Installation:

1b. 1/2" NPT Switch: Apply a curing type thread sealant (such as Loc-tite #565 with primer "N"), which is compatible with the liquid media. We do not recommend pipe tape. For Carbon Steel units torque one to two turns (maximum) past the hand-tight engagement. For Stainless Steel units torque one turn (maximum) past the hand-tight engagement. Over Torque of sensor can permanently damage sensor.

2. Sensor may be installed horizontally or up to 45° from horizontal, only. (See Figure 1)

3. Do not install sensor close to infrared sources.

4. Prism surface must be at least 2" from any reflective surfaces.

5. Connect appropriate voltage supply to red lead. For 12 VDC units, connect to 12 VDC ±5%.

6. Inductive loads must be diode-suppressed.

Maintenance:

Sensor may require a periodic cleaning of prism surface. A mild detergent may be used to clean prism surface.

This product complies with EN61326 Electrical Equipment for Measurement, Control and Laboratory use - EMC Requirements for Minimum Requirements and Industrial Locations. Special caution should be taken to meet EN61000-4-5 Surge Immunity if any of the following conditions apply to the installation: The product is installed outside; the cable is greater than 30 meters in length. In order to meet the Surge Immunity requirements, the following conditions must be followed during installation:

1. Shielded cable must be used, and the shield must be tied to earth ground (not power supply ground) on at least one end of the cable shield/drain wire. The shield must be maintained all the way from sensor to the power supply.

2. If unshielded cable is used, an earth grounded metal conduit can be used to replace the shielded cable.

3. For the sensor with metal body or enclosure the body/enclosure must be grounded to earth. If a protective metal housing is used, the metal housing should be grounded to earth.

4. If a protective plastic housing is used, the housing must be able to withstand at least 2 kV from the housing to earth ground.

Important Points:

- Omega products must be maintained and installed in strict accordance with the National Electrical Code and the applicable Omega Product Instruction Bulletin that covers installation, operation and proper maintenance. Failure to observe this information may result in serious injury or damages.

- For hazardous area applications involving such things as, but not limited to, ignitable mixtures, combustible dust and flammable materials, use an appropriate explosion-proof enclosure or intrinsically safe interface device.

- Please adhere to the pressure and temperature limitations shown throughout this catalog for our level and flow sensors. These limitations must not be exceeded.

- Selection of materials for compatibility with the media is critical to the life and operation of Omega products. Take care in the proper selection of materials of construction, testing is required.

- Our sensors have been designed to resist shock and vibration. However, shock and vibration should be minimized.

- Filter liquid media containing particulate and/or debris to ensure the proper operation of our products.

- Electrical entries and mounting points in an enclosed tank may require liquid/vaporsealing.

- Our sensors must not be field-repaired.

- Physical damage sustained by product may render it unserviceable.

Specifications:

<table>
<thead>
<tr>
<th>Materials</th>
<th>Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Housing</td>
<td>Nickel-Plated Carbon Steel</td>
</tr>
<tr>
<td>Prism</td>
<td>Fused Glass</td>
</tr>
<tr>
<td>Operating Pressure</td>
<td>0 to 2500 psig, Max</td>
</tr>
<tr>
<td>Operating Temperature</td>
<td>40°F to 212°F (-40°C to 100°C)</td>
</tr>
<tr>
<td>Current Consumption</td>
<td>12V ~34mA No Load</td>
</tr>
<tr>
<td>Output</td>
<td>Open Collector Output, 18 mA Sink Max.</td>
</tr>
<tr>
<td>Electrical Termination</td>
<td>22 AWG, Polymeric, 12&quot; to 14&quot; Extended Lead Wires</td>
</tr>
<tr>
<td>Repeatability</td>
<td>±1 mm</td>
</tr>
<tr>
<td>Approvals</td>
<td>Units Labeled, C.E. EN 61326</td>
</tr>
</tbody>
</table>

Note: Not for use in freezing liquids.
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 in which wear is not warranted, include but are not limited to contact points, fuses, and tracks.

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.

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 otherwise 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 modal changes, whenever an improvement is possible. This affords our customers the latest in technology and engineering.

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