

1 YEAR
WARRANTY

Ω OMEGA® User's Guide

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PX165

Low Differential Pressure Transducer

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It is the policy of OMEGA Engineering, Inc. 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 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.

⚠ WARNING! READ BEFORE INSTALLATION ⚠

GENERAL:

A failure resulting in injury or damage may be caused by excessive overpressure, excessive vibration or pressure pulsation, excessive instrument temperature, corrosion of the pressure containing parts or other misuse.

OVERPRESSURE:

Pressure spikes in excess of the rated overpressure capability of the transducer may cause irreversible electrical and/or mechanical damage to the pressure measuring and containing elements.

STATIC ELECTRICAL CHARGES:

Any electrical device may be susceptible to damage when exposed to static electrical charges. To avoid damage to the transducer the operator/installer should follow proper ESD (electrostatic discharge) protection procedures before handling the pressure transducer.

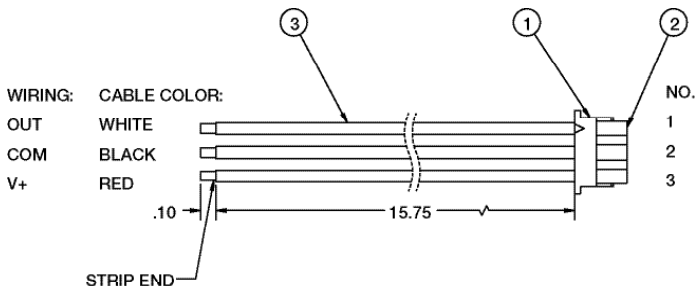
SPECIFICATIONS:

Output: 0.5 to 4.5 VDC ratiometric output when powered with a 5VDC supply voltage

Supply Voltage: 4.5 to 5.5 VDC regulated power supply

Electrical Connection:

- Transducer connector: JST SM03(4.0)B-BHS-1-TB
- Mating connector: JST BHR-03VS-1
- Optional electrical connection: JST BHR-03VS-1 connector with 15.75", 24 AWG leads.



Short-term reverse wiring protected - including temporary miswiring of the output pin

Mounting:

- a. The transmitter can be mounted with a #6 or #8 screws using the 4 mounting holes provided. Torque limits on the mounting holes provided are 6 inch-pounds.

Electrical Wiring:

Omega recommends the use of optional wiring harness with its 15.75" 24 AWG leads with the mating JST BHR-03VS-1 connector.

- b. If optional wiring harness is not being used the following JST parts are recommended:

- JST BHR-03VS-01 female connector
- JST SBH-001T-P0.5 terminal crimp
- 24 AWG wire

- c. Connect:

PIN 1 to the Output

PIN 2 to the Common (V-) 3

PIN 3 to the Supply (V+)

Set Up:

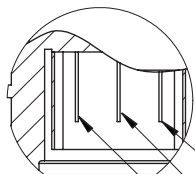
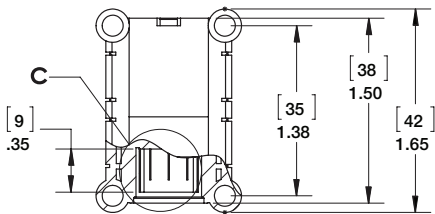
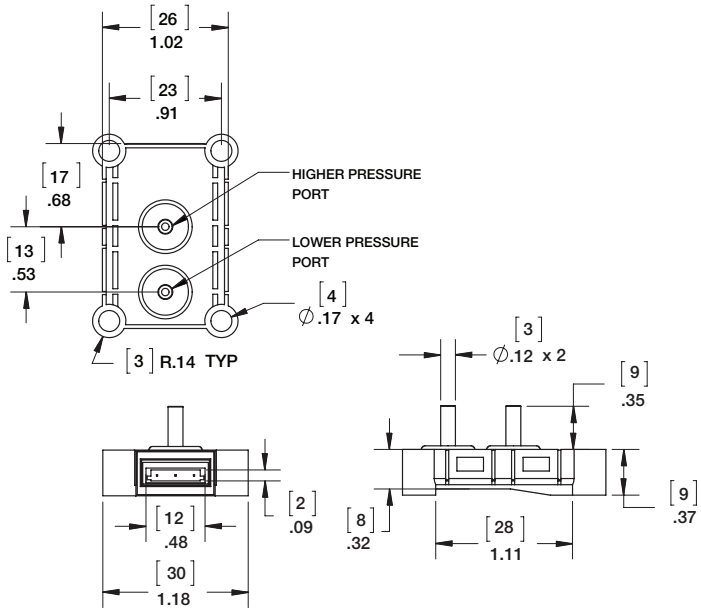
Note: For best immunity from EMI the pressure connection fittings on the PX165 should not be grounded.

The transmitters are calibrated at the factory in the vertical position. Mounting in the horizontal position can cause a zero shift of up to 1% of F.S. Please consult sales if your application requires a horizontal sensor calibration.

To find true zero differential pressure, pneumatically connect the high and low pressure connections together using the tubing provided with the transmitter. The barbed connection accept 1/8" O.D. 1/16" I.D. tubing.

Routine Maintenance:

The PX165 is a very stable and reliable transmitter incorporating a proven, micro-machined silicon capacitive sensor and an application specific integrated circuit (ASIC). All calibration and temperature compensation functions are done with a microprocessor and digital routines at the time of calibration.



DETAIL C
SCALE 2 : 1

- 3.V+(Power Supply +)
- 2.COM (Power Supply -)
- 1.Out (Output)

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.

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/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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