

MPM4511 Pressure Transmitter



Features

- Micro-fused technology, high temperature and shock/impact resistant
- Strong overload pressure ability, high EMC/RFI immunity
- Compact structure and cost-effective
- Wide working temperature range
- No oil filling or sealing O'rings

Application

- Engineering machinery
- Hydraulic and pneumatic system
- Energy and water treatment system
- Refrigeration system
- Industrial process control
- Pump or compressor
- HVAC systems



Introduction

MPM4511 pressure transmitter has a pressure chamber which is made from one piece stainless-steel construction, and all-metal sealing structure. The transmitter uses micro-fusion technology and has a specially designed structure. It comes with digital calibration and temperature compensation. This transmitter can meet the OEM 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 steam, light corrosive gases and liquids and other industrial or civil field pressure monitoring. Customized products are also available.

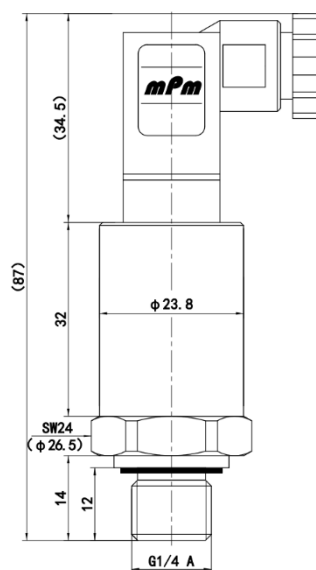
Specification

Pressure Range	0bar - 16bar...1000bar
Overpressure	3×FS (Pressure Range≤50bar) 2×FS (50bar≤Pressure Range≤750bar) 1.5×FS (750bar≤Pressure Range≤1000 bar)
Burst Pressure	≤ 5×FS (Max.2000bar)
Pressure Type	Gauge ≤35bar or Sealed Gauge >35bar
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 cycles
Weight	≤100g
Reverse Polarity	Reverse Polarity & Overvoltage Protected
Lightning Protection	500V Line-Line, 1kV Line to Earth

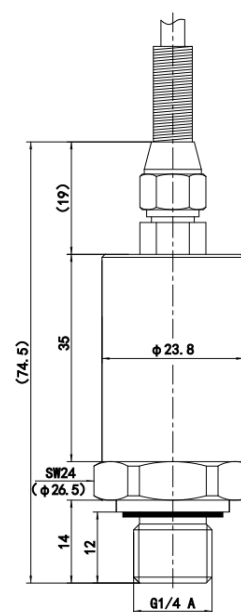
2. Output parameters

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)		3-wire	> 10k Ω	< 5m (@24V DC, load > 10k Ω)
0V - 10V DC (V)	11V - 33V DC			
0.5V - 4.5V DC (K1)	5V $\pm$ 0.1V DC			

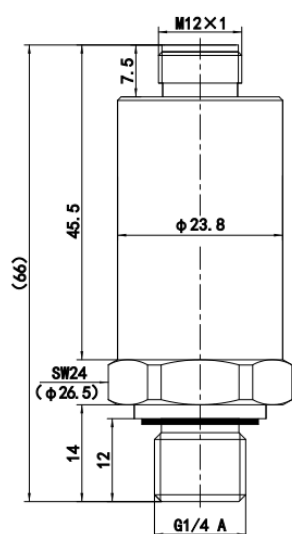
Outline Construction (Unit in mm)



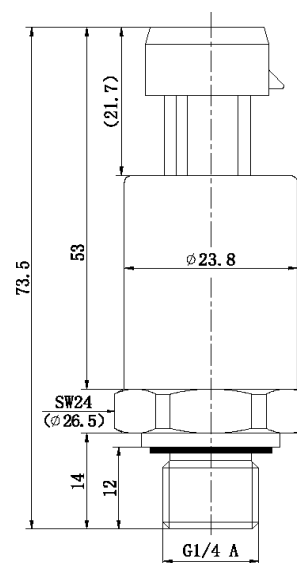
B8 (Mini Hirschmann)



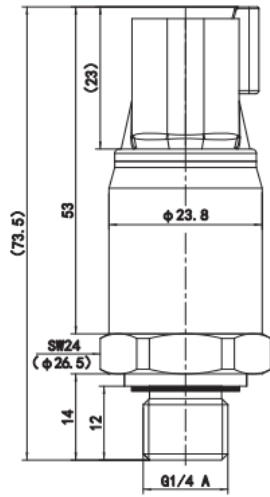
B2 (Cable)



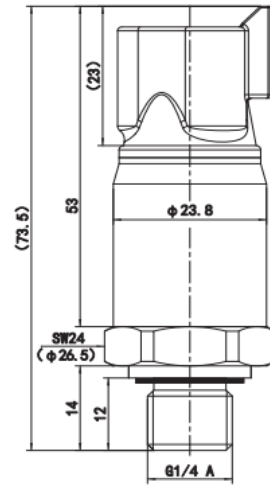
B4 (M12x1 4-pin plug)



B5 (Packard plug)



B10(DT04-4P)



B11(DT04-3P)

Electrical Connection

Function Definition	B8 (Mini Hirschmann)		B2 (Cable)		B4 (M12×1 4-pin plug)	
			/			
	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
+OUT	2	3	Black	Black	3	3
GND	Null	2	Null	White	Null	2
Function Definition	B5 (Packard Plug)		B10 (DT04-4P)		B11 (DT04-3P)	
	Current (2-wire)	Voltage (3-wire)	Current (2-wire)	Voltage (3-wire)	Current (2-wire)	Voltage (3-wire)
+V	+V	+V	2	2	A	A
+OUT	+OUT	+OUT	1	4	B	C
GND	Null	GND	Null	1	Null	B

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 parts

Isolation diaphragm: stainless steel 17-4PH

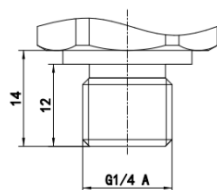
Pressure port: stainless steel 304

Sealing ring: FKM / NBR, others on request

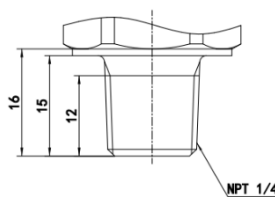
Non-Wetted part

Cable: Polyurethane (5-core, $\phi 5$ mm)

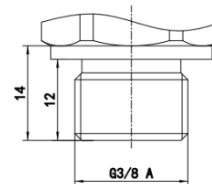
Process Connection (Unit in mm)



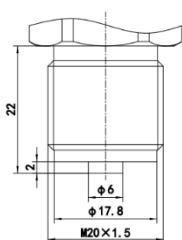
C2 (G1/4 male, face type seal)



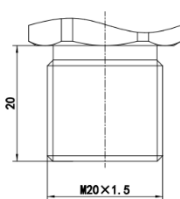
C6 (NPT1/4 male)



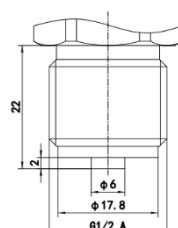
C16 (G3/8 male, face type seal)



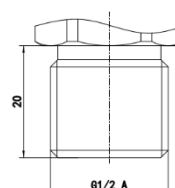
16≤Pressure range≤600bar



600≤Pressure range≤1000bar



16≤Pressure range≤600bar



600≤Pressure range≤1000bar

C5 (M20x1.5 male, waterline seal)

C25 (G1/2 male, waterline seal)

The maximum torque applied during the disassembly of the transmitter is 30Nm to 35Nm.

Order Guide

MPM4511	Pressure Transmitter	
	Range	0bar - 16bar...1000bar
	[0 - X] bar	X: Actual pressure range
	Code	Electrical Connection
	B2	Cable (material Polyurethane, default 0.5m)
	B4	4-pin Plug (M12×1)
	B5	Packard Plug
	B8	4-pin Plug (Mini Hirschmann; mating part included)
	B10	DEUTSCH Connectors (DT04-4P)
	B11	DEUTSCH Connectors (DT04-3P)
	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 (11 - 33VDC power)
	Code	Power Supply
	V6	5±0.1VDC
	V18	8-33VDC
	V19	11-33VDC
	Code	Process Connection
	C2	G1/4 male, face type seal (ISO 1179-2, rated pressure ≤600bar)
	C5	M20×1.5 male (EN837)
	C6	NPT1/4 male (ANSI/ASME B1.20.1, rated pressure ≤600bar)
	C16	G3/8 male, face type seal (ISO 1179-2, rated pressure ≤600bar)
	C25	G1/2 male (ISO 1179-2)
	Code	Sealing
	00	FKM (Default)
	01	NBR
	Code	Cable length (m)
	L0D5	0.5
	L1	1
	L1D5	1.5
	L2	2
	L3	3
	L5	5
	L8	8
	L10	10
	Null	Null
MPM4511	[0 - 16] bar	B8 E V18 C2 00

Notes

1. Pay attention that the measured media is compatible with the material of wetted part.
2. IP68 protection grade with snubber are available, please contact us.
3. The error band of conventional products in the whole temperature zone is $\leq \pm 2\%$ FS (@ - 40 °C - 125°C).
4. If you have special requirements for the error of a certain temperature zone, please consult for customization.