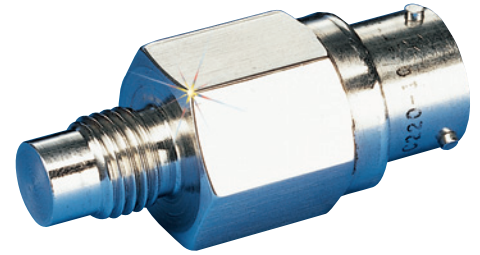


**omega.com**<sup>®</sup>

Ω OMEGA<sup>®</sup>

## PX610 Series Subminiature Millivolt Output Type Pressure Transducer



**INSTRUCTION  
SHEET**

**M0309/0505**

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### DESCRIPTION

The OMEGA<sup>®</sup> PX610 subminiature millivolt output type pressure transducers are for accurate measurements in restricted locations. These transducers are manufactured with a unitized metal (stainless) diaphragm. The advantage of this type of design is that a thin diaphragm and heavy sidewalls are made from one piece of stainless steel. This unitized diaphragm is rugged, but at the same time is capable of being made thin enough to measure pressures of only a few inches of water.

The diaphragm is welded to the transducer body to provide a hermetic seal for water applications. The transducers use epoxy to seal around the base of the diaphragm and to seal around the electrical leadwire exit at the rear of the body. For air and nonconductor fluid applications, the epoxy seals will not impair performance, however, if the transducers are to be used in water, high moisture areas, or corrosive fluids, the diaphragm should be welded to prevent moisture from penetrating inside the transducer and causing the strain gage to short to the metal case.

### AVAILABLE MODELS

The following models are available from OMEGA Engineering, Inc.

RANGE	MODEL	RANGE	MODEL
0-200 PSIG	PX610-200G V	0-3000 PSIG	PX610-3KG V
0-500 PSIG	PX610-500G V	0-5000 PSIG	PX610-5KG V
0-1000 PSIG	PX610-1KG V	0-10000 PSIG	PX610-10KG V
0-2000 PSIG	PX610-2KG V		

### UNPACKING

Remove the Packing List and verify that all equipment has been received. If there are any questions about the shipment, please call the OMEGA Customer Service Department at 1-800-622-2378 or 203-359-1660. We can also be reached on the Internet at

[omega.com](http://omega.com)  
e-mail: [info@omega.com](mailto:info@omega.com)

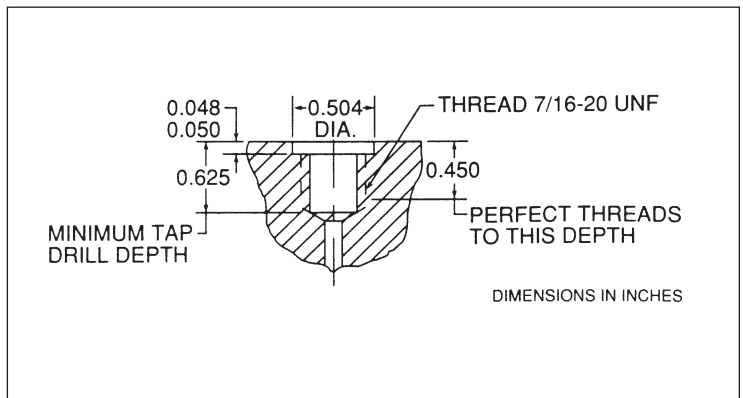
Upon receipt of shipment, inspect the container and equipment for any signs of damage. Take particular note of any evidence of rough handling in transit. Immediately report any damage to the shipping agent.

### NOTE

The carrier will not honor any claims unless all shipping material is saved for their examination. After examining and removing contents, save packing material and carton in the event reshipment is necessary.

