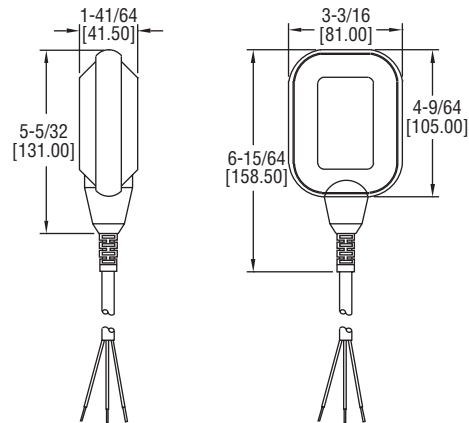




Switch-Tek LV41 Series Small Float Switch

Specifications - Installation and Operating Instructions



The **LV41 Series Small Float Switch** is a mechanically actuated floating switch intended to activate electrical components, usually pumps, to start and stop automatically. The LV41 Series is perfect for simple level control of liquids for filling or draining reservoirs and tanks. Float switches such as the LV41 Series are the most universally used for pump automation due to their high reliability, economical pricing, and easy installation. Counterweights and cable hangers are available to suit a variety of mounting applications.

INSTALLATION INSTRUCTIONS

The basic operating principle of the LV41 Series is very simple. As fluid level rises the float will also rise, resulting in a tilt of the micro-switch located inside the housing. This tilt will generate a signal that can be used to actuate a motor or signal an indicator alarm. To ensure the proper function of the LV41 Series, it is necessary to secure the electric cable inside the tank or well as illustrated in Figures 1 and 2. The length of the cable measured between the fixture point and the body of the LV41 Series determines the total extension of the float and also the resulting distance between the pump stopping and starting level. It is essential to ensure that there are no obstructions in the LV41 Series operational area before operation. During operation, **adjustments to the LV41 Series cable must not be made under any circumstances**, due to the fact that any unwanted cable connections made while the LV41 Series is immersed in water can lead to electric shock. There are two installation options for this cable float switch. One method is to fix the cable of the LV41 Series to the reservoir or container with the use of a small clamp, another technique would be to attach the accessory LV49-7000 counterweight to the cable of the float switch a desired distance between the highest and lowest level desired.

Note: With the use of the counterweight, the length of cable between the float and fixed point (starting and stopping indication) can be freely adjusted.

ELECTRICAL CONNECTIONS

SPDT, single pole double throw allows for operation of both increasing and decreasing level, depending on the connections made between the terminals of the micro-switch and the cable. SPDT, a three-conductor cable (without ground option), has one lead that is common, one that is normally open (NO), and the other that is normally closed (NC), for the proper connections of these conductors please refer to the wiring diagrams in Figures 3 and 4.

NOTICE

When making the connections described above, ensure that the maximum motor power does not exceed the values indicated on the level switch. The power supply cable is an important part of the LV41 Series. Should the cable appear to be damaged, discontinue use immediately and proceed to replace the unit.

SPECIFICATIONS

Service: Compatible liquids.

Wetted Materials:

Housing: Polypropylene;
Cable: PVC.

Temperature Limits: 32 to 122°F (0 to 50°C).

Pressure Limits: 14.5 psi (1 bar).

Enclosure Rating: IP68.

Switch Type: SPDT.

Electrical Rating: 10 (8)A @ 250 VAC.

Shipping Weight:

Housing: 5.43 oz (154 g);
Cable: 0.77 oz (21.27 g) per foot.

Agency Approvals: CE.

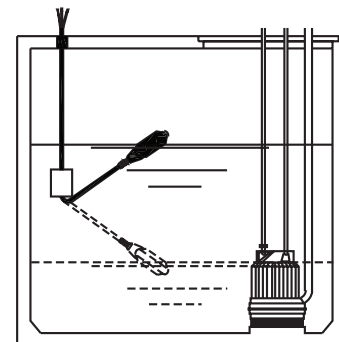


Figure 1-Emptying

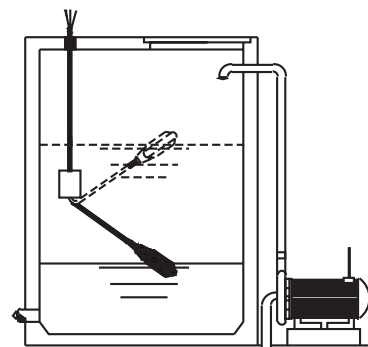


Figure 2-Filling

WIRING DIAGRAMS
3 x 1 CABLE

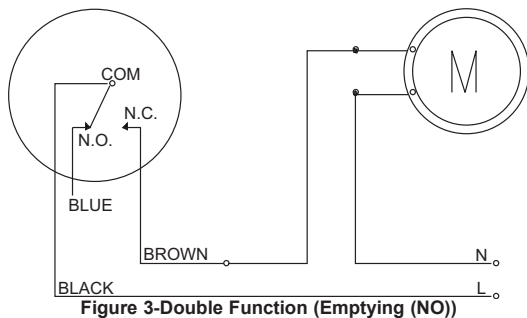


Figure 3-Double Function (Emptying (NO))

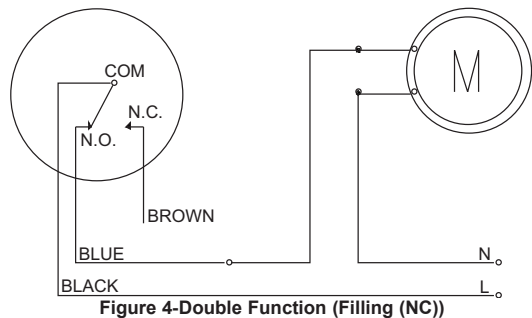


Figure 4-Double Function (Filling (NC))

INSTALLATION OF COUNTERWEIGHT

For correct counterweight installation, refer to the following procedure as well as the illustration in Figure 5.

1. Insert the cable into the counterweight, turning it. This will result in the detachment of the plastic ring inserted in the mouth (if necessary use a screwdriver to aid in the detachment of the ring). Place the ring at the point on the cable where the counterweight is to be attached.
2. Attach the counterweight on the ring by turning it and using moderate pressure. (Counterweight sold separately).

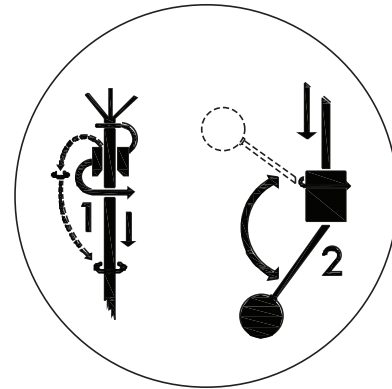


Figure 5-Counterweight Installation

For complete product documentation, video training, and technical support, go to www.flowline.com.
For phone support, call 562-598-3015 from 8am to 5pm PST, Mon - Fri.
(Please make sure you have the Part and Serial number available.)

Warranty

Flowline warrants to the original purchaser of its products that such products will be free from defects in material and workmanship under normal use and service in accordance with instructions furnished by Flowline for a period, which is equal to the shorter of one year from the date of purchase of such products or two years from the date of manufacture of such products. Flowline's obligation under this warranty is solely and exclusively limited to the repair or replacement, at Flowline's option, of the products or components, which Flowline's examination determines to its satisfaction to be defective in material or workmanship within the warranty period. Flowline must be notified pursuant to the instructions below of any claim under this warranty within thirty (30) days of any claimed lack of conformity of the product. Any product repaired or replaced under this warranty will be warranted only for the remainder of the original warranty period.

Returns

Products cannot be returned to Flowline without Flowline's prior authorization. To return a product that is thought to be defective, go to www.flowline.com, and submit a customer return (MRA) request form and follow the instructions therein. All warranty and non-warranty product returns to Flowline must be shipped prepaid and insured. Flowline will not be responsible for any products lost or damaged in shipment.

Limitations

This warranty does not apply to products which: 1) are beyond the warranty period or are products for which the original purchaser does not follow the warranty procedures outlined above; 2) have been subjected to electrical, mechanical or chemical damage due to improper, accidental or negligent use; 3) have been modified or altered; 4) anyone other than service personnel authorized by Flowline have attempted to repair; 5) have been involved in accidents or natural disasters; or 6) are damaged during return shipment to Flowline. Flowline reserves the right to unilaterally waive this warranty and dispose of any product returned to Flowline where: 1) there is evidence of a potentially hazardous material present with the product; or 2) the product has remained unclaimed at Flowline for more than 30 days after Flowline has dutifully requested disposition. This warranty contains the sole express warranty made by Flowline in connection with its products. ALL IMPLIED WARRANTIES, INCLUDING WITHOUT LIMITATION, THE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE EXPRESSLY DISCLAIMED. The remedies of repair or replacement as stated above are the exclusive remedies for the breach of this warranty. IN NO EVENT SHALL FLOWLINE BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES OF ANY KIND INCLUDING PERSONAL OR REAL PROPERTY OR FOR INJURY TO ANY PERSON. THIS WARRANTY CONSTITUTES THE FINAL, COMPLETE AND EXCLUSIVE STATEMENT OF WARRANTY TERMS AND NO PERSON IS AUTHORIZED TO MAKE ANY OTHER WARRANTIES OR REPRESENTATIONS ON BEHALF OF FLOWLINE. This warranty will be interpreted pursuant to the laws of the State of California. If any portion of this warranty is held to be invalid or unenforceable for any reason, such finding will not invalidate any other provision of this warranty.