

PCM301 Flameproof Pressure Transmitter

Features

- All stainless steel and all 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

PCM301 Flameproof Pressure Transmitter is specially designed for explosion-proof places. It has obtained Exd II BT6 certification.

PCM301 adopts integrated all-welded structure and high-stability piezoresistive silicon pressure sensor with high-performance dedicated amplifier circuit. The isolation and explosion-proof requirements are met after repeatedly stainless steel welding. PCM301 has advantages of high strength, small size, excellent anti-vibration performance, anti-mildew and moisture-proof design, which can be used in harsh environments for long term. PCM301 is widely used in petroleum machinery, chemical machinery, pumps, compressors, electric power, boilers, natural gas and various explosion-proof places.

Notes:

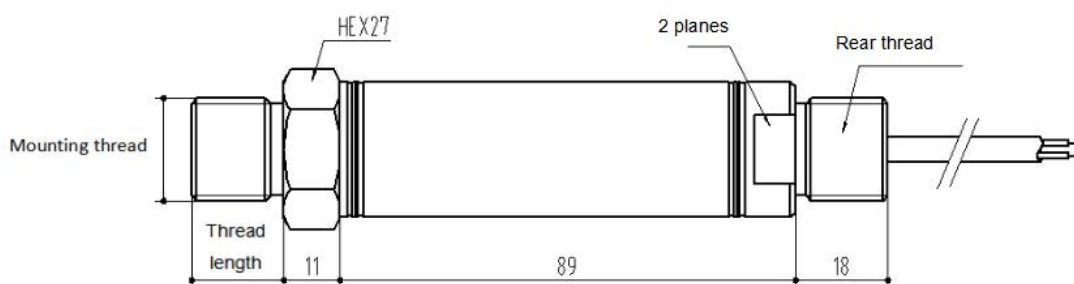
- 1 Do not misuse documentation.
- 2 The information presented in this product sheet is for reference only. Do not use this document as a product installation guide.
- 3 Complete installation, operation, and maintenance information is provided in the instructions of the product.
- 4 Misuse of the product 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: 16-36V; Output: 4-20mA
	Supply: 12-36V; Output: 1~5V, 0~5V
Accuracy	$\pm 0.5\% \text{FS}(\text{typ.})$; $\pm 1\% \text{FS}(\text{max.})$
Hysteresis & repeatability	$\leq \pm 0.1\% \text{FS}$
Temp. drift	$\leq \pm 1.5\% \text{FS}(@ -10^{\circ}\text{C} \sim 70^{\circ}\text{C})$
Response time	$\leq 100\text{ms}(\text{up to } 90\% \text{FS})$
Durability	$\geq 10^6$ pressure cycles
Ambient temp.	$-20^{\circ}\text{C} \sim 80^{\circ}\text{C}$
Medium temp.	$-30^{\circ}\text{C} \sim 105^{\circ}\text{C}$
Storage temp.	$-40^{\circ}\text{C} \sim 85^{\circ}\text{C}$
EMC-interference	IEC 61000-6-3
EMC-immunity	IEC 61000-6-2
Vibration resistance	$\geq 100\text{M}\Omega/250\text{VDC}$
Shock	10g/11ms
Protection	IP65
Material	304
Max. mounting torque	25Nm
Ex-proof	Ex d II C T6

Structure

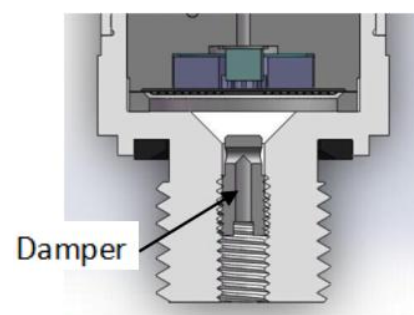
Dimension
In mm



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 valve or the start and stop of pump. Even at relatively low operating pressures, these problems may occur at the entrance and exit.

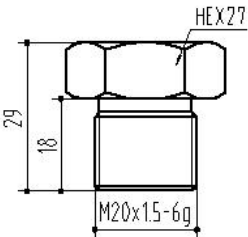
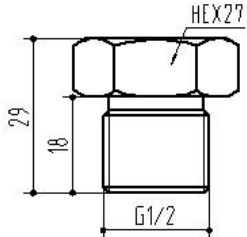
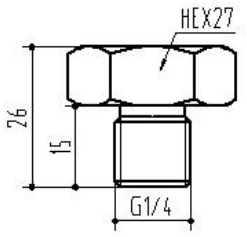
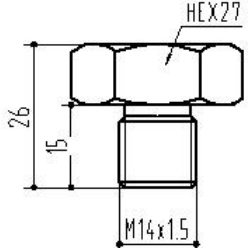
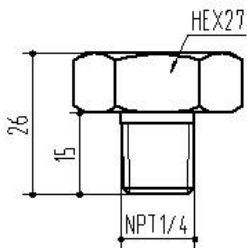
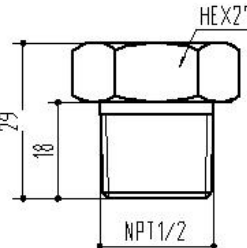
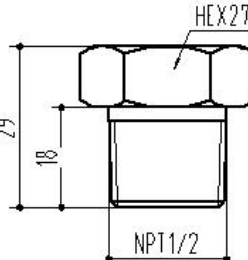
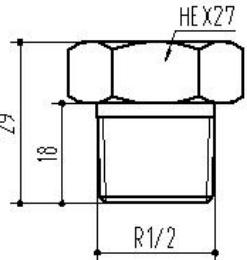


Media condition

In the liquid containing particles, nozzle clogging may occur. The vertical mounting of 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.

