

0.5% Industrial Pressure Transmitter User Manual

Series PT-200



Doc #9004739
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Introduction

Thank you for purchasing a series PT-200 0.5% industrial pressure transmitter from APG. We appreciate your business! Please take a few minutes to familiarize yourself with your PT-200 and this manual.

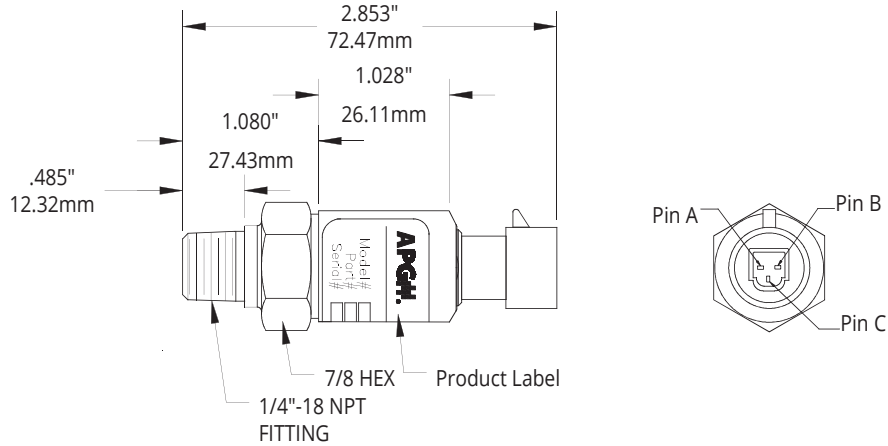
The series PT-200 pressure transmitters are rugged, general purpose sensors that offer reliable and accurate measurements under harsh conditions. The sensor fitting is machined from a solid piece of 17-4PH to provide stable operation when subjected to shock and vibration. PT-200s also incorporate digital compensation and temperature correction for high accuracy and stability.

Reading your label

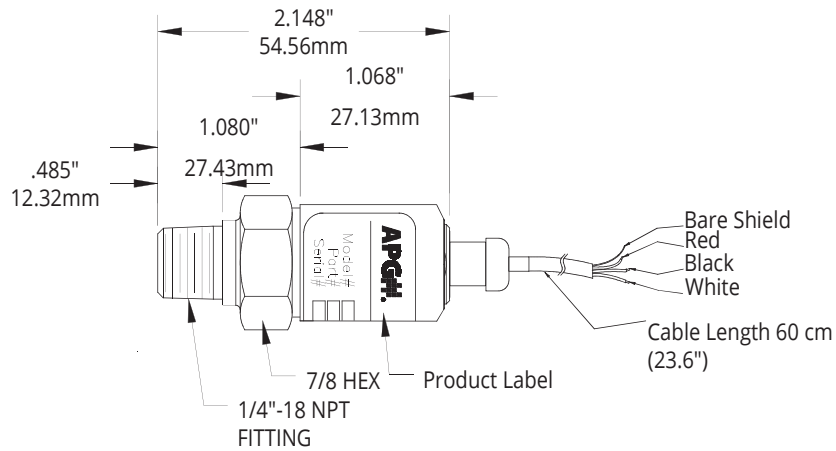
Every APG instrument comes with a label that includes the instrument's model number, part number, serial number, and a wiring pinout table. Please ensure that the part number and pinout table on your label match your order.

Chapter 1: Specifications and Options

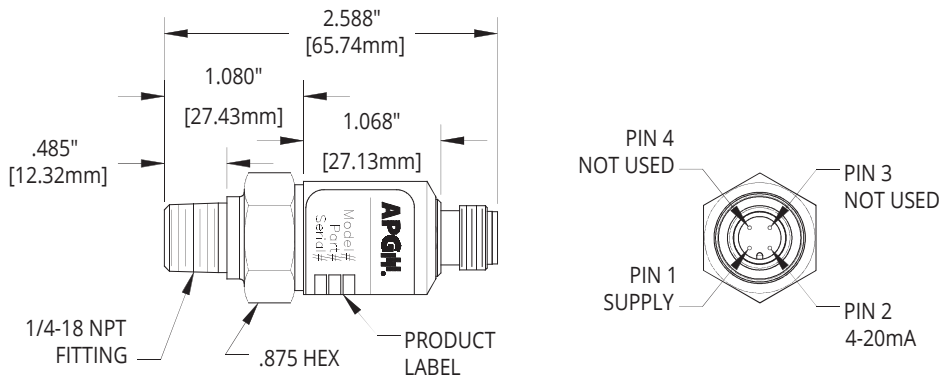
- Dimensions



Packard Connector



3-Conductor Pigtail



M12 Connector

- **Specifications**

Performance

Pressure Ranges	0 to 10K PSIG
Analog Output	4-20mA
Over Pressure	2X Full Scale
Burst Pressure	3.5X Full Scale
Life span	4 million full scale cycles

