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
- Available for measurement of absolute pressure, gauge pressure and sealed gauge pressure
- A variety of electrical connections
- Liquid contacting diaphragm 316L
- Suitable for mass production

Applications and industries

- 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.

Product overview

PCM390 universal 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.

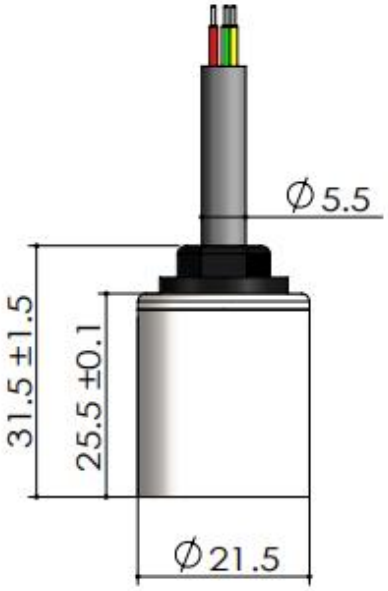
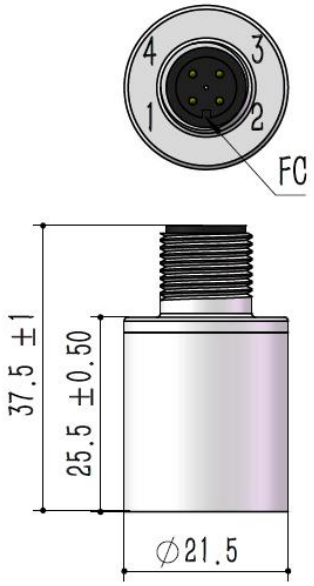
Performance parameters	
Pressure range	0～35kPa…10MPa
Pressure reference	Gauge pressure | Absolute pressure | Sealed gauge pressure
Accuracy	±0.5%FS(typ.);±1%FS(max.)
Hysteresis & repeatability	≤±0.1%FS
Temperature drift	≤±1.5%FS(-20℃～85℃)
Response time	＜25ms
Durability	10^6 pressure cycles
Ambient temperature	-20℃～80℃
Medium temp.	-30℃～105℃
Storage temp.	-40℃～120℃
EMC- interference	IEC 61000-6-3
EMC- immunity	IEC 61000-6-2
Insulation resistance	≥100MΩ/500VDC(200MΩ/250VDC)

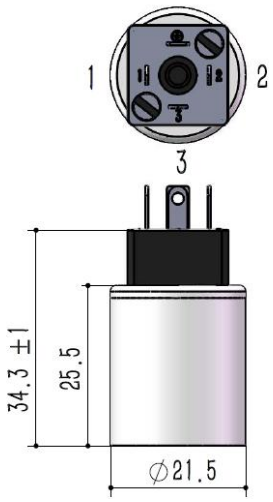
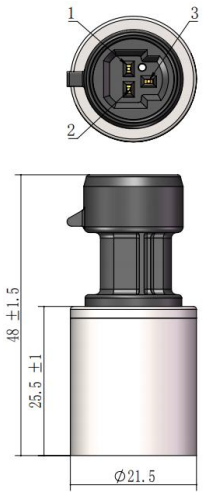
Anti-vibration performance	Sine curve: 20g, 25Hz~2kHz; IEC 60068-2-6
	Random: 7.5grms, 5Hz~1kHz; IEC 60068-2-64
Shock resistance	Shock: 10g/11ms; IEC 60068-2-27
	Free fall: 1m; IEC 60068-2-32
Protection grade	IP65
Material	Wetted part: ASTM S31603 (AISI316L)
	Housing: ASTM S30400 (AISI304)
	Electrical connection: PA66
Net weight	50～90g
Hexnut	HEX22

