

PRODUCT OVERVIEW

PRESSURE MEASUREMENT

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PF501 Compact Industrial Pressure Sensor



Characteristics

- ☆ Compact & Lightweight design, easy to install
- ☆ High Precision up to 0.2%F.S & good long-term stability
- ☆ Small temperature drift
- ☆ Static and dynamic pressure measurement supported
- ☆ Various connection methods
- ☆ No welding
- ☆ Voltage and current output signals are optional
- ☆ Resistant to shocks and overloads.
- ☆ Corrosion & High-Temperature Resistance
- ☆ Versatile Installation: it can be installed at any position

Applications

- ☆ Automated production lines
- ☆ Injection molding machines
- ☆ Water jets
- ☆ Pumps
- ☆ Compressors
- ☆ Pneumatic system
- ☆ Water treatment
- ☆ Metallurgy
- ☆ Electricity generation
- ☆ Other harsh industrial applications

Profiles

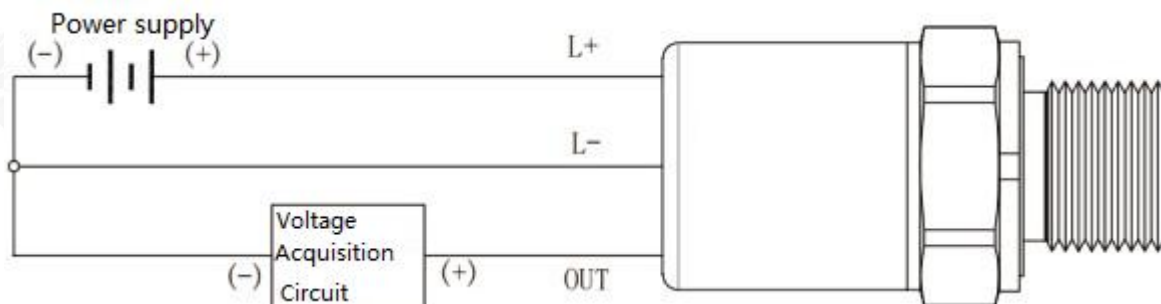
PF501 compact industrial pressure sensor adopts a metal-based pressure-sensitive chip that can provide reliable pressure measurement even in harsh environments. The product has a compact structure made of all-welded stainless steel shell, with IP65/IP67 protection level.

The product features good electromagnetic compatibility, strong impact and high temperature resistance, with a measuring range from 0.5MPa to 100MPa, and multiple accuracy options of 0.2%F.S, 0.5% F.S and 1% F.S. PF501 has good long-term performance at -40~105℃, making the sensor meet the most stringent industrial requirements. It supports a variety of output forms, pressure connectors and electrical connectors to meet a wide range of application requirements.

