



Multiple-Stage Switches: **Vertical Mount**

Innovative Solutions



L312 Series Custom Switches with a Maximum Length of 4'

The L312 series level switches are individually designed from over 360 component parts to create a custom switch available in lengths of from six inches (152 mm) to four feet (1.2m).



L312

Product Configuration Choices:

Mounting & Materials: Select mounting size, mount and stem material, float material, switch type, and optional enclosure from **Table A**.

Float Size: Select float from **Table B**.

Switch Wiring: Select switch wiring from **Table C**.

Actuation Levels: Select switch actuation level(s) from **Table D**.

A. Component Choices L312:

Series	Mounting Types		Mounting & Stem Materials		Float Materials		Switch Types		Enclosures	
L312	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 (standard)	01	Polypropylene NEMA 4
	02	1/4" NPT	04	Kynar (PVDF)	04	Kynar (PVDF)	04	100 VA SPST	02	Cast aluminum
	03	3/8" NPT	05	PVC	05	PVC	06	3 VA SPDT		NEMA 4/7/9
	04	1/2" NPT	08	316 SS	08	316 SS			03	Cast Iron NEMA 4/7/9
	05	3/4" NPT	15	Teflon (PFA)	15	Teflon (PFA)				
	06	1" NPT	18	Nylon	16	Teflon PTFE (hollow)				
	07	1 1/4" NPT	21	Acetal (Delrin)	20	Buna-N				
08	1 1/2" NPT	22	Polysulfone	22	Polysulfone					

Example: L312-0401-2003-00 = 1/2" NPT mounting; brass mounting & stem material; Buna-N float; 50VA SPST switches; no enclosure



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B. Float Sizes and Operating Specifications

Float Materials	Dimensions	Available Mount Types	Temperature	Pressure	Minimum Specific Gravity
Polypropylene (hollow)	1" x 1"	00, 01, 02, 03, 04, 06, 07, 08	-40° to +150° F	50 psig	.70
Polypropylene (solid)	1" x 1"	00, 01, 02, 03, 04, 06, 07, 08	-40° to +150° F	150 psig	.90
Kynar	1" x 1"	00, 01, 02, 03, 04, 06, 07, 08	-40° to +150° F	50 psig	1.1
PVC	1" x 1"	00, 01, 02, 03, 04, 06, 07, 08	-40° to +140° F	50 psig	.95
316 stainless steel	1" x 1"	00, 01, 02, 03, 04, 06, 07, 08	-40° to +300° F	300 psig	.95
316 stainless steel	1.5" x 1"	00, 01, 02, 03, 08	-40° to +300° F	100 psig	.70
316 stainless steel	1" ball	00, 01, 02, 03, 04, 06, 07, 08	-40° to +300° F	275 psig	.80
316 stainless steel	.90" x 1½"	00, 01, 02, 03, 04, 05, 06, 07, 08	-40° to +300° F	200 psig	.85
Teflon (PFA)*	1" x 1"	00, 01, 02, 03, 04, 06, 07, 08	-40° to +300° F	1000 psig	.90*
Teflon (hollow)	1.125" x 1.250"	00, 01, 02, 03, 04, 06, 07, 08	-40° to +300° F	100 psig	1.0
Buna-N	1" x 1"	00, 01, 02, 03, 04, 06, 07, 08	-40° to +180° F	150 psig	.80
Polysulfone	1" x 1"	00, 01, 02, 03, 04, 06, 07, 08	-40° to +225° F	50 psig	.90

C. Switch Wiring and Electrical Specifications

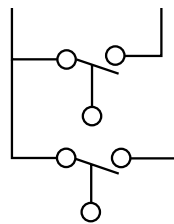
Each switching point requires one float. For special applications, a single float can be used to activate two switch points, though these points must have a minimum separation of 1/8" (3mm). The maximum number of actuation levels depends on the wiring type selected.

Ratings: 20 VA @ 120 VAC SPST
50 VA @ 240 VAC SPST
3 VA @ 30 VAC/VDC SPDT

Connection: 24" Free Leads
#22 AWG, PVC jacketed.

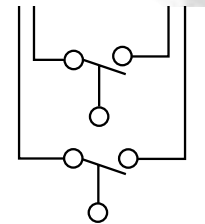
Mounting Attitude: Vertical ± 30°

Group 1 SPST
One Common Wire



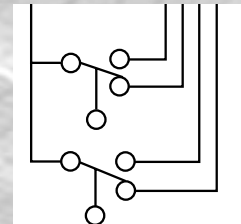
1 to 5 switch points

Group 2 SPST
Independent Circuits



1 to 3 switch points

Group 3 SPDT
One Common Wire



1 or 2 switch points

Switch Wiring Code			
Wiring Options	Group 1 SPST	Group 2 SPST	Group 3 SPDT
Common Wire	Black	None	Black
	NO or NC	NO or NC	NO/NC
L1	Red	Red/Red	Red/White-Red
L2	Yellow	Yellow/Yellow	Yellow/White-Yellow
L3	Blue	Blue/Blue	
L4	Brown		
L5	Orange		

Notes: All SPST switches are set normally open in their "dry", "no level" condition unless specified otherwise.
"White-Red" and "White-Yellow" denote single white wire with red or yellow stripes.



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D. Actuation Level Dimensions

A = Minimum distance from actuation point to bottom of mounting.

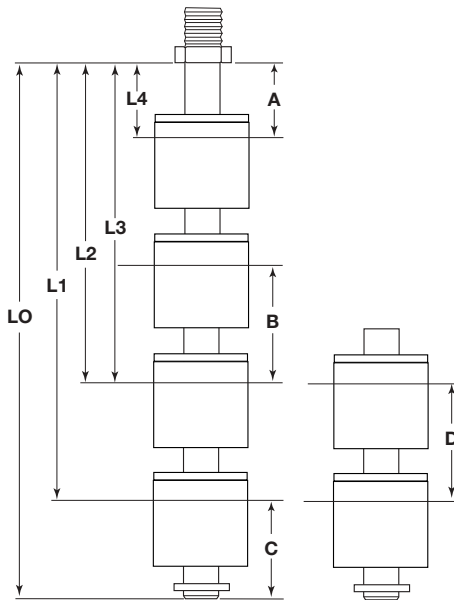
B = Minimum distance between actuation levels.

C = Minimum distance from end of unit to lowest actuation point.

D = Minimum distance between actuation points when a single float is used to actuate two switches.

Notes:

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



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"
.9 x 1.5"	1"	2 1/2"	1 1/2"	1/8"