ALTHEN SENSORS & CONTROLS

bar MPM4511

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

MICROSENSOR
AUTHORIZED DISTRIBUTOR

APPLICATIONS

- 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

MPM4511 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. It can be widely used in air pressure, hydraulic, and even worse media measuring environment, such as sewage, steam, light corrosive gases and liquids and other industrial or civil field pressure monitoring. Customized products for users are also available.

SPECIFICATIONS

Pressure Range	0bar ~ 16bar...1000bar
Overpressure	3×FS(Pressure Range≤50bar) 2×FS(50bar≤Pressure Range<750bar) 1.5×FS(750bar≤PressureRange≤1000 bar)
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
Protection class	IP65
Impact life	10 million times
Weight	≤100g

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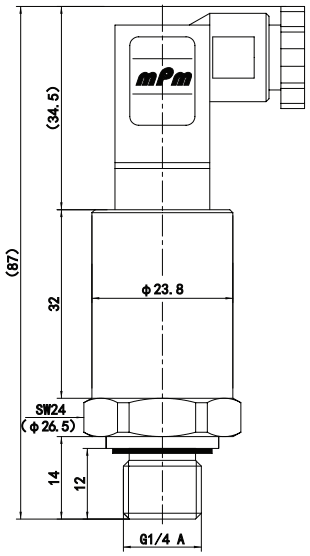
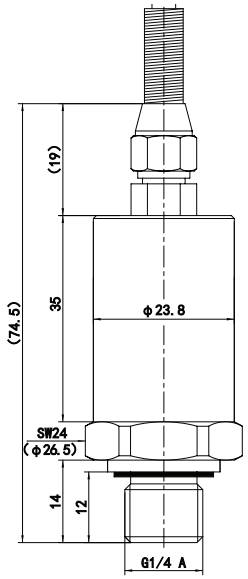
OUTPUT PARAMETERS

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

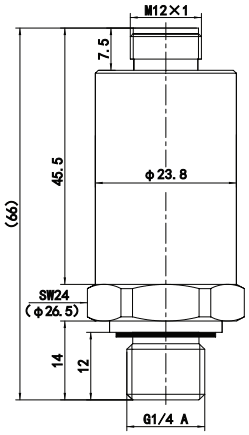
OUTLINE DIMENSIONS (UNIT:mm)



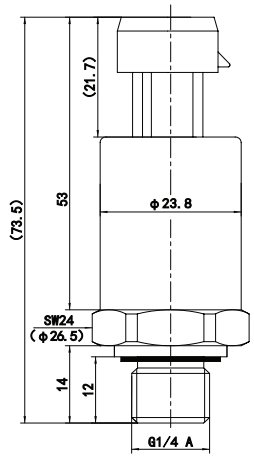
B1 (Mini Hirschmann)



B2 (Cable)



B4 (M12×1 4-pin plug)



B5 (Packard plug)

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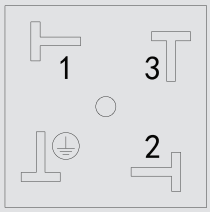
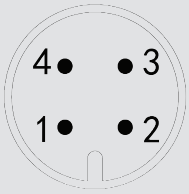
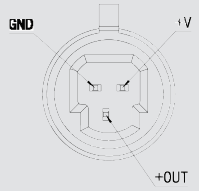
ELECTRICAL CONNECTION

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

MATERIALS

Wetted Parts

Isolation diaphragm: stainless steel 17-4PH

Pressure port: stainless steel 304

Sealing ring: FKM /NBR

Non-wetted Parts

Cable: Polyurethane (5-core, φ5 mm)

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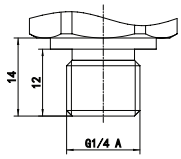
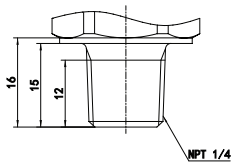
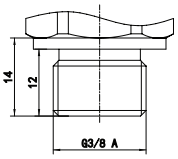
PROCESS CONNECTION (UNIT:mm)



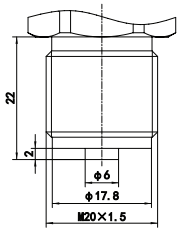
C2（G1/4 male, face type seal）



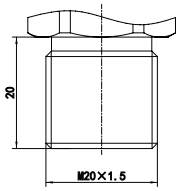
C6 (NPT1/4 male)



C16 (G3/8 male, face type seal)

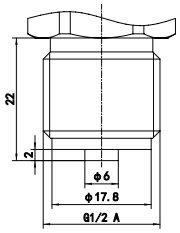


16bar≤Pressure Range<600bar

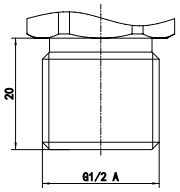


600bar≤Pressure Range<1000bar

C5 (M20×1.5 male, waterline seal)



16bar≤Pressure Range<600bar



600bar≤Pressure Range<1000bar

C25 (G1/2 male, waterline seal)

The max. torque during the installation and uninstallation of the transmitter is about 30N•m ~ 35N•m.

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ORDER GUIDE

MPM4511	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(8V ~ 33VDC power)
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(≤60MPa optional,standard:ISO 1179-2)
C5	M20×1.5 male, waterline seal (Full scale optional,standard:EN 837,Refer to the drawings of the process connection)
C6	NPT1/4 male(≤60MPa optional,standard:ANSI/ASME B1.20.1)
C16	G3/8 male, face type seal (≤60MPa optional,standard:ISO 1179-2)
C25	G1/2 male, waterline seal (Full scale optional,standard:ISO 1179-2,Refer to the drawings of the process connection)

Code	Description
A	Fixed code for corporate internal use

MPM4511	**[0 ~ 16]bar**	**B1**	**E**	**C2**	**A**	**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. *For products with a range exceeding 600 bar, only the C5 and C25 thread interfaces are available. For any other thread interface requirements, please feel free to consult our company for customization;*
4. *The error band of conventional products in the whole temperature zone is ≤ ± 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.*

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