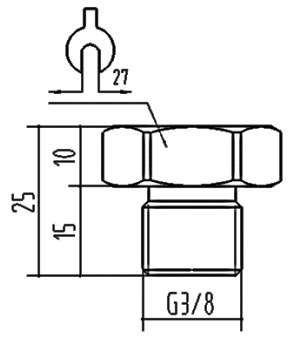
In the liquid containing particles, nozzle clogging may occur.

The vertical mounting of pressure transmitter minimizes the risk of clogging because the flow of fluid happens in initial start only, the volume of the rear of the nozzle is fixed and the nozzle has a relatively large aperture (1.2 mm). The effect of medium viscosity on response time is small. Even if the viscosity reaches 100 CST, the response time will not exceed 4 ms.



## Thread connection

Thread code	C1: M20×1.5-6g	C2: G1/2	C3: G1/4
Dimension In mm			
Thread code	C4: M14×1.5-6g	C5: NPT1/4、Z1/4	C6: R1/4、PT1/4、ZG1/4
Dimension In mm			

Thread code	C7: NPT1/2、Z1/2	C10: R1/2、PT1/2、ZG1/2	C11: 7/16-20UNF
Dimension In mm			
Thread code	C15: G3/8		
Dimension In mm		-	-

Note: Recommended torque 15~25Nm depends on a number of factors such as gasket material, supporting material, thread lubrication and pressure range.

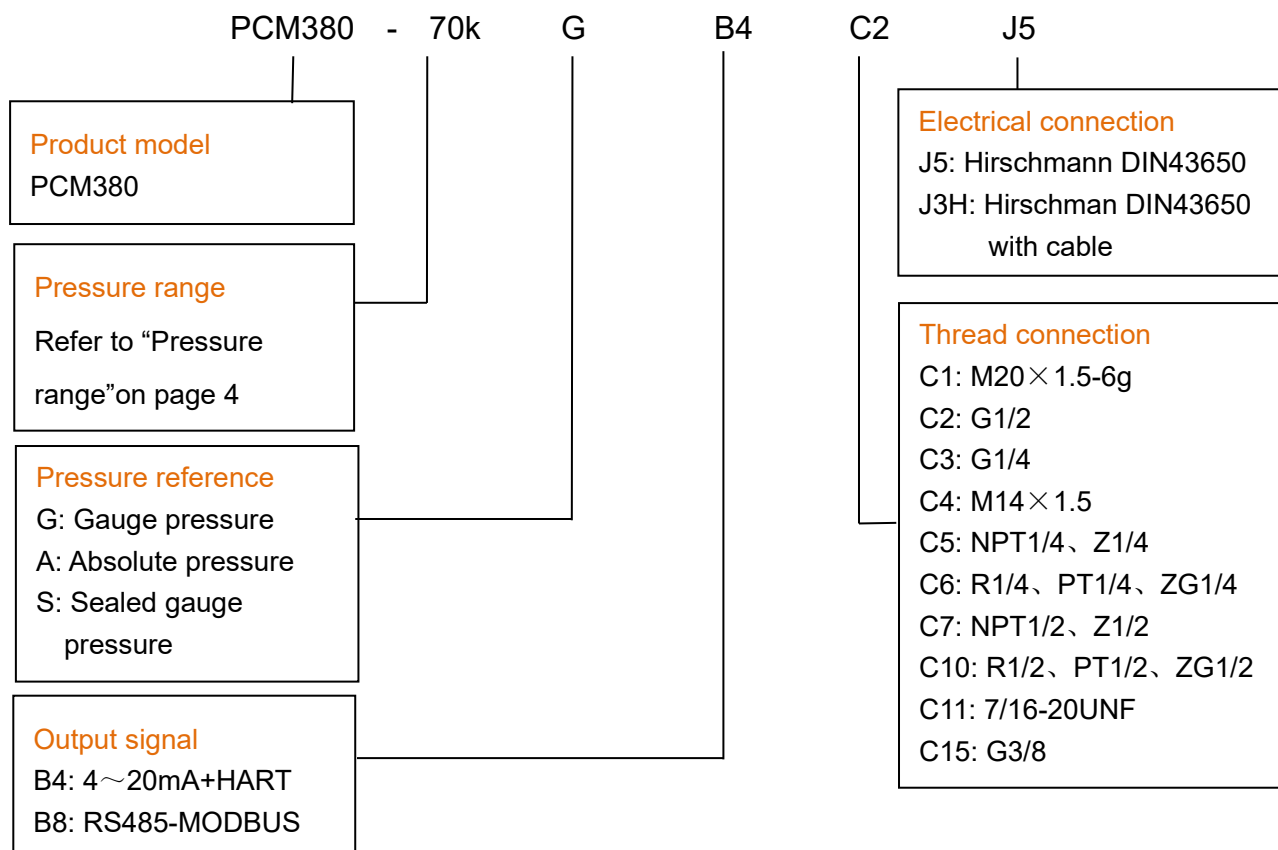
Pressure range selection					
Pressure range code	Pressure reference	Pressure range	Overload pressure	Burst pressure	Remark
35k	G	0~35kPa	300%FS	500%FS	
70k	G	0~70kPa	300%FS	500%FS	
100k	G、A	0~100kPa	200%FS	300%FS	
160k	G	0~160kPa	200%FS	300%FS	
250k	G、A	0~250kPa	200%FS	300%FS	
400k	G	0~400kPa	200%FS	300%FS	
600k	G	0~600kPa	200%FS	300%FS	
1M	G、S	0~1MPa	200%FS	300%FS	
1.6M	S	0~1.6MPa	200%FS	300%FS	
2.5M	S	0~2.5MPa	200%FS	300%FS	
6M	S	0~6MPa	150%FS	300%FS	
10M	S	0~10MPa	150%FS	300%FS	

Note: G: gauge pressure, A: absolute pressure, S: sealed gauge pressure.

### Accessory

Name	Appearance	Description	Material No.
M4 Damper		Refer to the application of damper	100030500027
Domestic Hersman plug		Domestic(by default)	100040301005
Imported Hersman plug		All imported	100040301013

### How to order





**Example:** PCM380-70kGB4C2J5

The model is PCM308. 70k: pressure range 0~70kPa, G:gauge pressure, B4: output signal 4 ~ 20mA+HART, C2: thread connection G1/2, J5: electrical connection Hirschmann DIN43650

**Ordering tips:**

1. Ensure compatibility between measured medium and contacting part of product.
2. Customization is available for special requirements on the appearance and performance parameters of the product.

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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