Where Do I Find Everything I Need for Process Measurement and Control?
OMEGA…Of Course!

TEMPERATURE
- Thermocouple, RTD & Thermistor Probes, Connectors, Panels & Assemblies
- Wire: Thermocouple, RTD & Thermistor
- Calibrators & Ice Point References
- Recorders, Controllers & Process Monitors
- Infrared Pyrometers

PRESSURE, STRAIN AND FORCE
- Transducers & Strain Gages
- Load Cells & Pressure Gages
- Displacement Transducers
- Instrumentation & Accessories

FLOW/LEVEL
- Rotameters, Gas Mass Flowmeters & Flow Computers
- Air Velocity Indicators
- Turbine/Paddlewheel Systems
- Totalizers & Batch Controllers

pH/CONDUCTIVITY
- pH Electrodes, Testers & Accessories
- Benchtop/Laboratory Meters
- Controllers, Calibrators, Simulators & Pumps
- Industrial pH & Conductivity Equipment

DATA ACQUISITION
- Data Acquisition & Engineering Software
- Communications-Based Acquisition Systems
- Plug-in Cards for Apple, IBM & Compatibles
- Datalogging Systems
- Recorders, Printers & Plotters

HEATERS
- Heating Cable
- Cartridge & Strip Heaters
- Immersion & Band Heaters
- Flexible Heaters
- Laboratory Heaters

ENVIRONMENTAL MONITORING AND CONTROL
- Metering & Control Instrumentation
- Refractometers
- Pumps & Tubing
- Air, Soil & Water Monitors
- Industrial Water & Wastewater Treatment
- pH, Conductivity & Dissolved Oxygen Instruments

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WARNING: These products are not designed for use in, and should not be used for, patient-connected applications.
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.

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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.

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Installation

CAUTION:
1. INCORRECT ELECTRICAL CONNECTIONS CAN, IN CERTAIN CIRCUMSTANCES, DESTROY THE ELECTRONIC OUTPUT CIRCUIT.
2. BEFORE APPLYING ELECTRICAL POWER, MAKE SURE THE SUPPLY VOLTAGE IS TO THE CORRECT RATING.
3. THIS IS A VERY SENSITIVE SENSOR, ONLY APPLY PRESSURE WITHIN THE PRESSURE RANGE.

Mounting

Two M5 threaded holes in the base of the sensor provide mounting points.

Note: The screws must not enter the holes more than 0.472" into the sensor body.

The installed position of the sensor should be away from sudden temperature variations, shocks and vibrations and should not be close to strong electromagnetic fields (transformers, motors etc.). The sensor can be mounted in any position, but mounting at an angle may require zero adjustment. For very low pressure sensors (less than 0.08 inH2O) the recommended mounting is horizontal.

Electromagnetic Interference

To avoid electrical interference, use shielded cable with the shield connected to earth ground at both ends. The ground of the sensor can be the casing or the ground terminal screw.

Electrical Connections

PX938 Series (current output)

The maximum allowable load resistance is calculated to the formula:

\[ R_{\text{Max}} = 0.05 \times (V_{\text{supply}} - 10) \text{ k\(\Omega\)} \]

Where: \( R_{\text{Max}} \) in \( \text{k\(\Omega\)} \) and \( V \) in Volts

Note:
- Mounting at an angle may require zero adjustment.
- For very low pressure sensors (less than 0.08 inH2O), the recommended mounting is horizontal.
PX938 Series (Unidirectional voltage output)

<table>
<thead>
<tr>
<th>Signal</th>
<th>Minimum load</th>
<th>Power supply</th>
<th>Connection</th>
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</table>
| 1kΩ | 10 to 30 V d.c. | 10 to 30 V d.c. | + for positive, - for negative, and 0 for neutral; connect the output to signal for positive and 0 for negative signal.

**Specifications**
- **Pressure range:** ±0.04 inH₂O to ±300 psid
- **Pressure media:**
  - X750 inconel diaphragm: Any fluids, compatible with stainless steel (316L), X750 Inconel, 600 Inconel, Loctite Master joint 510
  - Beryllium copper diaphragm: Any fluids, compatible with stainless steel (316L), beryllium copper, brass and soft solder, Loctite Master joint 510
- **Accuracy:** ±0.1% BSL (including linearity, hysteresis and repeatability)
- **Long term stability:** ±0.1% over 1 year at stabilized temperature
- **Weight:** 3.4 to 4.2 lbs

**Adjustments**
- **Zero adjustment:**
  - Zero adjustment is carried out with no pressure applied.
  - Depending on the model, set the zero adjustment to: 0.00 V, 2.50 V, 4.00 mA or 12.00 mA
- **Span adjustment:**
  - Span adjustment is carried out with the required span pressure applied to the HI pressure connector.
  - Depending on the model, set the span adjustment to: 5.00 V, 10.00 V, or 20.00 mA.
  - Release the pressure.

**Completion**
- Check the output at zero pressure and if necessary, repeat the zero and span adjustments.
- Release the pressure and disconnect the equipment.
- Refit the cover.

**Warning:** Connection of this sensor must only be carried out with all power supplies isolated.

The wiring used must meet the requirements of inductance and, the inductance/resistance ratio.

To avoid electrical interference use shielded cable with the shield connected to the ground of the non-hazardous area.

DO NOT CONNECT the shield to ground at both ends - this does not comply with the requirements of intrinsically safe installations.