Performance parameters

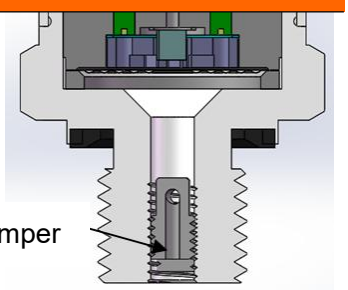
Code	B1	B7	B6
Output	4～20mA	0～10V	0.5～4.5V R/M
Supply	12～30VDC	12～30VDC	5VDC

Electrical connection and conncetion mode

Electrical connection	J3: Cable outlet	J4: M12
Dimension In mm		
Connection mode (2 wire current)	Red wire: Supply+ Green wire: Current output	Pin 1: Supply+ Pin 2: Current output Pin 3: Pending
Connection mode (3 wire voltage)	Red wire: V+ Green wire: Ground Yellow: Voltage output	Pin 1: V+ Pin 2: Voltage output Pin 3: Ground

Electrical connection	J6: Mini 4 pin	J7: Round Packard
Dimension In mm		
Connection mode (2 wire current)	Pin 1: Supply+ Pin 2: Current output Pin 3: Pending Grounding: Pending	Pin 1: Supply+ Pin 2: Current output Pin 3: Pending
Connection mode (3 wire voltage)	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.

Medium condition

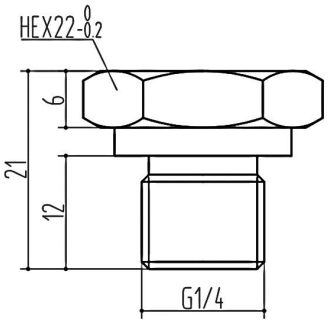
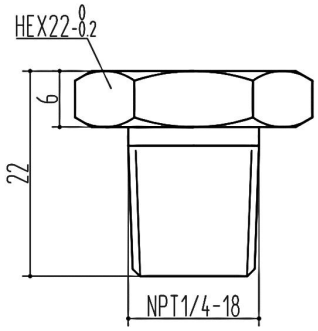
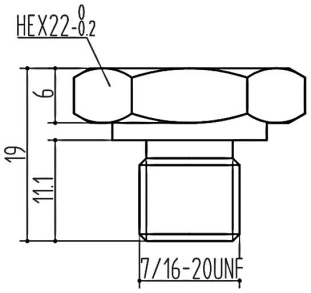
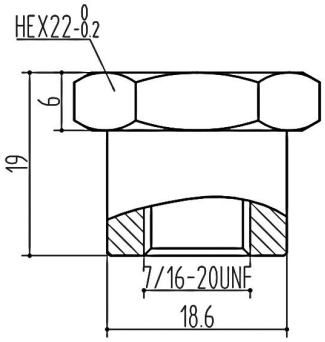
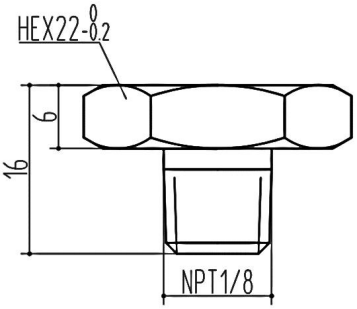
In the liquid containing particles, nozzle clogging may occur. The vertical mounting of pressure transmitter minimizes the risk of clogging because the flow of fluid happens in initial start only, the volume of the rear of the nozzle is fixed and the nozzle has a relatively large aperture (1.2 mm).

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.

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.	100030500027

Pressure connection

Thread code	C3: G1/4	C5: NPT1/4-18	C11: 7/16-20UNF
Dimension In mm			
Recommended torque	15～25Nm	15～25Nm	15～25Nm
Thread code	C11: 7/16-20UNF	C18: NPT1/8	
Dimension In mm			-----
Recommended torque	15～25Nm	15～25Nm	

