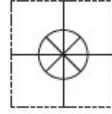


**1 YEAR**  
WARRANTY



# User's Guide

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The information contained in this document is believed to be correct, but OMEGA accepts no liability for any errors it contains, and reserves the right to alter specifications without notice.

**WARNING:** These products are not designed for use in, and should not be used for, human applications.

# Operating Instructions

## PX2700

### General Information

Your Omega transducer has been carefully calibrated before shipment to you, and it should be handled with the same care given any precision instrument. Pressure range and dimensions are reported on the specifications bulletin for the transducer.

### Ambient Conditions

Do not use in ambient conditions corrosive to anodize aluminum, or submerge in liquids, subject to spray or vibration environment.

### Electrical Conditions

Function	Standard "Belden" Cable Lead Option (#8723 Grey Cable)	"Tensolite" Cable Lead
Positive Excitation	Red	White
Positive Output	Green	Yellow
Negative Output	White	Brown
Negative Excitation	Black	Black
Case	Shield	Shield

### Electrical

The electrical circuit is equivalent to a 4-terminal network which can be grounded at only one point, either at the negative excitation or the negative signal output lead, but must not be commoned or grounded at more than one point.

The pressure transducer must be operated with the case connected either to the negative excitation terminal or to the negative output terminal. Failure to do this may result in damage to, or unsatisfactory operation of the unit. This connection may be made by connecting shield and black (negative excitation) leads or alternatively by connecting the shield and negative output signal leads together. Best shielding against noise will be obtained by connecting the shield and negative excitation leads. Circuit is reversed voltage protected for at least 5 minutes. Internal transient suppression network is provided for short duration transients to 150 volts.

In some instances, use of long cables (several hundred feet long), may introduce enough cable capacitance into the output circuit to cause output oscillation. If encountered, this oscillation may be eliminated by connecting a 100 ohm resistor (1/8 watt or larger) in series in each of the output leads at the end of the 2 foot transducer cable. These series resistors of course add to the output resistance.

## Adjustments (with cover removed)

### CAUTIONS:

1. Before making any adjustments, determine which circuit board diagram on Page 2 matches the circuit board in your transducer.
2. Turn off excitation power during cover removal or replacement.
3. Touching any adjustments other than zero of span may necessitate recalibration and voids the warranty.

### ZERO OUTPUT:

Output can be adjusted to zero by potentiometer as shown in diagram. Unit factory adjusted to 0.00 VDC output ( $\pm 5\text{mV}$ ).

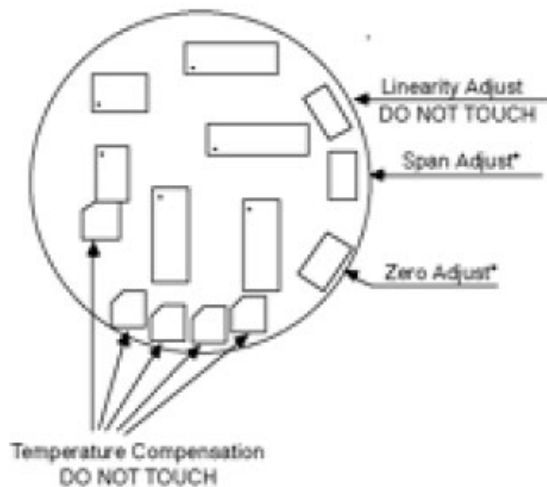
### SPAN:

Can be adjusted by potentiometer as shown in diagram. Unit factory adjusted to 5.00 VDC full scale output ( $\pm 5\text{mV}$ ).

