HPM280 Pressure Transmitter

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Product Overview

HPM280 protected pressure transmitter uses a highly stable and reliable diffused silicon piezoresistive pressure sensor as its signal measurement element and has undergone automatic testing and laser trimming for wide temperature range performance compensation. The housing is made of aluminum alloy, providing a high level of protection. The product has undergone rigorous selection processes including long-term aging and stability testing, ensuring stable and reliable performance.
This product can be equipped with a field digital display and is suitable for harsh working environments requiring on-site pressure measurement. It is widely applicable to pressure measurement in industrial processes such as machinery, metallurgy, petrochemicals, and power generation.

Features

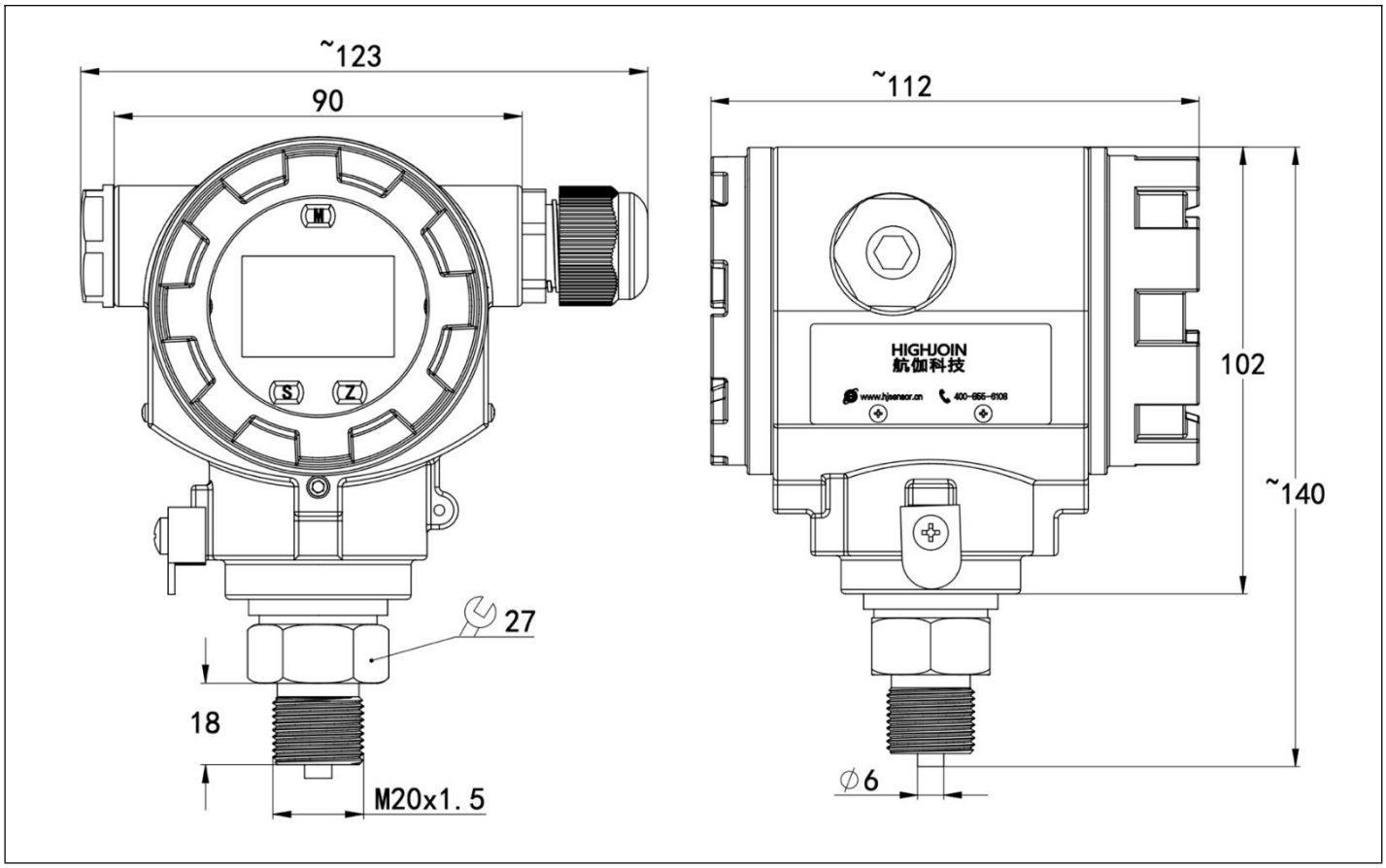
- Aluminum alloy housing, with an IP66 protection rating.
- Local display, simultaneously outputting standard remote signals.
- Reverse polarity protection and instantaneous overcurrent and overvoltage protection.
- Multiple process connections.

