

# PCM380 Intelligent Pressure Transmitter

## Features

- Communication protocol HART, RS485-MODBUS
- Adopting digital compensation and nonlinearity correction technology
- Supporting networking application
- Wide pressure range, can measure the absolute pressure, gauge pressure and sealed gauge pressure
- Advanced structure, can ensure the product reliability
- Excellent on-site interchangeability

## Applications and industries

- Project kitting
- Scientific experiment
- Leakage monitoring
- Petrochemical industry process industry
- Precision measurement for the fluid pressure

### 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

PCM380 Intelligent Pressure Transmitter is a high precision and high stability intelligent pressure measurement product. This product is developed based on the all-welded OEM oil-filled sensor and ADI dedicated die combined with the microprocessor technology; it has the functions such as data processing, zero point and full span software adjustment, permanent storage for the setting parameters, etc.; it is small in size, high in precision, light in weight, and wide in pressure range coverage, which is suitable for various industries where the precision measurement for the fluid pressure is required.

### 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.

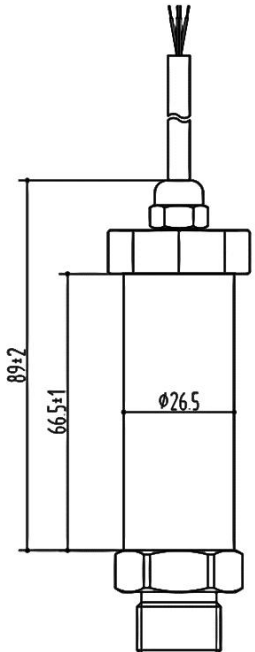
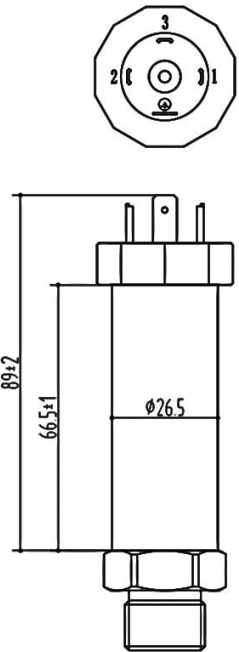
## Performance parameters

Pressure range	0~35kPa...10MPa
Pressure reference	Gauge pressure, Absolute pressure, Sealed gauge pressure
Supply & output	4~20mA+HART protocol (12~30V), RS485-MODBUS communication protocol (12~30V)
Accuracy	±0.5%F.S. (@25±5℃)
Hysteresis and repeatability	±0.1%FS
Temperature drift	±3%FS (@-10~70℃)
Service life	≥10 <sup>6</sup> pressure cycles
Ambient temperature	-20℃~80℃
Medium temp.	-30℃~105℃
Storage temp.	-40℃~120℃
Insulation resistance	≥100MΩ/250VDC
Protection grade	IP65

### Performance parameters (cont.)

Anti-vibration performance	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 falling body: 1m; IEC 60068-2-32
Material	SS304
Maximum mounting torque	25N·m

### Electrical connection & wiring mode

Connector code	J3H: DIN43650 with cable	J5: DIN43650
Dimension In mm		
Wiring method (4~20mA+HART)	Red wire: Vin Green wire: Iout	Pin 1: Vin Pin 2: Iout
Wiring method (RS485-MODBUS)	Red wire: V+ Green wire: V- Yellow wire: RS485-A White wire: RS485-B	Pin 1: V+ Pin 2: V- Pin 3: RS485-A Grounding: RS485-B

### Application of damper

#### Application

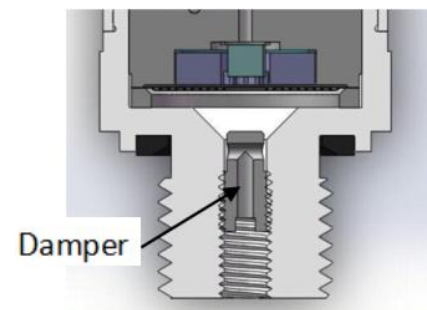
Cavitation, liquid hammer and pressure peak may occur in air or fluid systems with varying flow rates, such as the rapid closing of the valve or the start and stop of the pump.

