The PSW-12 Series switch utilizes a diaphragm sensor to detect a pressure change. The response, at a predetermined set point, actuates a SPDT or DPDT snap-acting switch, converting a pressure signal into an electrical signal. Control set point may be varied by turning the internal slotted adjustment screw according to procedures outlined in Part II-Adjustments.

Date code format on enclosure is “YYWW” for year and week.

Part I - Installation

Tools Needed
1-1/6” Open end wrench

Mounting

Always locate units where shock, vibration and ambient temperature fluctuations are minimal. Do not mount in ambient temperature areas exceeding 176°F.

If severe pressure surges are expected, consider the use of a pressure snubber.

For pressure models, mount using pressure connection: Always use a wrench on pressure connection wrench flat. (See Figure 1)

Figure 1

The product may be mounted in any position. However, if installation location results in frequent exposure to liquid it is recommended that the product be mounted vertically with the pressure connection down. If product is to be set after mounting, verify that adjustment opening is accessible, “front” marking on nameplate must face the operator.

Panel Mounting via 1/2” NPTM Electrical Connection
When panel mounting, mount through 7/8” clearance hole in panel. Use 1/2” conduit nut to secure in place. Always support the product by holding a wrench on the hex.

To attach conduit connection, hold electrical connection steady with wrench on hex, then thread on conduit.
WIRING

DISCONNECT ALL SUPPLY CIRCUITS BEFORE WIRING THE PRODUCT. WIRE IN ACCORDANCE WITH LOCAL AND NATIONAL ELECTRICAL CODES. THE WIRES SHOULD BE PROTECTED AGAINST MECHANICAL DAMAGE BY USE OF A CONDUIT OR OTHER SUITABLE MEANS.

EXTERNAL GROUNDING SCREW (ADD -GND TO OMEGA PART NUMBER) IS REQUIRED FOR NON-METALLIC CONDUIT SYSTEMS. (SEE FIGURE 2)

ELECTRICAL RATINGS STATED IN THE LITERATURE AND PRINTED ONTO THE PRODUCT HOUSING MUST NOT BE EXCEEDED. OVERLOAD ON A SWITCH CAN CAUSE FAILURE ON THE FIRST CYCLE.

1/2" NPT (male) conduit connection is provided on top of the product with 72" long, 18 AWG leadwires. The product is available with SPDT or DPDT operation. External grounding screw and clamp is provided with option GND (see figure 2).

Factory sealed leadwires are color coded:

<table>
<thead>
<tr>
<th>TERMINALS</th>
<th>SPDT</th>
<th>DPDT</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Circuit 1</td>
<td>Circuit 2</td>
</tr>
<tr>
<td>Common</td>
<td>Brown</td>
<td>Brown</td>
</tr>
<tr>
<td>Normally Closed</td>
<td>Red</td>
<td>Yellow</td>
</tr>
<tr>
<td>Normally Open</td>
<td>Blue</td>
<td>Red</td>
</tr>
<tr>
<td>Ground</td>
<td>Green</td>
<td>Black</td>
</tr>
</tbody>
</table>

For setting on RISE, apply desired pressure and turn adjustment clockwise until switch actuates (circuit across N.O. and COM terminals closes).

For setting on FALL, apply pressure equal to normal system operating pressure. Reduce source pressure to setpoint value. Turn adjustment counterclockwise until switch actuates (circuit across N.C. and COM terminals closes).

Part II - Adjustments

Tools Needed

Flathead screwdriver with 3/16” or 1/4” wide blade

1. Connect control to pressure source.
2. With power disconnected, slide cover toward electrical terminations while twisting it to overcome friction.
3. Connect power to terminals or leads.
4. Insert screwdriver into adjustment slot and turn clockwise to increase setting or counterclock-wise to decrease setting. (See figure 3)

For setting on RISE, apply desired pressure and turn adjustment clockwise until switch actuates (circuit across N.O. and COM terminals closes).

For setting on FALL, apply pressure equal to normal system operating pressure. Reduce source pressure to setpoint value. Turn adjustment counter clockwise until switch actuates (circuit across N.C. and COM terminals closes).
WARRANTY/DISCLAIMER

OMEGA ENGINEERING, INC. warrants this unit to be free of defects in materials and workmanship for a period of **37 months** from date of purchase. OMEGA’s WARRANTY adds an additional one (1) month grace period to the normal **three (3) 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.

**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 the company 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.

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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.

**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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- pH, Conductivity & Dissolved Oxygen Instruments

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