PCM380 Intelligent Pressure Transmitter

Features

- HART, RS485-MODBUS communication protocol
- 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's reliability
- Excellent on-site interchangeability

Applications and industries

- Project kitting
- Scientific experiment
- Leakage monitoring
- Petrochemical 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

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

Notes:

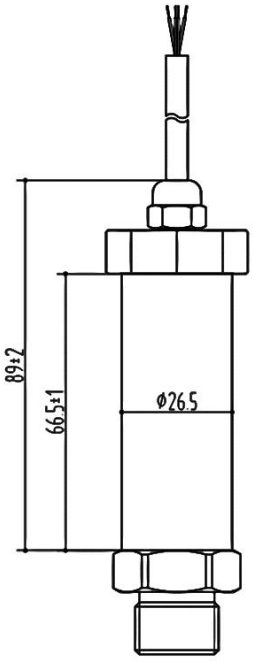
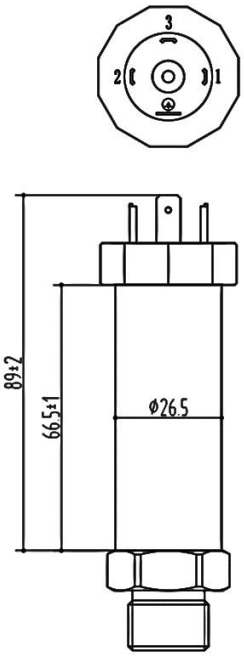
1 Do not misuse documentation.

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 signal	4~20mA+HART protocol (12~30V), RS485-MODBUS communication protocol (12~30V)
Accuracy	±0.5%FS (@25±5℃)
Hysteresis and repeatability	±0.1%FS
Temperature drift	±3%FS (@-10~70℃)
Durability	≥10^6 pressure cycles
Ambient temperature	-20℃~80℃
Medium temp.	-30℃~105℃
Storage temp.	-40℃~120℃
Insulation resistance	≥100MΩ/250VDC
Protection grade	IP65
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: 1m; IEC 60068-2-32
Material	SS304
Maximum mounting torque	25N·m

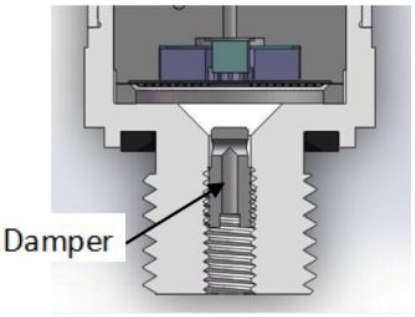
Electrical connection & wiring mode		
Connector code	**J3H: DIN43650 with cable**	**J5: DIN43650**
Dimension In mm		
Wiring method (4~20mA+HART)	Red wire: Vin Green wire: Iout	Pin 1: Vin Pin 2: Iout
Wiring method (RS485-MODBUS)	Red wire: V+ Green wire: V- Yellow wire: RS485-A White wire: RS485-B	Pin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

