

MPM4511H Pressure Transmitter



Features

- Micro-fused technology, high temperature resistance, shock resistance
- Strong overload pressure ability, impact resistance, anti-interference resistance
- Compact structure and cost-effectiveness
- Wide working temperature range
- No oil filling or sealing ring

Application

- Hydrogen
- Sewage
- Steam
- Engineering machinery
- Hydraulic and pneumatic system
- Energy and water treatment system
- Refrigeration system
- Industrial process control and automatic detection system
- Pump or compressor
- HVAC systems

Introduction

MPM4511H pressure transmitter has the pressure chamber which is made of single complete stainless steel piece, and all-metal sealing structure. The transmitter uses micro-fusion technology and has specially designed structure. It adopts the overall digital calibration and temperature compensation. This transmitter can meet the OEM customers' large volume demand and is highly cost effective. Special treated stainless steel 316L diaphragm can be widely used in air pressure, hydraulic, and even worse media measuring environment, such as sewage, steam, and industrial or civilian on-site pressure monitoring of hydrogen gas. Customized products for users are also available.

Specification

1. Basic performance parameters

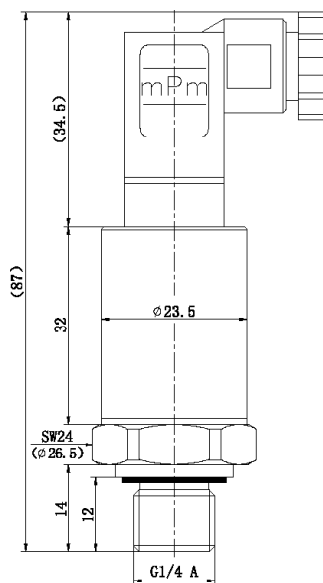
Pressure Range	0bar ~ 16bar...1000bar
Overpressure	3×FS (Pressure Range ≤ 50bar) 2×FS (50bar ≤ Pressure Range ≤ 750bar) 1.5×FS (750bar ≤ Pressure Range ≤ 1000bar)
Burst Pressure	≤ 5×FS (Max. 2000bar)
Pressure Type	Gauge, Sealed gauge
Accuracy	≤ ±0.5%FS (@25°C)
Total Error Band	≤ ±1%FS (@-10°C ~ 80°C)
Long Term Stability	< 0.25%FS/year
Compensation Temperature	-10°C ~ 80°C
Application Temperature	-40°C ~ 125°C
Storage Temperature	-40°C ~ 125°C
Vibration	20g, 20Hz ~ 2000Hz (GB/T2423.10/IEC60068-2-6)
Shock	100g, 6ms (GB/T2423.5/IEC60068-2-27)
Insulation resistance	100MΩ, 500V
Certification	CE, UKCA, RoHS
Protection class	IP65
Impact life	10 million times
Weight	≤ 100g

2. Output parameters

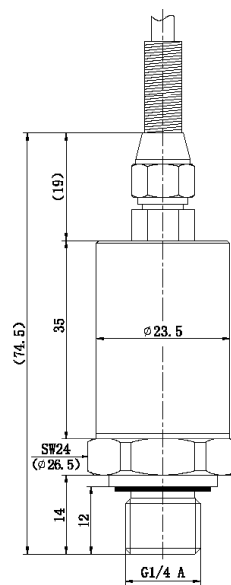
Output Signal	Power Supply	Output Format	Load Resistance	Transmission Distance
4mA ~ 20mA DC(E)	8V ~ 33V DC	2-wire	$\leq (U-8) / 0.02 \ (\Omega)$	< 1000m (@24V DC, load 250 Ω)
0.5V ~ 4.5V DC(K)				
0V ~ 10V DC(V)	11V ~ 33V DC	3-wire	> 10k Ω	< 5m (@24V DC, load > 10k Ω)
0.5V ~ 4.5V DC(K1)	5V \pm 0.1V DC			

Outline Construction

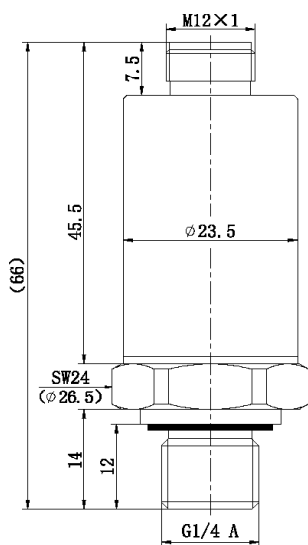
(unit:mm)



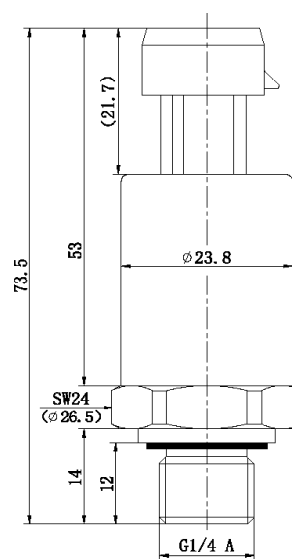
B1 (Mini Hirschmann)



B2 (Cable)



B4 (M12x1 4-pin plug)



B5 (Packard plug)

Electrical Connection

Function Definition	B1 (Mini Hirschmann)		B2 (Cable)		B4 (M12×1 4-pin plug)		B5 (Packard plug)	
			/					
	current 2-wire	voltage 3-wire	current 2-wire	voltage 3-wire	current 2-wire	voltage 3-wire	current 2-wire	voltage 3-wire
+V	1	1	Red	Red	1	1	+V	+V
+OUT	2	3	Black	Black	3	3	+OUT	+OUT
GND	Null	2	Null	White	Null	2	Null	

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

Structure Material

Wetted part

Isolation diaphragm: stainless steel 316L

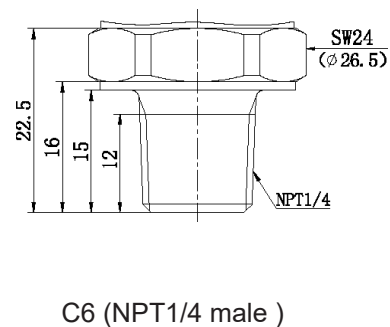
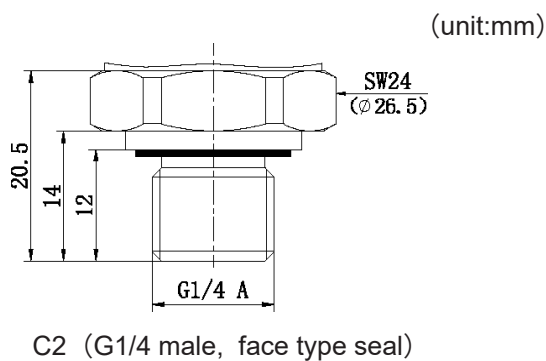
Pressure port: stainless steel 316L

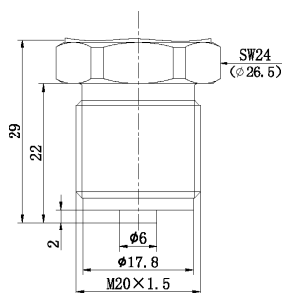
Sealing ring: FKM

Non-Wetted part

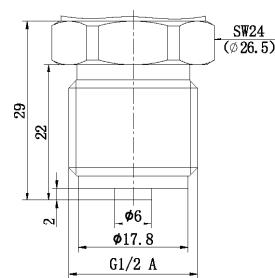
Cable: Polyurethane (5-core, φ5 mm)

Process Connection





C5 (M20×1.5 male, waterline seal)



C25 (G1/2 male, waterline seal)

Order Guide

MPM4511H Pressure Transmitter	
Range	0bar ~ 16bar...1000bar
[0 ~ X]bar	X: Actual pressure range
Code	Electrical Connection
B1	4-pin Plug(Mini Hirschmann)
B2	Cable (Default 0.5m)
B4	4-pin Plug(M12×1)
B5	Packard Plug
Code	Output Signal
E	4mA ~ 20mA DC
K	0.5V ~ 4.5V DC (8V ~ 33VDC power)
K1	0.5V ~ 4.5V DC (5V±0.1V DC power)
V	0V ~ 10V DC (11V ~ 33VDC power)
Code	Process Connection
C2	G1/4 male, face type seal (≤35MPa optional,standard:ISO 1179-2)
C5	M20×1.5 male, waterline seal (Full scale optional,standard:ISO 9974-2)
C6	NPT1/4 male (≤35MPa optional,standard:ANSI/ASME B1.20.1)
C25	G1/2 male, waterline seal (Full scale optional,standard:ISO 1179-2)
MPM4511H	[0 ~ 16]bar B1 E C2 the whole spec.

Notes

1. Please pay attention that the measured media shall be compatible with the material of wetted part;
2. Products of IP68 protection grade with snubber are available, please consult with our company to customize this demand;
3. The error band of conventional products in the whole temperature zone is $\leq \pm 2\%$ FS (@ - 40 °C ~ 125 °C). If you have special requirements for the error of a certain temperature zone, please consult with our company for customization.