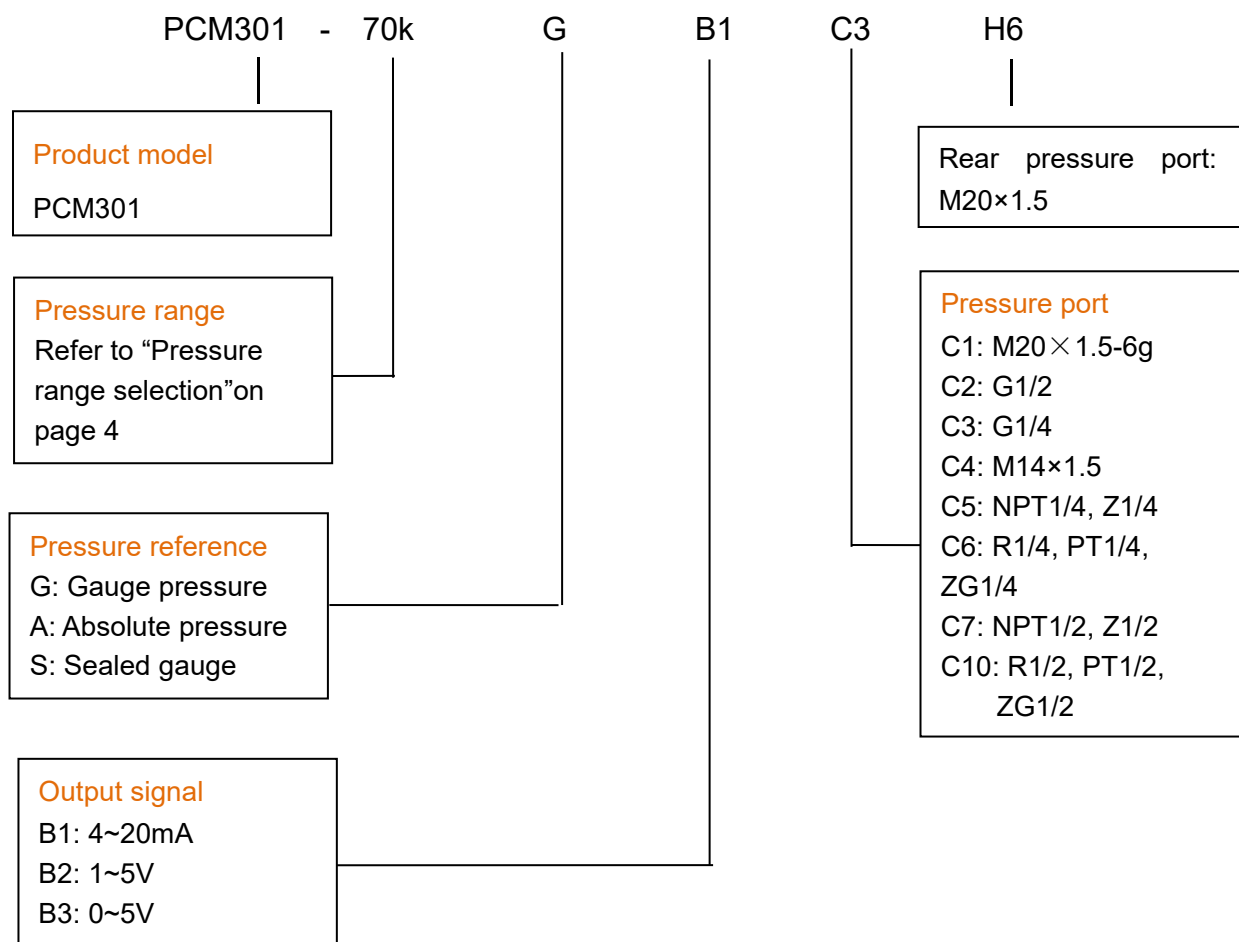
Pressure range selection

Pressure range code	Pressure reference	Pressure range	Overpressure	Remark
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	0~4MPa	150%FS	
10M	S	0~6MPa	150%FS	
16M	S	0~10MPa	150%FS	
25M	S	0~25MPa	150%FS	
40M	S	0~40MPa	150%FS	
60M	S	0~60MPa	150%FS	

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

Accessory

Name	Appearance	Description	Part number
M4 damper		Refer to "Application of damper"	100030100027


Example: PCM301-70kGB1C3H6

PCM301: product model. 70k: pressure range 0~70kPa. G: pressure reference gauge pressure. B1: output signal 4~20mA. C3: pressure port G1/4. H6: rear pressure port 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.

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