HPM1301 Micro Pressure Transmitter

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Overview

The HPM1301 micro pressure transmitter adopts a unique ultra-small structural design and is miniature in size. It also uses high-performance silicon piezoresistive sensors and high-precision electronic conditioning circuits, and is assembled and produced through strict technological processes. This product has an all-stainless steel appearance, a variety of output signals to choose from, wide temperature range compensation, and high overall accuracy. In addition, this product adopts laser welding process and internal potting process, which is moisture-proof and earthquake-proof, and the overall protection level is higher. In addition, the pressure sensor inside the product adopts an isolated diaphragm structure, which can complete the pressure measurement and control of various media such as gas, liquid, steam and so on.

This product is well designed, not only has a compact structure, but also has excellent performance, making it very suitable for occasions with small installation spaces.

Features

- Micro structure, suitable for occasions with small installation space
- All stainless steel appearance, stronger corrosion resistance
- High accuracy, 0.25 % accuracy
- A variety of output signals are available
- -10~80℃ wide temperature range compensation, low temperature drift
- Protection level up to IP67

Technical Parameters

Pressure Range (Gauge Pressure)										
Rated measuring range(MPa)	0.2	0.35	0.7	1	2	3.5	7	10	20	40

Minimum measuring range(MPa)	0.05	0.2	0.35	0.7	1	2	3.5	7	10	20
Overload(MPa)	0.4	0.7	1.4	2	4	7	14	20	40	60
Note: 1. Support composite pressure measurement 2. Support customized intermediate range										

Pressure Range (Absolute Pressure)								
Rated range(MPa)	0.2	0.35	0.7	1	2	3.5	7	10
Minimum measuring range(MPa)	0.05	0.2	0.35	0.7	1	2	3.5	7
Overload(MPa)	0.4	0.7	1.4	2	4	7	14	20
Note : Support customized intermediate range								

Measuring Medium	
Medium type	Various liquids and gases compatible with contact materials

Output Signal/Power Supply	
Standard	2-wire：4~20mA / Vs=10~30 V
Standard	3-wire：0 ~ 5V / Vs=8.5~30V or Vs=3.1~8V（At the same time, it needs to be 0.4V higher than the maximum output voltage.）
Standard	3-wire：0 ~ 10V / Vs=12~30 V
Standard	4-wire：RS485 / Vs=6 ~ 30V

Performance	
Accuracy	±0.25%FS @25℃
Long-term Stability	±0.25%FS/year
Resolution ratio	Unlimited, only affected by output noise level, usually ≤0.01%
Response time	About 1ms
Start-up time	≤200ms

Temperature drift characteristics	
Compensation temperature range	-10 ~ 80℃
Temperature coefficient of Zero	±1.0%FS（Reference 35ºC）
Temperature coefficient of full scale	±1.0%FS（Reference 35°C, warm-up range）

Environmental conditions	
Temperature range	Ambient temperature： -40 ~ 85℃ Medium temperature： -40 ~ 100℃ Storage temperature： -40 ~ 85℃
Protection grade	IP67 *Seal gauge pressure and absolute pressure types only

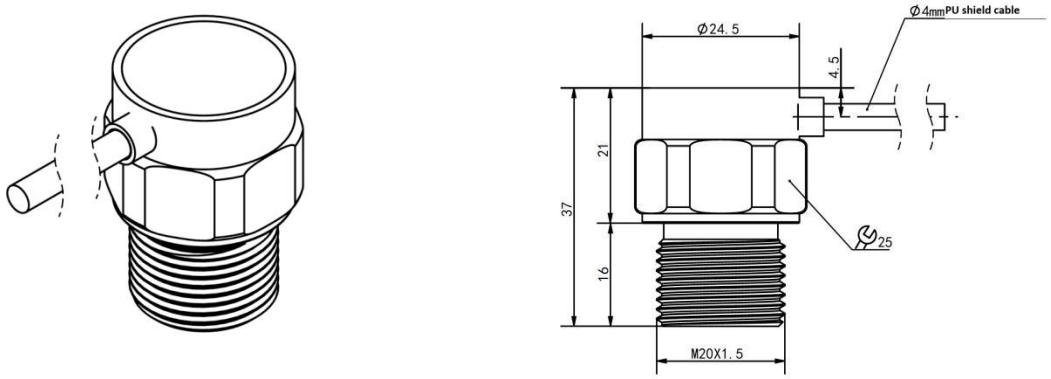
Electrical protection	
Short circuit protection	Permanent
Reverse polarity protection	No damage, circuit does not operate
Electromagnetic compatibility	Conforms to EN 61326

