

PCM308 Pressure Transmitter for Hydraulic Industry



Features

- Applicable to harsh industrial environments
- Resistance to cavitation, liquid hit and pressure peak
- Housing and wetted parts are acid resistant 316L stainless steel

PCM308 pressure transmitter is equipped with an integrated pulse buffer, which is specially designed for hydraulic industry applications, in which severe impact of media exists, such as cavitation, hydraulic hammer and

pressure peak. PCM308 carries out reliable pressure measurement even in harsh environmental conditions.

PCM308 provides various output signals and pressure references. The pressure range is from 0 ~ 100kPa to 0 ~ 60MPa.

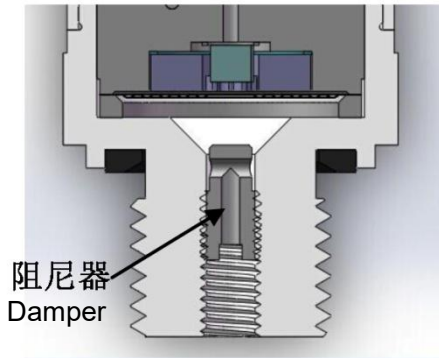
Excellent seismic performance, rugged construction and high-grade EMC / EMI protection enable PCM308 to meet the stringent requirements of industrial use.

Performance parameters

Pressure range	-100kPa…0~100kPa…60MPa		
Pressure reference	Gauge pressure Absolute pressure		
Supply	24V(typical) (9~32V)	24V(typical) (9~30V)	24V(typical) (15~30V)
Output signal	4 to 20mA	1 to 5V 0 to 5V 1 to 6V	0 to 10V 1 to 10V
Accuracy	±0.5%F.S. (typical) ±1%F.S. (max.)		
Nonlinearity	≤±0.2%F.S. (Best Fit Straight Line)		
Hysteresis & repeatability	≤±0.1%F.S.		
Zero temp. coefficient	±1.5%F.S. (-20 °C-85 °C)		
Span temp. coefficient	±1.5%F.S. (-20 °C-85 °C)		
Response time	Viscosity of liquid<100cSt	<4ms	
	gas	<35ms	
Overpressure	1.5×FS (max.90MPa)		
Burst pressure	2×FS (max.120MPa)		
Service life	>10×10 ⁶ pressure cycles		
Ambient temp.	-40°C - 85°C		
Medium temp.	-40°C - 100°C		
Storage temp.	-50°C - 85°C		
Compensated temp.	0°C - 80°C		
EMC-interference	EN 61000-6-3		
EMC-immunity	EN 61000-6-2		
Insulation resistance	>200MΩ/250VDC		
Power frequency test	SEN 361503		
Vibration resistance	Sine curve	15.9mm-pp, 5Hz~25Hz	IEC 60068-2-6
		20g, 25Hz~2kHz	
	Random	7.5grms, 5Hz~1kHz	IEC 60068-2-64
Shock resistance	Shock: 500g/1ms		IEC 60068-2-27
	Free fall		IEC 60068-2-32

Protection	IP65	
Material	Wetted part	ASTM: S31603(AISI 316 L)
	Housing	Stainless steel 304
	Electrical connection	PA6.6
Weight	Approximately 0.2kg	

Application and media condition



Application

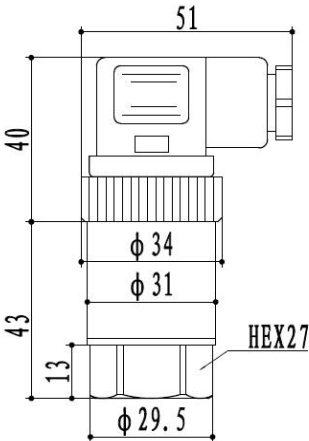


Cavitation, liquid hammer and pressure peak may occur in hydraulic systems with varying flow rates, such as the rapid closing of valve or the start and stop of pump.

Even at relatively low operating pressures, these problems may occur at the entrance and exit.

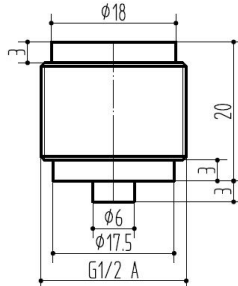
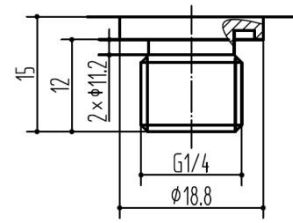
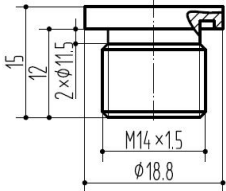
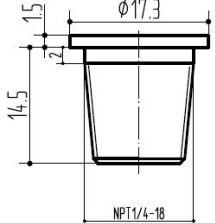
Media condition

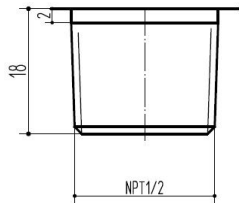
In the liquid containing particles, nozzle clogging may occur. The vertical mounting of pressure transmitter minimizes the risk of clogging because the flow of fluid happens in initial start only, the volume of the rear of the nozzle is fixed and the nozzle has a relatively large aperture (1.2 mm).

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.

Type	Dimension (in mm)	Connection mode (current 2 wire)	Connection mode (Voltage 3 wire)
J5: DIN43650		<p>Pin 1: Excitation+ Pin 2: Current output Pin 3: Suspended</p>  <p>Connect to the housing</p>	<p>Pin 1: Excitation+ Pin 2: Ground Pin 3: Voltage output</p>  <p>Connect to the housing</p>

Pressure port

Type	C2: G1/2	C3: G1/4	C4: M14×1.5	C5: NPT1/4
Dimension In mm				
Recommended torque	30~35Nm	30~35Nm	30~35Nm	After being tightened by fingers, twist 2 to 3 laps.

Type	C7: NPT1/2			
Dimension In mm				
Recommended torque	After being tightened by fingers, twist 2 to 3 laps.			

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

Common pressure ranges

Code	Pressure range	Code	Pressure range	Code	Pressure range
W5	100kPa	W10	1.0MPa	W15	16MPa
W6	160kPa	W11	1.6MPa	W16	25MPa
W7	250kPa	W12	2.5MPa	W17	40MPa
W8	400kPa	W13	6MPa	W18	60MPa
W9	0.6MPa	W14	10MPa		

How to order

Model	Pressure transmitter			
Code	Pressure range			
	Refer to the above common pressure ranges. Other pressure ranges please specify directly, e.g. 0~4MPa.			
Code	Pressure reference			
G	Gauge pressure			
A	Absolute pressure			
Code	Output signal			
B1	4~20mA			
B2	1~5V			
B3	0~5V			
B7	0~10V			
B11	1~6V			
B12	1~10V			
Code	Pressure connection			
C2	G1/2			
C3	G1/4			
C4	M14×1.5			
C5	NPT1/4			
C7	NPT1/2			
PCM308	W	x	B	C

Example: PCM308(W10)-G-B2-C3

The model is PCM308. The pressure range is 0-1.0MPa. The pressure reference is gauge pressure. The output signal is 1-5V. The pressure connection is G1/4.



Ordering tips:

1. Ensure compatibility between measured media and contacting part of product.
2. Customization is available for special requirements on the appearance and performance parameters of the product.

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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