Application of damper

Application

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

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

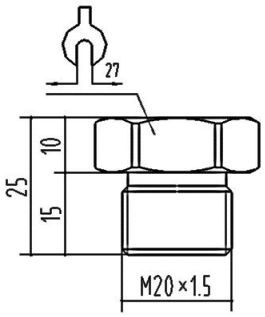
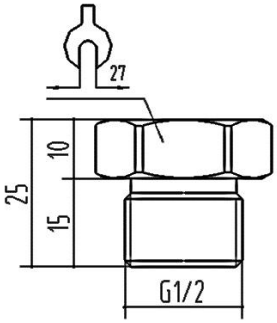
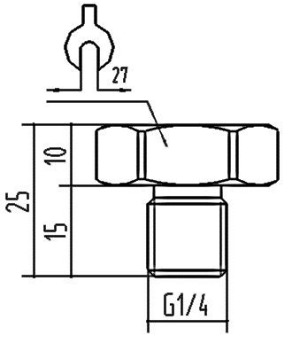
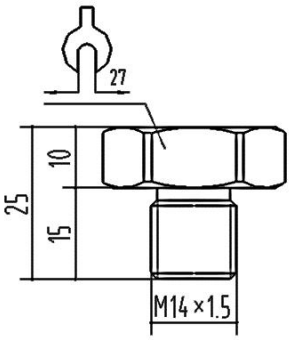
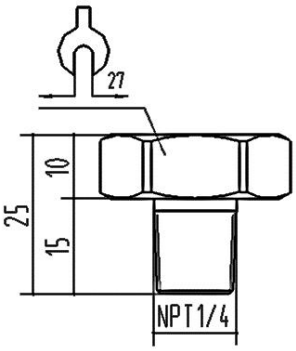
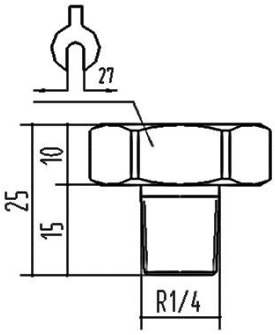


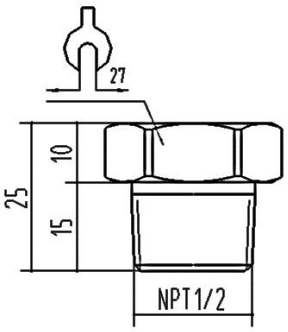
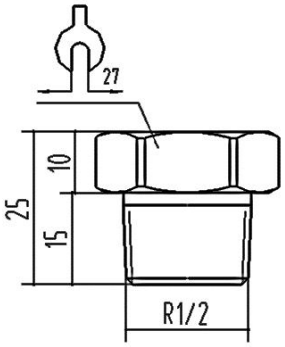
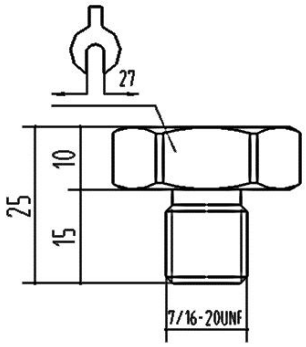
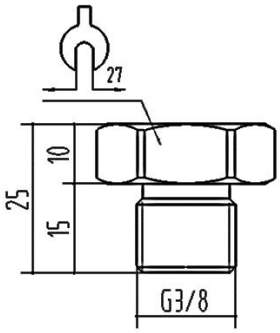
Media condition

In the liquid containing particles, nozzle clogging may occur. The vertical mounting of the pressure transmitter minimizes the risk of clogging because the flow of fluid happens at 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.

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 the gasket material, kitting material, thread lubrication, and pressure.

Pressure range selection					
Pressure range code	**Pressure reference**	**Pressure range**	**Overload pressure**	**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

PCM380 - 70k G B4 C2 J5

Product model
PCM380

Pressure range
(refer to “Pressure range selection” on Page 4)

Pressure reference
G: Gauge pressure
A: Absolute pressure
S: Sealed gauge pressure
Others

Supply & output signal
B4: 4~20mA+HART protocol
B8: RS485-MODBUS protocol
Others

Electrical connection
J3H: DIN43650 with cable
J5: DIN43650
Others

Pressure port
C1: M20×1.5-6g
C2: G1/2
C3: G1/4
C4: M14×1.5
C5: NPT1/4, Z1/4
C6: R1/4, PT1/4, ZG1/4
C7: NPT1/2, Z1/2
C10: R1/2, PT1/2, ZG1/2
C11: 7/16-20UNF
C15: G3/8
Others

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 Ensure the measured medium is compatible with the contacting part of the product.
2 For special requirements on the appearance and performance parameters, customization is available.

Contact us

Nanjing Wotian Technology Co.,Ltd.

Website: www.wtsensor.com

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

E-Mail: dr@wtsensor.com