PCM301 Flameproof Pressure Transmitter

Features

- All stainless steel and fully welded structure
- High strength, anti-vibration
- CNEX certified
- 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

Applications

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

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 PCM301 Flameproof Pressure Transmitter is specially designed for explosion-proof places. It has obtained Ex db ⅡC T6 Gb certification.

PCM301 adopts an integrated all-welded structure and can meet the isolation and explosion-proof requirements by repeatedly welding stainless steel. It is equipped with a high-stability silicon piezoresistive pressure sensor and a high-performance dedicated amplifier circuit, with high strength, small size, and excellent anti-vibration performance. The anti-mold and moisture-proof design allows it to be used for a long time in harsh environments.

PCM301 is widely used in petroleum machinery, chemical machinery, pumps, compressors, electric power, boilers, natural gas, and various explosion-proof 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.

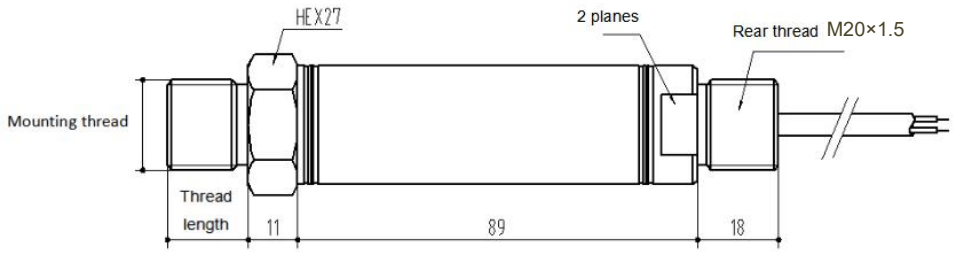
3 Complete installation, operation, and maintenance information is provided in the instructions of the product.

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
Supply & output signal	4~20mA (12~30VDC); 1~5V, 0~5V (12~30VDC)
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 pressure 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 in contact with media	304
Max. mounting torque	20N·m
Ex-proof level	Ex db Ⅱ C T6 Gb

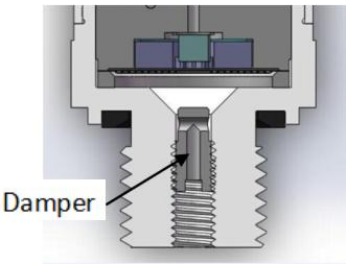
Structure

Dimension
In mm



Application of damper

Application



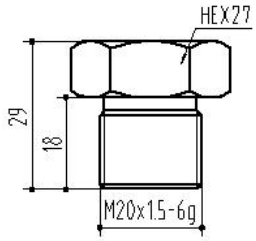
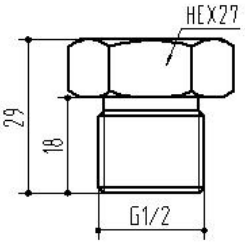
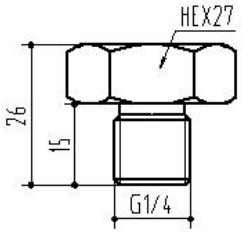
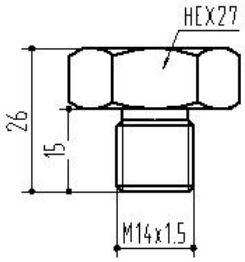
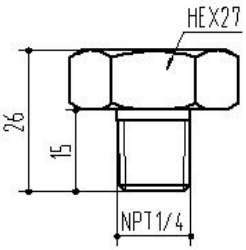
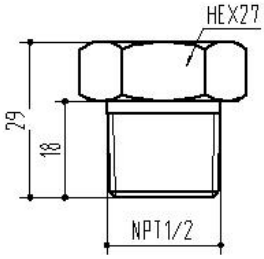
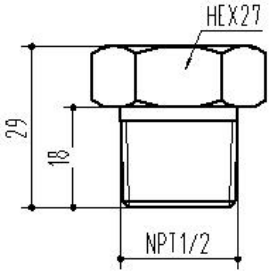
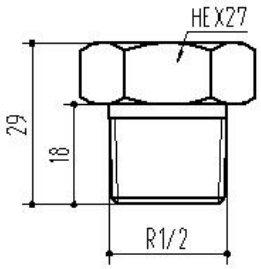
Cavitation, liquid hammer, and pressure peak may occur in air or hydraulic systems with varying flow rates, such as the rapid closing of a valve or the starting and stopping of a pump. Even at relatively low operating pressures, these problems may occur at the inlet and outlet.

Media condition

Nozzle clogging may occur in liquids containing particles. Vertical mounting of the pressure transmitter can minimize this risk. This is because the 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 material of gasket, supporting materials, lubrication of thread and pressure.

