

# PCM301J Explosion-Proof Pressure Transmitter

## Features

- All stainless steel and all welded structure
- High strength, anti-vibration
- Passed the national explosion-proof electrical product quality supervision and inspection center isolation explosion-proof certification.
- Wide measuring range to measure absolute pressure, gauge pressure and sealed gauge pressure
- Good sealing performance and long-term stability
- Advanced structure ensures product reliability
- Widely used in flammable and explosive environments
- Supports sensor gold plating to prevent hydrogen permeation

## Applications

- Equipment support
- Hydraulic and pneumatic equipment
- CNG pipeline network
- Compressor
- Natural gas refueling station equipment
- Hydrogen measurement



## Product overview

PCM301J explosion-proof pressure transmitter is a pressure transmitter designed specifically for explosion-proof locations and has obtained explosion-proof Ex db II C T6 Gb certification.

The PCM301J explosion-proof pressure transmitter adopts an integrated fully welded structure, which has undergone multiple stainless steel welding to meet the requirements of isolation and explosion-proof. It is composed of a highly stable silicon piezoresistive pressure sensor combined with a high-performance dedicated amplification circuit, with high strength, small volume, excellent vibration resistance, and anti mold and moisture-proof design. It can be used for a long time in harsh environments. Widely used in various explosion-proof places such as petroleum machinery, chemical machinery, pumps and compressors, power, boilers, natural gas, etc.

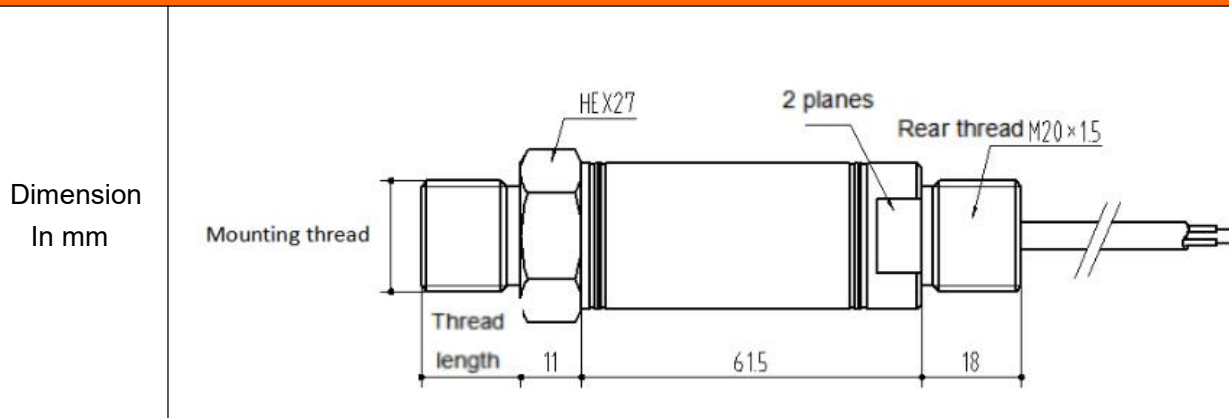
### Notes:

- 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
Supply & output	Supply:12-30V;Output:4-20mA
	Supply:12-30V;Output:1~5V, 0~5V
Accuracy	±0.5%FS(@25±5°C)
Hysteresis & repeatability	±0.1%FS
Temp. drift	±1.5%FS(@-10°C~70°C)
Response time	≤100ms(up to 90%FS)
Durability	10 <sup>6</sup> cycles
Ambient temp.	-20°C~85°C
Medium temp.	-30°C~105°C
Storage temp.	-40°C~85°C
EMC-interference	IEC 61000-6-3
EMC-immunity	IEC 61000-6-2
Insulation resistance	≥100MΩ/250VDC
Shock	Impact: 100g/11ms; IEC 60068-2-27
	Free fall: 1m; IEC 60068-2-32
Protection	IP65
Material	304
Max. mounting torque	25N • m
Ex-proof	Ex db II C T6 Gb

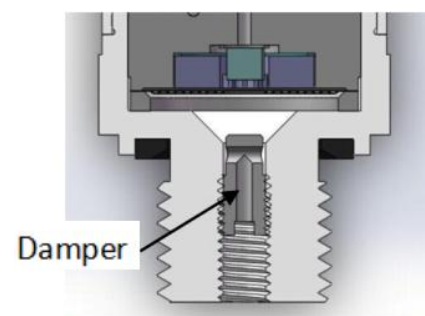
## Structure



## Application of damper

### Application

Cavitation, liquid hammer and pressure peak may occur in air or 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.



