

PRODUCT OVERVIEW

PRESSURE MEASUREMENT

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PF001/002/003 Sputter Thin Film

Universal Pressure Sensor



Characteristics

- ☆0.2%F.S, 0.5%F.S, 1%F.S accuracy optional
- ☆Metal-based pressure-sensitive chip ensures long-term stability better than $\pm 0.2\%FS/\text{year}$
- ☆Advanced anti-interference, anti-surge circuit protection and high insulation and pressure-resistant film materials
- ☆No oil filling, all S/S structure, no leakage hazard
- ☆Firm & durable double gold wire lead technology
- ☆Wide measuring range from 0.5MPa~250MPa
- ☆Fast response, response time less than 1ms
- ☆Small hysteresis and good repeatability
- ☆IP65, IP67 high protection class

Applications

- ☆Ship
- ☆Transportation
- ☆Chemical industry
- ☆Medicine
- ☆Food
- ☆Water supply
- ☆Hydraulic
- ☆Refrigeration
- ☆Industrial Automation Control
- ☆Vehicles
- ☆Process control

Profiles

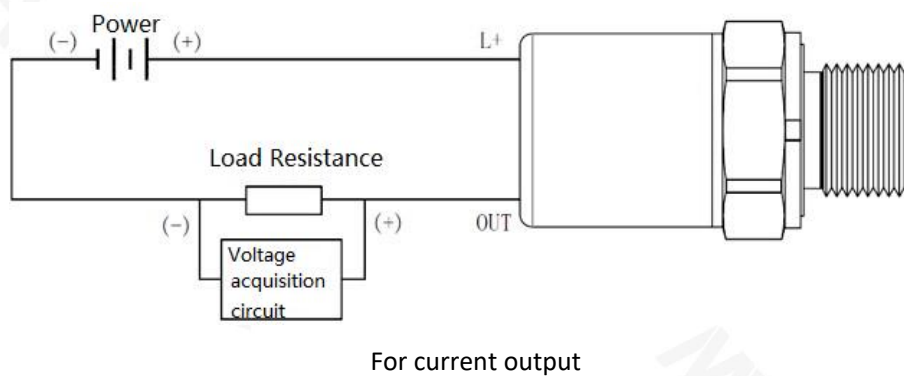
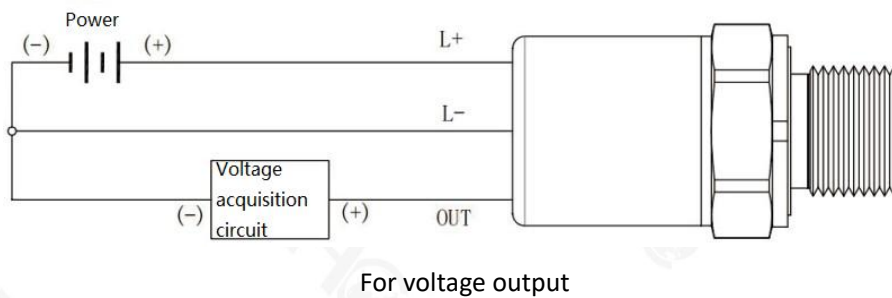
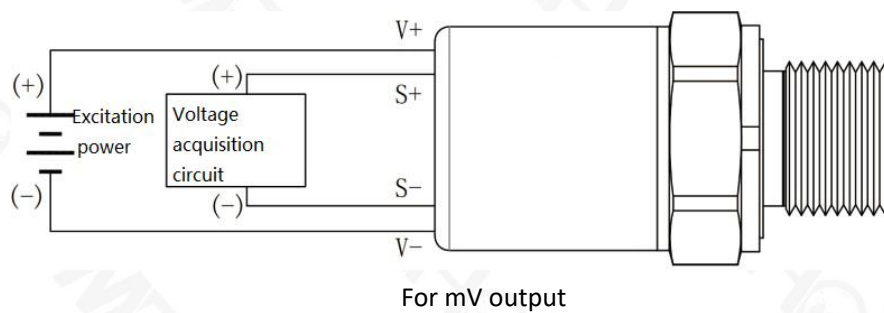
PF001/002/003 series universal pressure sensors are packaged with our metal sputtering membrane cores, which can provide accuracy of 0.2%F.S, 0.5%F.S and 1%F.S in the pressure range of 0.5MPa to 250MPa. They have the advantages of long-term fatigue resistance, wide temperature range, shock resistance and high reliability, and can perform accurate measurements even under the most severe conditions. They are suitable for pressure measurement of various gases and liquids.

This series adopts the sturdy all-welded stainless steel housing, which can effectively protect the sensor under harsh conditions. The electrical connectors are IP65 or IP67 rated. The robust internal structure ensures the sensor can work under high vibration environment. Besides, it has a variety of outputs, pressure connectors and electrical connectors, meeting the needs of a wide range of applications.