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

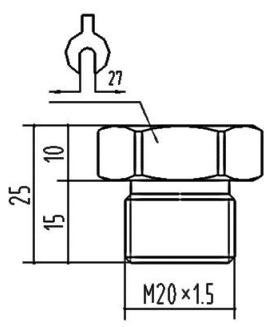
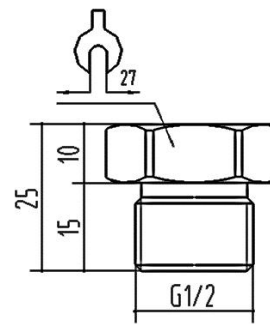
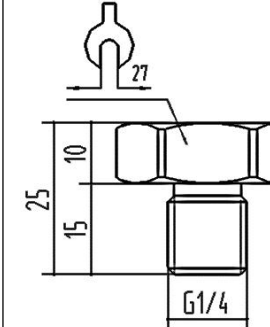
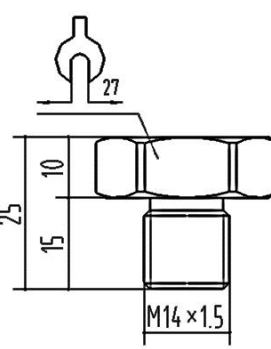
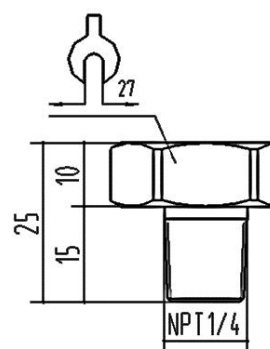
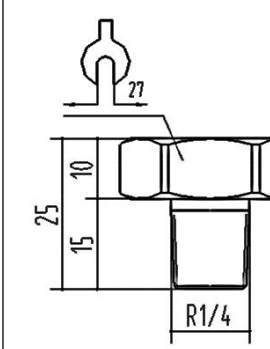
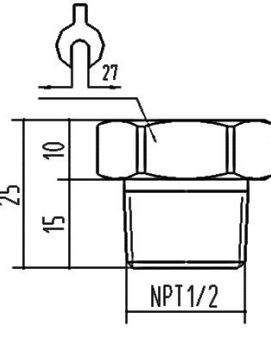
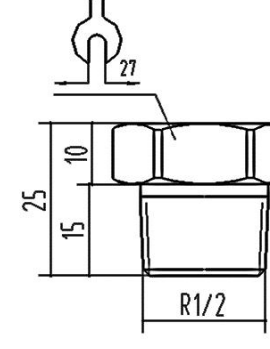
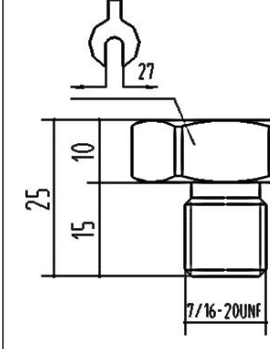
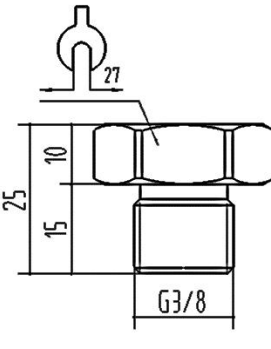
#### Media condition

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 4ms.



**Pressure 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: 15~25N·m, and the torque depends on all kinds of factors, such as gasket material, kitting material, thread lubrication and pressure.