Pressure range selection

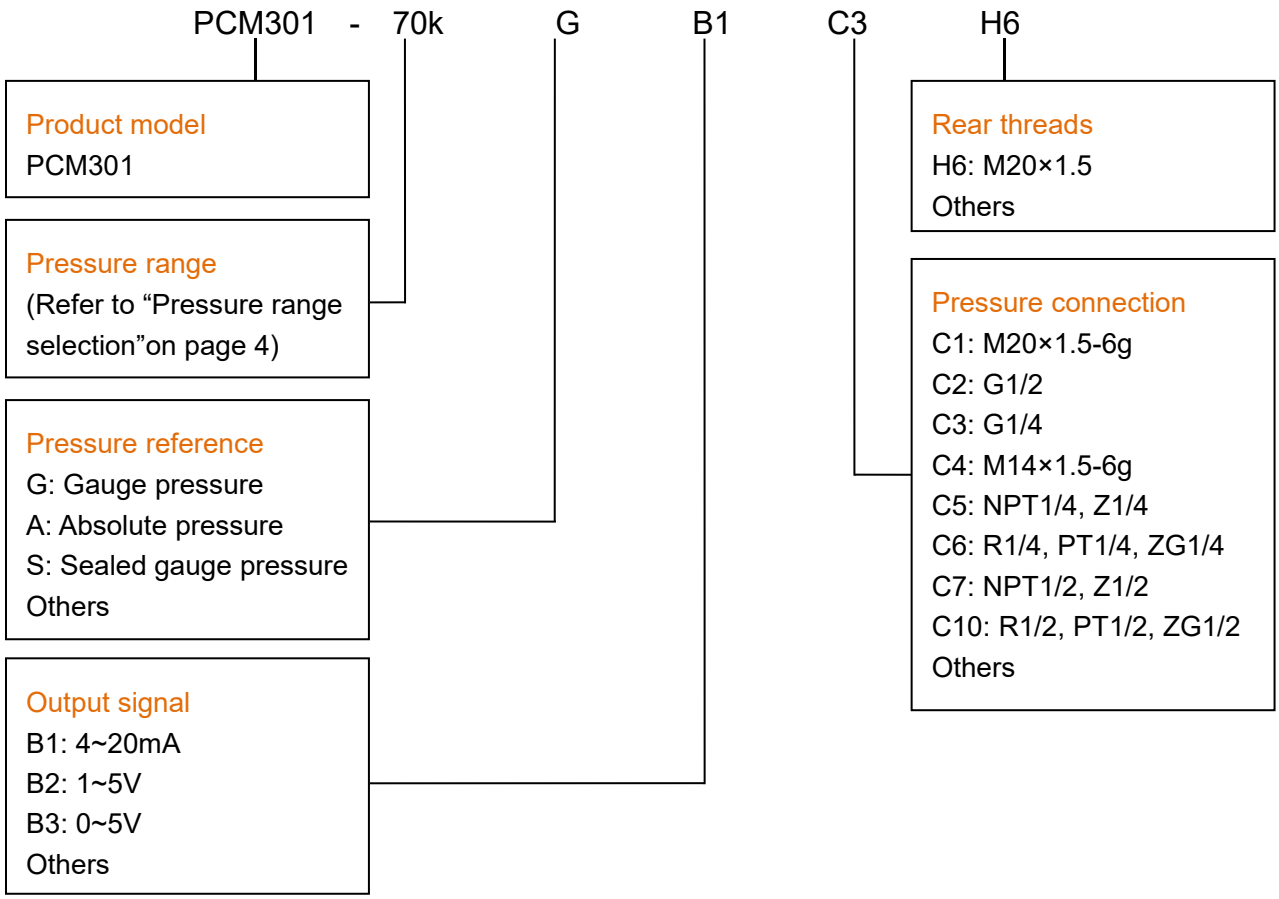
Pressure range code	Pressure reference	Pressure range	Overpressure	Note
10k	G	0~10kPa	300%FS	
35k	G	0~35kPa	300%FS	
70k	G	0~70kPa	300%FS	
100k	G, A	0~100kPa	200%FS	
160k	G	0~160kPa	200%FS	
250k	G, A	0~250kPa	200%FS	
400k	G	0~400kPa	200%FS	
600k	G	0~600kPa	200%FS	
1M	S	0~1MPa	200%FS	
1.6M	S	0~1.6MPa	200%FS	
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	

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

Accessory

Name	Appearance	Description	Part number
M4 damper		Refer to “Application of damper” on Page 2	100030500027

How to order



Example: PCM301-70kGB1C3H6

Product model PCM301, pressure range 0~70kPa. G: gauge pressure. B1: output signal 4~20mA. C3: pressure port G1/4. H6: rear threads 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 product’s appearance and performance parameters, customization is available.

Contact us

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