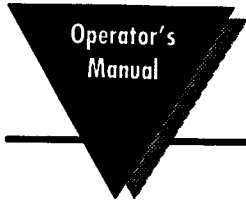
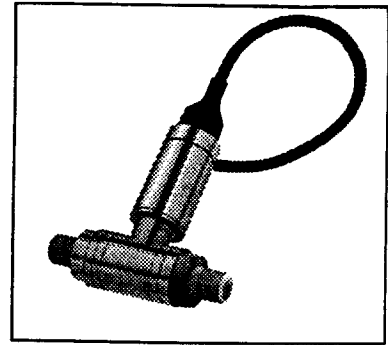




PX821 Series Wet/Wet Differential Pressure Transducer



M2033/1294

Unpacking Instructions

Remove the Packing List and verify that you have received all equipment, including the following (quantities in parentheses):

- PX821 Transducer (1)
- Operator's 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

The OMEGA® PX821 Series Differential Pressure Transducer is a high accuracy, lightweight, wet/wet differential pressure transducer. For compatibility with a number of liquid and gaseous media, both the positive and negative pressure ports are manufactured from Hastelloy C276 and 316L stainless steel. In addition, its rugged, all welded construction assures excellent resistance to shock, vibration, and overload.

Available Models

Model	Range (PSID)
PX821-005DV	0-5
PX821-010DV	0-10
PX821-015DV	0-15
PX821-020DV	0-20
PX821-030DV	0-30
PX821-050DV	0-50
PX821-075DV	0-75
PX821-100DV	0-100
PX821-200DV	0-200
PX821-300DV	0-300
PX821-500DV	0-500
PX821-900DV	0-900

WARNING

READ BEFORE INSTALLATION

Fluid hammer and surges can destroy any pressure transducer 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.

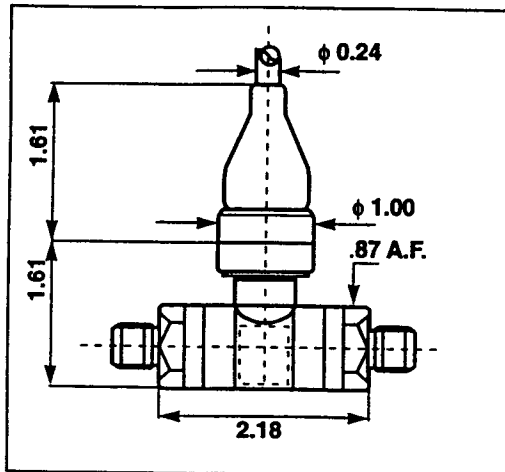
Symptoms of fluid hammer and surge's damaging effects:

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.

Electrical Connections

- Red + Excitation
- White Excitation
- Yellow + Output
- Blue - Output
- Shield N/C to transducer body

Dimensions



Specifications (continued)

- Temperature Range: -20 to 80°C (-5 to 175°F)
- Temperature Effects: ±1.5% FS total error band from -5 to 175°F
- Max. Static Pressure: 1000 PSI
- Overpressure: The operating pressure range can be exceeded by the following multiples causing negligible calibration change:
 - Positive Connection: 6X for 5 PSI range, 4X for 10 PSI and above to 2000 PSI max.
 - Negative Connection: 4X for 5 PSI range, 2X for 10-75 PSI ranges, 1.50 PSI max. for higher ranges.
- Vibration Effects: Less than 0.05% FS/g @ 30 g 10 Hz to 2 kHz
- Wetted Parts: 316L SS and Hastelloy C276
- Pressure Connections: 1/4" - 18 NPTM
- Electrical Connection: 3 ft. shielded cable
- Weight: 7.7 oz. (218 grams)

Specifications

- Excitation: 10 VDC regulated
- Output: 50 millivolts for 5 PSI range
100 millivolts for all other ranges
- Output Impedance: 1000 ohms nominal
- Load Impedance: >100K ohms for rated performance
- Accuracy: ±0.1% BFSL (combined linearity hysteresis and repeatability)
- Zero Offset: ±3 mV maximum



WARRANTY

OMEGA warrants this unit to be free of defects in materials and workmanship and to give satisfactory service 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 should malfunction, 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. However, this WARRANTY is VOID if the unit shows evidence of having been tampered with or shows evidence of being 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 or which are damaged by misuse are not warranted. These include contact points, fuses, and triacs.

OMEGA is glad to offer suggestions on the use of its various products. Nevertheless, OMEGA only warrants 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, 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.

Every precaution for accuracy has been taken in the preparation of this manual; however, OMEGA ENGINEERING, INC. neither assumes responsibility for any omissions or errors that may appear nor assumes liability for any damages that result from the use of the products in accordance with the information contained in the manual.

SPECIAL CONDITION: Should this equipment be used in or with any nuclear installation or activity, purchaser will indemnify OMEGA and hold OMEGA harmless from any liability or damage whatsoever arising out of the use of the equipment in such a manner.



Servicing USA and Canada: Call OMEGA Toll Free

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|---|--|
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- 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™
TELEX: 996404 EASYLINK: 62968934 CABLE: OMEGA

Servicing Europe: United Kingdom Sales and Distribution Center

25 Swannington Road, Broughton Astley, Leicestershire
LE9 6TU, England
Telephone: 44 (1455) 285520 FAX: 44 (1455) 283912

RETURN REQUESTS / INQUIRIES

Direct all warranty and repair requests/inquiries to the OMEGA ENGINEERING 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.

FOR **WARRANTY RETURNS**, please have the following information available BEFORE contacting OMEGA:

1. P.O. 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 OR CALIBRATION**, consult OMEGA for current repair/calibration charges. Have the following information available BEFORE contacting OMEGA:

1. P.O. number to cover the COST of the repair/calibration,
2. Model and serial number of product, and
3. Repair instructions and/or specific problems relative to the product.

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