PCM401 Flameproof Pressure Transmitter

Features

- Diffusion silicon piezoresistive pressure sensor
- Solid and well-sealed aluminum alloy junction box, convenient for outdoor installation and use
- For gas, liquid, and steam pressure measurement
- Provide low, medium, and high pressure ranges
- LCD option
- Isolation explosion-proof

Applications

- Industrial site control
- Coal mines
- Oilfield
- Heavy industry
- Chemical industry
- Gas pipeline network
- Water supply pipeline network

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 PCM401 flameproof pressure transmitter adopts a high-performance silicon piezoresistive oil-filled pressure sensor as the pressure-sensitive core. Through the internal ASIC, the millivolt signal of the sensor is transmitted into a standard current signal suitable for long-distance transmission. PCM401 can be directly connected with computer interface cards, control instruments, intelligent meters, and PLCs conveniently. The series of products is widely used in industrial process control, petroleum, chemical, metallurgical, and other industries.

This product complies with the regulations of GB3836.1-2010 "*Explosive Environment Part 1: General Requirements for Equipments*" and GB3836.2-2010 "*Explosive Environment Part 2: Equipments Protected by Flameproof Enclosure d*". Explosion-proof mark Ex d ⅡC T6 Gb.

Flameproof pressure transmitters operate normally at the following altitude, ambient air temperature, and ambient relative humidity: altitude not exceeding 2000m; ambient air temperature -10℃~+60℃; relative humidity of 90% (+25℃).

Notes:

1 Do not misuse documentation.

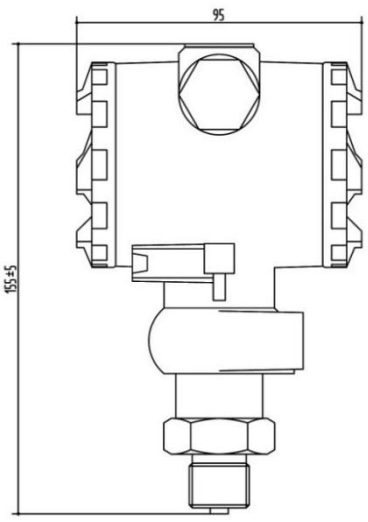
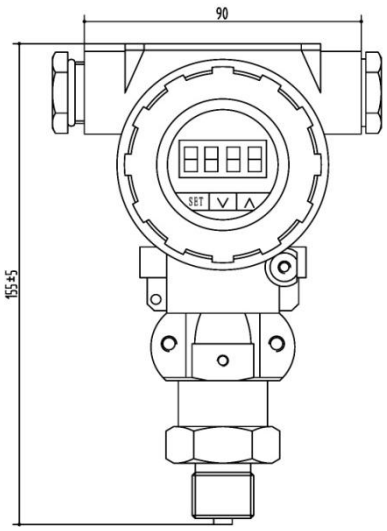
2 The information presented in this product sheet is for reference only. Do not use this document as a guide for product installation.

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

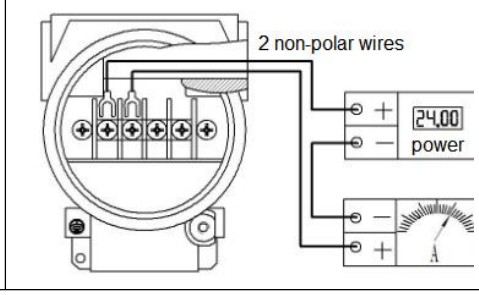
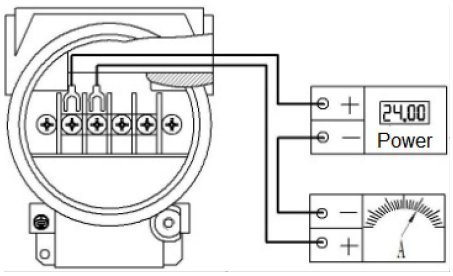
4 Misuse of the product may cause danger or personal injury.

Performance parameters	
Pressure range	-0.1MPa…0~0.01MPa…100MPa
Pressure reference	Gauge pressure | Absolute pressure | Sealed gauge pressure
Operating temp.	-20℃~85℃
Medium temp.	-20℃~85℃
Storage temp.	-40℃~125℃
Zero temp. coefficient	±1.5%FS (@-20℃~85℃)
Span temp. coefficient	±1.5%FS (@-20℃~85℃)
Overload pressure	150%FS~300%FS
Mechanical vibration	20g (20~5000HZ)
Shock	100g/11ms
Accuracy	0.5%FS
Insulation	100MΩ/250VDC
Response time	≤1ms (Up to 90%FS)
Long-term stability	±0.2%FS/Year
Protection level	IP65
Ex-proof level	Ex d Ⅱ C T6 Gb
Material	Low copper aluminum alloy for housing; 316L for isolation diaphragm
Medium compatibility	All media compatible with stainless steel 316L

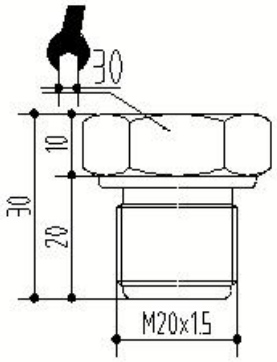
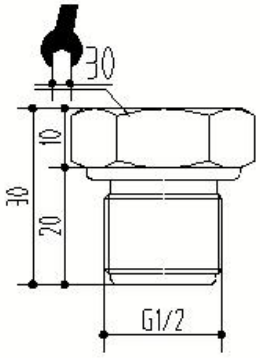
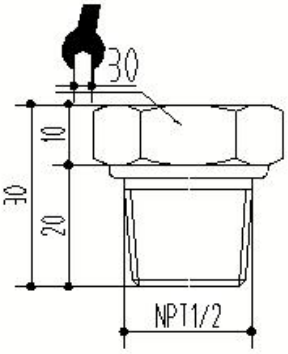
Output signal and power supply	
Code	**B1**
Output signal	4~20mA
Power supply	12~30VDC

Structure		
Type	**J12: Flameproof housing**	**J13: Flameproof housing with display**
Dimension In mm		

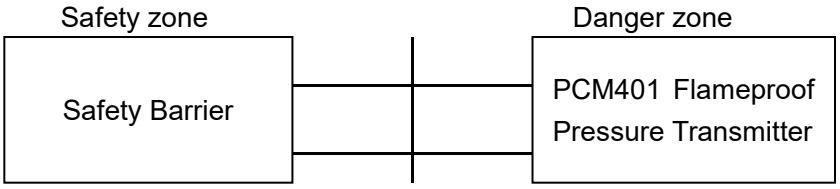
Wiring method

Wiring method (Current output)		

Pressure connection

Type	C1: M20×1.5	C2: G1/2	C7: NPT1/2
Dimension In mm			
Recommended torque	15~25Nm	15~25Nm	15·25Nm

Flameproof parameters



Safety barrier parameters should meet: C0 ≤ 35V, I0 ≤ 35mA

Transmitter internal parameters: C1 = 0.01uF, L1 = 0

The distributed parameters of the connecting cable between the safety barrier and the transmitter should meet: Cp ≤ Co-Ci, Lp ≤ Lo-Li

Note:

Uo: Maximum open circuit voltage of the safety barrier

Io: Maximum short circuit current of the safety barrier

Co: Maximum allowable capacitance outside the safety barrier

Lo: Maximum allowable inductance outside the safety barrier

Cp: Maximum allowable distributed capacitance of connecting cable

Lp: Maximum allowable distributed inductance of connecting cable

Ci: Maximum capacitance inside the transmitter

Li: Maximum inductance inside the transmitter

Pressure range selection

Pressure range code	Pressure reference	Pressure range	Overload pressure	Burst pressure	Note
10kG	G	0~10kPa	300%FS	600%FS	
20kG	G	0~20kPa	300%FS	600%FS	
35kG	G	0~35kPa	300%FS	600%FS	
70kG	G	0~70kPa	300%FS	600%FS	
100kG	G	0~100kPa	200%FS	500%FS	
160kG	G	0~160kPa	200%FS	500%FS	
250kG	G	0~250kPa	200%FS	500%FS	
400kG	G	0~400kPa	200%FS	500%FS	
600kG	G	0~600kPa	200%FS	500%FS	
1MG	G	0~1MPa	200%FS	500%FS	
100kA	A	0~100kPa	200%FS	500%FS	
160kA	A	0~160kPa	200%FS	500%FS	
250kA	A	0~250kPa	200%FS	500%FS	
400kA	A	0~400kPa	200%FS	500%FS	
600kA	A	0~600kPa	200%FS	500%FS	
1MA	A	0~1MPa	200%FS	500%FS	
1.6MS	S	0~1.6MPa	200%FS	500%FS	
2.5MS	S	0~2.5MPa	200%FS	500%FS	
6MS	S	0~6MPa	200%FS	400%FS	
10MS	S	0~10MPa	200%FS	400%FS	
16MS	S	0~16MPa	200%FS	400%FS	
25MS	S	0~25MPa	150%FS	400%FS	
40MS	S	0~40MPa	150%FS	300%FS	
60MS	S	0~60MPa	150%FS	300%FS	
100MS	S	0~100MPa	150%FS	300%FS	

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

Accessory

Name	Appearance	Description	Material No.
Bracket for 2088 housing		Applicable to pipe diameter: φ50≤D≤φ62	100040300006

How to order

PCM401 - 100kG B1 C2 J13

Product model
PCM401

Pressure range
(refer to “pressure range selection” on pages 4)

Output signal
B1: 4~20mA
Others

Pressure connection
C1: M20×1.5
C2: G1/2
C3: G1/4
C5: NPT1/4, Z1/4
C6: R1/4, PT1/4
C7: NPT1/2
Others

Electrical connection
J12: Flameproof housing (M20×1.5 Female)
J13: Flameproof housing with display (M20×1.5 Female)
J22: Flameproof housing (NPT1/2 Female)
J23: Flameproof housing with display (NPT1/2 Female)
Others

Example: PCM401-100kGB1C2J13

The product model is PCM401, pressure range 0~100kPa, gauge pressure, output signal 4~20mA with display, pressure connection G1/2, flameproof housing with display (M20×1.5 Female).

Ordering tips

1 For products with a display, there are two types: digital tube and LCD display. Please specify this in the order.
2 For special requirements on the appearance and performance parameters, customization is available.

Contact us

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