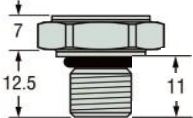
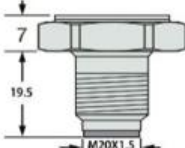
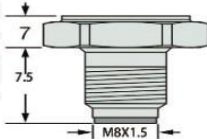
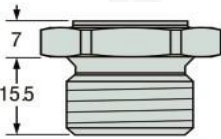
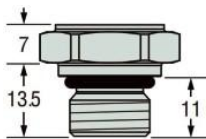
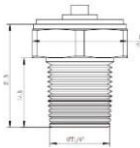
Specifications

Parameter	PF001/002/003 Series								
Measuring range(MPa)	0.5-2.5	4-10	16-40	60	70	100	120-180	200	250
Overload pressure	200%	200%			150%				≤300MPa
Burst pressure	4000%	2000%	1000%	≤400MPa	≤400MPa				
Accuracy	±0.2%F.S,±0.5%F.S ,±1%F.S								
Long-term stability	±0.2%F.S/year								
Output	4-20mA,0.5-4.5V,0.5-4.5V(ratiometric),0.5-2.5V,0-5V, 0-10V, CAN protocol digital output, millivolt signal								
Power Supply	8-32VDC, 5VDC								
Load	Current output type: $R_L \leq 50 \times (V_{cc} - 8) \Omega$, Voltage output type: $R_L \geq 2 \text{ K}\Omega$								
Zero point temperature drift	±0.1%F.S/10℃ or by customized								
Full range temperature drift	±0.3%F.S/10℃ or by customized								
Response time	≤1ms								
Durability	10 ⁸ pressure circles								
Insulation resistance	≥1000MΩ/500VDC								
Sensitive component material	17-4PH								
IP rating	IP65, IP67								
Medium temp. range	-40~+85℃								
Ambient temp. range	-40~+85℃								
Storage temp. range	-40~+85℃								
Random vibration	14.1g, GB/T2423.56-2006								
Sinusoidal vibration	10g,GB/T2423.10-2008								
Shock	20g,11ms GB/T2423.5-1995								
EMC-electromagnetic field radiation immunity	GB/T 17626.3-2016								
EMC-electrostatic discharge immunity	GB/T 17626.2-2018								

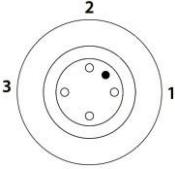
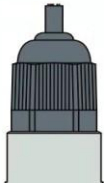
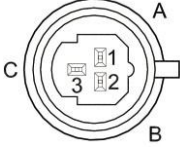
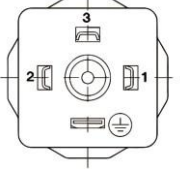
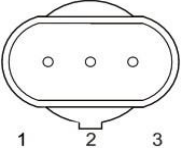
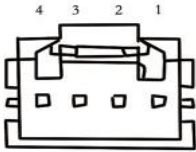
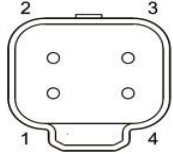
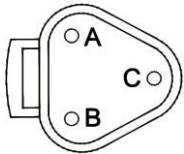
Wiring



Pressure Connections

Code	G2	M3	G1	G5	M6
Overall dimensions					
	G1/4-19	M12x1.5	G1/8	G1/4-19A	M20X1.5
Code	M1	G4	M4	N2	
Overall dimensions					
	M8X1.25 female	G1/2	M14X1.5	NPT1/4	

Electrical Connections

Code	01		02		03		04	
Port form	M12X1 		Direct cable outlet 		Packard 		Hirschmann 	
Pin definition	Current	Voltage	Current	Voltage	Current	Voltage	Current	Voltage
	1:Power + 2:Loop 3:/ 4:/	1:Power+ 2:Signal 3:GND 4:/	Red:Power Black:Loop	Red:Power Black:GND Blue: Signal+ White:Signal-	A: Loop B: Power+ C:/	A: GND B: Power + C:Signal	1:Power+ 2:Loop- 3:/ 4:/	1:Power+ 2:GND 3:Signal 4:/
Code	05		06		07		08	
Port form	AMP 		JS.T connection 		Deutsch DT04-4P 		Deutsch DT04-3P 	
Pin definition	Current	Voltage	Voltage 1:Power+ 2:Signal+ 3:GND 4:Signal-		Current	Voltage	Current	Voltage
	1:/ 2:Loop 3:Power+	1:Signal 2:GND 3:Power+			1:Loop- 2:Power+ 3:/ 4:/	1:GND 2:Power+ 3:/ 4:Signal	A:Power+ B:Loop C:/	A:Power+ B:GND C:Signal

Order Information

PF(Model)		003	01	A	S26	G2	105
Item							
Accuracy		003=1%F.S 002=0.5%F.S 001=0.2%F.S					
Electrical Connection		01=M12X1 02=Direct cable outlet 03=Packard connector 04=Hirschmann connector 05=AMP connector 06=JS.T connection 07=Deutsch DT04-4P 08=Deutsch DT04-3P					
Output		A= 4-20mA C=0.5-4.5V ratiometric E=0.5-2.5V J=CAN protocol digital output	B=0.5-4.5V D= 0-5V I=Millivolt				
Power Supply		S26=8~32Vdc S6=5VDC					
Pressure connection		G2=G1/4-19 M6=M20X1.5 G1=G1/8 G4=G1/2 M1=M8X1.25 female	N2=NPT 1/4 M3=M12X1.5 G5=G1/4-19A M4=M14X1.5				
Pressure Measurement		055=0.5MPa 255=2.5MPa 106=10MPa 406=40MPa 107=100MPa 167=160MPa	105=1 MPa 046=4 MPa 166=16 MPa 606=60 MPa 127=120 MPa 187=180MPa	165=1.6 MPa 066=6 MPa 256=25 MPa 706=70 MPa 147=140 MPa 207=200 MPa		257=250 MPa	