



LVN-141/LVN-142 Vertical Level Switch



M-5176/1112

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Installation:

A standard NPT female boss in tank top, bottom or side is all that is required. Units operate in any attitude - from the vertical to a 30° inclination - with lead wires up or down. Standard IPS pipe extends units to any intermediate level in the tank. Moisture Protection: When moisture exists in conduit and extension pipes, the potential for this moisture to "wick" down the wire leads and into the switch assembly exists. Should this happen, the switch will appear to be closed due to a high resistance path through the moisture. The following suggestions may help to prevent this from happening:

1. Pitch conduit away from the level switch, so that condensation will drip away from the level switch assembly.
2. When a vertical run of extension pipe is used to extend a level switch down from the top of the tank, a non-conductive silicone oil should be used to fill the vertical run. Alternatively, an appropriate potting may be used to fill the vertical run to occupy the space in which condensation will normally form. CAUTION LVN-141 and LVN-142 level products incorporate a potting cap or are fully potted. Due to the bonding characteristics of the potting to the wire leads, there is no way of assuring a water-tight seal at the potting joint. Our potting cap will resist moisture to some degree, but the precautions mentioned above should be used to assure moisture doesn't enter the switch and cause a short.

Thread Treatment 1. Sealing: When threading metal threads into a metal coupling, pipe sealant or PFA tape is recommended. Due to potential compatibility problems, when sealing plastic threaded units, a compatible pipe sealant is recommended.

2. Tightening: When threading a plastic level switch into a metal coupling, the installer should use a suitable wrench and tighten the threads one to one and one half additional turns past hand-tight. Over-torquing of the threads will result in damage to the plastic mounting plug.

Electrical Data

See Typical Wiring Diagram. Connect lead wires to load circuit, using approved method. Caution: See specifications above and "Switch Ratings" before connecting power.

Standard reed switches in OMEGA level switch units are hermetically-sealed, magnetically actuated, make-and-break type. Switches are SPST or SPDT and are rated in Volt-Amps (VA). See the adjacent chart for maximum load characteristics of OMEGA level switches. CAUTION: Contact protection is required for transient or high in-rush current. Contact OMEGA for more details.

European Pressure Directive Addendum

The product is designed and manufactured in accordance with Sound Engineering Practice as defined by the Pressure Equipment Directive 97/23/EC. This product must not be used as a "safety accessory" as defined by the Pressure Equipment Directive, Article 1, Paragraph 2.1.3. The presence of a CE Mark on the unit does not relate to the Pressure Equipment Directive.

This product is suitable for Class I and Class II applications only, per the requirements of standard EN60730 and any additional specific requirements for a particular application or medium being sensed. Class I compliance of metal bodied units requires a ground connection between the metal body and the earthing system of the installation. Class I compliance of plastic bodied units in contact with a conductive medium requires that the medium be effectively earthed so as to provide an earthed barrier between the unit and accessible areas. For Class III compliance, a supply at safety extra-low voltage (SELV) must be provided. Please consult the Factory for compliance information on specific part numbers.

Important points:

Product must be maintained and installed in strict accordance with the National Electrical Code and OMEGA product catalog and instruction bulletin. Failure to observe this warning could result in serious injuries or damages.

An appropriate explosion-proof enclosure or intrinsically safe interface device must be used for hazardous area applications involving such things as (but not limited to) ignitable mixtures, combustible dust and flammable materials.

*** Warning: To prevent ignition of flammable or combustible atmospheres, disconnect power before servicing.

Pressure and temperature limitations shown on individual catalog pages and drawings for the specified level switches must not be exceeded. These pressures and temperatures take into consideration possible system surge pressures/temperatures and their frequencies.

Selection of materials for compatibility with the media is critical to the life and operation of OMEGA level switches. Take care in the proper selection of materials of construction; particularly wetted materials.

Life expectancy of switch contacts varies with applications.

Ambient temperature changes do affect switch set points, since the specific gravity of a liquid can vary with temperature.

Level switches have been designed to resist shock and vibration; however, shock and vibration should be minimized.

Liquid media containing particulate and/or debris should be filtered to ensure proper operation of OMEGA products.

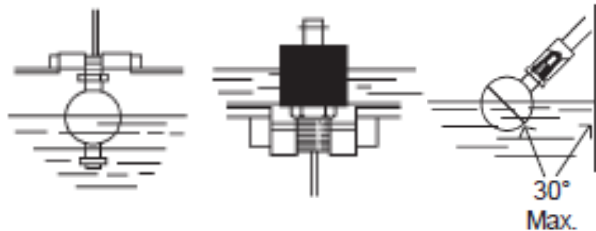
Electrical entries and mounting points may require liquid/vapor sealing if located in an enclosed tank.

Level switches must not be field repaired.

Physical damaged sustained by the product may render it unserviceable.

Part Number	Mounting	HEX Size	Float Diameter
LVN-141	1/8" NPT	1/2"	1"
LVN-141-G	G 1/8"	9/16"	1"
LVN-141-M12	M12	5/8"	1"
*LVN-142	1/8" NPT	1/2"	1"
*LVN-142-G	G 1/8"	9/16"	1"
*LVN-142-M12	M12	5/8"	1"

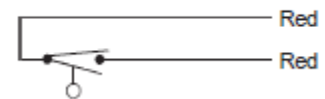
**Plastic sensors made from NSF approved material safe for use in potable water.*



Switch Ratings - Maximum Resistive Load -			
VA	Volts	Amps AC	Amps DC
20	0-30	.4	.3
	120	.17	.13
Pilot Duty	240	.080	.06

Wiring Diagram

SPST, Normally Open or Closed



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It is the policy of OMEGA Engineering, Inc. 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 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, human applications.

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 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.

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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