Mechanical stability	
Vibration	10g(20~2000Hz)
Shock resistance	100g(11ms)

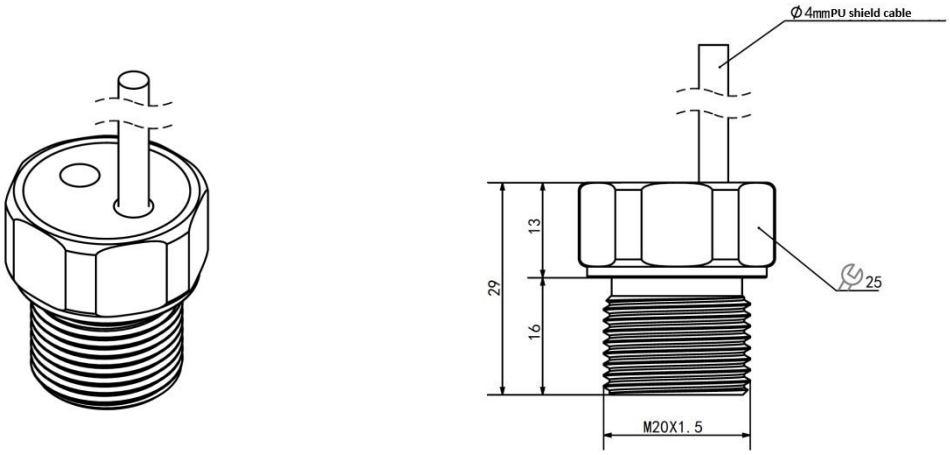
Insulation properties	
Insulation resistance	>20MΩ @500VDC
Dielectric strength	<2mA @ 500VAC 1min

Structural Drawing（unit:mm）

Side direct cable outlet

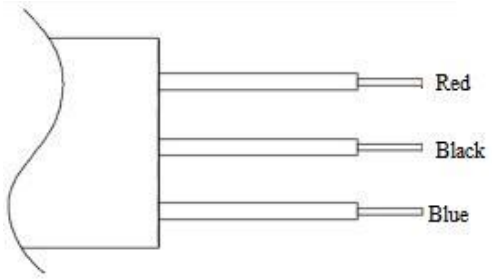


Top direct cable outlet



Electrical Connection

Side direct cable outlet（ordering code C2C）,Top direct cable outlet(ordering codeC2D）



Cable Outlet	4 ~ 20mA, 2-wire	3-wire voltage
Red	Power supply+ （+V）	Power supply+ （+V）
Black	Power Supply- （0V/+OUT）	Common port （GND）
Blue		Output+ （+OUT）

Ordering Guide

Item No.	Type							
HPM1301	Micro Pressure Transmitter							
	Pressure Range	Measuring Range						
	(0~X)MPa	Fill out X directly						
		Code	Output Signal					
		B1	(4~20)mA					
		B3	(0-10) V					
		B4	(0-5)V					
		B5	(1-5)V					
		B6	(0.5~4.5)V					
		B7	RS485					
			Code	Thread Spec				
			P2	M20*1.5				
			P4	G1/2				
				Code	Electrical Connection			
				C2C	side direct cable outlet			
				C2D	top direct cable outlet			
					Code	Material		
					S4	304		
					S6	316L		
						Code	Sensor	
						M1	diffusion silicon diaphram	
							Code	Additional Functions
							G	Gauge Pressure(Default)
							A	Absolute Pressure
e.g.:HPM1301	(0~10)Mpa	B1	P2	C2C	S4	M1	G	