Accuracy

Linearity, Hysteresis & Repeatability	±0.5% of Full Scale (BFSL)
Thermal Zero Shift	±0.01% FSO/°C (±0.02% FSO/°F)
Thermal Span Shift	±0.02% FSO/°C (±0.04% FSO/°F)
Long Term Stability	<±0.35% FSO/year
Zero Span Offset Tolerance	±1.75% FSO

Environmental

Operating Temperature	-10 to 100°C (14 to 212°F)
Compensated Temperature	0 to 85°C (32 to 185°F)
Operating Temperature	-20 to 125°C (-4 to 257°F)

Electrical

Supply Voltage (at sensor)	9-32 VDC
Loop Resistance	< 100 Ω

Materials of Construction

Wetted Materials	17-4PH Stainless Steel
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Mechanical

Process Connection	1/4"-18 Male NPT
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Environmental

Enclosure Protection	IP65
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• Model Number Configurator

Model Number: PT-200 - - - -
 A B C D E

A. Output

L1 4-20 mA

B. Common Pressure Ranges

100 **250** **500** **2500** **10000**
 200 **300** **1000** **5000**

C. Unit of Measure

PSIG Gauge

D. Electrical Connection

E4 M12 Connector
 E5 Pigtail with 2 ft. (60 cm) of cable
 E51 Packard Connector

E. Process Connection

P0 1/4"-18 NPTM

• **Electrical Connectors, Pinout Table, and Supply Power Table**

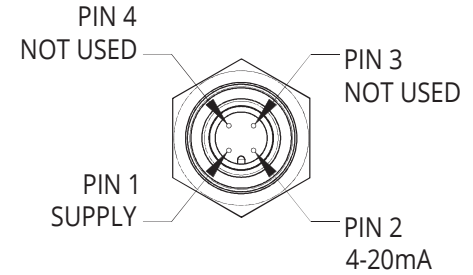
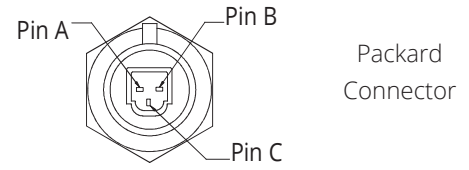
PT-200 Pin Out Table

	Packard Connector	Pigtail 3/C with Shield	M12 Connector
Excitation -	A	Black	Pin 2
Excitation +	B	Red	Pin 1
No Connection	C	White	Pins 3,4
Gnd	-	Shield	

N/C indicates no connection

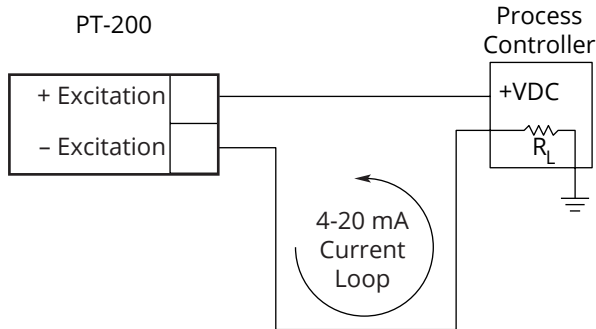
PT-200 Series Supply Power Table

	4-20 mA
Power Supply	9-32 VDC



M12 Connector

• **Wiring Diagram**



4-20 mA Output Wiring Diagram

The 4-20 mA PT-200 is a 2 wire, loop powered transducer/transmitter. A voltage of between 9 and 32 VDC must be maintained at this connection. Completion of the earth or system ground is recommended for proper circuit protection.

Power supply voltage must be sufficient to maintain a minimum of 9 VDC at the transducer/transmitter terminals after “dropping” voltage across R_L at full scale current (20 mA). Example: If $R_L = 250 \Omega$ then “drop” is $0.02 \text{ Amps} \times 250 \Omega = 5 \text{ volts}$. Therefore power supply minimum is $5 \text{ V} + 9 \text{ V} = 14 \text{ V}$.

Chapter 3: Maintenance

• General Care

Your series PT-200 pressure transmitter is very low maintenance and will need little care as long as it was installed correctly. However, in general, you should:

- Keep the transmitter and the area around it generally clean.
- Avoid applications for which the transmitter was not designed, such as extreme temperatures, contact with incompatible corrosive chemicals, or other damaging environments.
- Inspect the threads whenever you remove the transmitter from duty or change its location.
- Avoid touching the diaphragm. Contact with the diaphragm, especially with a tool, could permanently shift the output and ruin accuracy.
- Clean the diaphragm or the diaphragm bore with extreme care. If using a tool is required, make sure it does not touch the diaphragm.

i **IMPORTANT:** Any contact with the diaphragm can permanently damage the sensor. Use extreme caution.

• Repair and Returns

Should your series PT-200 pressure transmitter require service, please contact the factory via phone, email, or online chat. We will issue you a Return Material Authorization (RMA) number with instructions.

Please have your PT-200's part number and serial number available. See Warranty and Warranty Restrictions for more information.