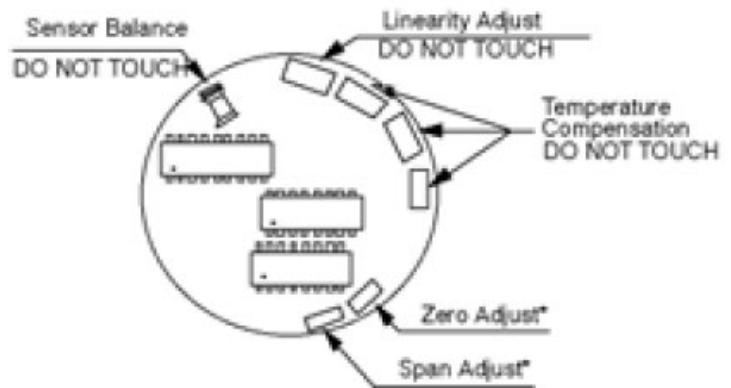
### LINEARITY - DO NOT TOUCH

Factory adjusted for best linearity.

Circuit Board 1



Circuit Board 2



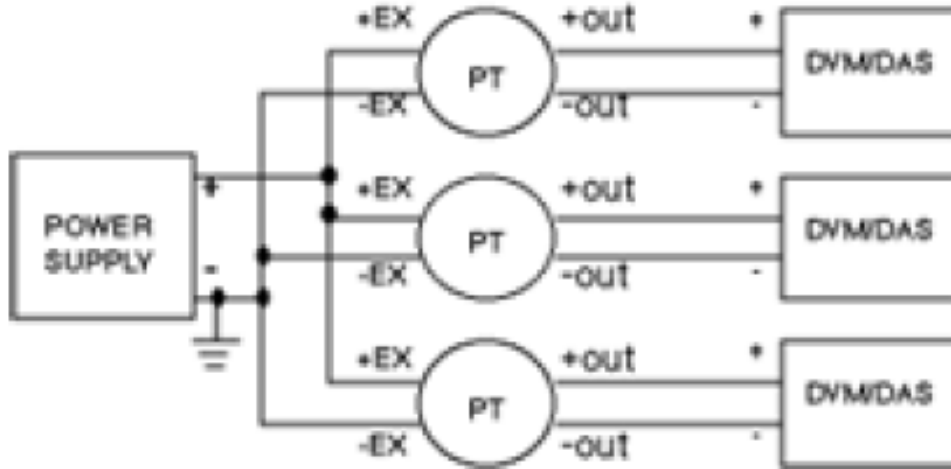
NOTE: When circuit cover is removed, a zero shift can be noticed. The zero will return by the same amount when the cover is replaced. This displacement of the output should be taken into account when making adjustments or during recalibration.

\*Adjustments: Due to the high accuracy of this transducer, adjustments to zero and span should only be made with the use of primary pressure standards of known accuracy higher than that of the PX2700.

## INSTALLATION INSTRUCTIONS FOR MULTIPLE HOOK-UP OF 4-WIRE OMEGA PRESSURE TRANSDUCERS

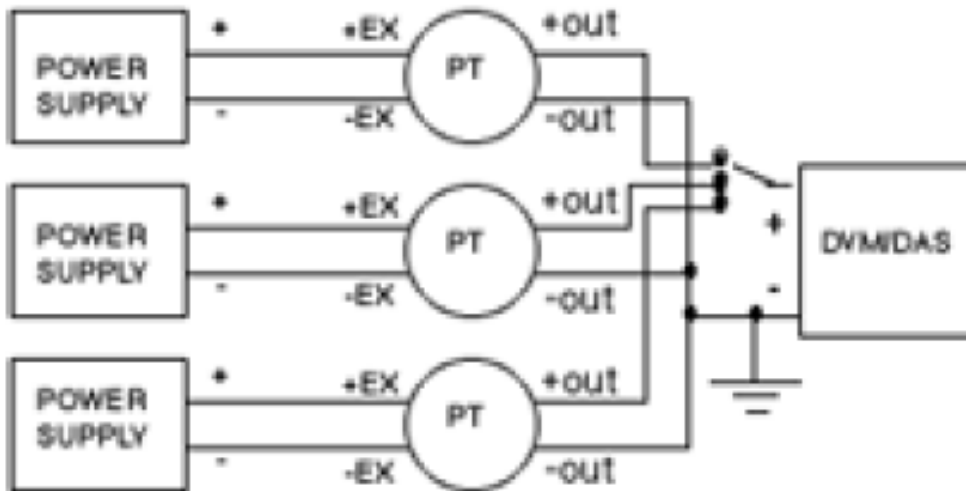
### OPTION #1

Uses a single, ground referenced power supply for excitation and separate, isolated (not ground referenced) readout or “differential input) to a data acquisition system for each pressure transducer output.



