HPM27 anti-corrosive pressure transmitter

Nanjing Hangjia Electronic Technology Co., Ltd.

Overview

HPM27 Anti-corrosive Pressure Transmitter adopts high anti-corrosive sensitive core, and with high accurate electric element, to be assembled through strict craft process. This product has strong anti-corrosive and anti-wearing functions, which perfectly solves the problem of pressure measuring for strong corrosive and low corrosive air or liquid in the domestic special occasions.

Features

.Tantalum diaphragm or ceramic core, strong anti-corrosion function

.Impact resistance, vibration resistance and wear resistance

.Protective shell, ingress protection IP65

.LCD field display, high accuracy and stability

.Suitable for various hostile occasions

Technical Parameters

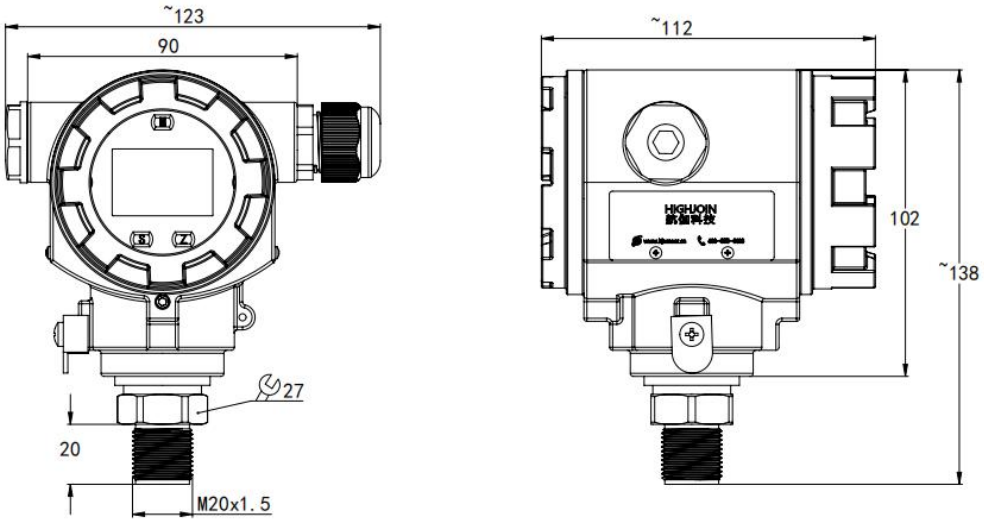
Pressure Range	
Gauge pressure range	-100kPa…0 ~ 20kPa…70MPa (Corrosion-resistant metal diaphragm sensor, selection code M2, M3, M4) -100kPa…0 ~ 20kPa…2MPa (Ceramic piezoresistive sensor, selection code M5) -100kPa…0 ~ 1kPa…4MPa (Ceramic capacitive sensor, selection code M6)
Absolute pressure range	0 ~ 30kPa…70MPa (Corrosion-resistant metal diaphragm sensor, selection code M2, M3, M4) 0 ~ 50kPa…2MPa (Ceramic piezoresistive sensor, selection code M5) 0 ~ 1kPa…4MPa (Ceramic capacitive sensor, selection code M6)
Note: 1. If the pressure interface material is selected as PTFE (selection code FE), the maximum measuring range is 1 bar. 2. For other measuring ranges, please consult a sales engineer.	
Measuring Medium	
Type	A variety of liquids and gases compatible with the materials in contact
Output Signal/Power Supply	
Standard	2-wire：4~20mA / Vs=8~30V
Standard	2-wire：4~20mA+HART / Vs=12~32V
Standard	3-wire：0 ~ 10V / Vs=12~30V
Standard	4-wire：Modbus-RTU/RS485 / Vs=12~30V
Performance	
Accuracy*	±0.5%FS @25℃ ±0.2%FS @25℃

Long-term stability	±0.25%FS/year （0.5% accuracy） ±0.2%FS/year （0.2% accuracy）
Temperature Drift Characteristic	
Compensation temperature range	0 ~ 50℃ (Corrosion-resistant metal diaphragm type) 0 ~ 70℃ (Ceramic piezoresistive type) -20 ~ 80℃ (Ceramic piezoresistive type)
Temperature drift of zero point	±1.0%FS, reference 25℃, within compensation temperature range
Temperature drift of full point	±1.0%FS, reference 25℃, within compensation temperature range
Environment Condition	
Temperature Range	Medium temperature：-20 ~ 80℃ Ambient temperature：-20 ~ 80℃ Storage temperature：-20 ~ 80℃
Note: For pressure fittings made of PVDF, the product's medium temperature range is -10 to 80℃. For pressure fittings made of PVC, the product's medium temperature range is 0 to 60℃. For pressure fittings made of PP, the product's medium temperature range is 0 to 80℃.	
Protection Grade	IP66， M20×1.5 female, cable gland （ordering code C7）

