

User's Guide

CE



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MODEL PX2650 Low Pressure Transducers



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It is the policy of OMEGA to comply with all worldwide safety and EMC/EMI regulations that apply. OMEGA is constantly pursuing certification of its products to the European New Approach Directives. OMEGA will add the CE mark to every appropriate device upon certification.

The information contained in this document is believed to be correct, but OMEGA Engineering, Inc. 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, patient-connected applications.

General Information

The PX2650 series pressure transducers sense differential or gage (static) pressure and convert this pressure difference to a proportional high level analog output for unidirectional and bidirectional pressure ranges.

Environmental Conditions

The PX2650 is designed to be stored and operated under the ambient conditions listed below:

Temperature

Operating: 0 to 150°F (-18 to 65°C)
Storage: -40 to 185°F (-40 to 85°C)

Position Effect (units calibrated in the vertical plane)

<u>Range</u>	<u>Zero Offset</u>
0 to 10" WC	0.3% FS
0 to 2" WC	0.4% FS
0 to 0.5" WC	0.6% FS

Electrical Connections

Wiring terminations are identified on the top of the unit. The connections are marked on the top of the package and are designated as follows:

Positive Excitation: +EXC Connect to positive terminal of power supply
Negative Exc/Out: -COM Connect as common return leads for +EXC and +OUT (to negative terminals of power supply and control or pressure monitor).
Positive Output: +OUT Connect to positive terminal of control or pressure monitor

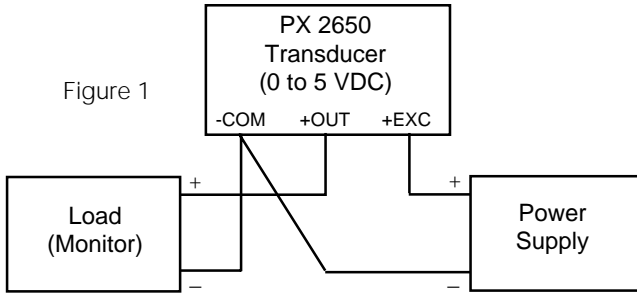
The Voltage Output Transducer is a three (3) wire system as shown above and in the wiring as depicted in Figure 1. The location of the terminals is shown in Figure 2.

Input Power

The PX2650 Series operates at 24 VDC excitation voltage. The 24 VDC transducers have a 0.2 to 5.2 VDC output. The allowable tolerance on the input voltage is listed below:

24 VDC will operate from 21.6 to 32 VDC

Figure 1



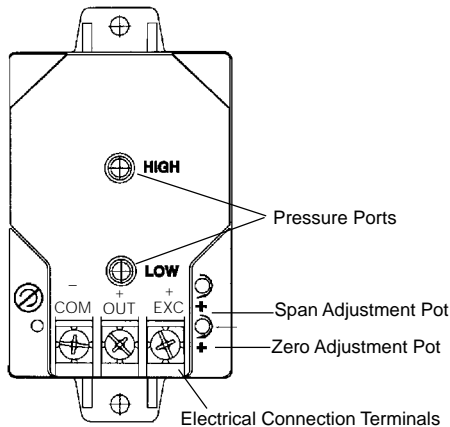
Mounting and Pressure Fittings

Mounting - The PX2650 Series are designed for mounting in either a switch box or by using the two (2) holes that are provided on the housing. Optimum performance is obtained by isolating the instrument from vibration and providing relatively clean, dry ambient air to the pressure ports. The PX2650 has been calibrated at the factory in the vertical position. In most cases, preferred installation is with the baseplate mounted vertically and located on a relatively flat surface in a junction box or attached to a nearby beam.

Caution: The axis most sensitive to vibration is the one perpendicular to the mounting base. Avoid mounting with vibration along this axis.

Pressure Fittings – Two (2) 3/16" O.D. pressure fittings are supplied for pressure signal connection with 1/4" push-on tubing. Both the positive (high) pressure port and the reference (low) pressure port are located on the top face of the unit. For best results (shortest response time), 3/16" I.D. tubing is suggested for tubing lengths up to 100 feet long, 1/4" I.D. for tubing lengths up to 300 feet, and 3/8" I.D. for tubing lengths up to 900 feet. The high and low ports are labeled next to each respective port (see Figure 2).

Figure 2



Calibration

The Voltage Output Transducer is factory calibrated and should require no field adjustment. However, both zero and span adjustments are provided. Whenever possible, any zero and/or span offsets should be corrected by software adjustment in the user's control system. Use the zero and span adjustments only if absolutely necessary. The PX2650 Series are calibrated in the vertical position at the factory. For use in other orientations, position the unit and follow the zero adjustment procedure listed below. Pressure ranges are fixed and cannot be changed in the field. If a range change is required, contact the factory for a replacement in the appropriate pressure range.

Zero Adjustment: Voltage Output Transducers

While monitoring the voltage between the positive output (+OUT) and common (COM), and with both pressure ports open to atmosphere, the zero may be adjusted. For unidirectional pressure ranges, turn the zero adjustment screw until the desired setting is achieved. The potentiometer hole is located as shown in the Figure 2 and is designated with a "Z".

Span Adjustment: Voltage Output Transducers

Span or full scale output adjustments should only be performed by using an accurate pressure standard (electronic manometer, digital pressure gage, etc.) with at least comparable accuracy to the PX2650 Series. With full scale pressure applied to the high pressure port, adjust span to the specified full scale output. The potentiometer hole is located as shown in Figure 2 and is designated with an "S".

Note: The input is reverse-voltage protected. The output is internally protected against damage if shorted to ground. Recheck all connections before applying power.

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 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 which wear are not warranted, including but not limited to contact points, fuses, and tracs.

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 it will be as specified and free of defects. OMEGA MAKES NO OTHER WARRANTIES OR REPRESENTATIONS OF ANY KIND WHATSOEVER, EXPRESS OR IMPLIED, EXCEPT THAT OF TITLE, AND ALL IMPLIED WARRANTIES INCLUDING ANY WARRANTY OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE HEREBY DISCLAIMED.

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CONDITIONS: Equipment sold by OMEGA is not intended to be used, nor shall it be used: (1) as a "Basic Component" under 10 CFR 21 (NRC), used in or with any nuclear installation or activity; or (2) in medical applications or used on humans. Should any Product(s) be used in or with any nuclear installation or activity, medical application, used on humans, or misused in any way, OMEGA assumes no responsibility as set forth in our basic WARRANTY/DISCLAIMER language, and, additionally, purchaser will indemnify OMEGA and hold OMEGA harmless from any liability or damage whatsoever arising out of the use of the Product(s) in such a manner.

RETURN REQUESTS/INQUIRES

Direct all warranty and repair requests/inquires 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. This affords our customers the latest in technology and engineering.

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