

# LS-350 Series

## Combination Siphon and Level Sensor

- ▶ Multi-Level Switch Options
- ▶ Up to 4 Actuation Points
- ▶ Integral Siphon or Fill Tube
- ▶ Customized Mountings
- ▶ Custom Configurable

Save valuable space and costly installation/maintenance time with these highly customizable sensors. LS-350 units combine a siphon tube and up to four liquid level sensors as a single component. The complete unit installs through a single opening in the fluid container.

Simple and clean — a single component that enables remote monitoring of a tank's fluid content while allowing access for container filling and draining. These units are custom configured to fit the container of your choice, with a wide range of mountings, fluid and electrical connectors, materials and lengths.

### Typical Applications

- Immuno-Chemistry/Cytology
- Hematology
- Automated Urine Analysis
- Laboratory Automation

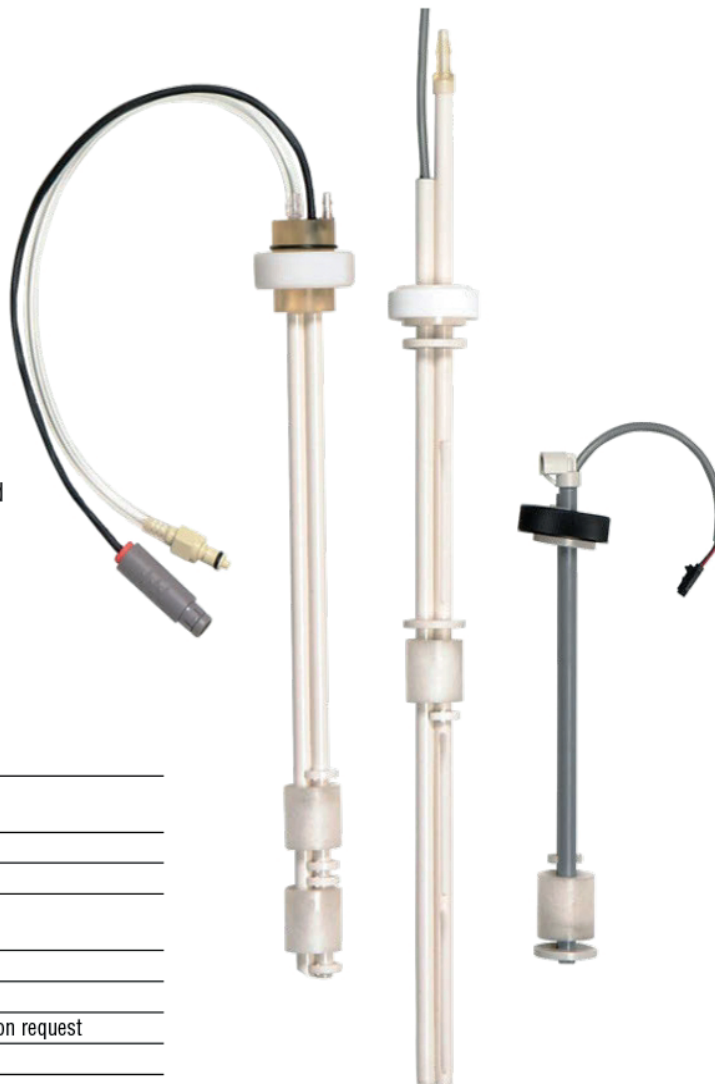
### Specifications

<b>Materials</b>	
<b>Stem and Mounting</b>	Polysulfone or Noryl®
<b>Floats</b>	Polypropylene or Buna N
<b>Gasket</b>	Buna N
<b>Operating Temperature</b>	
<b>Buna N Float</b>	221°F (105°C) Max.
<b>Polypropylene Float</b>	210°F (99°C) Max.
<b>Switch</b>	SPST
<b>Length</b>	15" (380 mm) Max., Longer units available on request
<b>Mounting Attitude</b>	±30° from vertical
<b>Actuation Level Points</b>	6 Max.

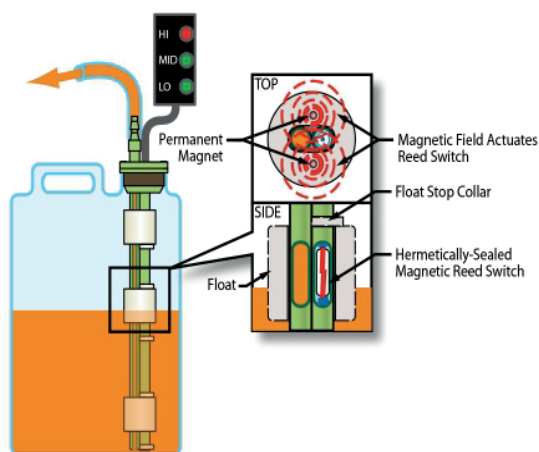
### Operating Principle

The LS-350 Series provides two functions: liquid level monitoring and fluid fill or extraction access. The latter function is accomplished with an integrated siphon tube that runs parallel to the float sensor stem and through the top mounting; it is commonly topped with a barb (or customer specified) fitting for the connection of flexible tubing. Fluid level sensing is accomplished with magnetic reed switch technology. One or more floats encircling a stationary stem are equipped with powerful, permanent magnets. As a float rises or lowers with liquid level, the magnetic field generated from within the float actuates a hermetically sealed magnetic reed switch mounted inside the stem. The switch actuation may be used for alarm, solenoid, pump or other fluid control operations.

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 Easy online ordering too!

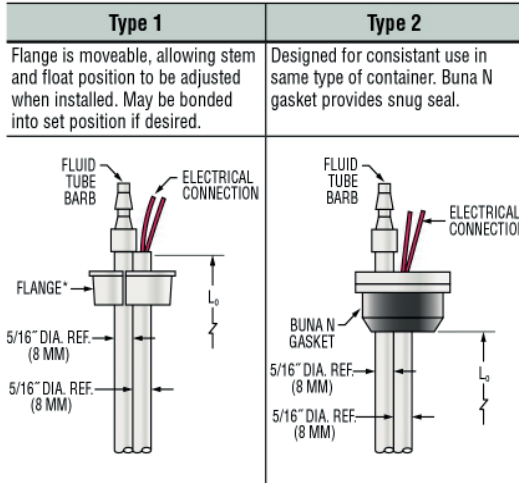


LEVEL SWITCHES – MULTI POINT



## 1. Mounting Types

Each mounting type can be configured with stem lengths ( $L_0$ ) and as indicated below.



<b>Mounting Hole Dia.</b>	1.20" / 1.25" (30.5 mm / 31.75 mm)	1.31" / 1.32" (33.3 mm / 33.5 mm)
<b>Stem, Mounting and Collar Material</b>	Polysulfone	Polysulfone with Buna N Gasket
<b>Pressure Rating (mounting)</b>	Atmosphere (Not recommended for pressurized applications)	
<b>Fluid Barb</b>	Compatible 3/16" I.D. Hose (Options available)	
<b>Max Length (<math>L_0</math>)</b>	15 inches (38 cm) $\pm$ 1/16" (2 mm)	
<b>Mounting Position</b>	Vertical $\pm$ 30° Inclination	
<b>Mounting Compatibility</b>	Cubitainer® Style Opening	Tank Wall Thickness 1/32" - 1/8"

\* Orientation of slot in flange is not critical.

## 2. Float Types

A single float type is used for all actuation points.

	Buna N	Polypropylene
<p>VIEW WITH FLOAT REMOVED BOTH TYPES</p>		
<b>Part Number</b>	<b>128642</b>	<b>130893</b>
<b>Liquid Suitability</b>	Oil-Based	Water-Based
<b>Min. Media Specific Gravity</b>	0.75	0.98
<b>Operating Temperature</b>	Oil: -40°F to +221°F (-40°C to +105°C) Water: to 180°F (82°C)	-40°F to +210°F (-40°C to +99°C)

## 3. Electrical Specifications

Typically, one float is required for each point at which you need a switch action to occur. The number of actuation levels available depends on the Group Type Wiring selected; see below.

