PX5000 Series
High Performance Sputtered Thinfilm Pressure Transducer

SPECIFICATIONS:

Electrical:
Excitation: 10 V dc
Output FSO: 30 mV typical, 2.6 mV minimum
Input Resistance: 1000 ohms typical, 800 ohms minimum, 1500 ohms maximum
Output Resistance: 1000 ohms ±200 ohms.
For 350 ohm bridge see custom configurations
Insulation Resistance: 500 megohms minimum

Sensing Element: 4 active-arm bridge using sputtered-deposited thin-film elements

Performance:
Accuracy: Combined Linearity, Hysteresis and Non-repeatability: ±0.10% FSO 0-15 thru 0-999 PSI ±0.15% FSO 1,000 PSI and above
Calibration Stability: ±0.1% for 18 months
Reliability: MTBF = 100,000 hours

Environmental:
Operating Temp Range: -54° to 150°C
(-55° to 300°F)
Compensated Temp Range:
-54° to +121°C (-55° to +250°F)
Thermal Effects: Span: ±0.005% FSO/°F
Zero: ±0.005% FSO/°F
Vibration Sensitivity: At 35g peak sinusoidal vibration from 10 Hz to 2000 Hz (5° D.A.), the output shall not exceed 0.04% FSO/g for 15 PSI range to 0.003% FSO/g for 1000 PSI and above
Natural Frequency: 50 kHz for 5,000 PSI range, decreasing logarithmically to 5kHz for 15 PSI range
Shock: Qualification level of 100g, 11 msec half sine wave without damage
Humidity: Qualified per MIL-STD-810
Electrostatic Discharge (ESD): Protected to 15kV

Pressure:
Pressure: 2.0 times rated pressure or 15,000 PSI whichever is less, will not cause changes in performance beyond the specified tolerances
Burst Pressure: 3.0 times rated pressure or 20,000 PSI whichever is less, will not cause rupture of the pressure containment cavity

Mechanical:
Wetted Parts: 17-4 PH Stainless Steel or 15-5 PH Stainless Steel
Pressure Fitting: ¼-20 male per MS33656-4
Mounting Sensitivity: Less than 0.05% FSO change in zero when mounted by the pressure port to a manifold at a torque of 15 ft-lb on a solid copper gasket
Mating Connector: (Not included)
PTS06A-10-6S
Weight: 5 oz (145g) maximum

Dimensions shown in Inches (mm)

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WRENCH FLATS:

.688 ± .010
(17.47 ± .25)

PRESSURE FITTING PER MS33656-4

1.01 MAX
(25.7)
DIA.

1.96 MAX
(49.8).

IDENTIFIED IN THIS AREA

ELECTRICAL RECEPTACLE
BENDIX PTIH-10-6P (101)
(OR EQUIVALENT)
MATING CONNECTOR
BENDIX PTS06A-10-6S (SR)
(OR EQUIVALENT) NOT SUPPLIED
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 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. 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 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 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, 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. 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, consult OMEGA for current repair charges. Have the following information available BEFORE contacting OMEGA:
1. P.O. number to cover the COST of the repair,
2. Model and serial number of product, and
3. Repair instructions and/or specific problems relative to the product.