Structure Material

Ordering Code	Part	Material
A12	Housing Shell	Cast aluminum alloy ADC12 (default)
Y104		Cast aluminum alloy YL104 (lower copper-zinc)
HC	Process Connection	Hastelloy C
TI		Titanium alloy
DF		PVDF, density 1.78g/cm^3, Shore hardness 77, applicable temperature -10 ~ 140℃
PC		PVC， density 1.45g/cm^3， Shore hardness 79, applicable temperature 0 ~ 60℃
PP		PP, density 0.91g/cm^3， Shore hardness 72, applicable temperature 0 ~ 100℃
FE		PTFE, density 2.17g/cm^3， Shore 54 ~ 60， applicable temperature -200 ~ 260℃
X		Customization
M1	Sensor	316L （default）
M2		Titanium diaphragm TA1 and titanium housing TC4
M3		Tantalum film
M4		Hastelloy C-276
FK	Sealing ring	FKM （-20 ~ 200℃） (default)
FF		Perfluororubber FFKM (more corrosion-resistant, applicable temperature range -25 to 300℃)

Structure Drawings

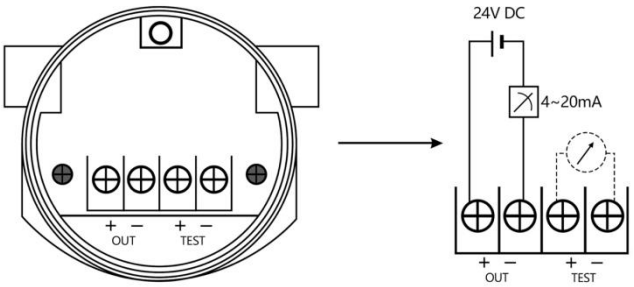


Notes:

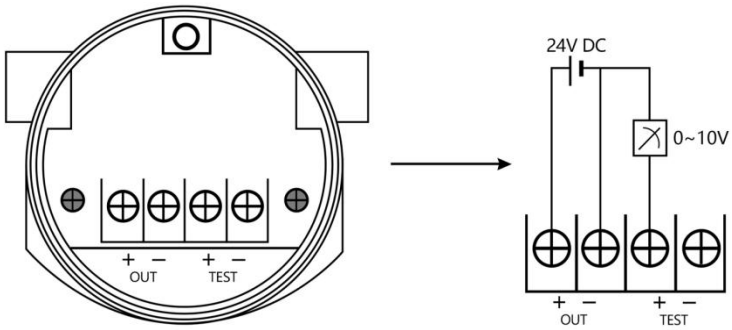
1.The dimensions listed in the figure may change with the update of the process

2. For other shapes, please consult the sales engineer

Electrical Connection

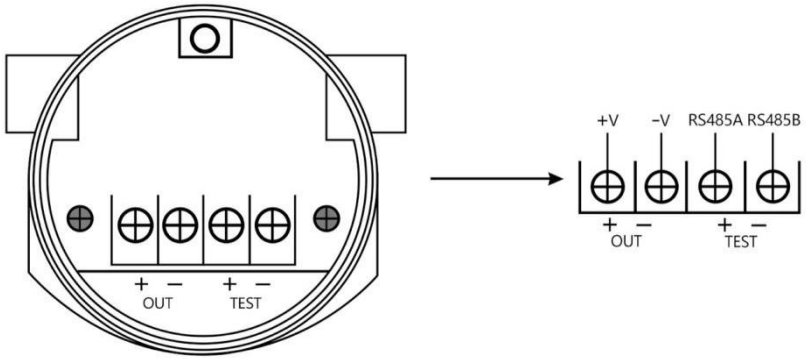
2-wire, 4 ~ 20mADC or 4 ~ 20mADC +HART		
		
Signal Definition	Power+(+V)	Power-(0V/+OUT)
Terminal Connector	OUT+	OUT-

3-wire , 0~10VDC



Signal Definition	Power+(+V)	Power-(GND)	Signal +(+OUT)
Terminal Connector	OUT+	OUT-	TEST+

