

HPM20F Flange Diaphragm Pressure Transmitter



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Overview

HPM20F Flange Diaphragm Pressure Transmitter regards international standard flange as the interface standard to achieve the requirements of flange field installation. It has advanced technology and adopts high stable and reliable silicon piezoresistive pressure sensor as signal measuring element. And it is processed through automatic testing and laser trimming to achieve wide temperature compensation. This product has stable and reliable performance because they all pass the strict testing and long-term ageing testing. HPM20F can meet the requirements of corrosion resistance and sanitation, which is can be widely used for pressure measurement in the fields of machinery, metallurgy, petrochemical, power, food and medicine.

Application

- .For corrosive media measurement
- .For the measured medium has a solid suspension or high viscosity of the medium, easy to clogging
- .For the measured medium with a pressure tube out of easy crystallisation or solidification
- .For the need to replace the measured medium of the occasion, you can flush the pressure port to prevent mixing of media
- .For high hygiene requirements, the need to prevent contamination of the occasion

Features

- .various optional materials for isolation diaphragm, high anti-corrosion grade
- .hygienic style, easy to clean, no dead angle
- .aluminium alloy shell, ingress protection IP65
- .field display, 4-20mADC signal output and other telecommunication signals
- .with polarity reversal protection ,overcurrent and overvoltage protection
- .zero-scale and full-scale adjustable
- .strong anti-jamming, long-term stability

Technical Parameters

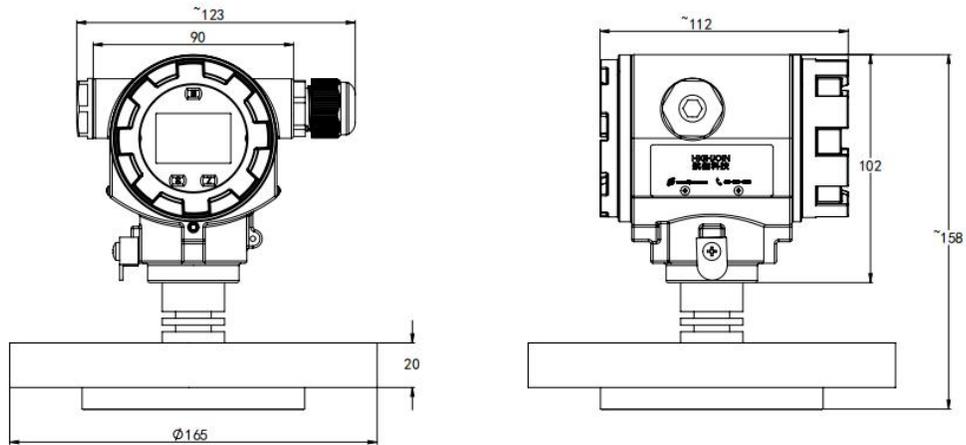
Pressure Range	
Measuring range	-100kPa...0 ~ 20kPa...16MPa (gauge); 0 ~ 20kPa...10MPa(absolute);
Overload	1.5 ~ 2x of full range
Measuring Medium	
Type	A variety of liquids and gases compatible with the materials in contact
Output Signal/Power Supply	
Standard	2-wire: 4~20mA / Vs=8~30V
Standard	2-wire: 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)

Temperature Drift Characteristic	
Compensation temperature range	-5 ~ 60℃
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 : -40 ~ 140℃ (3pcs cooling fins) -40 ~ 200℃ (5 pcs cooling fins) -40 ~ 250℃ (10 pcs cooling fins) 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 Material

