PCM301J Explosion-Proof Pressure Transmitter

Features

- All stainless steel and fully welded structure
- High strength, anti-vibration
- Pass 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 gold plating on sensors and prevents hydrogen permeation

Applications

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

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

PCM301J adopts an integrated fully welded structure, which has undergone stainless steel welding repeatedly 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 in harsh environments for a long time and is widely used in various explosion-proof fields, such as petroleum machinery, chemical machinery, pumps and compressors, power, boilers, and natural gas.

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.

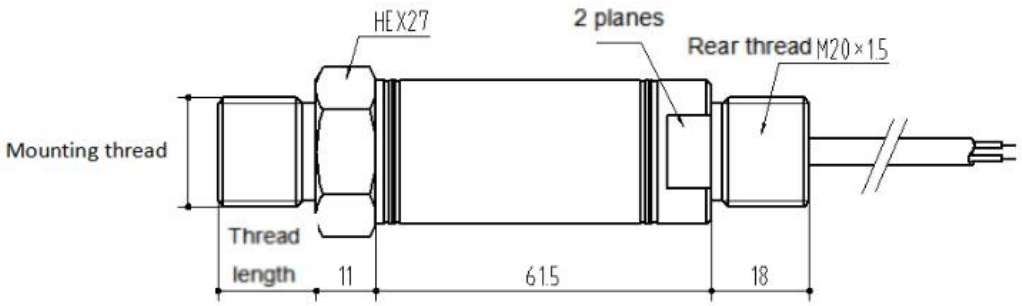
4 Misuse of the product may cause danger or personal injury.

Performance parameters	
Pressure range	-100kPa…0~10kPa…60MPa
Pressure reference	Gauge pressure, Absolute pressure, Sealed gauge pressure
Supply & output signal	Supply:12~30VDC; Output signal:4~20mA
	Supply:12~30VDC; Output signal:1~5V, 0~5V
Accuracy	±0.5%FS(@25±5℃)
Hysteresis & repeatability	±0.1%FS
Temp. drift	±1.5%FS(@-10℃~70℃)
Response time	≤100ms(up to 90%FS)
Durability	10^6 (cycles)
Ambient temp.	-20℃~85℃
Medium temp.	-30℃~105℃
Storage temp.	-40℃~85℃
EMC-interference	IEC 61000-6-3
EMC-immunity	IEC 61000-6-2
Insulation resistance	≥100MΩ/250VDC
Shock	Shock: 100g/11ms; IEC 60068-2-27 Free fall: 1m; IEC 60068-2-32
Protection	IP65
Material	304
Max. mounting torque	25N·m
Ex-proof level	Ex db Ⅱ C T6 Gb

Structure

Dimension

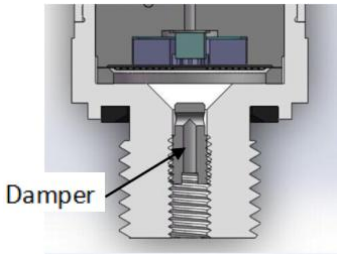
In mm



Application of damper

Application

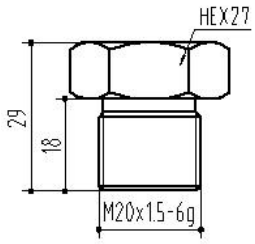
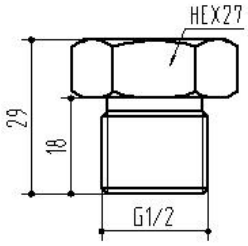
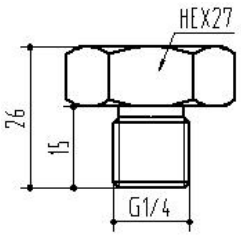
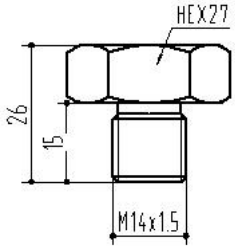
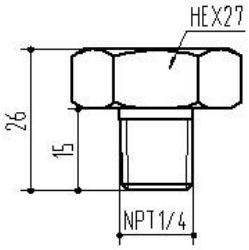
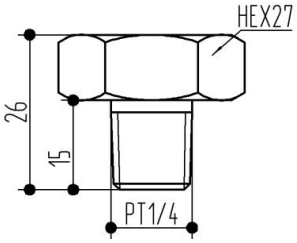
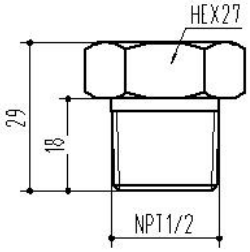
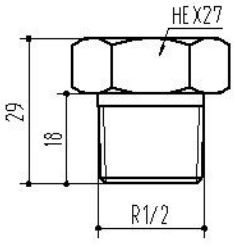
Cavitation, liquid hammer, and pressure peak may occur in air or hydraulic systems with varying flow rates, such as the rapid closing of a valve or the starting and stopping of a pump. Even at relatively low operating pressures these problems may occur at the inlet and outlet.



