

L500 SERIES

CUSTOM MULTI-LEVEL FLOAT SWITCH IDEAL FOR LARGE TANKS

DESCRIPTION

The wider displacement L500 Single or Multi-Level Switch is designed to monitor up to six levels on a single device. With only one entry, the L500 can track changing levels within a large tank, as well as monitor liquid interfaces of dissimilar liquids for oil/water separations, chemical emulsions and condensation levels. Probe lengths are constructed up to 15' with numerous possible combinations of floats, mounts, enclosures and materials to suit every application. Integrations with thermostatic switches are also available to provide level and temperature sensing capabilities within one control.

PRINCIPLE OF OPERATION

The switching action is achieved through the use of an internal magnet within the float assembly and its interaction with the switch mechanism. As the liquid level fluctuates inside the tank, the float moves. Its magnetic field actuates each reed switch inside the stem and completes an electrical circuit.



L500

PRODUCT CONFIGURATION

- A** Mounting & Materials
- B** Float Size
- C** Switch Wiring
- D** Actuation Levels

KEY FEATURES

- Modular Design
- Probe Lengths Up to 15'
- Capable of Up to 6 Switch Positions
- SPST 50 VA Switch (Standard)
- Adjustable & Thermostatic Switch Models

A MOUNTING & MATERIALS

MOUNT TYPE*	MOUNT & STEM MATERIALS	FLOAT MATERIALS	SWITCH TYPE	ENCLOSURES
04 ½" NPT	01 Brass	02 Polypropylene (Hollow)	20 20 VA SPST	00 No Enclosure
06 1" NPT	02 Polypropylene	05 PVC	03 50 VA SPST	01 Polypropylene NEMA 4
07 1¼" NPT	05 PVC	08 316 SS	04 100 VA SPST	02 Cast Aluminum NEMA 4/7/9
08 1½" NPT	08 316 SS	20 Buna-N	06 3 VA SPDT	03 Cast Iron NEMA 4/7/9
09 2" NPT	14 Teflon®	16 Teflon® (Hollow)		
73 2" #150 ANSI Flange				
75 3" #150 ANSI Flange				
76 4" #150 ANSI Flange				

B FLOAT SIZE & OPERATING SPECIFICATIONS

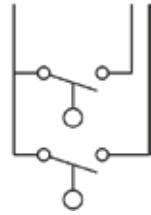
FLOAT MATERIALS	DIMENSIONS	AVAILABLE MOUNT TYPES	TEMPERATURE	PRESSURE	SG**
Polypropylene (Hollow)	1.875" x 1.906"	04, 06, 09, 73, 75, 76	-40 to +150 °F	50 PSIG	0.48
316 Stainless Steel	1.5" x 1.3"	04, 06, 09, 73, 75, 76	-40 to +300 °F	120 PSIG	0.80
316 Stainless Steel	2" Ball	04, 06, 09, 73, 75, 76	-40 to +300 °F	750 PSIG	0.79
Teflon® (Hollow)	2.150" x 1.980"	04, 06, 09, 73, 75, 76	-40 to +300 °F	40 PSIG	0.84
Buna-N	1.250" x 1.875"	04, 06, 07, 09, 73, 75, 76	-40 to +180 °F	150 PSIG	0.64
Buna-N	1.875" x 1.750"	04, 06, 09, 73, 75, 76	-40 to +180 °F	150 PSIG	0.57
PVC (Hollow)	1.875" x 1.906"	04, 06, 09, 73, 75, 76	-40 to +150 °F	50 PSIG	0.69

SWITCH WIRING & ELECTRICAL SPECIFICATIONS

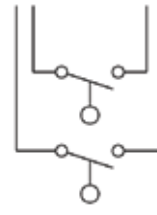
Each switching point requires one float. For special applications, a single float can be used to activate two switching points with a minimum separation space of 1/8" (3 mm). The maximum number of actuation levels depends on the wiring.

ELECTRICAL

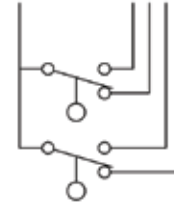
- Switch Ratings:
SPST 20, 50 or 100 VA @ 120 VAC
SPST 50 VA @ 240 VAC
SPDT 100 W @ 240 VAC
- Connection: 24" Free Leads #22 AWG or 18 AWG
- Mounting Altitude: Vertical $\pm 30^\circ$



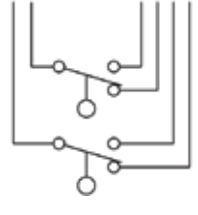
GROUP 1 SPST
One Common Wire



GROUP 2 SPST
Independent Circuits



GROUP 3 SPDT
One Common Wire



GROUP 4 SPDT
Independent Circuits

C SWITCH WIRING & ELECTRICAL SPECIFICATIONS

WIRING OPTIONS	GROUP 1 SPST	GROUP 2 SPST		GROUP 3 SPDT		GROUP 4 SPDT		
Common Wire	Black	None		Black		None		
	NO/NC	NO	NO	NO	NC	Common	NO	NC
L1	Red	Red	Red	Red	White-Red	Red	White-Red	White-Black-Red
L2	Yellow	Yellow	Yellow	Yellow	White-Yellow	Yellow	White-Yellow	White-Black-Yellow
L3	Blue	Blue	Blue	Blue	White-Blue			
L4	Brown	Brown	Brown					
L5	Orange							
L6	Gray							

ACTUATION LEVEL DIMENSIONS

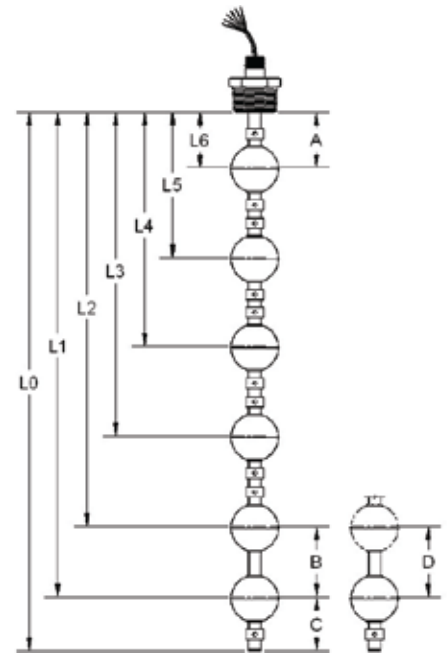
NOTES

- A, B and C dimensions are based on a specific gravity of 1.0.
- When using one float for two actuation points, contact the factory for the available switch ratings.
- Actuation levels are calibrated on descending fluid levels with water, unless otherwise specified.
- Standard tolerance on actuation levels is $\pm 1/8"$ (3 mm).

D ACTUATION LEVEL DIMENSIONS

AREA	DISTANCE (INCH)	DISTANCE (MM)	DEFINITION
A	1 1/2"	38 mm	Minimum Distance from Actuation Point to Inside Surface of Tank or Mounting Pad
B	3"	76 mm	Minimum Distance Between Actuation Levels
C	2"	51 mm	Minimum Distance from End of Unit to Lowest Actuation Level
D	1/4"	6 mm	Minimum Distance Between Points When a Single Float is Used to Activate 2 Switches*

*One float can activate two switches when the lower switch is NC and the upper switch is NO.



INTEGRATED TEMPERATURE SENSORS

TEMPERATURE SENSOR OPTIONS

- Thermistor: Variable Resistance, Continuous Output
- Thermocouple: Variable Resistance, Continuous Readout
- Thermostat: Fixed Setpoint For High/Low Alarm Switching

