

# PCM390 Universal Pressure Transmitter

## Features

- Compact structure
- Digital circuit compensation
- Strong anti-interference, good long-term stability
- Small diameter, small size, easy to install and use
- Can measure absolute pressure, gauge pressure and sealed gauge pressure
- A variety of electrical connections
- Liquid contacting diaphragm 316L
- Suitable for mass production

## Applications

- Air compressor
- Hydraulic and pneumatic equipment
- Servo valves and drive
- Air conditioning systems
- Piping systems

### 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

PCM390 pressure transmitter is specially designed for small and medium equipment applications such as booster pumps and air compressors. It is also applicable to a wide range of industrial applications, with a variety of structures, output forms and pressure connections to meet the requirements of most applications. PCM390 is designed with compact structure which especially applies to the installation in small space.

### Notes:

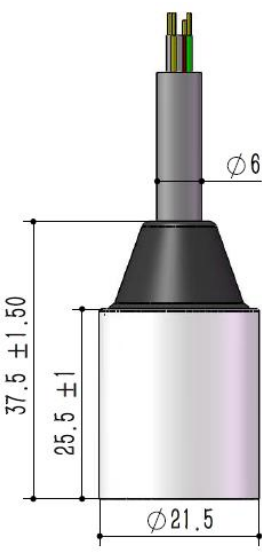
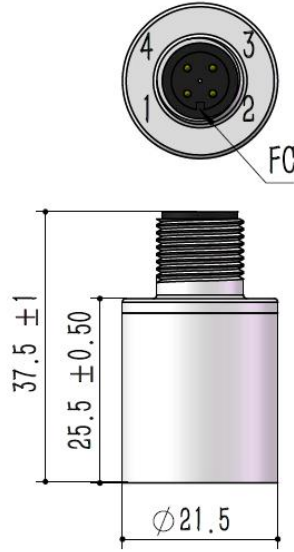
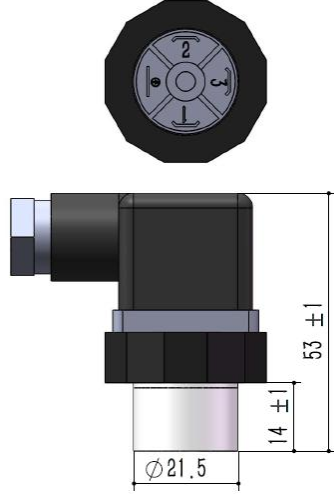
- 1 Do not misuse documentation.
- 2 The information presented in this product sheet is for reference only. Do not use this document as a product installation guide.
- 3 Complete installation, operation, and maintenance information is provided in the instructions of the product.
- 4 Misuse of the product may cause danger or personal injury.

## Performance parameters

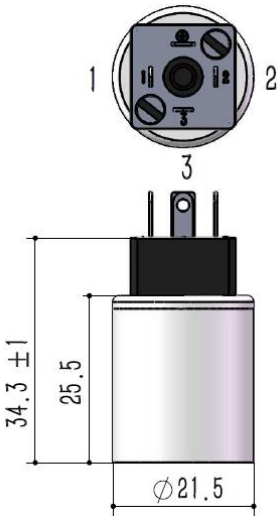
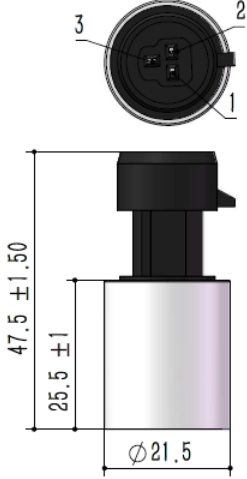
Pressure range	-100kPa...0~35kPa...10MPa
Pressure reference	Gauge pressure, Absolute pressure, Sealed gauge pressure
Supply & output	4~20mA, 0~5V, 0~10V (12~30VDC)
	0.5~4.5V R/M(5VDC)
Accuracy	±0.5%FS(typ.); ±1%FS(max.)
Hysteresis & repeatability	≤±0.1%FS
Temp. drift	≤±1.5%FS(-20° C~85° C)
Response time	<4ms

Performance parameters (cont.)	
Service life	$\geq 10 \times 10^6$ pressure cycles
Ambient temp.	-20° C~80° C
Medium temp.	-30° C~105° C
Storage temp.	-40° C~120° C
EMC-interference	IEC 61000-6-3
EMC-immunity	IEC 61000-6-2
Insulation resistance	$\geq 100\text{M}\Omega/500\text{VDC}(200\text{M}\Omega/250\text{VDC})$
Vibration resistance	Sine curve: 20g, 25Hz~2kHz; IEC 60068-2-6
	Random: 7.5grms, 5Hz~1kHz; IEC 60068-2-64
Shock resistance	Shock: 200g/1ms; IEC 60068-2-27
	Free fall: 1m; IEC 60068-2-32
Protection	IP65
Material	Liquid contacting part: ASTM S31603 (AISI316L)
	Housing: ASTM S30400 (AISI304)
	Electrical connection: PA66
Net weight	50g~90g
Size of hexagon	HEX22

### Electrical connection & wiring method

Connector code	J3: Cable outlet	J4: M12	J5: DIN43650
Dimension In mm			
Connection mode Current (2 wires)	Red: Supply+ Green: Current output	Pin 1: Supply+ Pin 2: Current output Pin 3: Pending	Pin 1: Supply+ Pin 2: Current output Pin 3: Pending Grounding: Pending
Connection mode Voltage (3 wires)	Red: Supply+ Green: Ground Yellow: Voltage output	Pin 1: Supply+ Pin 2: Voltage output Pin 3: Ground	Pin 1: Supply+ Pin 2: Ground Pin 3: Voltage output Grounding: Pending

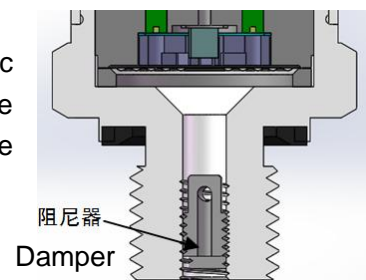
**Electrical connection & wiring method (cont.)**

Connector code	J6: Mini 4 pin	J7: Round Packard	
Dimension In mm			
Connection mode Current (2 wires)	Pin 1: Supply+ Pin 2: Current output Pin 3: Pending Grounding: Pending	Pin 1: Supply+ Pin 2: Current output Pin 3: Pending	
Connection mode Voltage (3 wires)	Pin 1: Supply+ Pin 2: Ground Pin 3: Voltage output Grounding: Pending	Pin 1: Supply+ Pin 2: Ground Pin 3: Voltage output	

**Application of damper**

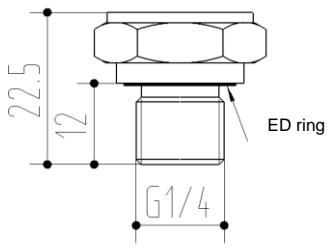
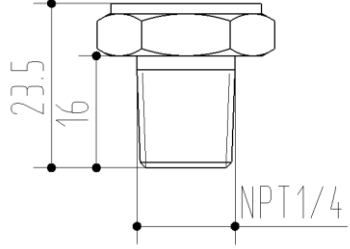
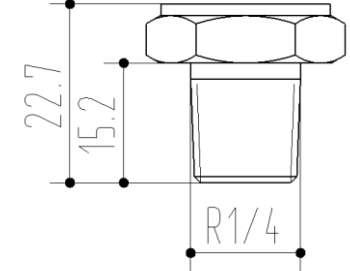
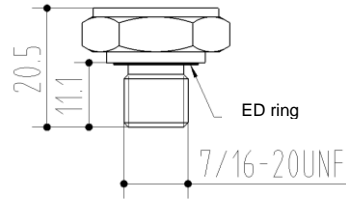
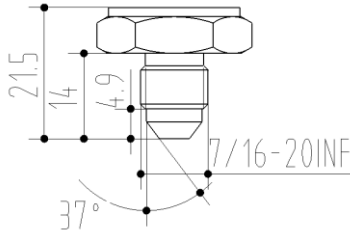
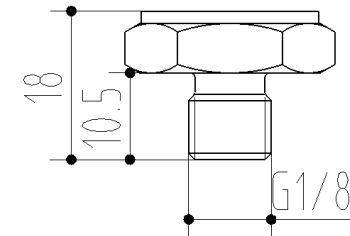
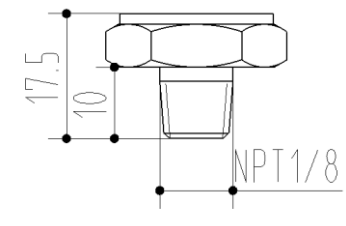
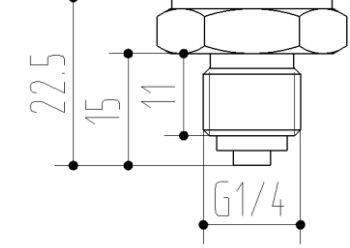
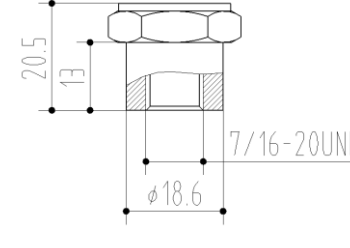
**Application**

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.

Thread code	C3: G1/4	C5: NPT1/4-18	C6: R1/4-19
Dimension In mm			
Recommended torque	15~25 N•m	15~25 N•m	15~25 N•m
Thread code	C11: 7/16-20UNF	C12: 7/16-20UNF 37°	C14: G1/8
Dimension In mm			
Recommended torque	15~25 N•m	15~25 N•m	15~25 N•m
Thread code	C18: NPT1/8	C34: G1/4 A(EN 837)	C36: 7/16-20UNF Female
Dimension In mm			
Recommended torque	15~25 N•m	15~25 N•m	15~25 N•m


Note: Recommended torque depends on various factors such as material of gasket, supporting materials, lubrication of thread and pressure.

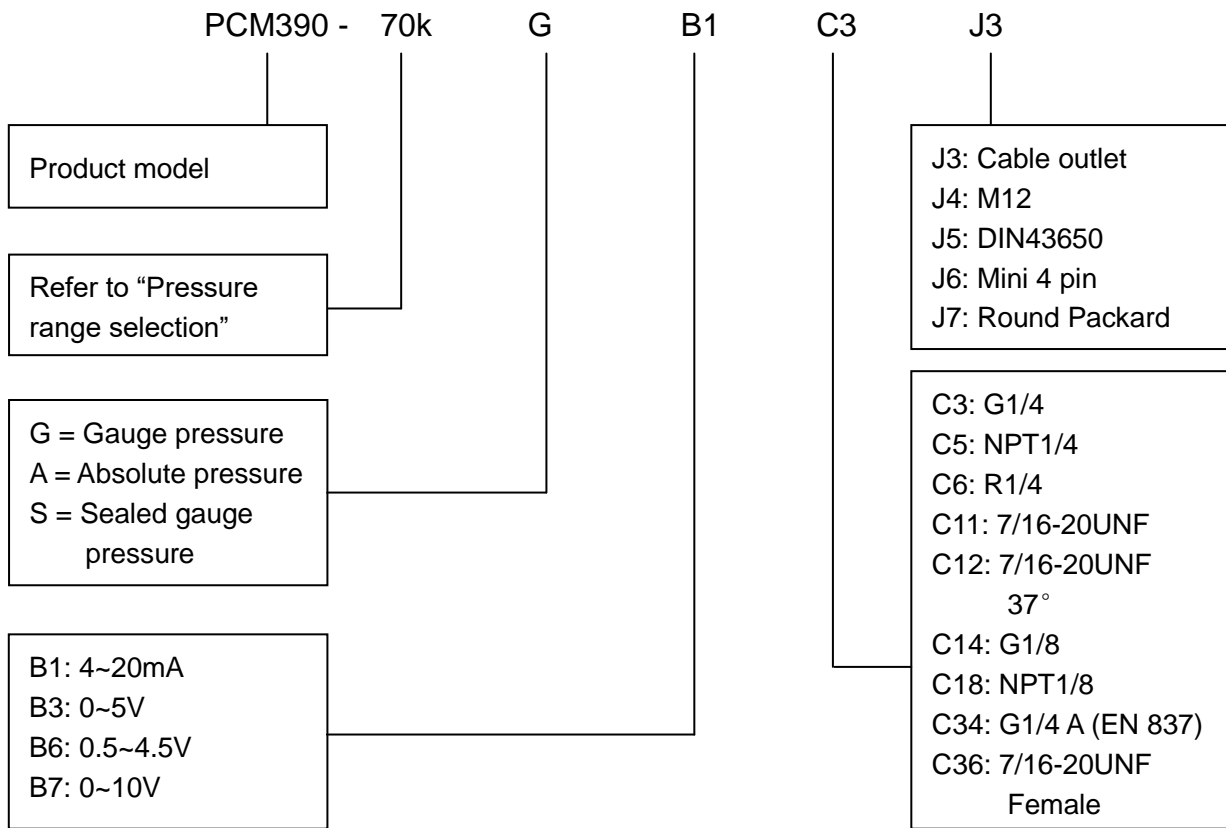
### Pressure range selection

Pressure range code	Pressure reference	Pressure range	Overpressure	Burst pressure	Remark
35k	G	0~35kPa	300%FS	600%FS	
70k	G	0~70kPa	300%FS	600%FS	
100k	G, A	0~100kPa	200%FS	500%FS	
160k	G	0~160kPa	200%FS	500%FS	
250k	G, A	0~250kPa	200%FS	500%FS	
400k	G	0~400kPa	200%FS	500%FS	
600k	G	0~600kPa	200%FS	500%FS	
1M	G	0~1MPa	200%FS	500%FS	
1.6M	S	0~1.6MPa	200%FS	500%FS	
2.5M	S	0~2.5MPa	200%FS	500%FS	
4M	S	0~4MPa	200%FS	400%FS	
6M	S	0~6MPa	200%FS	400%FS	
10M	S	0~10MPa	200%FS	300%FS	
N1k	N/A	-100~0kPa	200%FS	400%FS	

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

### Accessory

Name	Appearance	Description	Item number
M4 damper		1 Refer to "Application of damper" 2 Pressure ports with thread code C12, C34 and C36 are not applicable	100030100027



Example: PCM390-70kGB1C3J3

Refer to product model PCM390, pressure range 0~70kPa, pressure reference gauge pressure, output signal 4~20mA, pressure port G1/4, electrical connection cable outlet.

### Ordering tips:

Ensure compatibility between measured media and contacting part of product when placing an order.

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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