### Pressure range selection

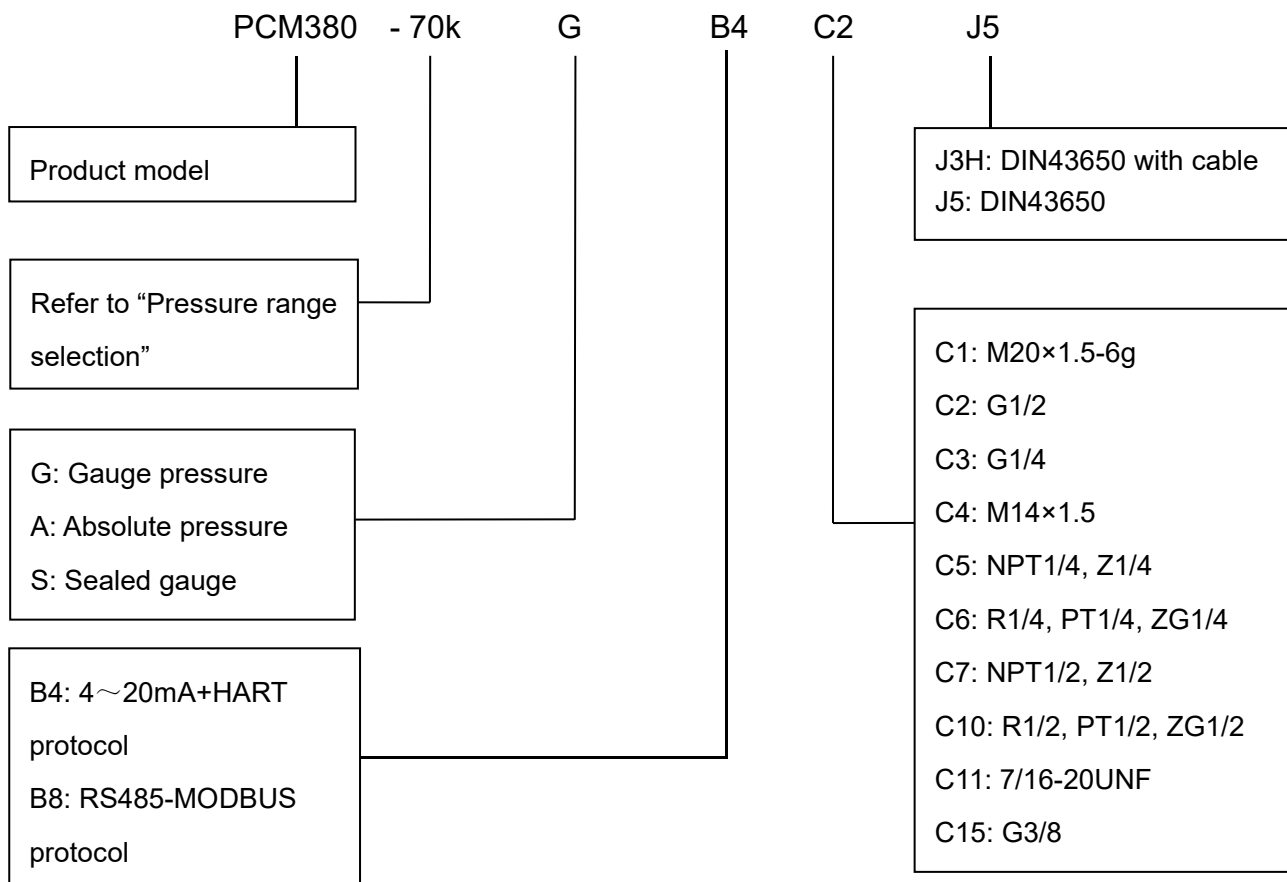
Pressure range code	Pressure reference	Pressure range	Overpressure	Burst pressure	Note
35k	G	0~35kPa	300%FS	500%FS	
70k	G	0~70kPa	300%FS	500%FS	
100k	G, A	0~100kPa	200%FS	300%FS	
160k	G	0~160kPa	200%FS	300%FS	
250k	G, A	0~250kPa	200%FS	300%FS	
400k	G	0~400kPa	200%FS	300%FS	
600k	G	0~600kPa	200%FS	300%FS	
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 stands for gauge pressure, A, absolute pressure, S, sealed gauge pressure.

### Accessory

Name	Appearance	Description	Material No.
M4 damper		Refer to "Application of damper"	100030500027
Hirschmann plug made in China		Made in China (By default)	100040301005
Imported Hirschmann plug		Fully imported	100040301013

## How to order



Example: PCM380-70kGB4C2J5

Refer to product model PCM380, pressure range 0~70kPa, pressure reference gauge pressure, output signal 4~20mA+HART protocol, pressure connection G1/2, electrical connector DIN43650.

### Ordering tips

- (1) Please ensure the compatibility between the measured medium and the contacting part of the product when placing an order.
- (2) If there are special requirements for the product appearance or performance parameter, our company can provide customization.

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.

### Contact us

Nanjing Wotian Technology Co.,Ltd.

Website: [www.wtsensor.com](http://www.wtsensor.com)

Add: 5 Wenying Road, Binjiang Development Zone, Nanjing, 211161, China

E-mail: [dr@wtsensor.com](mailto:dr@wtsensor.com)