### OPTION #2

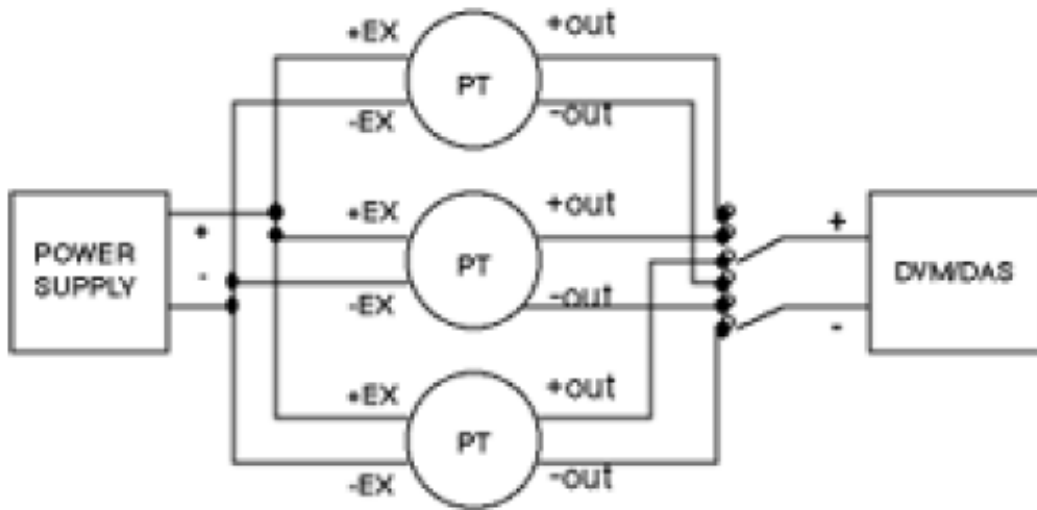
Uses a separate, isolated power supply for each pressure transducer’s excitation and a single ground referenced readout or “single ended input” to a data acquisition system for all outputs.



Power Supply (Nominal 24 VDC)  
PT - Pressure Transducer (4 Wire Circuit)  
DVM/DAS - Digital Volt Meter or Data Acquisition System

### OPTION #3

Uses a single, ground referenced power supply for excitation and either a single, isolated readout with a bipolar switch that “breaks before makes” both the + output and - output of each pressure transducer, or a single data acquisition system with a multiplexer (MUX).



NOTE: The shield is internally commoned to the case and pressure port of the transducer. When the shield is connected to ground the case and pressure port of the transducer will also be commoned to that ground.

## **RETURNING PRODUCTS FOR REPAIR**

Please contact Omega at 1-800-826-6342 or 1-203-359-1660 before returning unit for repair to review information relative to your application. Many times, only minor field adjustments may be necessary. When returning a product to Omega, the material should be carefully packaged and shipped prepaid to:

Omega Engineering, Inc  
One Omega Drive  
P.O. Box 4047  
Stamford, CT 06907-0047

To assure prompt handling, please supply the following information and include it inside the package of returned material:

1. Name and phone number of person to contact.
2. Shipping and billing instruction.
3. Full description of the malfunction.
4. Identify any hazardous material used with product.