Technical Parameters

Measuring Range (Gauge)	-100kPa…0~10kPa…60MPa
Measuring Range (Absolute)	0~20kPa…60MPa
Overload	1.5 times the full scale
Measuring Medium	Various liquids and gases compatible with contact materials
Output Signal (option 1)	2-wire 4~20mA / Vs=8~30V
Output Signal (option 2)	2-wire 4~20mA+HART / Vs=12~32V
Output Signal (option 3)	3-wire 0~10V / Vs=12~30V
Accuracy*	±0.5%FS @25℃ ±0.2%FS @25℃
Long-term Stability	±0.25%FS/year (0.5%FS accuracy) ±0.2%FS/year (0.2%FS accuracy)
*Accuracy conforms to IEC 60770 (non-linearity, hysteresis, repeatability)	
Compensation Temperature Range	0~70℃ (0.5%FS accuracy) -10~80℃ (0.2%FS accuracy) Note: For pressure range ≤20kPa, please consult us.
Zero-point Temperature Drift	±1.0%FS Reference 25℃, within the temperature compensation range (temperature drift of ±2.0%FS for 10kPa range, 0~60℃)
Full-scale Temperature Drift	±1.0%FS Reference 25℃, within the temperature compensation range (temperature drift of ±2.0%FS for 10kPa range, 0~60℃)
Medium Temperature	-40~100℃

Ambient Temperature	-20~80℃
Storage Temperature	-20~80℃
Protection Rating	IP66, M20×1.5 internal thread, cable plug construction (ordering code C7)
Short Circuit Protection	supported
Reverse Polarity Protection	No damage, circuit does not work.
Insulation resistance	>20MΩ @500VDC
Insulation strength	<2mA 500VAC 1min

Dimensions (Unit: mm)



Note:

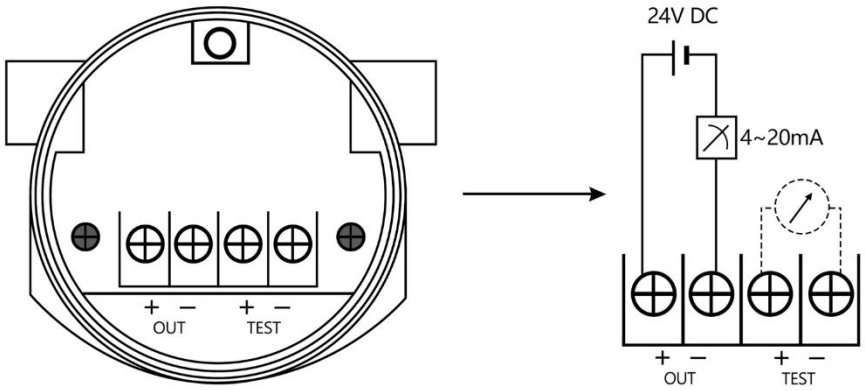
1. The dimensions listed in the diagram may change with updates to the manufacturing process.
2. For other shapes, please consult a sales engineer.

Structural materials

Ordering Code	Part	Description
A12	Shell	Cast aluminum alloy ADC12(by default)
Y104		Cast aluminum alloy YL104(Lower copper and zinc)
X		Customization
S4	Pressure Interface	SS304(By default)
S6		SS316L
X		Customization
M1	Sensor core	SS316L (by default)
M2		Titanium diaphragm TA1 and titanium shell TC4
M3		Tantalum film Ta
M4		Hastelloy C-276
NB	O ring	FKM Fluor rubber sealing ring (applicable temperature range -20~200℃) (default)
FK		NBR Nitrile sealing ring (applicable temperature range -40~120℃)
ED		EPDM sealing ring (applicable temperature range -55~150℃)
HB		HNBR Hydrogenated nitrile butadiene rubber sealing ring (applicable temperature range -40~150℃)

