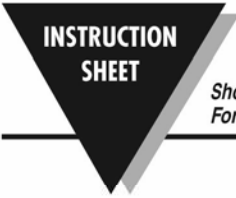




LV-510 Series

Single Station Vertical Level Switch



M-1972/0413

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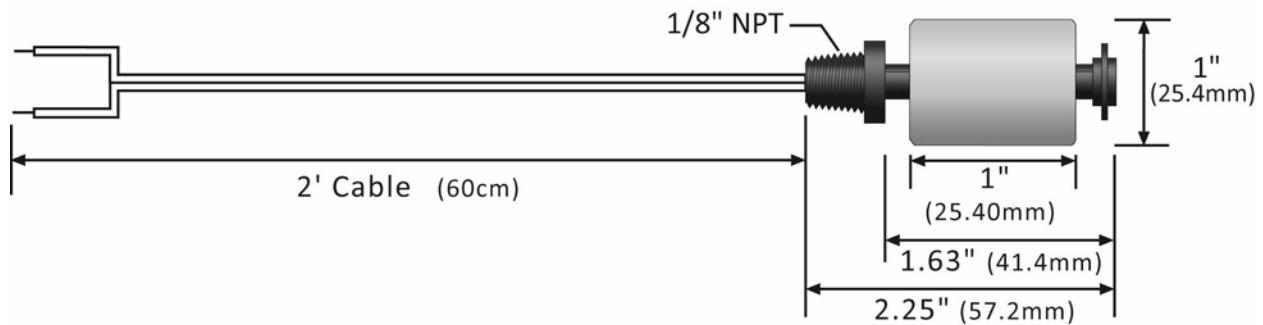
Specifications:

Accuracy: ± 5 mm in water
 Repeatability: ± 2 mm in water
 Extreme orientation: ±20° from vertical
 Specific Gravity: 0.8 minimum
 Contact type: (1) SPST (reed)
 Contact rating: 50 VA @ 0.5A
 Contact output: Selectable NO or NC
 Temperature range: F: -40° to 176° / C: -40° to 80°
 Pressure: 10 psi (0.7 bar)
 Sensor rating: NEMA 6 (IP68)
 Sensor material: LV-510: Polypropylene
 LV-511: Polyvinylidene Fluoride
 Wire jacket material: LV-510: PVC
 LV-511: TFE
 Wire type: 2-conductor
 Wire length: 2' (61 cm)
 Mounting threads: 1/8" NPT
 Classification: General purpose, CE

Installation:

1. Switches should be installed rigidly so the float or floats are free to move as the liquid level changes.
2. Switches should be mounted in a tank area free of severe turbulence or protected from such turbulence by appropriate and adequate slosh shields.
3. Vertical switch stems should be vertical for best results, but satisfactory operation is possible in most liquids with the stem at up to a 20° angle from vertical.
4. Care should be taken that switches are always operated within electrical ratings.
5. Orientation for switches can be changed from normally open to normally closed dry or vice versa by removing the float and reversing it in the stem.

Dimensions:



Components:

Part Number	Body Material	Cable Material	Thread
LV-510	PP	PVC	1/8" NPT
LV-511	PVDF	TFE	1/8" NPT

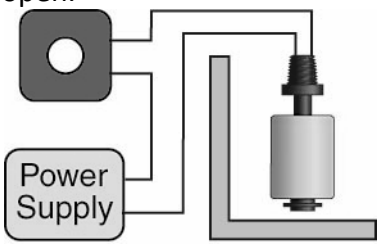
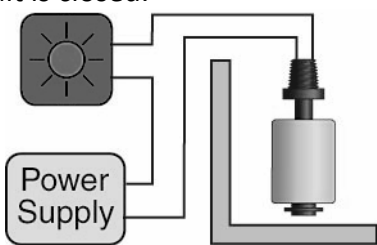
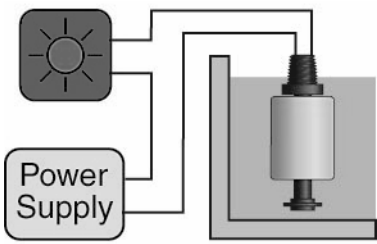
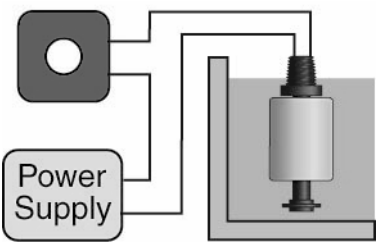
Switch Rating:

Reed Switch Rating		Max. Resistive Load	
VA	Volts	Amps (AC)	Amps (DC)
50	0-50	0.5	0.5
	120	0.4	0.4
	240	0.2	0.2

Top Wall Installation: Omega Engineering LV-510 series switch may be installed through the top wall of a tank. Because the thread of the sensor is very small (1/8"), finding standard fittings may be difficult. In lieu of standard fittings, one suggestion is to use a larger pipe, such as 1/2". Place a cap or plug on the end of the pipe and tap a 1/8" thread into the end. Secure the other end of the pipe to the top of the tank or to a clamp. For pipes longer than 2', be sure to cleanly extend the cable (splice) so that the connection is not exposed to the liquid.

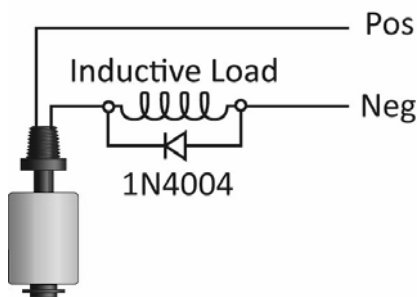
Signal Outputs (Normally Open vs. Normally Closed): The LV-510 series float switch ships from the factory in the Normally Open (NO) configuration. The normal state is when the float is resting on the bottom of the stem. An orientation mark will appear on the top of the float when it is in the NO configuration. To switch the LV-510 series from NO to NC configuration, flow the steps below.

1. Remove the C-clip from the stem.
2. Remove the float and rotate it 180°.
3. Return the float to the stem with orientation mark now on the bottom.
4. Replace the C-clip.

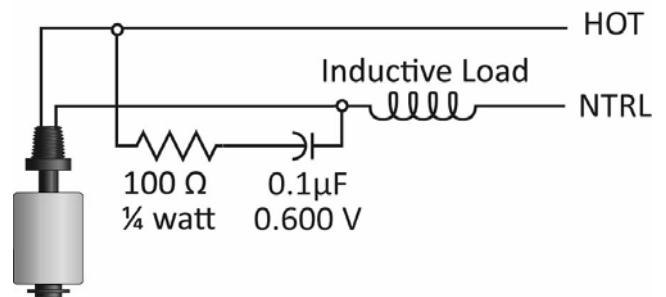
Normally Open Operation:	Normally Closed Operation:
<p>Orientation mark on the top of the float. In the dry state, the float rests on the bottom of the stem and the circuit is open.</p> 	<p>Orientation mark on the bottom of the float. In the dry state, the float rests on the bottom of the stem and the circuit is closed.</p> 
<p>As the switch becomes wet, the float becomes buoyant and circuit closes.</p> 	<p>As the switch becomes wet, the float becomes buoyant and circuit opens.</p> 

Contact Protection (Reed Switch): When current is interrupted, the inductance of the load generates a high frequency voltage, which appears across the switch contacts. If the voltage is large enough, it can cause arcing. Arcing can cause the contacts to weld to each other resulting in unreliable switching performance. It is essential to protect the circuit, by suppressing the voltage to prevent arcing. This can be accomplished through the use of a diode for DC circuits and a resistor-capacitor network for AC circuits.

DC Contact Protection:



AC Contact Protection:





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The purchaser is responsible for shipping charges, freight, insurance and proper packaging to prevent breakage in transit.

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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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2. Model and serial number of the product, and
3. Repair instructions and/or specific problems relative to the product.

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