HPM320 Differential Pressure Transmitter

Datasheet

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Overview

The HPM320 differential pressure transmitter uses a silicon piezoresistive differential pressure core and a stainless steel process interface, offering strong corrosion resistance. The pressure interface is threaded, allowing direct installation on the measuring pipeline or connection via a pressure tap. This product is available with standard voltage, current output, and RS485 support, facilitating easy installation and use. It is widely used in process control, aerospace, automotive, medical equipment, HVAC, and other fields for differential pressure, level, and flow measurement and control.

Application

Differential pressure, liquid level and flow measurement and control in equipment supporting, process control, aerospace, automobile, medical equipment, water supply and drainage, HVAC and other fields

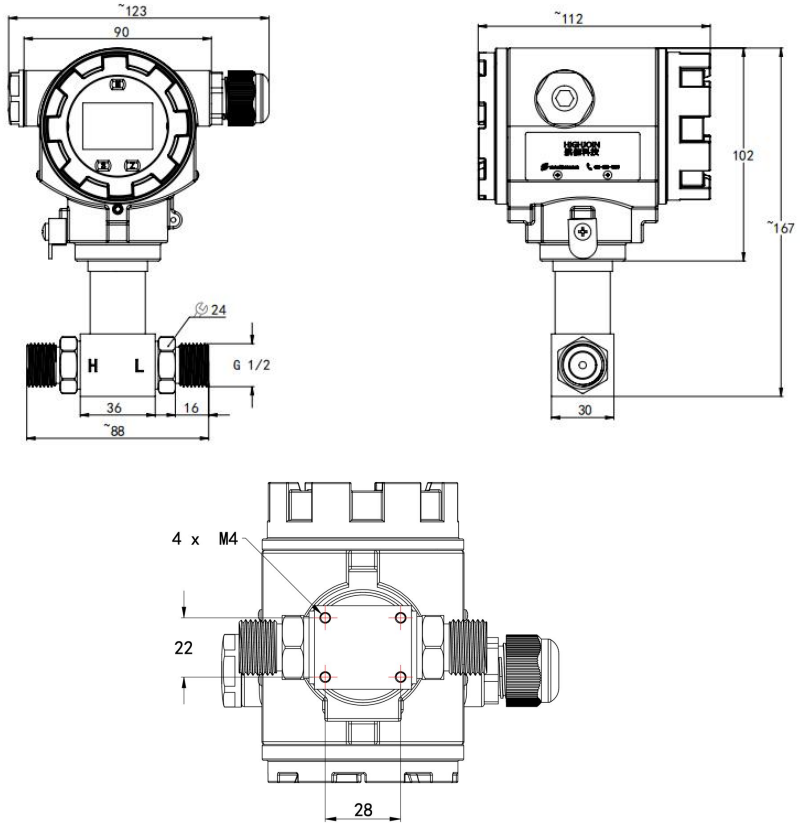
Features

- Compact differential pressure measuremen
- 316L stainless steel diaphragm structure
- Aluminum alloy housing with IP66 protection rating
- Local display with simultaneous output of standard remote signal
- Multiple process connections

Technical Parameters

Pressure Range	
Measuring range	0 ~ 10kPa...3.5MPa
Bilateral static pressure	≤20MPa
Overload for single positive pressure side	1.5 ~ 2x of full range
Overload for single negative pressure side	1x of full range
Note: The upper and lower limits of the measurement range can be customized, with the negative pressure end being greater than the positive pressure end, such as -100 to 100kPa, -50 to 20kPa, etc	
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）
Static pressure influence	≤0.5%F.S./MPa
Temperature Drift Characteristic	
Compensation temperature range	0 ~ 70℃
Temperature drift of zero point	±1.5%FS reference 25℃, within 0-70℃
Temperature drift of full point	±1.5%FS reference 25℃, within 0-70℃
Environment Condition	
Temperature Range	Medium temperature：-40 ~ 100℃ Ambient temperature：-20 ~ 80℃ Storage temperature：-20 ~ 80℃
Protection Grade	IP66, M20×1.5 female, cable gland（ordering code C7）
Process Connection	
Pressure Port	G1/4'' Male, G1/2'' Male, M20×1.5 Male or others
Electrical Protection	
Short-circuit protection	Support
Reverse Voltage Protection	No damage. The circuit does not work
Insulation	
Insulation Resistance	>20MΩ @500VDC
Dielectric strength	<2mA @ 500VAC 1min

Structure Drawings (unit:mm)

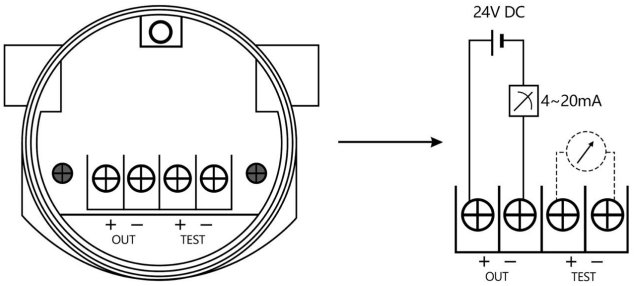


Structure Material

Ordering Code	Part	Material
A12	Housing Shell	Cast aluminum alloy ADC12 (default)
Y104		Cast aluminum alloy YL104 (lower copper-zinc)
X		Customized
S4	Process Connection	SS304（default）
S6		SS316L
X		Customized
M1	Sensor	316L（default）
FK	Seal-ring	FKM（-20 ~ 200℃） （default)
NB		NBR(-40 ~ 120℃)
ED		EPDM（-55 ~ 150℃）
HB		HNBR（-40 ~ 150℃）

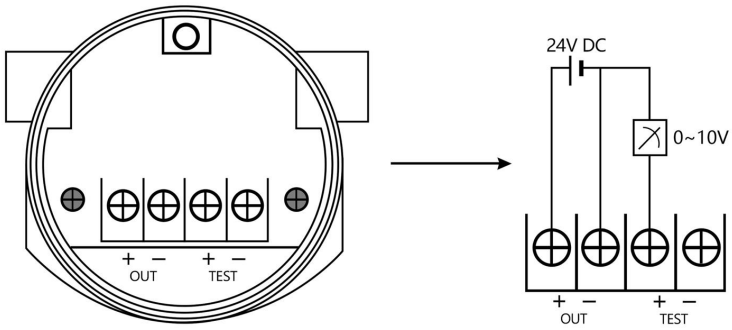
Electrical Connection

2-wire, 4 ~ 20mADC or 4 ~ 20mADC +HART



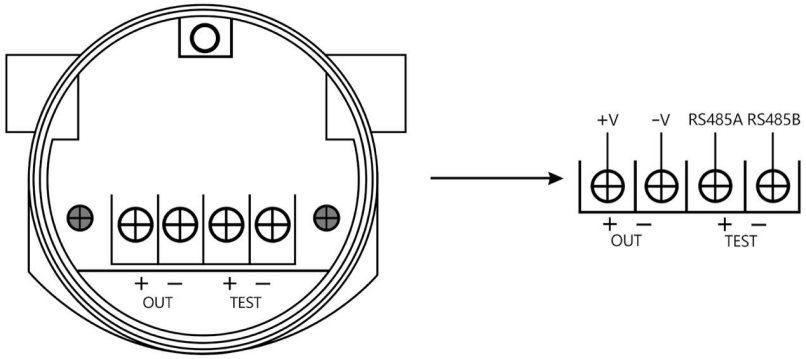
Signal Definition	Power+(+V)	Power-(0V/+OUT)
Terminal Connector	OUT+	OUT-

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-

Ordering Guide

Item NO.	Type						
HPM320	Differential 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				
		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	Case Material	
					A12	ADC12 (default)	
					Y104	YL104	
						Code	Additional Functions
						FK	FKM sealing ring(default)
						NB	NBR sealing ring
						LCD	LCD display(default)
						LED	LED display
						J5	0.5% accuracy(default)
						J2	0.2% accuracy
HPM320	(0~0.5)MPa	B1	P1	C7	M1	FK LCD J5	