*Notes: Please remove any pressure fittings and plumbing that you have installed and enclose any required mating electrical connectors and wiring diagrams. Allow approximately 3 weeks after receipt at Omega for the repair and return of the unit. Non-warranty repairs will not be made without customer approval and a purchase order to cover the repair charges.*

### **Calibration Services**

Omega maintains a complete calibration facility that is traceable to the National Institute of Standards & Technology (NIST). If you would like to recalibrate or re-certify your Omega pressure transducers or transmitters, please call our Sales Department at 1-800-826-6342 or 1-203-359-1660 for scheduling, cost and turnaround estimates.

Thank you,  
Omega Engineering, Inc.



## WARRANTY/DISCLAIMER

OMEGA ENGINEERING, INC. warrants this unit to be free of defects in materials and workmanship for a period of **13 months** from date of purchase. OMEGA's WARRANTY adds an additional one (1) month grace period to the normal **one (1) year product warranty** to cover handling and shipping time. This ensures that OMEGA's customers receive maximum coverage on each product.

If the unit malfunctions, it must be returned to the factory for evaluation. OMEGA's Customer Service Department will issue an Authorized Return (AR) number immediately upon phone or written request. Upon examination by OMEGA, if the unit is found to be defective, it will be repaired or replaced at no charge. OMEGA's WARRANTY does not apply to defects resulting from any action of the purchaser, including but not limited to mishandling, improper interfacing, operation outside of design limits, improper repair, or unauthorized modification. This WARRANTY is VOID if the unit shows evidence of having been tampered with or shows evidence of having been damaged as a result of excessive corrosion; or current, heat, moisture or vibration; improper specification; misapplication; misuse or other operating conditions outside of OMEGA's control. Components in which wear is not warranted, include but are not limited to contact points, fuses, and triacs.

**OMEGA is pleased to offer suggestions on the use of its various products. However, OMEGA neither assumes responsibility for any omissions or errors nor assumes liability for any damages that result from the use of its products in accordance with information provided by OMEGA, either verbal or written. OMEGA warrants only that the parts manufactured by the company will be as specified and free of defects. OMEGA MAKES NO OTHER WARRANTIES OR REPRESENTATIONS OF ANY KIND WHATSOEVER, EXPRESSED OR IMPLIED, EXCEPT THAT OF TITLE, AND ALL IMPLIED WARRANTIES INCLUDING ANY WARRANTY OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE HEREBY DISCLAIMED. LIMITATION OF LIABILITY: The remedies of purchaser set forth herein are exclusive, and the total liability of OMEGA with respect to this order, whether based on contract, warranty, negligence, indemnification, strict liability or otherwise, shall not exceed the purchase price of the component upon which liability is based. In no event shall OMEGA be liable for consequential, incidental or special damages.**

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## RETURN REQUESTS/INQUIRIES

Direct all warranty and repair requests/inquiries to the OMEGA Customer Service Department. BEFORE RETURNING ANY PRODUCT(S) TO OMEGA, PURCHASER MUST OBTAIN AN AUTHORIZED RETURN (AR) NUMBER FROM OMEGA'S CUSTOMER SERVICE DEPARTMENT (IN ORDER TO AVOID PROCESSING DELAYS). The assigned AR number should then be marked on the outside of the return package and on any correspondence.

The purchaser is responsible for shipping charges, freight, insurance and proper packaging to prevent breakage in transit.

FOR **WARRANTY** RETURNS, please have the following information available BEFORE contacting OMEGA:

1. Purchase Order number under which the product was PURCHASED,
2. Model and serial number of the product under warranty, and
3. Repair instructions and/or specific problems relative to the product.

FOR **NON-WARRANTY** REPAIRS, consult OMEGA for current repair charges. Have the following information available BEFORE contacting OMEGA:

1. Purchase Order number to cover the COST of the repair,
2. Model and serial number of the product, and
3. Repair instructions and/or specific problems relative to the product.

OMEGA's policy is to make running changes, not model changes, whenever an improvement is possible. This affords our customers the latest in technology and engineering.

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