

## Small Size – Engineered Plastics

### LS-3 Series – Offers High Reliability, Compact Size and Low Costs in NPT, Straight and Metric Threads

Ideal for shallow tanks or restricted spaces, or for any low-cost, high volume use. LS-3 Series are available in FDA compliant materials, consult GEMS for details.

Polysulfone Float



For water based liquids, with limited use in oils and chemicals.

Polypropylene Float (Hollow)



Features a low specific gravity float offering broad chemical compatibility.

Polypropylene Float (Solid)



With Polypropylene stem and float, switch offers broad chemical compatibility.

Buna N Float



Ideal for oils and fuels.

ALL-PVDF



Stem and float of corrosion-resistant PVDF for ultra-pure applications.

New 3/4" Polypropylene Float



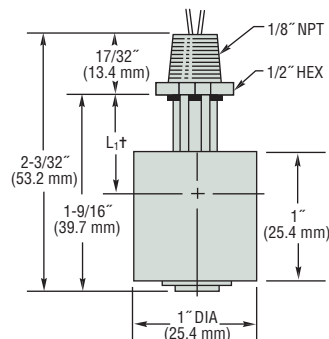
See next page for details.

### Common Specifications

**Approvals:** U.L. Recognized – File No. E45168; CSA Listed – File No. 30200. CE Declaration Available Upon Request. NSF materials are Standard 61 compliant. For NSF approved level switches contact Gems.

**Switch SPST:** 20 VA, 120-240 VAC. Units are shipped N.O. unless otherwise specified. Selectable, N.O. or N.C., by inverting float on unit stem.

### Dimensions – 1" Float Models only



$L_1$  = Actuation Level  
(see chart below)

Alternate Mountings			
	3/8"-16 Straight Thread	G1/8" 1/8"-28 BSP	M12x 1.75 Straight Thread
Electrical Termination	Lead Wires	Cable	Cable

## How To Order – Select Part Number based on specifications required.

Stem and Mounting Material	Float Material	Float Dia.	Actuation Level <sup>1</sup>	Min. Liquid Sp. Gravity	Pressure Max. @ 70°F (21°C)	Operating Temperature	Mounting Type	Electrical Termination	Part Number
Polysulfone	Polysulfone	1"	3/4" (19.0 mm)	.75	50 psi (3 bar)	-40°F to +225°F (-40°C to +107°C)	1/8" NPT	Lead Wires	42295 ⚡
Polypropylene <sup>2</sup>	Polypropylene (Hollow)	1"	13/16" (20.6 mm)	.60	50 psi (3 bar)	-40°F to +225°F (-40°C to +107°C)	1/8" NPT	Lead Wires	142505 ⚡
						-40°F to +225°F (-40°C to +107°C)	3/8"-16	Lead Wires	171517
						-40°F to +176°F (-40°C to +80°C)	G 1/8"-28	Cable	171518
						-40°F to +176°F (-40°C to +80°C)	M12x1.75	Cable	189739
Polypropylene <sup>3</sup> NSF Std. C-2 (Kynar float retaining clip)	Polypropylene <sup>3</sup> (Hollow) NSF Std. C-2	1"	13/16" (20.6 mm)	.60	50 psi (3 bar)	-40°F to +225°F (-40°C to +107°C)	1/8" NPT	Lead Wires	209475
							3/8"-16	Lead Wires	209455
							G 1/8"-28	Lead Wires	209460
							M12x1.75	Lead Wires	209465
Polypropylene <sup>2</sup>	Polypropylene (Solid)	1"	9/16" (14.3 mm)	.90	150 psi (10 bar) @ 68°F (20°C)	-40°F to +150°F (-40°C to +66°C)	1/8" NPT	Lead Wires	116826 ⚡
						-40°F to +176°F (-40°C to +80°C)	3/8"-16	Lead Wires	171514
		3/4"	7/16" (11.1 mm)	.95	Atmospheric	-40°F to +176°F (-40°C to +80°C)	M12x1.75	Cable	189787
						-40°F to +212°F (-40°C to +100°C)	1/8" NPT	Lead Wires or Cable	201540
Nylon	Buna	1"	13/16" (20.6 mm)	.45	150 psi (10 bar)	-40°F to +250°F (oil) (-40°C to +121°C [oil])	1/8" NPT	Lead Wires	162745 ⚡
						-40°F to +176°F (water) (-40°C to +80°C [water])	M12x1.75	Cable	189786
		3/4"	11/16" (17.5 mm)	.85	150 psi (10.3 bar)	-40°F to +250°F (oil) (-40°C to +121°C [oil])	1/8" NPT	Lead Wire	177818
PVDF	PVDF	1"	1/2" (12.7 mm)	.86	50 psi (3 bar)	-40°F to +250°F (-40°C to +121°C)	1/8" NPT	Teflon Jacketed Lead Wires	173250

Notes:

1. Based on a liquid specific gravity of 1.0.

2. All Polypropylene units carry a Kynar retaining clip. Accessories Available in OEM Quantities: Jam Nut, Gaskets, and Slosh Shields.

3. NSF C-2 Approved unit, for water use only.

⚡ – Stock Items.

## 3/4" Diameter Floats for Tiny Tanks

### Our smallest LS-3 yet!

- ▶ Reliable alternative to more expensive electronic sensors.
- ▶ Fits smaller devices. Less material, lower cost.
- ▶ Proprietary float more buoyant than competitors.

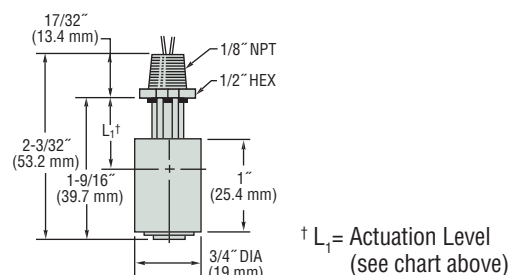
Small yes, but with BIG performance. No other 3/4" float switch on the market matches our LS-3 specs. These units are ideal for potable water, medical devices and other compact appliances, such as printers. Gems proprietary float enables use in lighter-than-water fluids. NSF/ FDA compliant models available at your request. Please consult factory.

### Specifications

<b>Wetted Material</b>	
<b>Stem and Mounting</b>	
P/N 201540	Polypropylene with Kynar retaining clip
P/N 177818	Nylon
<b>Float</b>	
P/N 201540	Polypropylene
P/N 177818	Buna-N
<b>Operating Temperature, Max.</b>	
P/N 201540	212°F (100°C)
P/N 177818	250°F (121°C) oil, -40°F to +176°F (-40°C to +80°C)
<b>Pressure, Max.</b>	
P/N 201540	Atmospheric
P/N 177818	150 psi (10.3 bar)



### Dimensions



### Order by Part Numbers:

LS-3, 3/4" Polypropylene Float: 201540

LS-3, 3/4" Buna-N Float: 177818

## Unique Features Make These LS-3 Models Special

These small switches feature unique configurations for special applications.

Part No. 142545  
With Slosh Shield



Cut-away version shown

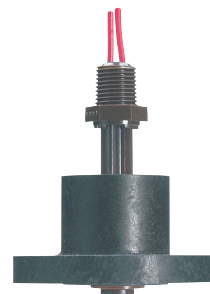
Compact, all-polypropylene switch with slosh shield is ideal for use with turbulent liquids in small tanks. FDA compliant materials.

Part No. 46999  
Bottle Level

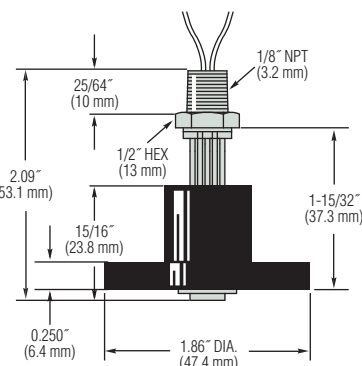
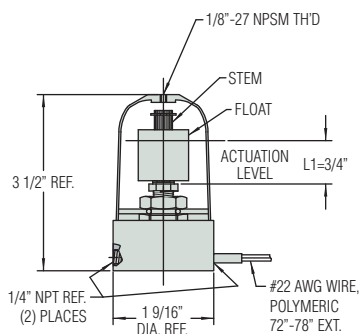
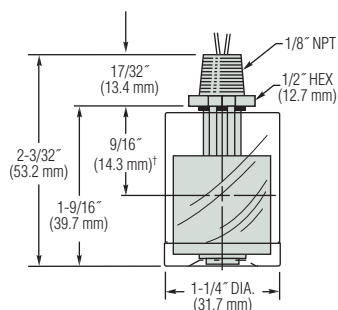


For external mounting on tanks too small to accommodate internally mounted switches. (See note below)

Part No. 76707  
For Low Level



For detecting levels as low as 5/8" from tank bottom. Use in water, some oils and chemicals.



Order By Part Number	142545 ⚡	46999 ⚡	76707 ⚡
<b>Materials</b>			
Stem and Mounting	All Polypropylene (Including Shield <sup>4</sup> )	Polysulfone	All Polysulfone (Including Collar)
Float	Polypropylene (Solid)	Polysulfone	Buna N
Other Wetted	—	Brass, Aluminum, Polycarbonate, Viton A	Epoxy
Min. Liquid Sp. Gr.	.90	.75	—
Operating Temperature	-40°F to +150°F (-40°C to +65.6°C)	-40°F to +120°F (-40°C to +48.9°C)	-40°F to +180°F (-40°C to +82.2°C)
Pressure, PSI, Max. <sup>3</sup>	150	50	
Switch <sup>1</sup> , SPST	20 VA, N.C./N.O. Dry <sup>2</sup>	20 VA, N.C. Dry	
Electrical Termination	No. 22 AWG, 22" L., PVC Lead Wires	No. 22 AWG, 72" L., Polymeric Lead Wires	No. 22 AWG, 72" L., PVC Lead Wires

**Notes:**

- See "Electrical Data" on Page X-5 for more information.
  - Switch operation is selectable, N.O. or N.C., by inverting the float on the unit stem.
  - Maximum pressure at 70°F (21°C).
  - Consult factory for other available materials.
- † L<sub>1</sub> = Switch actuation level, nominal (based on a specific gravity of 1.0).

Note: LS-3 Series Bottle Level Switch is also available with any of the float materials shown on opposite page. Contact GEMS for correct part number.

⚡ – Stock Items.