### MOUNTING

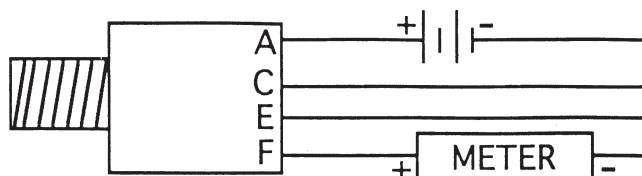
These transducers all use an O-ring for pressure sealing. To get the best seal with the O-ring on the transducer, the tapped hole should have the dimensions as shown below. For normal operating temperatures (-53.8° to 12.1°C [-65° to 250°F]) use BUNA-N (black) O-rings. Maximum installation torque is 500 in-lbs.



## WIRING

A+B	+EXCIT
C + D	-EXCIT
E	-SIGNAL
F	+SIGNAL

## 4-WIRE HOOKUP

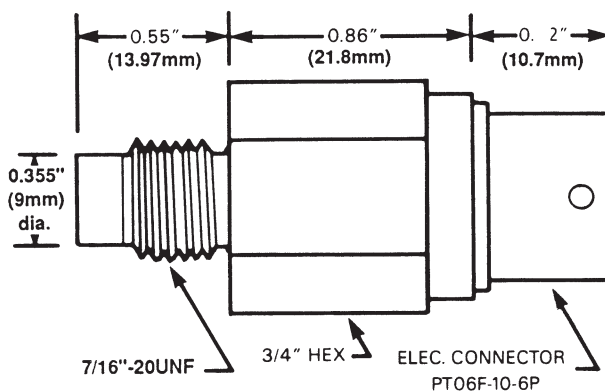


## SPECIFICATIONS

<b>EXCITATION:</b>	5 Vdc @ 15mA
<b>OUTPUT:</b>	10 mv
<b>SENSITIVITY:</b>	2mV/V nominal
<b>INPUT RESISTANCE:</b>	350Ω
<b>OUTPUT RESISTANCE:</b>	350Ω
<b>INSULATION RESISTANCE:</b>	>5MΩ @ 75 Vdc
<b>PERFORMANCE</b>	
<b>ACCURACY:</b>	±1% full scale
<b>LINEARITY &amp; HYSTERESIS:</b>	±1% full scale best fit straight line
<b>REPEATABILITY:</b>	±0.02 mV; ±0.1% full scale
<b>ZERO BALANCE:</b>	±3%
<b>OPERABLE TEMP. RANGE:</b>	-53.9° to 148.9°C (-65° to 300°F)
<b>COMPENSATED TEMP. RANGE:</b>	15.5° to 71.1°C (60° to 160°F)
<b>THERMAL ZERO EFFECT:</b>	+0.0015mV/°F; ±0.01% full scale/°F
<b>THERMAL SENSITIVITY EFFECT:</b>	+0.002mV/°F; ±0.02% full scale/°F
<b>PROOF PRESSURE:</b>	1.5 x Range
<b>BURST PRESSURE:</b>	4 x Range; 20,000 maximum

## CONSTRUCTION

<b>BODY MATERIAL:</b>	17-4 PH Stainless Steel
<b>DIAPHRAGM MATERIAL:</b>	17-4 PH Stainless Steel
<b>O-RING SIZE:</b>	2-012
<b>ELECTRICAL CONNECTION:</b>	PT06F-10-6S (not included)
<b>WEIGHT:</b>	42.5 g (1.5 oz)
<b>DIMENSIONS:</b>	See below



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### Servicing North America:

<b>U.S.A.:</b> <u>ISO 9001 Certified</u>	One Omega Drive, Box 4047 Stamford, CT 06907-0047 Tel: (203) 359-1660 e-mail: info@omega.com	FAX: (203) 359-7700
<b>Canada:</b>	976 Bergar Laval (Quebec) H7L 5A1, Canada Tel: (514) 856-6928 e-mail: info@omega.ca	FAX: (514) 856-6886

### For immediate technical or application assistance:

<b>U.S.A. and Canada:</b>	Sales Service: 1-800-826-6342 / 1-800-TC-OMEGA® Customer Service: 1-800-622-2378 / 1-800-622-BEST® Engineering Service: 1-800-872-9436 / 1-800-USA-WHEN®	
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## 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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