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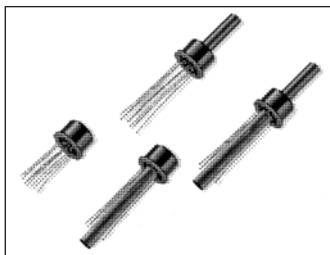
PX70 Series

Pressure Sensors

INSTRUCTION
SHEET

M2000/1207

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Unpacking

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

PX70 Series Pressure Sensor (1)

Instruction Manual (1)

If you have any questions about the shipment, please call the OMEGA Customer Service Department. When you receive the shipment, inspect the container and equipment for signs of damage. Note any evidence of rough handling in transit. Immediately report any damage to the shipping agent.

NOTE

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

General Description

OMEGA's PX70 Series is a piezoresistive pressure sensor in a TO-5 package suitable for PC board mounting. These devices are available in full scale ranges from 0.03 to 100 PSI as well as several standard package options. For gage and absolute ranges, the PX71 is available without fittings, while the PX72 has a top-mounted tube fitting (bottom vent for gage). The PX73 is also available in gage ranges and has a bottom tube fitting (top vent). For differential measurement, the PX74 has top and bottom tubes and can be used for uni-directional or bi-directional measurement. All models are operated from a constant current excitation supply. The PS-KIT-1 provides the necessary components to convert a constant voltage (9-30 Vdc) to a 1 mA constant current source.



Available Models

GAGE AND DIFFERENTIAL PRESSURE RANGES	NO FITTING	TOP FITTING	BOTTOM FITTING	DIFFERENTIAL
	MODEL NO.	MODEL NO.	MODEL NO.	MODEL NO.
0 to 0.3 PSI	PX71-0.3GV	PX72-0.3GV	PX73-0.3GV	PX74-0.3DV
0 to 0.8 PSI	PX71-0.8GV	PX72-0.8GV	PX73-0.8GV	PX74-0.8DV
0 to 1.5 PSI	PX71-1.5GV	PX72-1.5GV	PX73-1.5GV	PX74-1.5DV
0 to 5.0 PSI	PXC71-005GV	PX72-005GV	PX73-005GV	PX74-0050V
0 to 15 PSI	PX71-015GV	PX72-015GV	PX73-015GV	PX74-015DV
0 to 30 PSI	PX71-030GV	PX72-030GV	PX73-030GV	PX74-030DV
0 to 60 PSI	PX71-060GV	PX72-060GV	PX73-060GV	PX74-060DV
0 to 100 PSI	PX71-100GV	PX72-100GV	PX73-100GV	PX74-100DV

ABSOLUTE PRESSURE RANGES		
0 to 5.0 PSIA	PX71-005AV	PX72-005AV
0 to 15 PSIA	PX71-015AV	PX72-015AV
0 to 30 PSIA	PX71-030AV	PX72-030AV
0 to 60 PSIA	PX71-060AV	PX72-060AV
0 to 100PSIA	PX71-100AV	PX72-100AV

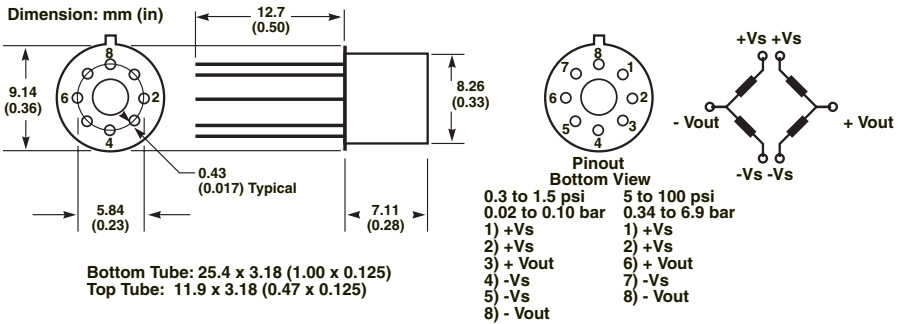


Read Before Installation

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.



Specifications

Linearity:	±0.5% FS
Excitation Current:	1.5 mA
Storage Temp. Range:	-40 to 125°C
Compensated Temp. Range:	-15 to 85°C
Zero Temp. Coefficient:	0.07% FS/C
Span Temp. Coefficient:	0.05% FS/C
Bridge Impedance:	3300 ±500 ohms
Proof Pressure:	>3X Full scale
Burst Pressure:	>5X Full scale
Sensitivity (0@ 1.5 mA excitation):	
0.0 to 0.3 PSI:	165 mV/PSI
0.0 to 0.8 PSI:	65 MV/PSI
0.0 to 1.5 PSI:	35 mV/PSI
0.0 to 5.0 PSI:	20 mV/PSI
0 to 15 PSI:	9.5 mV/PSI
0 to 30 PSI:	5.5 mV/PSI
0 to 60 PSI:	3.0 mV/PSI
0 to 100 PSI:	2.0 mV/PSI



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WARNING: These products are not designed for use in, and should not be used for, human 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 in which wear is not warranted, include but are not limited to contact points, fuses, and triacs.

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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 / 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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