Applicable for hydraulic and pneumatic application

Pressure Transmitter

MPM4511A

Application

- Aerial work platform hydraulic system
- Hydraulic and pneumatic system
- Energy and water treatment system
- Refrigeration System
- Industrial process control and automatic detection system
- Pumps or compressors
- HVAC
- Hydraulic servo control system for injection molding machine

Introduction

MPM4511A type pressure transmitter adopts a microfused pressure sensor with the compact structure and is highly resistant to vibration, shock and overload. The product also features digital calibration and temperature compensation, and dual output circuitry with high safety, has superior anti-interference and temperature resistance.

MPM4511A type pressure transmitter has many international certifications, is suitable to be mass produced cost-effectively, and can be widely used in hydraulic and pneumatic fields.

Feature

Range	0bar ～ 16bar …350bar
Over pressure	See measured range
Pressure type	Gauge, Sealed gauge
Accuracy	±0.5%FS（@25°C）
Long-term stability	±0.25%FS/Year
Electrical connection	Cable（B2）
	M12×1 4-pin plug,metal thread（B41）
	M12×1 5-pin plug,plastic thread（B42）
	Packard plug（B5）
Process connection	G1/4 A ISO 1179-2
	M14×1.5 ISO 9974-2
Supply voltage	5V±0.1V DC
	8V ～ 33V DC
	9V ～ 33V DC
	12V ～ 33V DC
Output Signal	0V ～ 10V DC
	0.5V ～ 4.5V DC
	4mA ～ 20mA DC
	4mA ～ 20mA & 20mA ～ 4mA DC(Dual Output)
	0.5V ～ 4.5V & 4.5V ～ 0.5V DC (Dual Output)
Working temperature	-40°C～ 125°C（Single Output）
	-40°C～ 85°C（Dual Output）
Response frequency	4ms
Vibration	20g，10Hz ～ 2000Hz
Shock	100g，11ms
Protection grade	IP67

Measured Range

Unit	Measured Range	Over pressure	Burst pressure
bar	0 ~ 16	3FS (48)	5FS (80)
	0 ~ 50	3FS (150)	5FS (250)
	0 ~ 250	2FS (500)	5FS (1250)
	0 ~ 350	2FS(700)	4FS(1400)

Output Signal

Type	Output Signal	Supply Voltage
Single current output (2-wire)	4mA ~ 20mA DC	8V ~ 33V DC
Single voltage output (3-wire)	0V ~ 10V DC	12V ~ 33V DC
	0.5V ~ 4.5V DC	8V ~ 33V DC
	0.5V ~ 4.5V DC	5V±0.1V DC
Dual current output (3-wire)	4mA ~ 20mA & 20mA ~ 4mA DC	9V ~ 33V DC
Dual voltage output (3-wire)	0.5V ~ 4.5V & 4.5V ~ 0.5V DC	9V ~ 33V DC

Output Load（Ω）

Current(2-wire) : ≤ (U-8)/0.02A

Current(3-wire) : ≤ (U-9)/0.024A

Voltage(3-wire) : > 10k

Accuracy

Accuracy grade	0.5
Accuracy	≤0.5%
Repeatability	≤0.2%
Non-linearity (BSFL)	≤±0.25%

Total Error

25°C ≤ ± 0.5%FS

-10°C~ 80°C ≤ ± 1%FS

Environmental Conditions

Items	Single Output	Dual Output
Media Temperature	-40°C~ 125°C	-40°C~ 85°C
Environmental Temperature	-40°C~ 125°C	-40°C~ 85°C
Storage Temperature	-40°C~ 125°C	-40°C~ 125°C
Relative Humidity	5% ~ 95%	5% ~ 95%

It is required that the measured medium must not be solidified, or partially solidified during the operation of the pressure transmitter.

Working Condition

Protection Grade

IP67

Atmospheric pressure

0.86bar ~ 1.06bar

Vibration

20g，10Hz ~ 2000Hz（GB/T2423.10/IEC60068-2-6）

Shock

100g，11ms（GB/T2423.5/IEC60068-2-27）

Material

Wetted Parts

Isolated diaphragm:17-4PH

Pressure port:Stainless Steel 304

Seal

FVMQ（As per DIN 3869）

Non-wetted Parts

Housing:Stainless Steel 304

Cable：Φ5 mm Polyurethane

M12 Plug：PA66+30%GF（As per GB/T 40006.8）

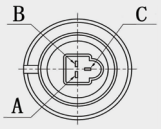
EMC

SN	Test Items	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-interference	GB/T 17626.6/IEC 61000-4-6

Approvals

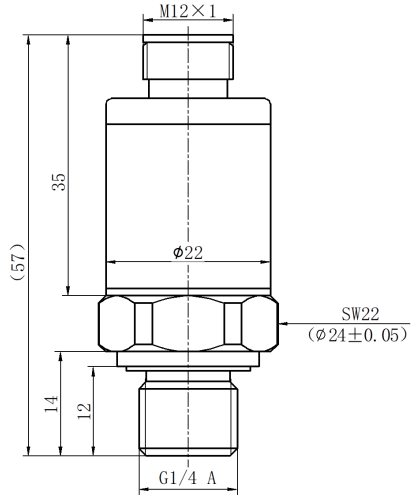
Mark	Instruction	Country/region
CE	EU Declaration of Conformity EMC Directive, Electromagnetic Emission and Immunity Standard Pressure Equipment Directive	EU
UKCA	UK Conformity Assessment	UK
RoHS COMPLIANT	RoHS Compliance	EU
EAC	RUS Conformity Assessment	RUS
TÜV SÜD	Protection Level D（Dual-output）	International

