

L312 SERIES

CUSTOM MULTI-LEVEL FLOAT SWITCH IDEAL FOR SMALL TANKS

DESCRIPTION

The vertically-mounted L312 Multi-Level Switch is designed to monitor up to five levels on a single device. With only one entry, the L312 can track changing levels within a small tank, as well as monitor liquid interfaces of dissimilar liquids for oil/water separations, chemical emulsions and condensation levels. Probe lengths are available up to 4' with numerous possible combinations of floats, mounts, enclosures and materials to suit every application.

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.

PRODUCT CONFIGURATION

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

KEY FEATURES

- Economical & Versatile
- Probe Lengths Up to 4'
- Capable of Up to 5 Switch Positions
- SPST 50 VA Switch (Standard)
- Adjustable Probe Model Options
- Over 360 Combinations to Customize



L312

A MOUNTING & MATERIALS

MOUNT TYPE*	MOUNT & STEM MATERIALS	FLOAT MATERIALS	SWITCH TYPE	ENCLOSURES
00 No Mounting	01 Brass	02 Polypropylene (Hollow)	20 20 VA SPST	00 No Enclosure
01 1/8" NPT	02 Polypropylene	03 Polypropylene (Solid)	03 50 VA SPST	01 Polypropylene NEMA 4
02 1/4" NPT	05 PVC	05 PVC (Hollow)	04 100 VA SPST	02 Cast Aluminum NEMA 4/7/9
03 3/8" NPT	08 316 SS	08 316 SS	06 3 VA SPDT	03 Cast Iron NEMA 4/7/9
04 1/2" NPT	15 Teflon® (PFA)	15 Teflon® (PFA)		
05 3/4" NPT	22 Polysulfone	16 Teflon® PFTA (Hollow)		
06 1" NPT		20 Buna-N		
07 1 1/4" NPT		22 Polysulfone (Hollow)		
08 1 1/2" NPT				
09 2" NPT				

B FLOAT SIZE & OPERATING SPECIFICATIONS

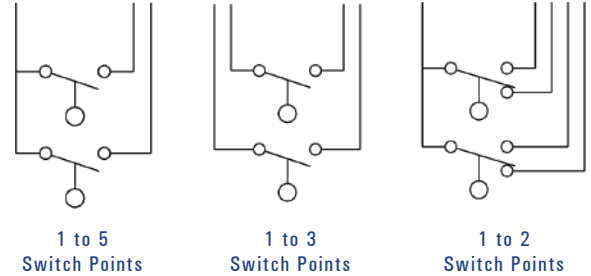
FLOAT MATERIALS	DIMENSIONS	AVAILABLE MOUNT TYPES	TEMPERATURE	PRESSURE	SG**
Polypropylene (Hollow)	1" x 1"	00, 01, 02, 03, 04, 06, 07, 08, 09	-40° to +150° F	50 PSIG	0.66
Polypropylene (Solid)	1" x 1"	00, 01, 02, 03, 04, 06, 07, 08, 09	-40° to +150° F	150 PSIG	0.87
PVC	1" x 1"	00, 01, 02, 03, 04, 06, 07, 08, 09	-40° to +150° F	50 PSIG	1.00
316 SS	1" x 1"	00, 01, 02, 03, 04, 06, 07, 08, 09	-40° to +300° F	300 PSIG	1.00
316 SS	1.5" x 1"	00, 01, 02, 03, 08, 09	-40° to +300° F	100 PSIG	0.69
316 SS	1" Ball	00, 01, 02, 03, 04, 06, 07, 08, 09	-40° to +300° F	375 PSIG	0.84
316 SS	0.90" x 1.5"	00, 01, 02, 03, 04, 05, 06, 07, 08, 09	-40° to +300° F	200 PSIG	0.96
Teflon® (PFA)	0.90" x 1.1"	00, 01, 02, 03, 04, 06, 07, 08, 09	-40° to +300° F	1000 PSIG	0.60
Teflon® PFTA (Hollow)	1.125" x 1.250"	00, 01, 02, 03, 04, 06, 07, 08, 09	-40° to +212° F	25 PSIG	0.95
Buna-N	1" x 1"	00, 01, 02, 03, 04, 06, 07, 08, 09	-40° to +180° F	150 PSIG	0.63
Polysulfone (Hollow)	1" x 1"	00, 01, 02, 03, 04, 06, 07, 08, 09	-40° to +250° F	50 PSIG	0.95

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 VA @ 120 VAC
SPST 50 VA @ 240 VAC
SPDT 3 VA @ 30 VAC/VDC
- Connection: 24" Free Leads #22 AWG UL-Approved
- Mounting Altitude: Vertical $\pm 30^\circ$



C SWITCH WIRING & ELECTRICAL SPECIFICATIONS

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

ACTUATION LEVEL DIMENSIONS

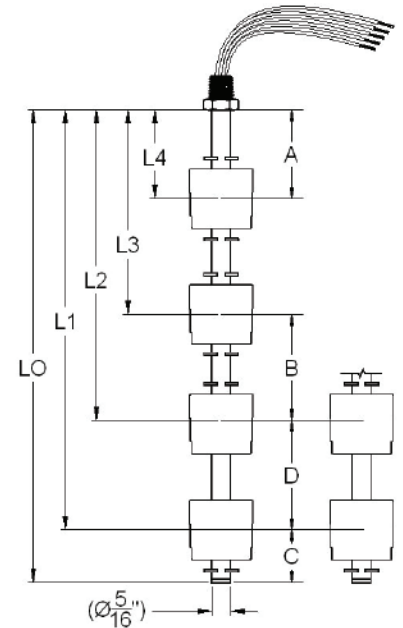
NOTES

- 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

FLOAT TYPE	A	B	C	D
1" x 1"	1"	1 3/4"	1"	1/8"
1.5" x 1"	1"	1 3/4"	1"	1/8"
1" Ball	1"	1 3/4"	1"	1/8"
0.9" x 1.5"	1"	2 1/2"	1 1/2"	1/8"

AREA	DEFINITION
A	Minimum Distance from Actuation Point to Inside Surface of Tank or Mounting Pad
B	Minimum Distance Between Actuation Levels
C	Minimum Distance from End of Unit to Lowest Actuation Level
D	Minimum Distance Between Points When a Single Float is Used to Activate 2 Switches



INTEGRATED TEMPERATURE SENSORS

TEMPERATURE SENSOR OPTIONS

- Thermistor: Variable Resistance, Continuous Output
- Thermocouple: Variable Resistance, Continuous Readout

