

PCM300 Universal Pressure Transmitter

Features

- 316L stainless steel isolation diaphragm structure
- High accuracy, all stainless steel structure
- Micro amplifier, voltage and current signal output
- Strong anti-interference, good long-term stability
- Various structures, easy to install and use
- Wide measuring range, can measure absolute pressure, gauge pressure, and sealed gauge pressure
- Vibration and shock resistance
- The zero point and full span of the product can be adjusted

Applications

- Process control
- Aviation and Aerospace
- Automotive & Medical Devices
- Pipeline Systems

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

The PCM300 Universal Pressure Transmitter uses a diffusion silicon pressure sensor as its sensitive element. The built-in processing circuit converts the sensor's millivolt signal into a standard current or voltage signal, which can be directly connected with the computer interface card, control instrument, intelligent instrument, or PLC. If it is used for remote transmission, the current output is available. PCM300 has a small size, light weight, and an all-stainless-steel sealing structure, and can be used in corrosive environments. The product is easy to install and has high anti-vibration and shock resistance performance, which can be widely used in process control, aviation & aerospace, auto industry, medical equipment, HVAC, and many other fields.

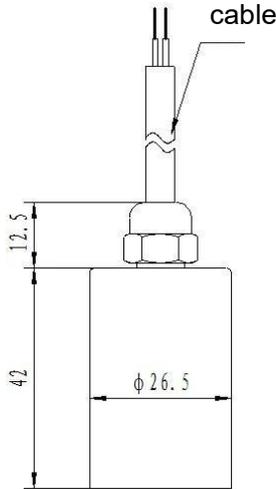
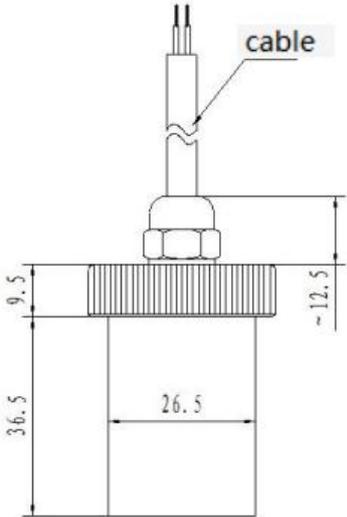
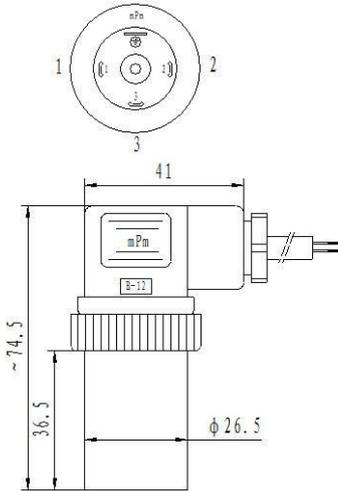
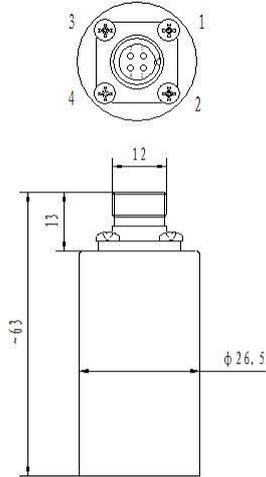
Notes:

- 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	-100kPa...0~10kPa...60MPa
Pressure reference	Gauge pressure, Absolute pressure, Sealed gauge pressure
Ambient temp.	-20°C~85°C
Medium temp.	-20°C~85°C
Storage temp.	-40°C~125°C
Zero temp. coefficient	±1.5%FS (@-20°C~85°C)
Span temp. coefficient	±1.5%FS (@-20°C~85°C)
Overload pressure	150%FS
Mechanical vibration	20g (20~5000HZ)
Shock	100g (11ms)
Overall accuracy	0.5%FS
Insulation	100MΩ/250VDC
Response time	≤1ms(Up to 90%FS)
Long-term stability	±0.2%FS/year
EMC Surge	(IEC 61000-4-5) 2KV
EMC Electrostatic discharge	(IEC 61000-4-2) Contact discharge: ±8 kV; air discharge: ±15 kV
Protection	IP65
Ex-proof grade	Intrinsic safety explosion-proof Exia II CT4
Material	Housing: stainless steel; isolation diaphragm: 316L
Medium compatibility	All media compatible with stainless steel 316L

