

MPM4503 Pressure Transmitter



Introduction

MPM4503 pressure transmitter is a cost-effective pressure transmitter. It uses silicon micro-fused technology sensing element and specialized amplifier circuit to realize linear correction and temperature compensation. The sensing elastic diaphragm is made of stainless steel which can resist the problem of transient overload pressure and also could meet different needs for pressure measurement and control in various environmental conditions. The product is batch produced in automatic production line and all the specifications are strictly controlled. The whole transmitter experiences a strict testing and aging screening for sensing element, semi-finished and finished product, which makes it more stable and has a good consistency.

Features

- Micro-fused technology, overpressure resistance, water-hammer resistance;
- Water hammer preventing and cracking resistant;
- Temperature compensation and linear correction.

Application

- Energy & Water Treatment System
- Building Automation System
- IoT Terminal
- VF constant pressure water supply
- Compressor

Specification

Pressure Range	0bar ~ 10bar,16bar,20bar,25bar, 50bar
Overpressure	≤ 1.5×FS
Burst pressure	≤ 5×FS (Max 100bar)
Pressure Type	Gauge , Sealed gauge
Accuracy	≤±1%FS
Long Term Stability	< 0.3 %FS/year
Compensated temperature	0°C~ 70°C
Working temperature	-10°C~ 80°C
Storage temperature	-40°C~ 100°C
Vibration	5g, 10Hz ~ 500Hz (GB/T2423.10/ IEC60068-2-6)
Shock	10g, 11ms (GB/T2423.5/ IEC60068-2-27)
Insulation resistance	100MΩ, 500V
Protection class	IP65 IP68
Weight	≤60g

2. Output parameters

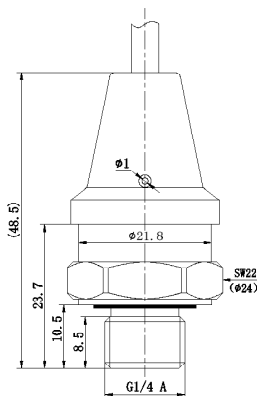
Output Signal	Power Supply	Output Format	Load Resistance	Transmission Distance
4mA ~ 20mA DC (E)	10V ~ 28V DC	2-wire	$\leq (U-10) / 0.02 \ (\Omega)$	$< 1000\text{m} \ (\text{@}24\text{V DC, load}250\Omega)$
0.5V ~ 4.5V DC(K1)	5V \pm 0.1V DC	3-wire	$\geq 10\text{k}\Omega$	$\leq 5\text{m}$
0.5V ~ 2.5V DC(W1)				
0.5V ~ 2.5V DC(W)	3.3V \pm 0.1V DC			

Electromagnetic Compatibility

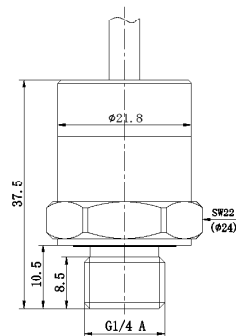
Code	Test Item	Standard
1	Electrostatic Discharge Immunity	GB/T 17626.2/IEC 61000-4-2
2	Radio-frequency Field	GB/T 17626.3/IEC 61000-4-3
3	Power Frequency Magnetic Field	GB/T 17626.8/IEC 61000-4-8
4	Immunity of Electrical Fast Pulse Group	GB/T 17626.4/IEC 61000-4-4
5	Surge Immunity	GB/T 17626.5/IEC 61000-4-5
6	RF Induction Conduction Anti-harassment	GB/T 17626.6/IEC 61000-4-6

Outline Construction

(Unit:mm)



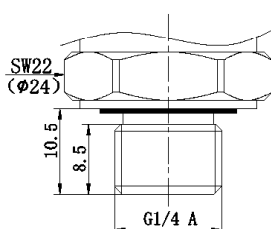
IP65 protection class



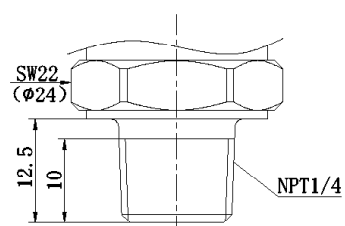
IP68 protection class

Process Connection

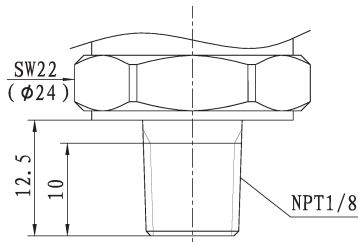
(Unit:mm)



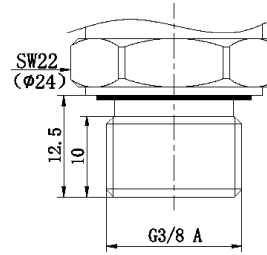
C2 (G1/4 male, end face seal)



C6 (NPT1/4 male)



C7 (NPT1/8 male)



C16 (G3/8 male, end face seal)

The maximum torque applied during the disassembly of the transmitter is 20N•m to 25N•m.

Electrical Connection

Wire color	2-wire	3-wire
Red	Power (+V)	Power (+V)
Green	Null	Output+ (+OUT)
Black	Output+ (OV/+OUT)	Common (GND)

Structure Material

Wetted part

Isolation diaphragm: stainless steel 17-4PH
 Pressure port: stainless steel 304
 Sealing ring: FKM/NBR

Non-Wetted part

Cable: polyvinyl chloride (5-core, φ5 mm)

Order Guide

MPM4503 Pressure Transmitter	
Range	0bar ~ 10bar, 16bar, 20bar, 25bar, 50bar
[0 ~ X]bar	X: Actual pressure range
Code	Electrical Connection
B2	Cable (Default 0.5m)
Code	Output Signal
E	4mA ~ 20mA DC (10V ~ 28V DC power)
K1	0.5V ~ 4.5V DC (5V±0.1V DC power)
W1	0.5V ~ 2.5V DC (5V±0.1V DC power)
W	0.5V ~ 2.5V DC (3.3V±0.1V DC power)
Code	Process Connection
C2	G1/4male, end face seal
C6	NPT1/4 male
C7	NPT1/8 male
C16	G3/8male, end face seal
Code	Water-proof Rating
IP65	IP65 Protection class
IP68	IP68 Protection class

MPM4503	[0 ~ 10]bar	B2	E	C2	IP65	the whole spec.
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Notes

1. Please pay attention that the measured media shall be compatible with the material of wetted part;
2. I²C output products is available, please consult with our company to customize this demand;
3. If the user has special requirement, please feel free to contact us.