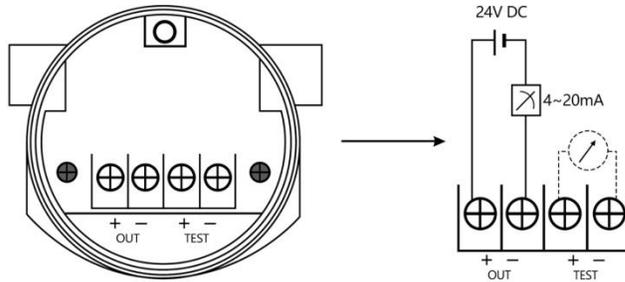
Ordering Code	Part	Material
A12	Housing Shell	Cast aluminum alloy ADC12 (default)
Y104		Cast aluminum alloy YL104 (lower copper-zinc)
X		Customized
S4	Flange	SS304(default)
S6		SS316L
X		Customization
S6	Diaphragm	SS316L(default)
HC		Hastelloy C
TA		Tantalum
FE		Coated with PTFE

Structure Drawings



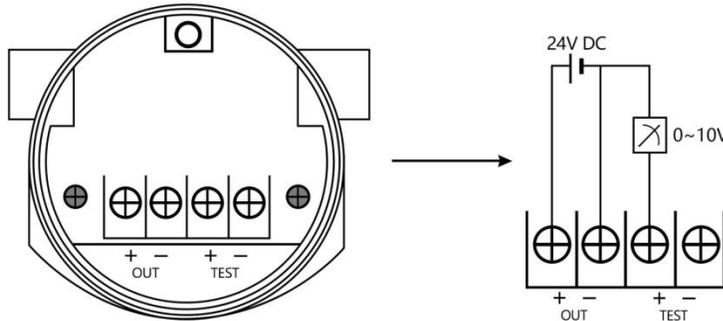
Electrical Connection

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



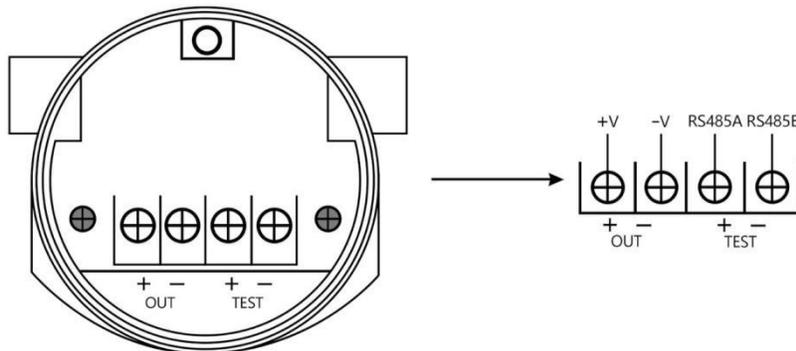
Signal Definition	Power+(+V)	Power-(0V/+OUT)
Terminal Connector	OUT+	OUT-

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						
HPM20F	Flange Diaphragm Pressure Transmitter						
	Pressure Range	Measuring Range					
	(0 ~ X)kPa	Fill out X directly					
		Code	Output Signal				
		B1	(4 ~ 20)mA				
		B2	(0 ~ 10)mA				
		B3	(0 ~ 10)V				
		B4	(0 ~ 5)V				
		B5	(1 ~ 5)V				
		B6	(0.5 ~ 4.5)V				
		Code	Flange Connection				
		KF20	DN20				
		KF25	DN25				
		KF40	DN40				
		KF50	DN50				
		X	Customized				
		Code	Housing Shell Material				
		A12	ADC12				
		Y104	YL104				
		Code	Process Connection				
		S4	304				
		S6	316L				
		X	Customized				
		Code	Sensor				
		M1	316L (default)				
		M2	Titanium diaphragm TA 1 and titanium housing TC4				
		M3	Tantalum Ta				
		M4	Hastelloy C-276				
		Code	Additional Functions				
		G	gauge pressure(default)				
		S	Sealed Pressure				
		A	Absolute Pressure				
		LCD	LCD Display(default)				
		LED	LED display				
		J5	0.5 % accuracy				
		J2	0.2 % accuracy				
		T5	5pcs cooling pcs				
		T10	10pcs cooling pcs				
		PN	Flange Nominal Pressure				
		QL	olive oil (-10~120℃)				
Order example: HPM20F	(0~100)kPa	B1	F25	A12	S4	M1	G LCD J5 T10