Output signal and power supply						
Code	B1	B3	B2	B7	B12	B6
Output signal	4~20mA	0~5V	1~5V	0~10V	1~10V	0.5~4.5V
Supply	12~30VDC					5VDC

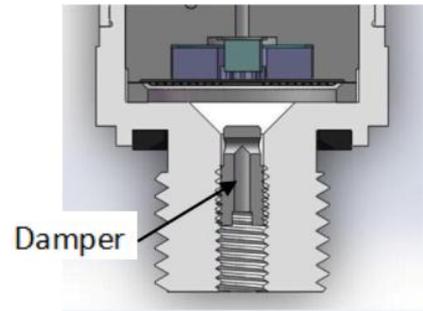
Electrical connection and wiring method

Connector code	J3: Cable outlet	J15: Hirschmann with cable
Dimension In mm		
Protection grade	IP65	
Connection mode (2-wire current)	Pin 1: Supply+ (red wire) Pin 2: Current output (green wire)	Red: Supply+ Green: Current output
Connection mode (3-wire voltage)	Pin 1: Supply+ (red wire) Pin 2: Ground (green wire) Pin 3: Voltage output (yellow wire)	Red: Supply+ Green: Ground Yellow: Voltage output
Connector code	J5: DIN43650	J4: Aviator Connector
Dimension In mm		
Protection	IP65	
Connection mode (2-wire current)	Pin 1: Supply+ (red wire) Pin 2: Current output (green wire)	Red: Supply+ Green: Current output
Connection mode (3-wire voltage)	Pin 1: Supply+ (red wire) Pin 2: Ground (green wire) Pin 3: Voltage output (yellow wire)	Red: Supply+ Green: Ground Yellow: Voltage output

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 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 the pressure transmitter minimizes the risk of clogging because the flow of fluid happens only at the initial start, 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 port

Thread code	C1: M20×1.5	C2: G1/2	C3: G1/4
Dimension In mm			
Recommended torque	15~25Nm	15~25Nm	15~25Nm
Thread code	C4: M14×1.5	C5: NPT1/4	C6: PT1/4
Dimension In mm			
Recommended torque	15~25Nm	15~25Nm	1~25Nm
Thread code	C7: NPT1/2	C9: G1/4 (female)	
Dimension In mm			
Recommended torque	15~25Nm	15~25Nm	

Note: The torque depends on all kinds of factors, such as the gasket material, kitting material, thread lubrication and pressure.

Pressure range selection

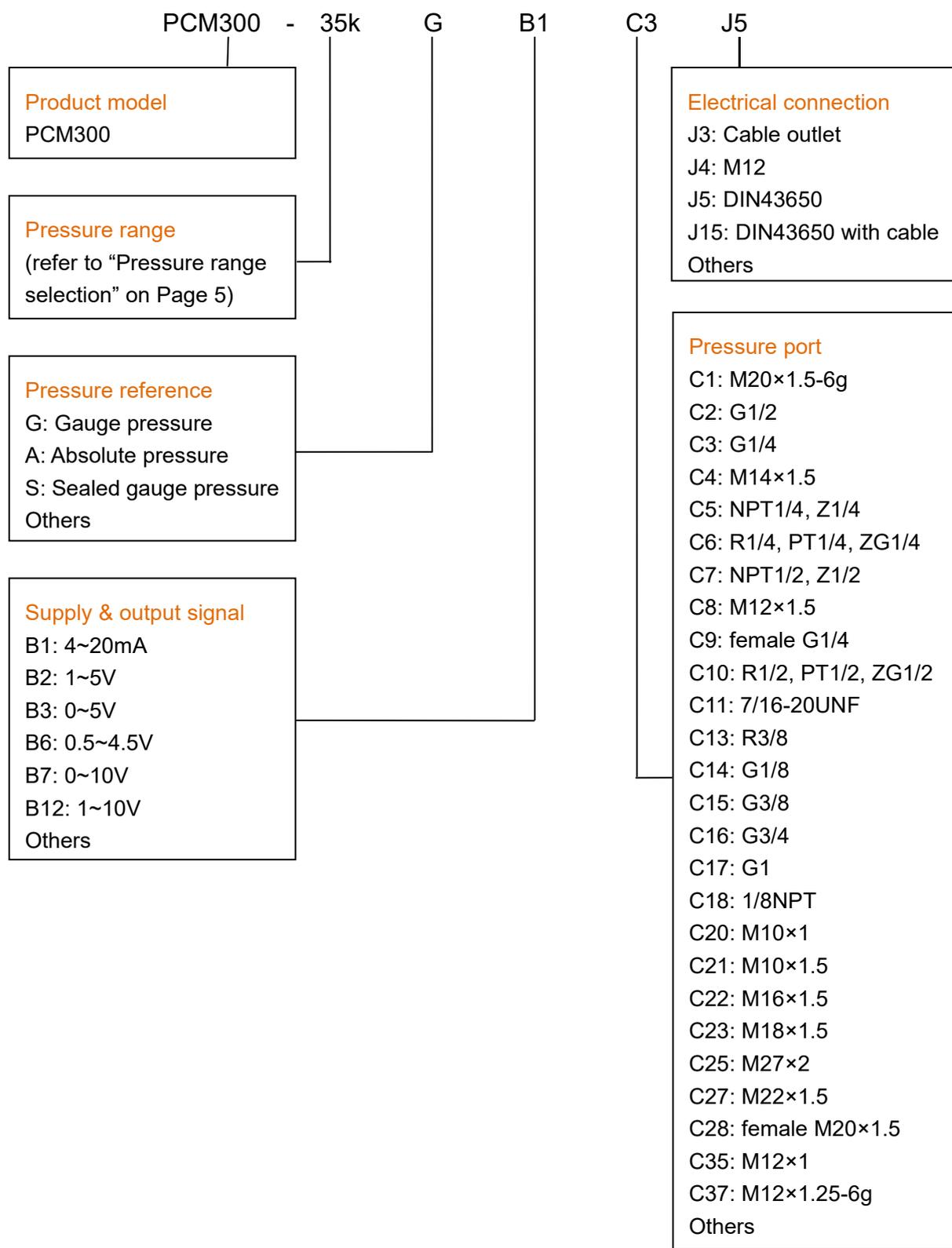
Pressure range code	Pressure reference	Pressure range	Overload pressure	Burst pressure	Note
35k	G, A	0~35kPa	150%FS	500%FS	
70k	G	0~70kPa	150%FS	500%FS	
100k	G, A	0~100kPa	150%FS	300%FS	
250k	G, A	0~250kPa	150%FS	300%FS	
400k	G, A	0~400kPa	150%FS	300%FS	
600k	G, A	0~600kPa	150%FS	300%FS	
1M	G, A, S	0~1MPa	150%FS	300%FS	
1.6M	G, S	0~1.6MPa	150%FS	300%FS	
2.5M	G, S	0~2.5MPa	150%FS	300%FS	
4M	S	0~4MPa	150%FS	300%FS	
6M	S	0~6MPa	150%FS	300%FS	
10M	S	0~10MPa	150%FS	300%FS	
16M	S	0~16MPa	150%FS	300%FS	
25M	S	0~25MPa	150%FS	300%FS	
40M	S	0~40MPa	150%FS	300%FS	
60M	S	0~60MPa	150%FS	200%FS	
100M	S	0~100MPa	120%FS	150%FS	
(-100~0)k	N/A	-100~0kPa	150%FS	300%FS	
(0~-100)k	N/A	0~-100kPa	150%FS	300%FS	
NP100k	N/A	-100~100kPa	150%FS	300%FS	

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

Accessory

Name	Appearance	Description	Item number
M4 damper		(Refer to "Application of damper" on Page 4.)	100030100027
LCD12 display gauge		1. LCD display 2. Green backlight	100040100008
BS-6 digital display gauge		1. Nixie tube display 2. Red backlight	100040101000
Hirschmann plug made in China		Made in China	100040301005
Imported Hirschmann plug		Imported	100040301013

How to order





Example: PCM300-35kGB1C3J5

Product model PCM300, pressure range 0~35kPa. G: gauge pressure. B1: output signal 4~20mA. C3: pressure port G1/4. J5: electrical connection DIN43650.

Ordering tips

- 1 Ensure the measured medium is compatible with the contacting part of the product when placing an order.
- 2 Customization is available for pressure ranges between 1~35kPa. (For ranges ≤ 6 kPa, an oil-free sensor should be selected, and the measured medium must be pure gas.)
- 3 Customization is available for ranges between 25~100MPa, where the application site involves extreme pressure impacts.

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

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

E-Mail: dr@wtsensor.com