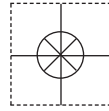


CE



User's Guide

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PSW300 Series Pressure Switches



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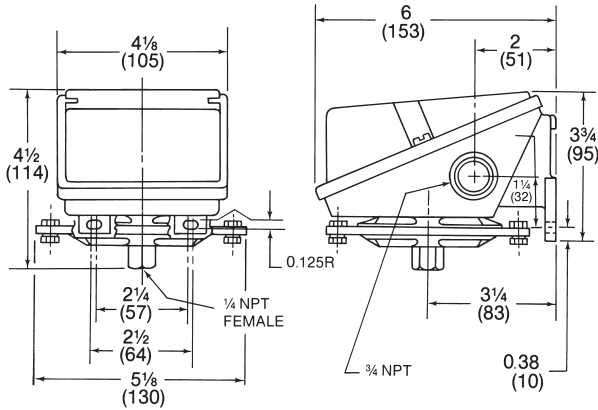
It is the policy of OMEGA to comply with all worldwide safety and EMC/EMI regulations that apply. OMEGA is constantly pursuing certification of its products to the European New Approach Directives. OMEGA will add the CE mark to every appropriate device upon certification.

The information contained in this document is believed to be correct, but OMEGA Engineering, Inc. accepts no liability for any errors it contains, and reserves the right to alter specifications without notice.

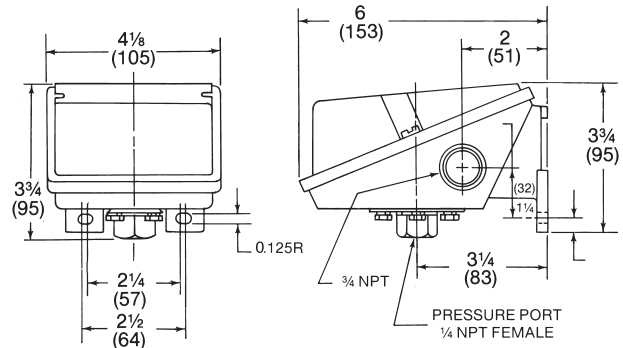
WARNING: These products are not designed for use in, and should not be used for, patient-connected applications.

INSTALLATION AND ADJUSTMENT INSTRUCTIONS

OMEGA® PSW300 SNAP-ACTION SWITCHES FOR PRESSURE CONTROL



STANDARD RANGES
10, 30, 60, 100, 150 in.H₂O



STANDARD RANGES
15, 30, 60, 100, 200, 400, 600 PSI
*1000, 2000, 3000 PSI

OPERATION

The OMEGA® pressure control is a precision device which features a snap-action switch. Fixed deadband is available with single or dual SPDT independently adjustable switches with various electrical ratings. Adjustable deadband is available with SPDT switch with various electrical ratings. Several wetted material constructions for compatibility with pressure media may be obtained.

PSW321 through PSW348 switches may be set to operate simultaneously or up to 85 percent of the range apart. The deadband of each switch will be within the limits noted on the nameplate. PSW301 through PSW311 switches may be set to operate with any deadband within the limits shown on the nameplate.

MOUNTING

The PSW300 Series OMEGA® snap-action pressure switch has a NEMA-4X enclosure which is an epoxy coated aluminum casting.

Two holes in the integral bracket are used to surface mount the control. Location of these holes is shown on the general dimension drawings. Mount on a vibration free surface or pipe in any orientation. When tightening control to pressure line, always use the wrench flats or

hex on the pressure connection. *NEVER TIGHTEN BY TWISTING THE CASE.*

ELECTRICAL CONNECTION

Remove cover, held in place by two screws.

Wire directly to the switch according to circuit requirements. Terminals are marked common (C), normally open (NO) and normally closed (NC).

CONDUIT CONNECTIONS

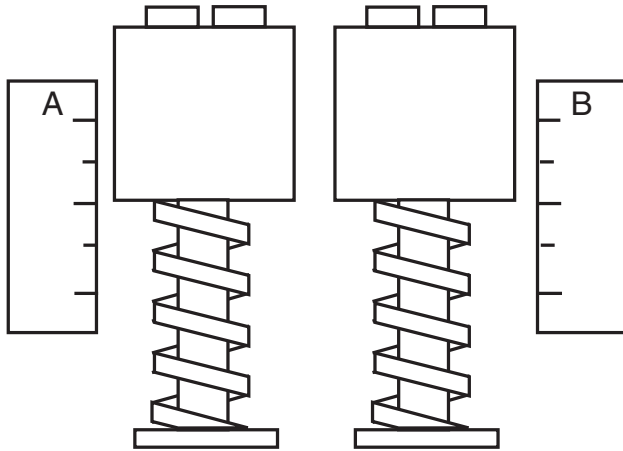
One 3/4 NPT hole fitted with a shipping plug, and two additional knock outs are provided. The knockouts may be removed by placing a screwdriver in the slot and rapping sharply with a hammer. It is recommended that Teflon tape or other sealant be used on conduit bushings or plug threads to ensure integrity of the enclosure.

SETPOINT ADJUSTMENTS

Setpoints are changed by means of the setpoint adjusters. The PSW300 Series adjustable deadband and PSW320, 330, and 340 Series dual switches each have two adjusters. On switches with two adjusters, the one on the left is referred to as "A" and the right one is referred to as "B"; see illustration. Setpoints can be adjusted from 20 to 100 percent of full range on increasing pressure.

PSW321 THROUGH PSW348 DUAL SWITCH

Remove cover. For setpoint adjustment on either increasing or decreasing pressure to



within $\pm 1/0$ of nominal range, mount the switch on a calibration stand and use a suitable reference such as an OMEGA[®] gauge or test gauge. Monitor switch with a light or meter.

Pressurize the system to the required higher setpoint pressure and turn adjuster "B" until the switch operates or resets as required. When the setpoint has been achieved, raise and lower the pressure to ensure that the setpoint is correct. Then reduce system pressure to the required lower setpoint pressure and turn adjuster "A" until the switch operates or resets as required. Verify this setpoint by raising and lowering pressure. Now increase system pressure to higher setpoint and make final adjustment on "B."

PSW301 THROUGH PSW311 ADJUSTABLE DEADBAND SWITCH

Remove cover. Adjuster "B" controls the operating point of the switch on increasing pressure. Adjuster "A" controls the reset point of the switch on decreasing pressure.

For accurate setpoint adjustment, mount the switch on a calibration stand and use a suitable reference such as an OMEGA[®] gauge or test gauge. Monitor switch with a light or meter. Pressurize the system to the required setpoint pressure. Turn adjuster "B" until switch operates. Then lower pressure to the reset point, turn adjuster "A" until the switch resets. Now

increase pressure to the operating point and make final adjustment on "B." Raise and lower pressure to ensure that the setpoint and reset point are correct.

SOME PRECAUTIONS TO OBSERVE

Do not loosen the screws holding the precision switch element(s) or mounting bracket in place.

Nameplate *PROOF* pressure should not be exceeded. Intermittent operation up to proof pressure is permissible, however, some change of setpoint may be noted. Operation and correct setpoint actuation should be routinely tested.

WARRANTY/DISCLAIMER

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.

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, EXPRESS 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. 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.

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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