Media condition

Nozzle clogging may occur in liquids containing particles. Vertical mounting of the pressure transmitter can minimize this risk. This is because fluid flow happens only during initial startup, 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 the 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 gasket materials, supporting materials, lubrication of the thread, and pressure.

Pressure range selection

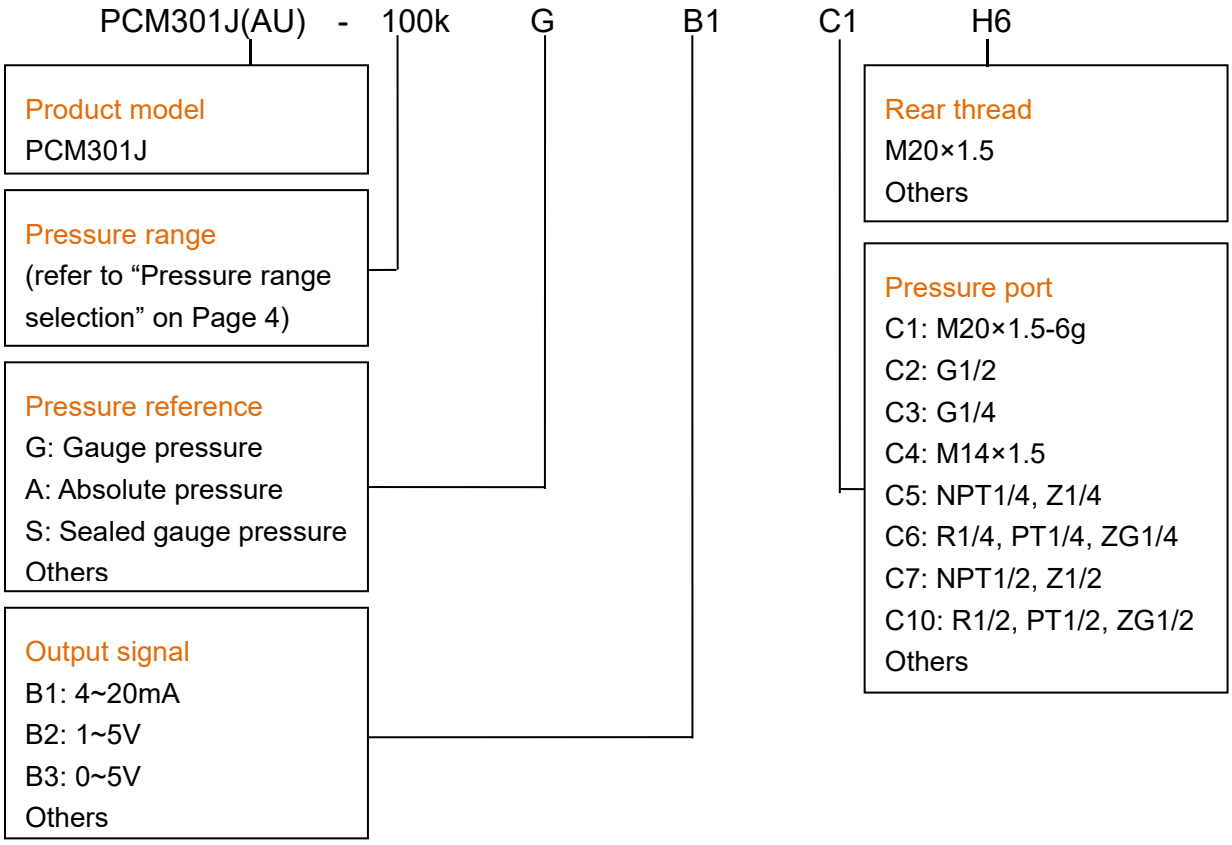
Pressure range code	Pressure reference	Pressure range	Overload pressure	Note
10k	G	0~10kPa	300%FS	
35k	G	0~35kPa	300%FS	
70k	G	0~70kPa	300%FS	
100k	G, A	0~100kPa	200%FS	
160k	G	0~160kPa	200%FS	
250k	G, A	0~250kPa	200%FS	
400k	G	0~400kPa	200%FS	
600k	G	0~600kPa	200%FS	
1M	S	0~1MPa	200%FS	
1.6M	S	0~1.6MPa	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, 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, pressure range: 0~100kPa, gauge pressure, power supply: 24V, output signal: 4~20mA, pressure port M20×1.5-6g, rear pressure port M20×1.5.

Example 2: PCM301J(AU)-100kGB1C1H6

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

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.
3 If the measuring medium of the product is hydrogen, a gold-plated sensor should be selected.

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