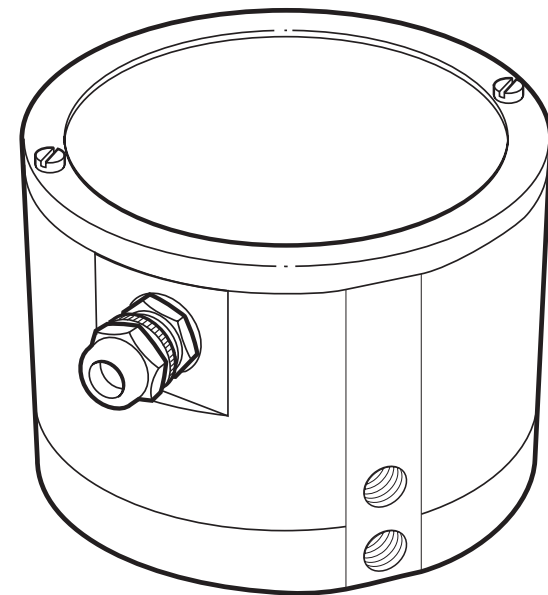
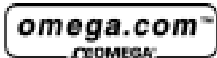


User's Guide

PX548

Wet/Wet Differential Pressure Sensor





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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.

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Adjustments

The following equipment is required to carry out the adjustments:

- Power supply
- Voltmeter or
- Milli-ammeter
- Pressure standard

◆ Connect the sensor as shown in Installation. The sensor should be put in its normal operating position (vertical or horizontal). Remove the cover to gain access to the zero and span adjustment potentiometers.

Zero adjustment

- ◆ Depending on the model, set the zero adjustment to: 0.00V, 4.00 mA or 12.00 mA.
- ◆ Span adjustment is carried out with the required span pressure applied to the +
- ◆ Depending on the model, set the span adjustment to: 5.00V, 10.00V 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.

Specification

Pressure range:.....0 to ±0.2 inH₂O - 0 to ±150 psid

Pressure media:

All fluids, gases and vapors compatible with anodized AU4G, beryllium copper, tin and brazing solder and Loctite Master Joint 510

Accuracy:..... ±0.25% FS BSL
(including linearity, hysteresis and repeatability)

Long term stability:.....±0.3% over 12 months

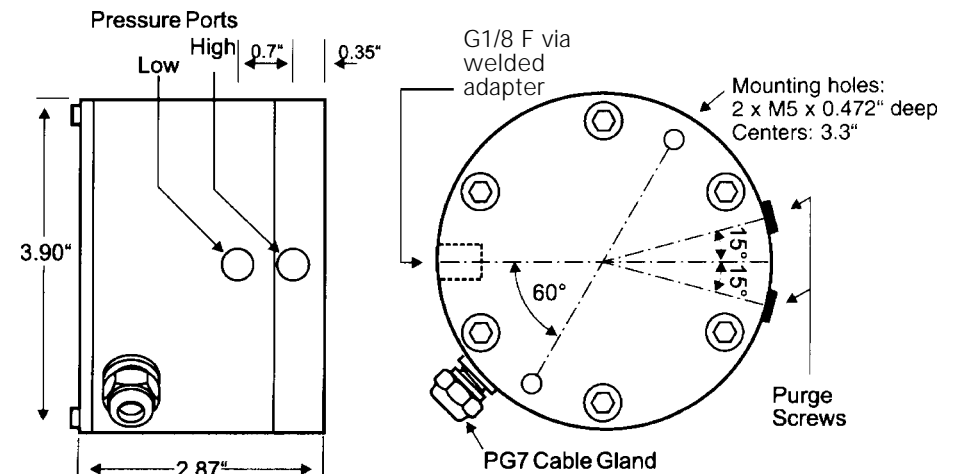
Weight (approximate).....2.1lbs

Dimensions.....see below

Electrical Specification

Power supply

LPX 5000.....	10 to 30V d.c.
LPM 5000.....	18 to 30V d.c.
LPM 5000 (±5V d.c. output).....	±12V d.c.