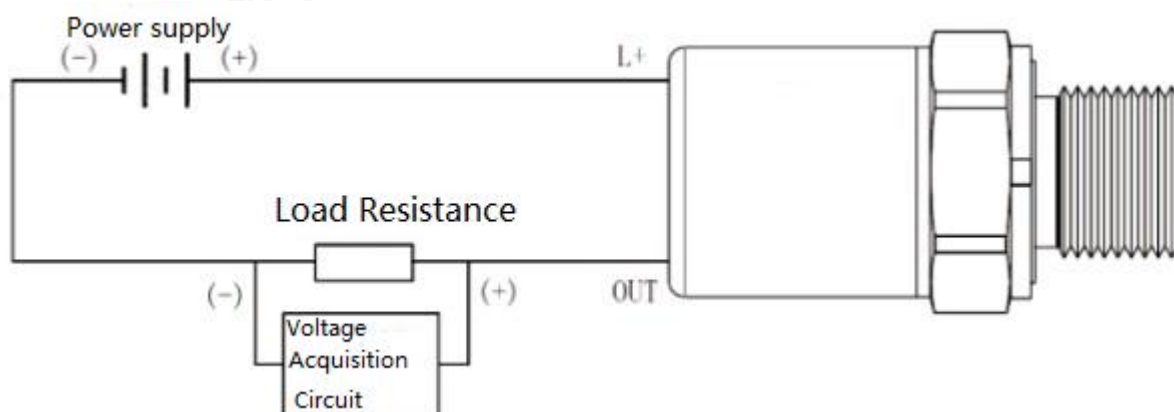
Specifications

Parameters	PF501 Series			
Measuring range(MPa)	0.5-6	10-60	70	100
Overload pressure	200%	200%	150%	
Burst pressure	2000%	1000% and ≤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,0-5V, 0-10V, 0.5-4.5V non-ratiometric,0.5-4.5V ratiometric, mV			
Power Supply	8-32VDC			
Zero point temperature drift	±0.1%F.S/10℃			
Full range temperature drift	±0.3%F.S/10℃			
Response time	≤1ms			
Durability	10 ⁷ pressure circles			
Insulation resistance	≥1000MΩ/500VDC			
Load	Current output type: Rl≤50 × (Vcc-8)Ω, voltage output type: Rl≥2KΩ			
Sensitive component material	17-4PH			
IP rating	IP65, IP67			
Medium temperature range	-40~+105℃			
Ambient temperature range	-40~+105℃			
Storage temperature range	-40~+105℃			
Random vibration	20g, GB/T2423.56-2006			
Sinusoidal vibration	14.1g,GB/T2423.10-2008			
Shock	50g,11ma, GB/T2423.5-1995			
EMC-electromagnetic field radiation immunity	GB/T 17626.3-2016			
EMC-electrostatic discharge immunity	GB/T 17626.2-2018			

Wiring

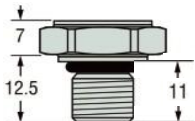
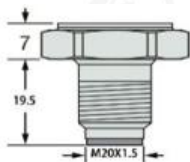
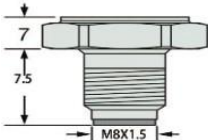
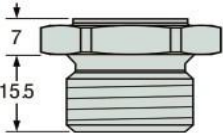
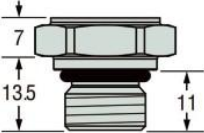
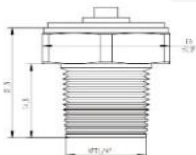


Voltage output

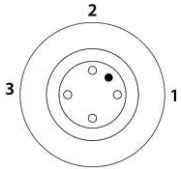
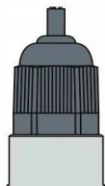
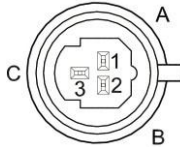
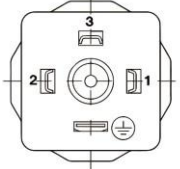
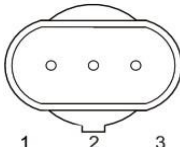
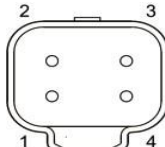
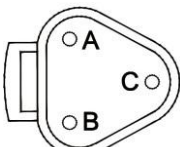
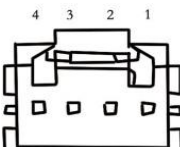


Current output

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		07		08		06	
Port form	AMP 		Deutsch DT04-4P 		Deutsch DT04-3P 		JS.T connector 	
Pin definition	Current	Voltage	Current	Voltage	Current	Voltage	Voltage 1:Power + 2:Signal+ 3: GND 4.Signal-	
	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

Selection		501	01	A	S26	G2	105
Item							
Model		501=PF501(accuracy 0.2%) 502=PF502(accuracy 0.5%) 503=PF503(accuracy 1.0%)					
Electrical Connection		01=M12X1 02=Direct cable outlet 03=Packard connector 04=Hirschmann connector 05=AMP connector 06=JS.T connector 07=Deutsch DT04-4P 08=Deutsch DT04-3P					
Output		A= 4-20mA C=0.5-4.5V ratiometric D=0-5V	B=0.5-4.5V G=0-10V I=mV signal				
Power Supply		S26=8~32Vdc					
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=2.5 MPa 106=10 MPa 406=40 MPa 107=100 MPa	105=1 MPa 046=4 MPa 166=16 MPa 606=60 MPa	165=1.6 MPa 066=6 MPa 256=25 MPa 706=70 MPa			