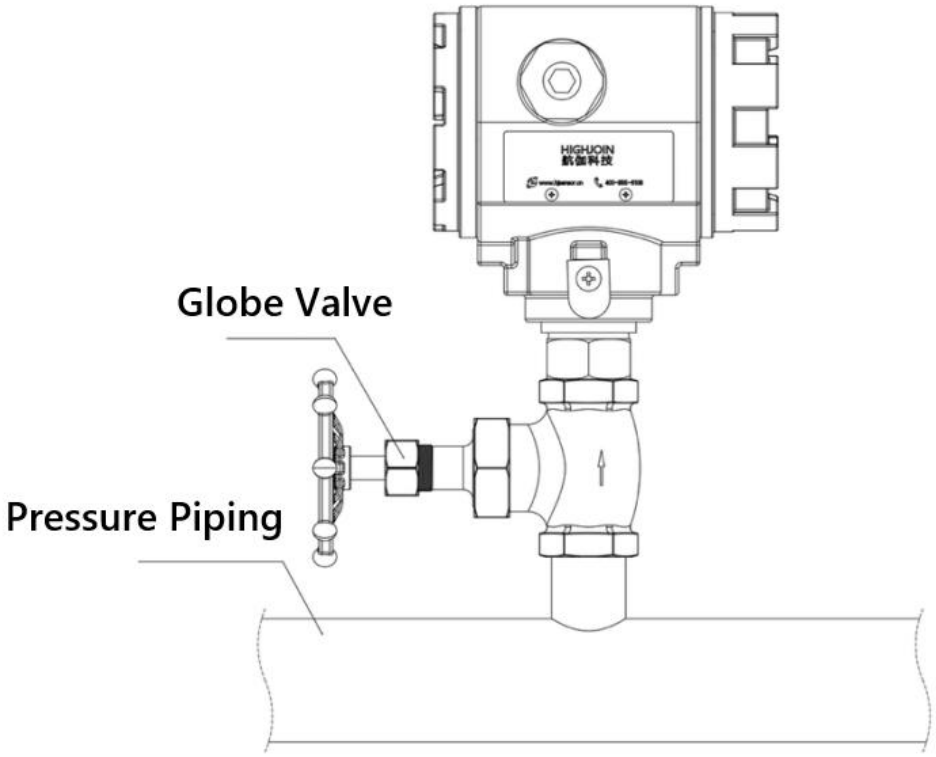
4-wire, Modbus-RTU/RS485



Signal Definition	Power+(+V)	Power-(-V)	RS485A	RS485B
Terminal Connector	OUT+	OUT-	TEST+	TEST-

Installation Diagram

The pressure transmitter can be installed directly on the pressure pipe or with the installation bracket.



Ordering Guide

Model	Type								
HPM27	Anti-corrosive Pressure								
	Pressure Range	Measuring Range							
	(0~X)kPa	Fill out X directly							
		Code	Output Signal						
		B1	(4~20)mA						
		B3	(0~10)V						
		B7	RS485						
		B8	HART						
			Code	Thread Spec					
			P1	M20×1.5, male					
			G12	G1/2" male					
			G14	G1/4" male					
				Code	Electrical Connection				
				C7	M20*1.5 female, cable gland				
					Code	Housing Shell Material			
					A12	ADC12			
					Y104	YL104			
						Code	Process Connection		
						HC	Hastelloy C		
						DF	PVDF		
						FE	PTFE		
						PC	PVC		
						PP	PP		
						X	Customized		
							Code	Sensor	
							M2	Titanium diaphragm TA1 and titanium	
							M3	Tantalum Ta	
							M4	Hastelloy C-276	
							M5	96% Al_2O_3, ceramic piezoresistive	
							M6	99.9% Al_2O_3, capancitance piezoresistive	
								Code	Additional Functions
								G	Gauge Pressure（Default）
								A	Absolute Pressure
								S	Sealed Gauge Pressure
								FK	FKM sealing ring
								FF	FFKM sealing ring
								LED	LED display
								LCD	LCD display
								J5	0.5% accuracy(default)
								J2	0.2% accuracy
e.g.: HPM27	(0~400)kPa	B1	P1	C9	M3	HC	M5	G FK LCD J5	

Tips for Type Selection

1. According to the corrosive conditions of the medium, choose the appropriate sensor material and the material of the pressurized shell

2. For other special requirements, please contact us and indicate in the order.