

Large Size – Engineered Plastics

LSP-800 Series – Features Inert Materials for Corrosive Liquids

- ▶ All-Plastic Wetted Parts - PVC, Polypropylene or PVDF
- ▶ 1 to 6 Actuation Levels
- ▶ Lengths to 70 inches

Specifically designed for corrosive liquids and vapors. Three standard model types in a choice of materials offer broad chemical compatibility.

1. Mounting Types

Each mounting type can be configured with stem lengths (L_0) and materials indicated in the table below. Floats and float stop collars are of same material specified for mounting.

| 1" NPT Type A | Type B 3" NPT | Type C 3", 150# Flange |
|---------------|------------------|---------------------------|
| | | |

| | |
|---|-------------------------------------|
| Stem, Mounting, Float and Collar Material | PVC, Polypropylene or PVDF |
| Max. Length (L_0) | 70 inches (177.8 cm) |
| Mounting Position | Vertical $\pm 30^\circ$ Inclination |

2. Float Types

| Float Material | PVC | Polypropylene | PVDF |
|------------------------------------|--|---------------|------|
| Float Dimensions | | | |
| Operating Temperature and Pressure | See Ratings Chart at top of following page | | |
| Min. Liquid Specific Gravity | 0.60 | 0.40 | 0.75 |

Note: Floats are always supplied in same material as specified for mounting.



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CE

LSP-800 Series – Continued

Temperature and Pressure Ratings Chart

Maximum Pressure vs. Temperature

| | Operating Temperature | | | | | | | |
|------------------|-----------------------|---------------------|---------------------|---------------------|----------------------|---------------------|---------------------|---------------------|
| LSP-800 Material | 0°F (-17.7°C) | 70°F (21.1°C) | 100°F (37.7°C) | 125°F (51.7°C) | 140°F (60.0°C) | 170°F (76.6°C) | 200°F (93.3°C) | 210°F (98.8°C) |
| PVC | 50 PSI (3.4 bar) | 50 PSI (3.4 bar) | 35 PSI (2.4 bar) | 20 PSI (1.4 bar) | 10 PSI (0.68 bar) | X | X | X |
| Polypropylene | 50 PSI (3.4 bar) | 50 PSI (3.4 bar) | 40 PSI (2.7 bar) | 35 PSI (2.4 bar) | 30 PSI (2.0 bar) | 25 PSI (1.7 bar) | X | X |
| PVDF | 50 PSI (3.4 bar) | 50 PSI (3.4 bar) | 45 PSI (3.1 bar) | 40 PSI (2.7 bar) | 35 PSI (2.4 bar) | 30 PSI (2.0 bar) | 25 PSI (1.7 bar) | 25 PSI (1.7 bar) |

3. Electrical Specifications

Switch (N.O. or N.C.):

SPST: 20 VA or 100 VA

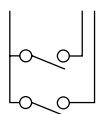
SPDT: 20 VA

Lead Wires: #22 AWG, 24" L., Polymeric

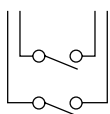
Typical Wiring Diagrams

For clarity, only two actuation levels are shown in each group diagram.

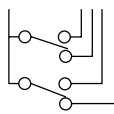
GROUP I
SPST



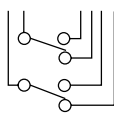
GROUP II
SPST



GROUP III
SPDT



GROUP IV
SPDT

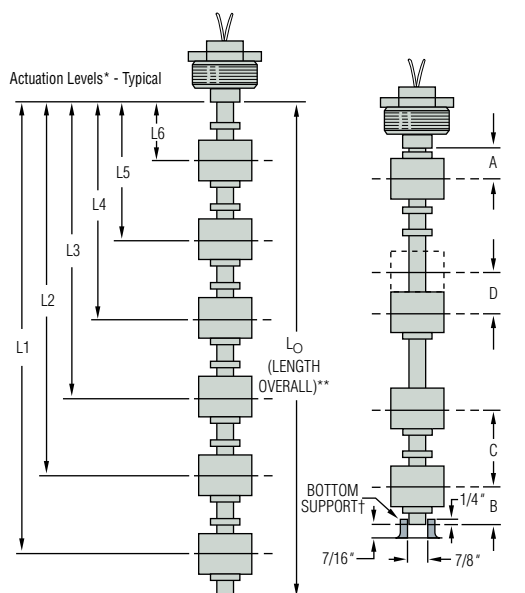


Wiring Color Code

| | SPST Switches | | | SPDT Switches 20 VA | | | | |
|-----------|---------------|----------|--------|---------------------|---------|----------|--------|------------|
| Wiring | Group I | Group II | | Group III | | Group IV | | |
| Com. Wire | Black | None | | Black | | None | | |
| | NO/NC | SW. Com. | NO/NC | NO | NC | SW. Com. | NO | NC |
| L1 | Red | Red | Red | Red | Wh/Red | Red | Wh/Red | Wh/Blk/Red |
| L2 | Yellow | Yellow | Yellow | Yellow | Wh/Yel | Yellow | Wh/Yel | Wh/Blk/Yel |
| L3 | Blue | Blue | Blue | Blue | Wh/Blue | Blue | Wh/Blu | Wh/Blk/Blu |
| L4 | Brown | Brown | Brown | Brown | Wh/Brn | Brown | Wh/Brn | Wh/Blk/Brn |
| L5 | Orange | Orange | Orange | Orange | Wh/Orn | Orange | Wh/Orn | Wh/Blk/Orn |
| L6 | Gray | Gray | Gray | Gray | Wh/Gra | Gray | Wh/Gra | Wh/Blk/Gra |

Notes: See "Electrical Data" on Page X-5 for more information.

4. Actuation Level Dimensions



* Actuation level distances and L_0 (overall unit length) are measured from inner surfaces of mounting plug or flange.

** Length Overall $L_0 = L_1 + \text{Dimension B}$. See Mounting Types for Maximum Length values.

† Bottom support recommended for units longer than 36 inches, or in applications having turbulent conditions.

Switch actuation levels are determined following the guidelines below.

A = 2-1/16" (52.4 mm) \pm 1/16" minimum distance to centerline of float (ref. mounting).

B = 2-11/16" (68.3 mm) \pm 1/16" minimum distance to centerline of float (ref. stem end).

C = 3-1/2" (88.9 mm) minimum distance between actuation levels.

D = Distance between actuation levels using one float.

Minimum = 1/4" (6.3 mm)

Maximum = 3-1/2" (88.9 mm)

Notes:

- The centerline of the float is used as a standard reference for actuating the switches.
- All levels are set on descending float travel with overtravel = 1/4" (6.3mm) \pm 1/8" (3.2mm).
Overtravel on Ascending = 1/8" (3.2mm) min.
- Tolerance on all actuation levels is \pm 1/8" (3.2 mm) Ref.