

Where Do I Find Everything I Need for Process Measurement and Control? OMEGA...Of Course!

TEMPERATURE

- Thermocouple, RTD & Thermistor Probes, Connectors, Panels & Assemblies
- Wire: Thermocouple, RTD & Thermistor
- Calibrators & Ice Point References
- Recorders, Controllers & Process Monitors
- Infrared Pyrometers

PRESSURE, STRAIN AND FORCE

- Transducers & Strain Gauges
- Load Cells & Pressure Gauges
- Displacement Transducers
- Instrumentation & Accessories

FLOW/LEVEL

- Rotameters, Gas Mass Flowmeters & Flow Computers
- Air Velocity Indicators
- Turbine/Paddlewheel Systems
- Totalizers & Batch Controllers

pH/CONDUCTIVITY

- pH Electrodes, Testers & Accessories
- Benchtop/Laboratory Meters
- Controllers, Calibrators, Simulators & Pumps
- Industrial pH & Conductivity Equipment

DATA ACQUISITION

- Data Acquisition & Engineering Software
- Communications-Based Acquisition Systems
- Plug-in Cards for Apple, IBM & Compatibles
- Datalogging Systems
- Recorders, Printers & Plotters

HEATERS

- Heating Cable
- Cartridge & Strip Heaters
- Immersion & Band Heaters
- Flexible Heaters
- Laboratory Heaters

ENVIRONMENTAL MONITORING AND CONTROL

- Metering & Control Instrumentation
- Refractometers
- Pumps & Tubing
- Air, Soil & Water Monitors
- Industrial Water & Wastewater Treatment
- pH, Conductivity & Dissolved Oxygen Instruments

M-1972 / 0602



User's Guide

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An OMEGA Technologies Company
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LV-510 Series Single Station Vertical Float

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

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

ISO 9002 Certified

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FOR NON-WARRANTY RETURNS, please have the following information available BEFORE contacting OMEGA:
1. PO number under which the product was purchased
2. Model and serial number of the product
3. Under warranty and/or specific problems relative to the product
3. Repair instructions and/or specific problems relative to the product.
2. Model and serial number of product, and PO number to cover the COST of the repair.
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WARRANTY/DISCLAIMER



SPECIFICATIONS

Step One

Specifications:

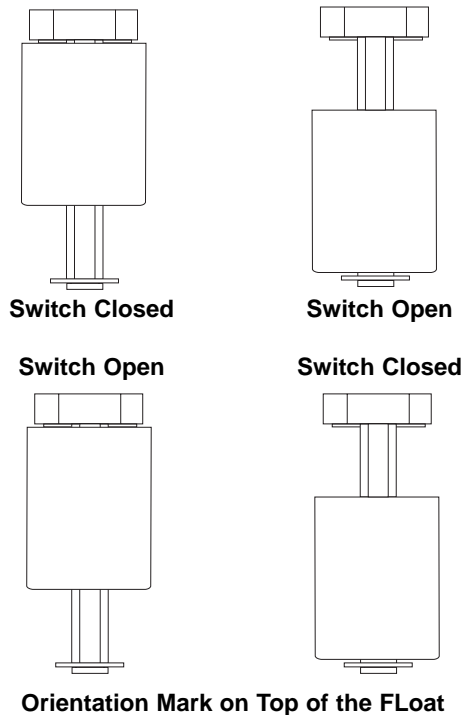
Accuracy:	± 5 mm in water
Repeatability:	± 2 mm in water
Extreme orientation:	±20° from vertical
Specific Gravity Range:	0.8 - 1.2
Reed type:	Dry contact, SPST
Reed rating:	120 VAC, 120 VDC @ 50 VA (CE: 30 Vrms and 42.2 Vpeak or 60 Vdc)
Reed output:	NO or NC
Temperature range:	F: -40° to 194° C: -40° to 90°
Pressure:	10 psi (0.7 bar) max.
Sensor material:	Polypropylene (PP) or Polyvinylidene Fluoride (PVDF)
Mounting threads:	1/8" NPT (1/8" BSP)
Cable type:	2 ft. (61 cm), 2-wire
CE compliance:	EN 50082-2 immunity EN 55011 emission

Part Number Information:

Part #	Material	Thread
LV-510	PP	1/8" NPT
LV-511	PVDF	1/8" NPT

Float Orientation:

Orientation Mark on Top of the FLoat



Orientation Mark on Top of the FLoat

⚠ About This Manual:

PLEASE READ THE ENTIRE INSTRUCTION SHEET PRIOR TO INSTALLING OR USING THIS PRODUCT. This Instruction sheet includes information on all models of Vertical Mini-Floats from Omega: LV-510 series. Please refer to the part number located on the sensor label to verify the exact model which you have purchased.

⚠ User's Responsibility for Safety:

Omega manufactures a wide range of liquid level sensors and technologies. While each of these sensors is designed to operate in a wide variety of applications, it is the user's responsibility to select a sensor model that is appropriate for the application, install it properly, perform tests of the installed system, and maintain all components. The failure to do so could result in property damage or serious injury.

⚠ Proper Installation and Handling:

Because this is an electrically operated device, only properly trained staff should install and/or repair this product. Use a proper sealant with all installations. Never overtighten the sensor within the fitting, beyond being hand tight. Always check for leaks prior to system startup.

⚠ Material Compatibility:

The LV-510 series is available in two different wetted materials. Models LV-510 are made of Polypropylene (PP, a polyolefin). Models LV-511 are made of Polyvinylidene Fluoride (PVDF). A Nylon C-ring is also used to secure the float. Make sure that the model which you have selected is compatible with the application liquids. To determine the chemical compatibility between the sensor and its application liquids, refer to the Compass Corrosion Guide, available from Compass Publications (phone 858-589-9636).

⚠ Wiring and Electrical:

The Vertical Mini-Float features a two-wire design with a SPST dry contact closure. Electrical wiring of the sensor should be performed in accordance with all applicable national, state, and local codes.

⚠ Normally Open/Normally Closed:

The orientation position of the float determines whether the switch is Open or Closed. The top of the float has two concentric circles on each edge of the cylinder. When the float is orientated up, the switch is open when the float is away from the threads and is closed when the float is next to the threads. When the float is orientated down, the switch is closed when the float is away from the threads and is open when the float is next to the threads.

⚠ Flammable, Explosive and Hazardous Applications:

The LV-510 series should not be used within flammable or explosive applications. In hazardous applications, use redundant measurement and control points, each having a different sensing technology. Refer to the National Electric Code (NEC) for all applicable installation requirements in hazardous locations.

⚠ About Single Station Sensing

Omega's LV-510 series use a magnetic float which rides up and down a stem containing the reed switch. The only moving part is the float. No bearings, packing glands, bellows or electronic gadgets are used. The Vertical Mini-Floats are built rugged to resist shock and vibration. The LV-510 series utilize a low cost, flexible design which allows for vertical mounting at the top or bottom of a tank. The Vertical Mini-Floats can be mounted up, down or up to 20 degrees off vertical.

Dimensions:

