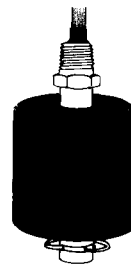




**LV-10, LV-20, LV-30 Series  
Liquid Level Switches  
Operator's Manual: M0474/1092**



**GENERAL DESCRIPTION**

The OMEGA® LV-10 Series Level Switches feature a small float displacement, especially suited for narrow or restricted areas. A standard NPT male fitting allows for quick installation in either the top or bottom of the tank or vessel. A sealed SPST switch provides consistent accuracy and high repeatability with the effects of shock, vacuum or vibration minimized. Extremely versatile, the switch is user selectable as normally open (N.O.) or normally closed (N.C.) by simply removing the retaining clip and inverting the position of the float.

For intermediate float displacement, the LV-20 Series will yield long life and greater stability for a broad range of level monitoring requirements. The LV-30 Series larger float displacement is intended for use with liquids of high viscosity, and is well suited for harsh environments. Both models share the standard features of the LV-10.

For pump-up/pump-down application, use OMEGA's SSRL series pump-down module. For applications requiring higher current or voltage ratings, use OMEGA's SSR240AC series solid state relays.

**SPECIFICATIONS**

<b>STEM MATERIAL:</b>	Brass, models LV-10, LV-20, LV-21, LV-30, LV-31; 316SS, models LV-11, LV-22, LV-23, LV-32, LV-33
<b>FLOAT MATERIAL:</b>	Buna N
<b>OTHER WETTED MATERIAL:</b>	316SS and Hysol
<b>OPERATING TEMPERATURE:</b>	Water: -40 to 180°F; Oil: -40 to 230°F
<b>PRESSURE RATING:</b>	150 PSI
<b>SWITCH:</b>	SPST
<b>SWITCH ACTUATION:</b>	Approx. 1/2 the distance from end of stem to mounting, or at halfway point of float travel.
<b>SWITCH RATING:</b>	Models LV-10, LV-11: 10VA; Models LV-20, LV-22, LV-30, LV-32: 20VA; Models LV-21, LV-23, LV-31, LV-33: 100VA
<b>LEAD WIRES:</b>	22 awg 24" polymeric for LV-10 and LV-20 Series; 18 awg 24" polymeric for LV-30 Series
<b>SPECIFIC GRAVITY OF FLOAT:</b>	LV-10 Series = 0.55; LV-20 Series = 0.59; LV-30 Series = 0.43. To determine minimum fluid specific gravity, add 0.1 to float specific gravity in clean liquid and 0.3 to float specific gravity in dirty water or viscous liquids.

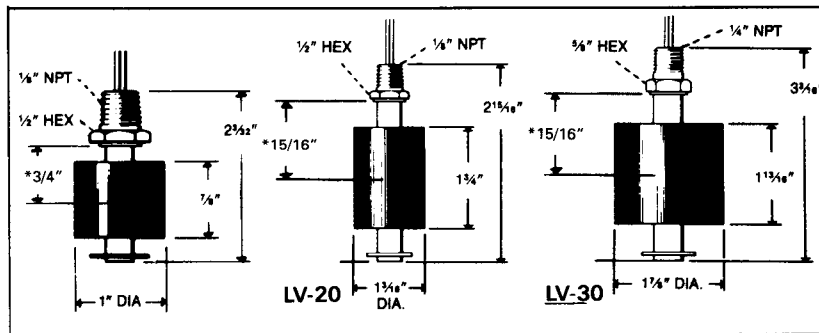
**NOTE:**

The reed relays in these level switches are intended to switch low level loads such as small light bulbs or logic signals to a computer or PLC. When switching inductive loads such as relays, solenoids, transformers, etc., or for applications requiring higher current or voltage ratings, use OMEGA's SSR240AC series solid state relays for switching AC loads.

**SWITCH RATINGS - MAX. RESISTIVE LOAD**

VA	Volts	Amps AC	Amps DC
10	0-50	.2	.13
	120	.08	.05
	240	.04	.02
20	0-30	.4	.3
	120	.17	.13
	240	.08	.06
100	120	.8*	N. A.
	240	.4	N. A.

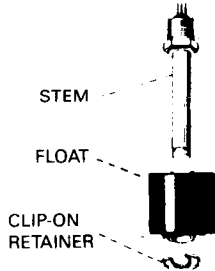
\* Limited to 50,000 operations.



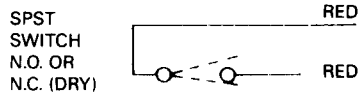
\* Note: All switch actuation points have a tolerance of  $\pm 1/8$ ".

**REVERSING SWITCH OPERATION**

The switch is user selectable as normally open or normally closed (dry). Simply remove the retaining clip and invert the position of the float. It is not necessary to disturb the installation.

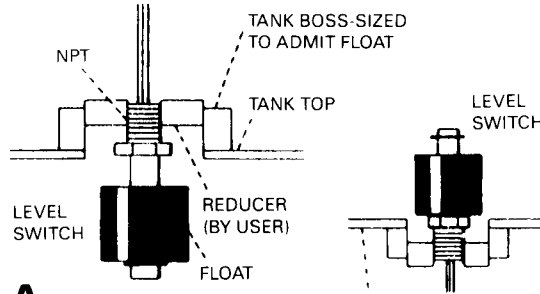


**WIRING DIAGRAM**

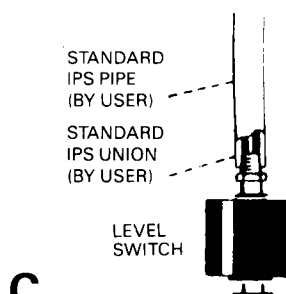


## INSTALLATION

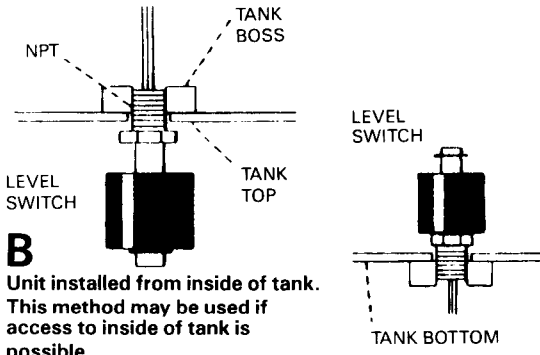
Install units vertically in tank top or bottom using Methods A, B, C or D (below).  
 Note: Units will operate normally inclined up to 30°.



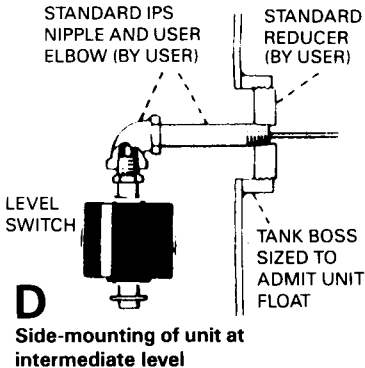
**A**  
 Unit installed from outside of tank



**C**  
 Extending level switch unit to intermediate level



**B**  
 Unit installed from inside of tank.  
 This method may be used if access to inside of tank is possible.



**D**  
 Side-mounting of unit at intermediate level

### NOTES: