Large Size – Engineered Plastics

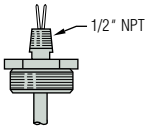
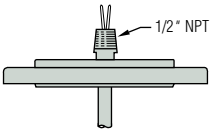
LS-800PVC Series – Our Most Economical Large Size Unit

ORDER IT!
Ordering is Easy! See Page B-26.
Easy online ordering too!

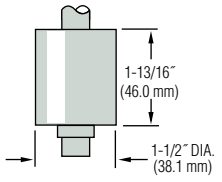
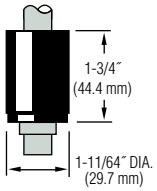
- NSF Approved All-PVC Wetted Parts Available
- 1 to 7 Actuation Levels
- Lengths to 60 inches

Inexpensive, all-PVC LS-800PVC Series switches bring reliable level sensing to corrosive liquids. These durable, yet economical, switches use the same high-quality, dependable reed switches found in GEMS' most expensive models. NSF-approved wetted parts make the LS-800PVC suitable for potable water applications.

1. Mounting Types

	Type 1 1/2" NPT	Type 3 2" NPT	Type 4 3", 150# Flange
			
Mounting and All Wetted Parts	PVC		
Operating Temperatures	0°F to 125°F (-17.8°C to 51.7°C)		
Pressure, PSI, Max.	15 @ 70°F (21°C)		
Max. Length (Lo)	60 inches (152.4cm)		
Mounting Position	Vertical ±30° Inclination		

2. Float Type

Float Material	PVC*	Buna N
Float Dimensions		
Float Part Number	**16306**	**142251**
Min. Liquid Specific Gravity	0.85	0.80

*Select for potable water applications.

LS-800PVC Series – Continued

3. Number of Actuation Levels and 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 type of wiring selected. See below.

Group I Wiring: 1 to 7 Actuation Levels

Group II Wiring: 1 to 4 Actuation Levels

Group III Wiring: 1 to 3 Actuation Levels

Group IV Wiring: 1 to 2 Actuation Levels

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

SPST: 20 VA or 100 VA

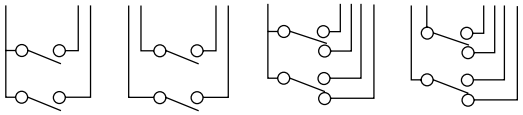
SPDT: 20 VA

Lead Wires: #22 AWG, 24˝ L., PVC

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

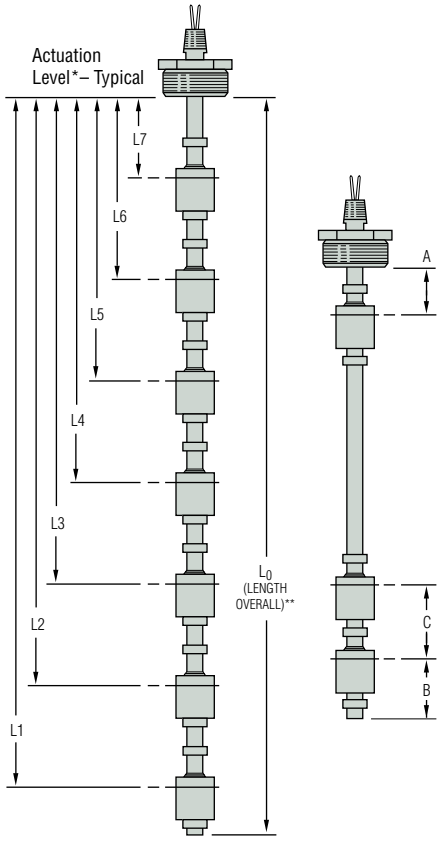


Wiring Color Code

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			
L4	Brown	Brown	Brown					
L5	Orange							
L6	Gray							
L7	White							

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 + Dimension B. See Mounting Types for Maximum Length values.

Switch actuation levels are determined following the guidelines below.

A = 1-1/2˝ (38.1 mm) Minimum distance to highest actuation level.

B = 2˝ (50.8 mm) Minimum distance from end of unit to lowest actuation level.

C = 3˝ (76.2 mm) Minimum distance between actuation levels.

Notes:

1. Actuation levels are calibrated on descending fluid level, with water as the calibrating fluid, unless otherwise specified.
2. A and B dimensions based on a top mounted unit.
3. Float stops are permanently cemented in place.
4. Tolerance on actuation levels is ±1/8˝ (3.2 mm).
5. Dimensions based on a liquid specific gravity 1.0.

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.

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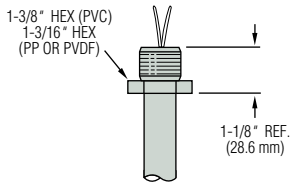
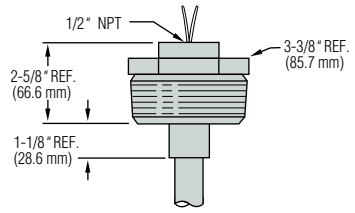
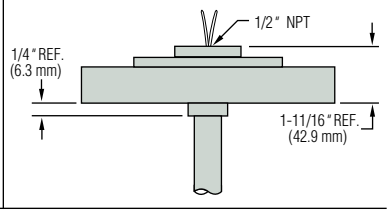
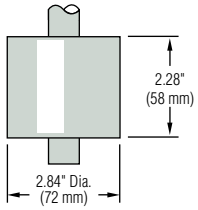
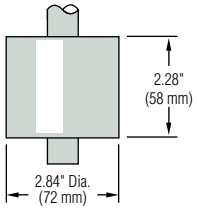
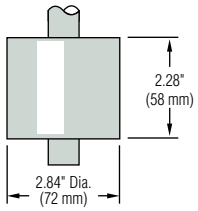
Easy online ordering too!

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.

	Type A 1" NPT	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 ±30° 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.

Order from: C A Briggs Company; 622 Mary Street; Suite 101 - Warminster, PA 18974
Phone: 267-673-8117 - Fax: 267-673-8118; E-Mail: Sales@cabriggs.com - www.cabriggs.com

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.):

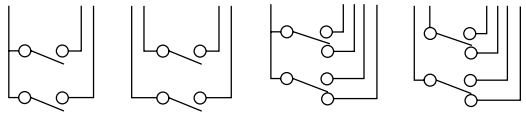
SPST: 20 VA or 100 VA

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

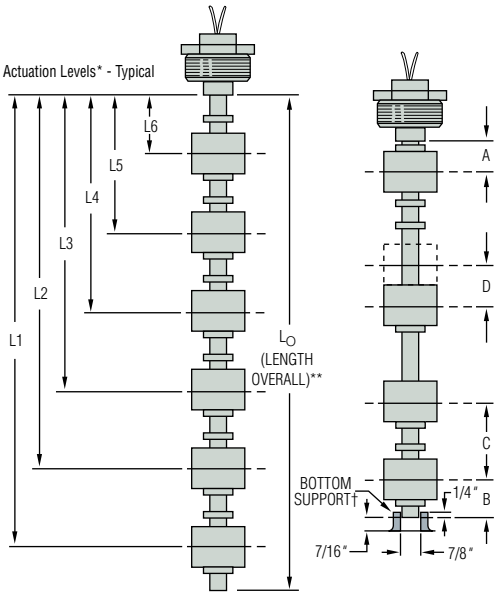


Wiring Color Code

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



Switch actuation levels are determined following the guidelines below.

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

B = 2-11/16˝ (68.3 mm) ±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:
1. The centerline of the float is used as a standard reference for actuating the switches.
2. All levels are set on descending float travel with overtravel = 1/4˝ (6.3mm) ±1/8˝ (3.2mm).
Overtravel on Ascending = 1/8˝ (3.2mm) min.
3. Tolerance on all actuation levels is ±1/8˝ (3.2 mm) Ref.

* Actuation level distances and L_0 (overall unit length) are measured from inner surfaces of mounting plug or flange.
** Length Overall $L_0 = L_1$ + Dimension B. See Mounting Types for Maximum Length values.
† Bottom support recommended for units longer than 36 inches, or in applications having turbulent conditions.

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Photocopy This Form
Use one form for each product type you are selecting.

This form may also be completed online at gemssensors.com for RFQ.

This is a ☐ Request for a Quote
☐ Order P.O.# _____

Quantity Needed _____

Date Required ____/____/_____

Shipping Method:_____

Partials Accepted: ☐ Yes ☐ No

Name _____

Company _____

Street _____

City_____ State ____ Zip_____

Phone (_____) _____

Fax (_____) _____

LS-800 Types Custom Length Float Type Level Switches

Application Environmental Conditions

This information is essential to the accurate and proper operation of your GEMS configurable sensors. Please complete fully and accurately.

1. Liquid Media: _____

2. Pressure: Minimum _____ psig Maximum _____ psig

3. Temperature: Minimum _____ °F Maximum _____ °F

4. Specific Gravity: Minimum _____ Maximum _____

5. Viscosity: _____ SSU

6. Tank Material: _____

Tank Depth: _____

7. Unit is Mounted In: ☐ Tank Top ☐ Tank Bottom

1. Series (Page No.):

☐ LS-800PVC (B-18) ☐ LSP-800 (B-20) ☐ LS-800 (B-22)
☐ LS-800-Adjustable (B-23)
☐ TM-800 (B-25. Thermistor Equipped)
☐ TH-800 (B-25. Thermostat Equipped)

See product page number for available mounting type and materials.

2. Mounting Type:

☐ Type A ☐ Type B ☐ Type C
☐ Type 1 ☐ Type 2 ☐ Type 3
☐ Type 4 ☐ Type 5

3. Mounting and Stem Material (if choice available):

☐ Brass ☐ Polypropylene
☐ PVC ☐ PVDF
☐ 316 Stainless Steel ☐ Carbon Steel (Flanges Only, in association with stainless steel stems.)

4. Mounting Position:

☐ Tank Top ☐ Tank Bottom

5. Float Part Number: |_|_|_|_|_|_|_|_|

Matching floats will be used at each actuation level specified.

6. Switch Type and Rating:

A. ☐ Group I ☐ Group II
☐ Group III* ☐ Group IV*

B. ☐ SPST ☐ SPDT*

C. ☐ 20 VA ☐ 100 VA (SPST only)
Please indicate if using microprocessor/PLC load: ☐ Yes ☐ No

* Not Available on the TM-800 Series.

7. Switch Actuation Level

A.

Actuation Level	Distance to Actuation Level (Inches)[1]	SPST Switch Operation[2] (Check Type)	
		N.O.	N.C.
L6			
L5			
L4			
L3			
L2			
L1[3]			

Notes:
1. Measured from inner surface of mounting plug or flange.
2. Switch position is "normal" with unit dry (tank empty).
3. L1 is the distance to the lowest actuation level with mounting "up," and is the distance to the highest actuation level with mounting "down."
4. Float stops are standard; see B-24 for specifications.

B. Length Overall (L_0) _____ inches (customer supplied support bracket assembly recommended for lengths over 72″.)

8. Lead Wire Length:

☐ 12″ ☐ 24″ ☐ Other:_____ inches.

Options:

☐ Temperature Switch Settings (°F): ☐ 100 ☐ 125 ☐ 150 ☐ 175 ☐ 200

On rising temperature, switch... ☐ Opens ☐ Closes

☐ Slosh Shield ☐ 316 SS (316 SS units only) ☐ Brass (Brass units only)

J-Box Electrical Connection:

☐ Explosion Proof Type (FM/CSA)*
☐ NEMA 4 Type ☐ Plastic ABS Type

* Requires stainless steel floats

Please Contact **C A Briggs Company** for any Special Configurations Or requirements not covered on this form. **267-673-8117**

Quote: $ _____ Date Quoted:____/____/____

Additional minimum charges may apply on special orders.

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