Electrical Wiring

2-wire 4~20mA output

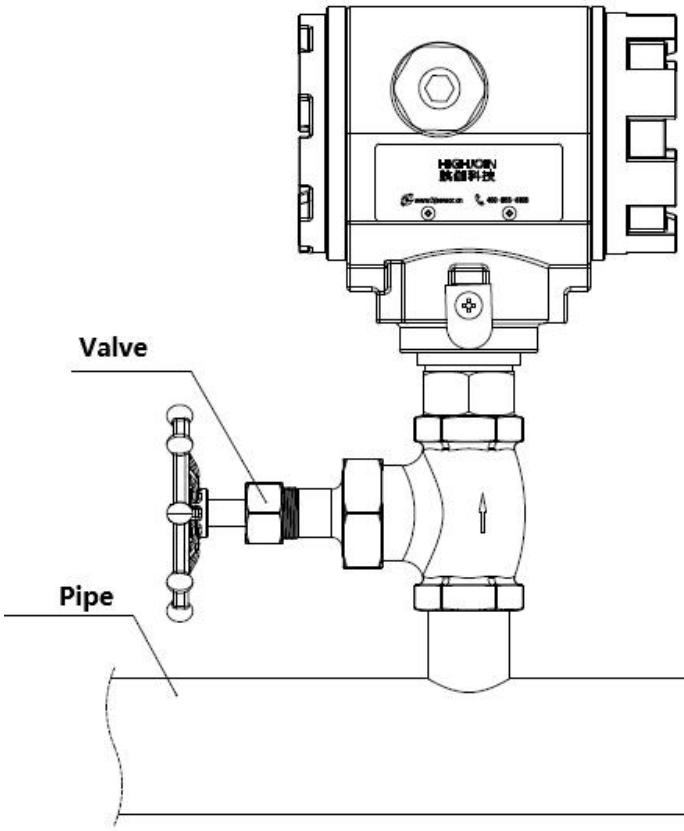


Electrical Wiring Definition

2-wire 4~20mA output		
Signal Definitions	Power Supply+(+V)	Power Supply-(0V/+OUT)
Terminal Blocks	OUT+	OUT-

3-wire 0~10V output			
Signal Definitions	Power Supply+(+V)	Power Supply+(GND)	Signal+(+OUT)
Terminal Blocks	OUT+	OUT-	TEST+

Installation Example



Installation Tips:

1. Install the product vertically at the on-site pressure interface, keeping it away from vibration and heat sources as much as possible.
2. When installing outdoors, place it in a well-ventilated and dry location, avoiding direct sunlight and rain.
3. In areas prone to lightning strikes, it is recommended to install a lightning protection device and ensure that the casing is reliably grounded.

Ordering Guide

Model	Type								
HPM280	Pressure Transmitter								
	Pressure Range	Measuring Range							
	(X1~X2)MPa	X1 is the lower limit X2 is the upper limit							
		Code	Output Signal						
		B1	(4～20)mA						
		B3	(0～10)V						
		B8	HART						
			Code	Thread Spec					
			P1	M20×1.5 male					
			G12	G1/2 male					
			G14	G1/4 male					
				Code	Electrical Connection				
				C9	M20×1.5 female thread with cable plug				
					Code	Shell Material			
					A12	ADC12			
					Y104	YL104			
						Code	Process Connection		
						S4	304		
						S6	316L		
						X	customization		
							Code	Sensor	
							M1	SS316L (by default)	
							M2	Titanium diaphragm TA1 and titanium shell TC4	
							M3	Tantalum film Ta	
							M4	Hastelloy C-276	
								Code	Others
								G	Gauge pressure(by default)
								S	Sealed gauge
								A	Absolute
								LED	LED Display
								LCD	LCD Display
								J5	0.5%FS Accuracy(by default)
								J2	0.2%FS Accuracy
								QF	With factory report
Eg:HPM280	(0～1)MPa	B1	P1	C7	A12	S4	M1	G LCD J5	

Certification Information

Factory certification	
Certification organization	CQM
Quality management system	ISO 9001:2015
Certification scope	Research, development and manufacture of pressure transmitter and temperature transmitter
Certificate No.	00223Q21711R1S

CE	
Certification organization	ECM
Certification scope	Pressure Transmitter
Standard	EN61326-1:2013
	EN61326-2-3:2013
	EN61000-6-2:2005/AC:2005
	EN61000-6-4:2007+A1:2011
Certificate No.	3Z200408.NHET098