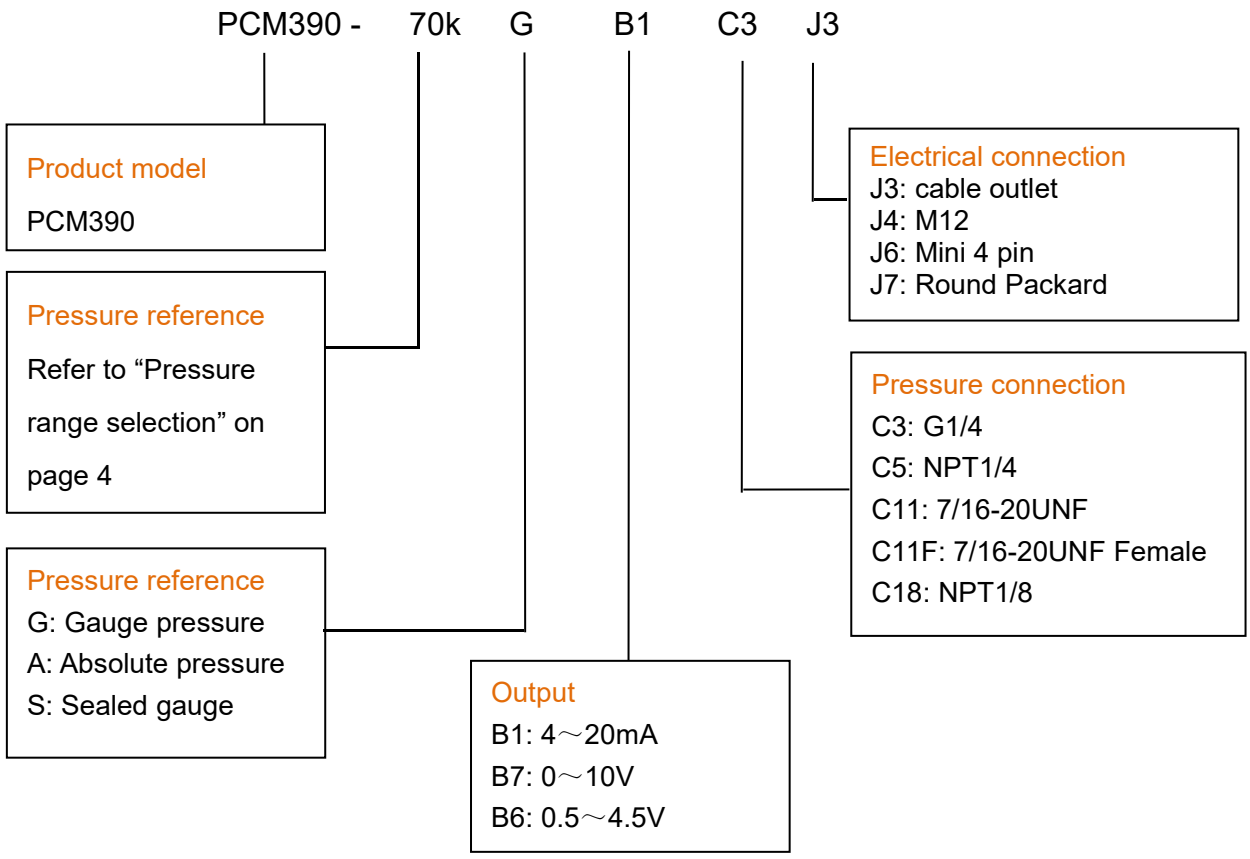
Note: The torque depends on all kinds of factors, such as gasket material, kitting material, thread lubrication and pressure.

Pressure range selection

Pressure range code	Pressure reference	Pressure range	Overload pressure	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	
6M	S	0～6MPa	200%FS	300%FS	
10M	S	0～10MPa	200%FS	300%FS	

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

How to order



Example: PCM390-70kGB1C3J3

The product model is PCM390, 70k: pressure range 0～35kPa, G: pressure reference gauge pressure, B1: output signal 4～20mA, C3: pressure connection G1/4, J3: electrical connection cable outlet

Ordering tips

1. Please ensure the compatibility between the measured medium and the contacting part of the product when placing an order.
2. For special requirements on performance parameters and appearance of the product, we can provide customization.

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