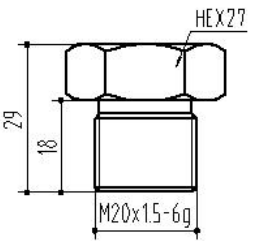
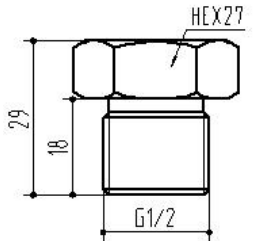
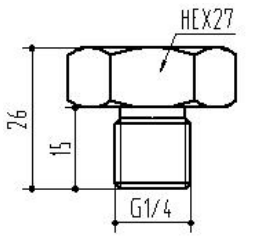
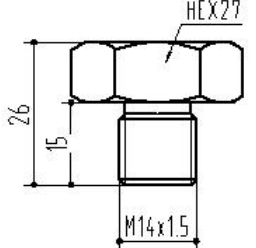
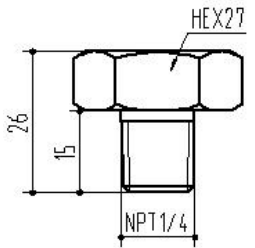
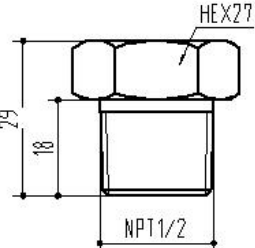
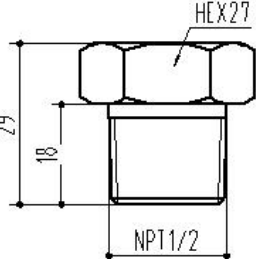
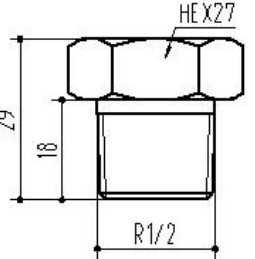
**Application of damper (cont.)**

**Medium conditions**

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.

**Pressure port**

Thread code	C1: M20×1.5-6g	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, Z1/4	C6: R1/4, PT1/4, ZG1/4
Dimension In mm			
Recommended torque	15~25Nm	15~25Nm	15~25Nm
Thread code	C7: NPT1/2, Z1/2	C10: R1/2, PT1/2, ZG1/2	
Dimension In mm			
Recommended torque	15~25Nm	15~25Nm	

Note: Torque depends on various factors such as material of gasket, supporting materials, lubrication of


thread and pressure.

### Pressure range selection

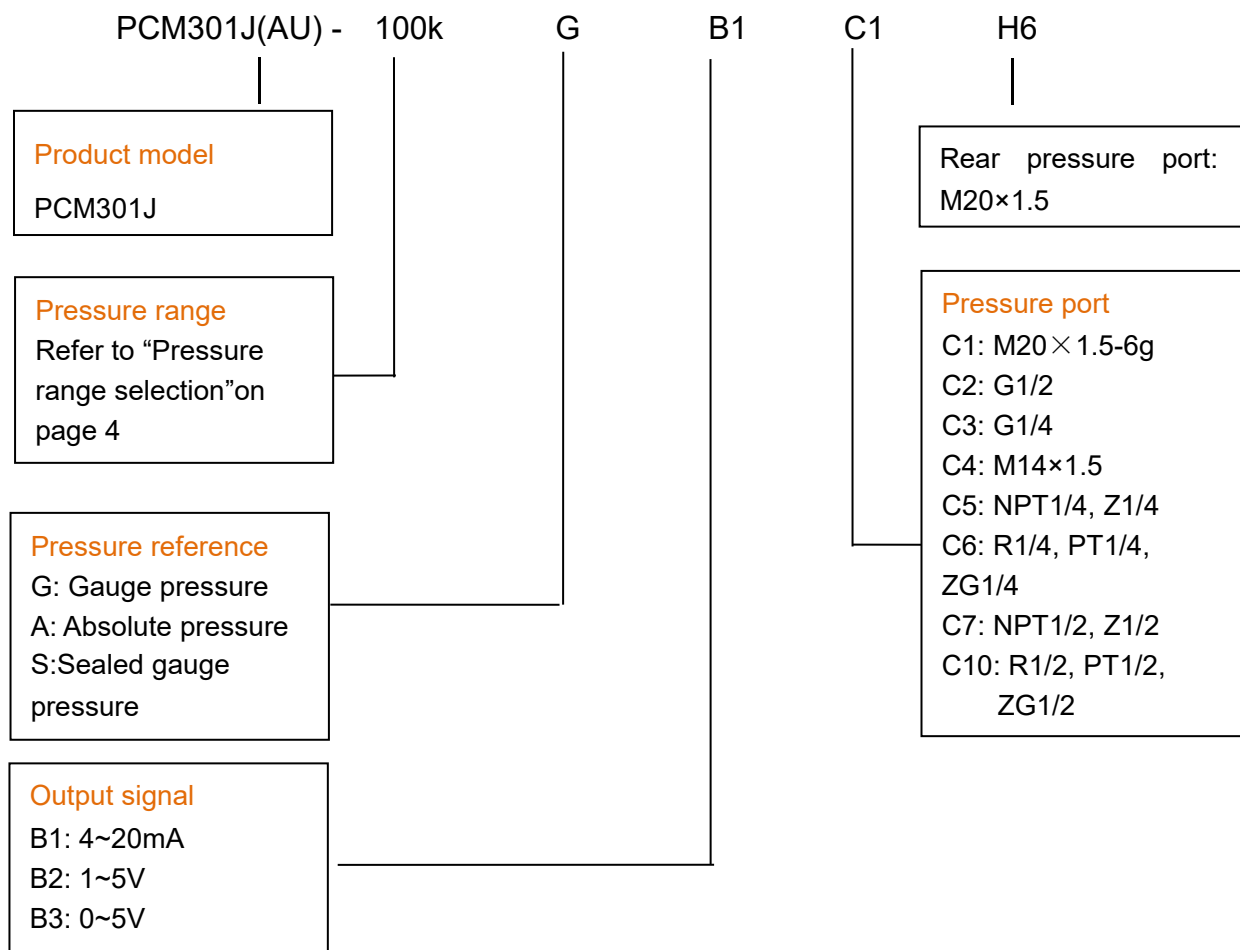
Pressure range code	Pressure reference	Pressure range	Overpressure	Remark
10k	G	0~10kPa	300%FS	
35k	G	0~35kPa	300%FS	
70k	G	0~70kPa	300%FS	
100k	G、A	0~100kPa	200%FS	
160k	G	0~160kPa	200%FS	
250k	G、A	0~250kPa	200%FS	
400k	G	0~400kPa	200%FS	
600k	G	0~600kPa	200%FS	
1M	S	0~1MPa	200%FS	
1.6M	S	0~1.6MPa	200%FS	
2.5M	S	0~2.5MPa	200%FS	
6M	S	0~6MPa	150%FS	
10M	S	0~10MPa	150%FS	
16M	S	0~16MPa	150%FS	
25M	S	0~25MPa	150%FS	
40M	S	0~40MPa	150%FS	
60M	S	0~60MPa	150%FS	
AU-100k	G	0~100kPa	200%FS	
AU-1M	G、S	0~1MPa	200%FS	
AU-1.6M	S	0~1.6MPa	200%FS	

Note: G stands for gauge pressure, A, absolute pressure, S, sealed gauge pressure. AU, gold-plated sensor

### Accessory

Name	Appearance	Description	Part number
M4 damper		Refer to "Application of damper"	100030500027

## How to order



Example:

(1) PCM301J-100kGB1C1H6

The model is PCM301J, with a range of 0-100kPa. The pressure reference is gauge pressure, the power supply is 24V, the output signal is 4-20mA, and the pressure port is M20 × 1.5-6g, rear pressure port is M20× 1.5.

(2) PCM301J (AU) -100kGB1C1H6

The model is PCM301J, the sensor is a gold-plated sensor, with a range of 0-100kPa. The pressure reference is gauge pressure, the power supply is 24V, the output signal is 4-20mA, and the pressure port is M20 × 1.5-6g, rear pressure port is M20× 1.5.

### Ordering tips:

- (1) Ensure compatibility between measured media and contacting part of product.
- (2) For special requirements on the product appearance and performance parameters, customization is available.



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**

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