Dimensions

Installation

CAUTION:

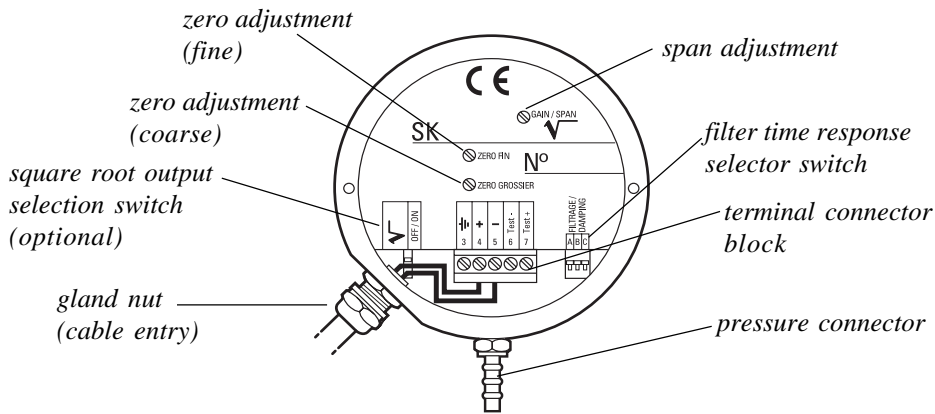
1. INCORRECT ELECTRICAL CONNECTIONS CAN, IN CERTAIN CIRCUMSTANCES, DESTROY THE ELECTRONIC OUTPUT CIRCUIT.
2. BEFORE APPLYING ELECTRICAL POWER, MAKE SURE THE SUPPLY VOLTAGE IS TO THE CORRECT RATING.
3. THIS A VERY SENSITIVE SENSOR, ONLY APPLY PRESSURE WITHIN THE PRESSURE RANGE.

Mounting

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

Note: The screws must not enter the holes more than 0.4" 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 2.0 inH₂O) the recommended mounting is horizontal.



Internal detail

Electromagnetic Interference

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

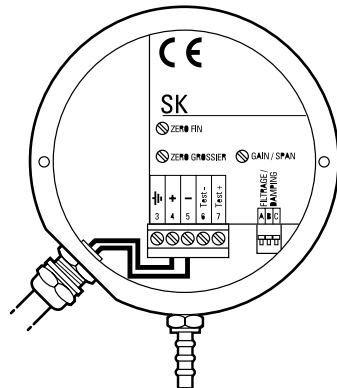
Electrical connections

PX548 Series (current output)

The maximum allowable load resistance is calculated to formula:

$$R_{Max} = 0.05 (V \text{ supply} - 10) \text{ kW}$$

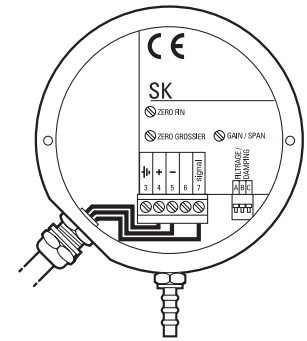
Where: R_{Max} in kW and V in Volts



PX548 Series (Unidirectional voltage output)

Minimum load 2 kW

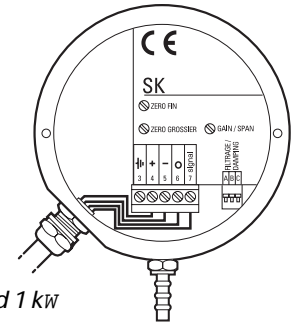
Note: Connections 5 and 6 are common



If the output cable passes through an area of electrical disturbance, use a recommended load impedance of between 2 kW and 10 kW. Connect the load resistance between the wires corresponding to signal and - terminal at a point furthest from the sensor.

PX548 Series bidirectional operation using bipolar power supply (± 12 Vdc) with bidirectional output (0 ± 5 Vdc or 0 ± 2.5 Vdc)

Connect the power supply to + for positive, - for negative, and 0 for neutral; connect the output to signal for positive and 0 for negative signal.



Minimum load 1 kW

Pressure connections

The high pressure connector is marked + and the low pressure connector is marked -.

Purging or de-gassing the sensor

Two 5 mm hexagonal socket bleed screws are located on the outer casing and can be loosened to bleed the two pressure connectors. Make sure that these screws are tightened after this operation.

Note: It is possible to changeover the bleed screws and pressure connectors enabling easier access or permitting installation in a difficult position.

Square root output option

This option only applies to the LPX 5000 sensor with 4 to 20 mA two wire connection and the square root electronics fitted. A switch next to the terminal block selects the output mode.

Switch	Output mode
OFF	Linear
ON	Square root

Filter response time

The filter response time of the sensor, additional to the built-in response time of 10 milliseconds (approximately), can be set using the three switches next to the terminal connector. Using combinations of the switches can set different times.

Switch	Filter response time
A	200 milliseconds
B	400 milliseconds
C	1 second

Example:
Switch A+B = 600 milliseconds

Note: A hollow point is visible when a switch is in the 'on' position.

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