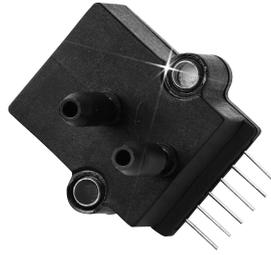


omega.com[®]Ω OMEGA[®]

PX137 SERIES

Pressure Sensors

INSTRUCTION
SHEET

M2001/0902

General Description

The OMEGA[®] PX137 Series Pressure Transducer uses state-of-the-art micromachined silicon pressure sensors in conjunction with stress-free packaging techniques to provide highly accurate, temperature compensated pressure transducers for the most demanding applications.

PX137 pressure transducers are available in absolute and differential models. Differential models can also be used to measure gage pressure and vacuum by simply varying the pressure connections. To measure gage pressure, make the pressure connection to port B and leave port A open to the atmosphere. For vacuum measurement, connect to port A and leave port B open.

Available Models

Gage/Differential Pressure Ranges	Model	FS Output (@12V Exc.)
0 to 0.3 PSI	PX137-0.3 DV	20 ±2 mV
0 to 1 PSI	PX137-001 DV	18 ±1 mV
0 to 5 PSI	PX137-005 DV	60 ±2.5 mV
0 to 15 PSI	PX137-015 DV	90 ±5 mV
0 to 30 PSI	PX137-030 DV	90 ±5 mV
0 to 100 PSI	PX137-100 DV	100 ±5 mV

Absolute Pressure Ranges	Model	FS Output (@12V Exc.)
0 to 15 PSIA	PX137-015AV	90 ±5 mV
0 to 30 PSIA	PX137-030AV	90 ±5 mV
0 to 100 PSIA	PX137-100AV	100 ±5 mV

Unpacking

Remove the Packing List and verify that you have received all equipment, including the following:

PX137 Series Pressure Sensor
Operator's Manual

If you have any questions about the shipment, please call the OMEGA Customer Service Department at 1-800-622-2378 or (203) 359-1660. When you receive the shipment, inspect the container for any signs of damage. Note any evidence of rough handling in transit. Immediately report any damage to the shipping agent.

WARNING

Read Before Installation

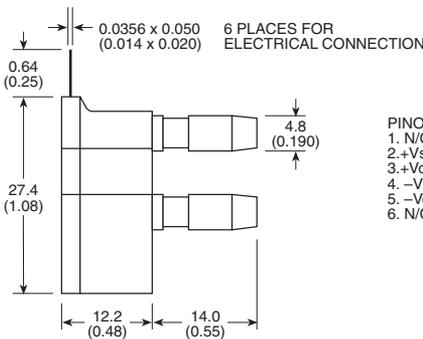
Fluid hammer and surges can destroy any pressure transducers and must always be avoided. A pressure snubber should be installed to eliminate the damaging hammer effects. Fluid hammer occurs when a liquid flow is suddenly stopped, as with quick closing solenoid valves. Surges occur when flow is suddenly begun, as when a pump is turned on at full power or a valve is quickly opened.

Liquid surges are particularly damaging to pressure transducers if the pipe is originally empty. To avoid damaging surges, fluid lines should remain full (if possible), pumps should be brought up to power slowly, and valves opened slowly. To avoid damage from both fluid hammer and surges, a surge chamber should be installed, and a pressure snubber should be installed on every transducer.

Symptoms of fluid hammer and surge's damaging effects:

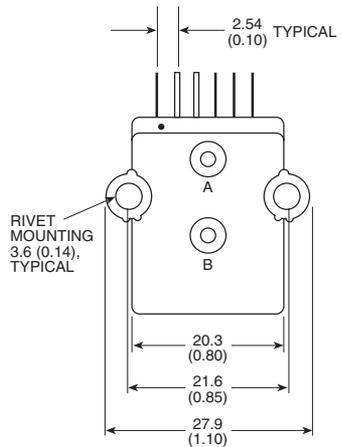
1. Pressure transducer exhibits an output at zero pressure (large zero offset). If zero offset is less than 10% FS, user can usually re-zero meter, install proper snubber and continue monitoring pressures.
2. Pressure transducer output remains constant regardless of pressure.
3. In severe cases, there will be no output.

Dimensions



- PINOUT:
1. N/C
 2. +Vsupply
 3. +Voutput
 4. -Vsupply
 5. -Voutput
 6. N/C

DIMENSIONS IN MM
DIMENSIONS IN (IN)





Specifications

Excitation Voltage:	12 Vdc (16 max.)
Linearity and Hysteresis:	$\pm 0.1\%$ FS typical/ 0.5% max. $\pm 0.5\%/1\%$ for 0.3 PSI range
Repeatability:	$\pm 0.1\%$ FS typical (0.3% max.)
Zero Balance:	± 1 mV (± 3 mV for 0.3 PSI range)
Input Resistance:	10 k Ohms
Storage Temp.:	-40 to 125°C (-40 to 257°F)
Operating Temp.:	0 to 70°C (32 to 158°F)
Span Temp. Effects:	0 to 50°C , $\pm 1.5\%$ FS 50 to 70°C , $\pm 0.5\%$ FS
Zero Temp. Effects:	0 to 50°C , ± 0.8 mV; 50 to 70°C , ± 0.2 mV For 0.3 PSI range 0 to 50°C , ± 1.0 mV, 50 to 70°C , ± 0.5 mV
Proof Pressure:	$>3\text{X}$ FS Pressure
Burst Pressure:	$>5\text{X}$ FS Pressure
Common Mode Pressure:	50 PSI
Media Compatibility:	For use with gages compatible with silicon, glass-filled nylon, and alumina ceramic



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Customer Service: 1-800-622-2378 / 1-800-622-BEST®
Engineering Service: 1-800-872-9436 / 1-800-USA-WHEN®
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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.

**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 which wear are not warranted, including but 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 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. 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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