**Group I Wiring:** 1 to 4 Actuation Levels.

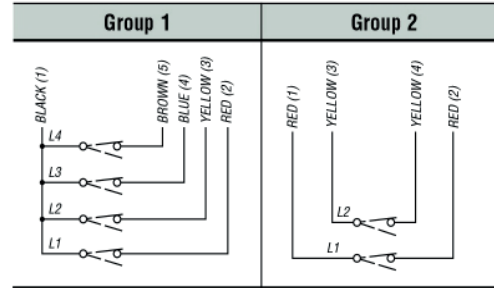
**Group II Wiring:** 1 or 2 Actuation Levels.

**Switch (SPST, N.O. or N.C.):** 10/20/50/100 VA.

Notes:

1. Other wiring options available. Consult factory.
2. Consult Factory for load information.

## 4. Wiring Group



## 5. Electrical Connections

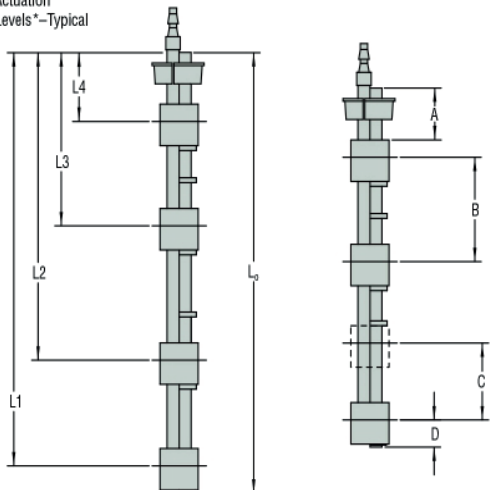
**Type 1:** Lead Wires, 24" to 26" (610 mm, Min.)

**Type 2:** Cable, 24" to 26" (610 mm, Min.)

## 6. Actuation Level Dimensions

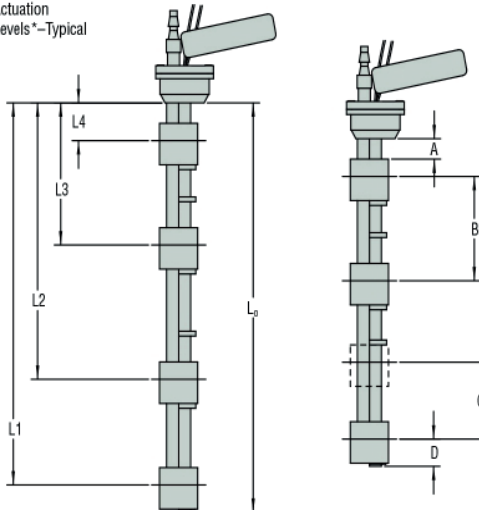
### Type 1

Actuation Levels\*—Typical



### Type 2

Actuation Levels\*—Typical



\* Actuation level distances and  $L_0$  (overall unit length) are measured from inner surfaces of mounting plug or flange. See mounting types on page B-11 for  $L_0$  reference point.

\*\* Length Overall ( $L_0$ ) =  $L_1$  + Dimension D. See Mounting Types for Maximum Length values.

Switch actuation levels are determined following the guidelines below.

A = Minimum distance to highest actuation level.

B = Minimum distance between actuation levels.

C = Minimum distance between two actuation levels with one float (Note: One float for two levels can be used only when low level is N.C. dry and high level is N.O. dry).

D = Minimum distance from end of unit to lowest level.

Float Type	Dimensions				
	A		B	C	D
	Type 1 Mount	Type 2 Mount			
<b>Buna N</b>	3/4" (19 mm), Min.	3/4" (19 mm)	1-3/4" (45 mm)	1/8" (3 mm) Minimum	15/16" (24 mm)
<b>Polysulfone</b>	1/2" (13 mm), Min.	1/2" (13 mm)	1-3/4" (45 mm)		1-3/16" (30 mm)

Notes:

1. Actuation levels are calibrated on ascending fluid level with water, specific gravity 1.0, as the calibrating fluid, unless otherwise specified.

2. Tolerance on actuation levels is  $\pm 1/8"$  (3 mm).