Electrical Connection

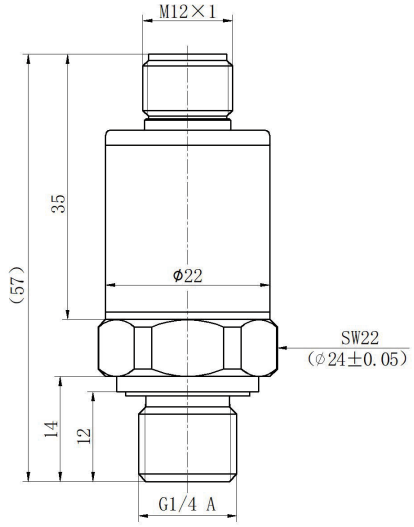
Signal	B2（cable）		B4（M12×1 5-pin）				B5（Packard）	
	/							
	Single Output		Single Output		Dual Output		Single Output	
	Current 2-Wire	Voltage 3-Wire	Current 2-Wire	Voltage 3-Wire	Current 3-Wire	Voltage 3-Wire	Current 2-Wire	Voltage 3-Wire
+V	Red	Red	1	1	1	1	B	B
+OUT	Black	Black	4	4	4（+OUT 1） 2（+OUT 2）	4（+OUT 1） 2（+OUT 2）	A	C
GND	Null	White	Null	3	3	3	空	A

Dimension

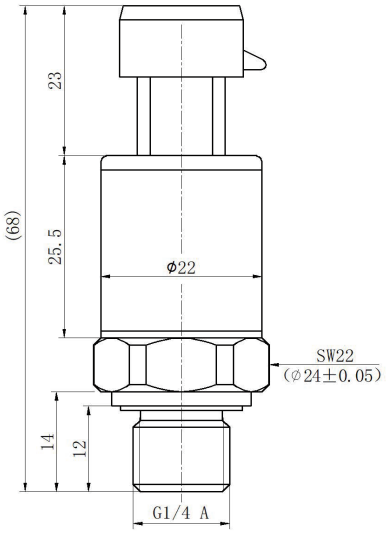
Unit: mm



B41(M12×1 4-pin, metal M12 thread)



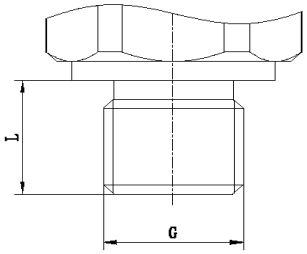
B42(M12×1 5-pin, plastic M12 thread)

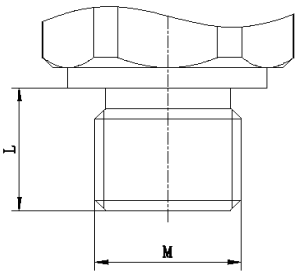


B5(Packard)

Process Connection

Unit: mm





G	L	Standard
G 1/4 A（C2）	12	ISO 1179-2

M	L	Standard
M14×1.5（C18）	12	ISO 9974-2

Pressure Port

For suitable process connections, it includes a pressure port (pressure hole with damping) as standard: Φ0.5mm.

Torque

The transmitter bearing structure of the torque application consists of a hexagon with a width across flats of 22mm and an outer diameter of 24mm. The maximum torque to be applied during transmitter disassembly is approximately 20N•m ～ 25N•m.

Order Guide

MPM4511A	Pressure Transmitter					
	Code	Pressure Type				
	G	Gauge				
	S	Sealed Gauge				
		Range	Measured Range 0bar ～ 16bar…350bar			
		[0 ～ X]bar	X：Actual measured range			
			Code	Electrical connection		
			B2	Cable (0.5m by default, please specify if additional cable length is required)		
			B41	M12×1 4-pin plug（metal M12 thread）		
			B42	M12×1 5-pin plug（plastic M12 thread）		
			B5	Packard Plug		
				Code	Output signal	
				E	4mA ～ 20mA DC (8V ～ 33V DC power supply)	
				V	0V ～ 10V DC (12V ～ 33V DC power supply)	
				K	0.5V ～ 4.5V DC (8V ～ 33V DC power supply)	
				K1	0.5V ～ 4.5V DC (5V±0.1V DC power supply)	
				DE	4mA ～ 20mA & 20mA ～ 4mA DC (9V ～ 33V DC power supply)	
				DK	0.5V ～ 4.5V & 4.5V ～ 0.5V DC (9V ～ 33V DC power supply)	
					Code	Process Connection
					C2	G1/4 A (Standard: ISO 1179-2 End face seal)
					C18	M14×1.5 (Standard: ISO 9974-2 End face seal)
MPM4511A	G	[0 ～ 16]bar	B2	E	C2	Complete P/N

Order Note

1.Please be careful that the measured media should be compatible with the material of wetted part;

2.The total error ≤ ± 2%FS (@-40°C～ 125°C) for Single Output standard products. The total error ≤ ± 2%FS (@-40°C～ 85°C) for Dual Output standard products. For special requirements, please contact us for availability.