

# Small Size – Engineered Plastics

## LS-7 Series–Compact Side Mounts are the Solution to Many Small Tanks

These low-cost units are ideal for high volume use in small tanks and vessels. Engineered plastics construction offers broad compatibility in water, oils and chemicals.

LEVEL SWITCHES – SINGLE POINT

Type 3 Internal Mounting	Type 5 External Mounting	Type 7 External Mounting
<p>Polypropylene, Nylon or Versaplast™.</p>	<p>Polypropylene, Nylon or Versaplast™.</p>	<p>Polypropylene or Nylon; conduit connection.</p>
<p>ZIP CORD LEADWIRES, 24" EXTENDED 3.84" (97.5 mm) GASKET (WHITE BUNA N INCLUDED) 5/8"-11 THREAD LOCKING NUT (NYLON) 2-3/4" (69.8 mm)</p>	<p>ZIP CORD STYLE 24" LEADWIRES 4-1/4" (108 mm) 5/8" (16 mm) 2-7/8" (73 mm) 5/8" HEX 1/2" NPT</p>	<p>LEAD WIRES, 24" EXTENDED 1/2" NPT 4-1/2" (114 mm) 5/8" (16 mm) WRENCH FLAT 19/64" (7.5 mm) 2-7/8" (73 mm)</p>

### Common Specifications

**Switch Rating\*:** SPST, 20VA

**Lead Wire Gauge:** No. 22 AWG

**Mounting Attitude:** Horizontal.

**RoHS:** In compliance with EU-directive 2011/65/EC requirements for chemicals and substances.

\* See "Electrical Data" on Page X-5 for more information.

### Approvals

Material	CE	UL Recognized File No. E45168	cUL Recognized	CSA Listed-File No. 30200	NSF Listed Mat. Std. 169
Nylon	X	X	X	X	
Polypropylene	X	X	X	X	X
Noryl®	X	X	X		X
Versaplast™	X	X	X		

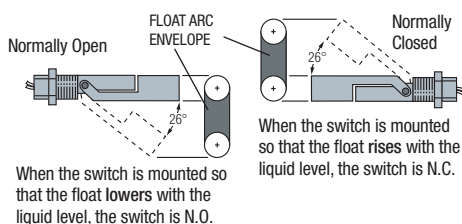
### Media Compatibility

Media	LS-7 Compatible Types
Oil, Fuel, Hydrocarbons	Nylon
Broad Range of Chemicals and Water	Polypropylene
Limited Chemicals and Water	Noryl®
Oil, Antifreeze, High Temperatures, Corrosive Fluids, Various Chemicals	Versaplast™

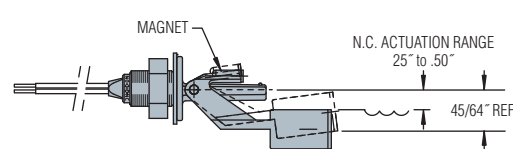
### Switch Operation

Depending on the mounting position, the float on these switches can rise or lower with the liquid level. By rotating the switch 180°, the switch operation can be Normally Open or Normally Closed (except Type 12).

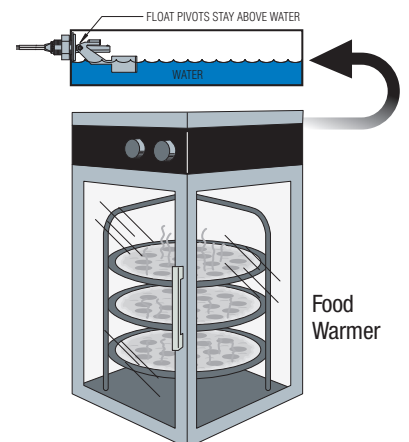
Types 3, 5, 7, 10 and 13



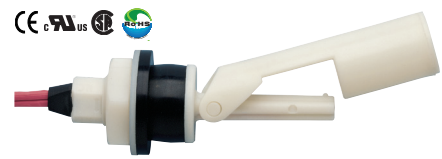
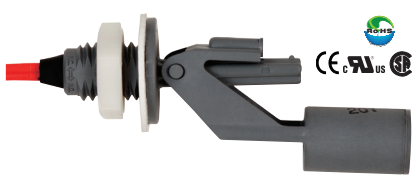

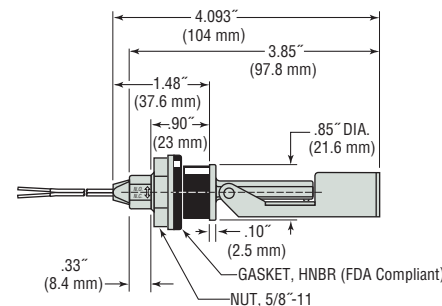
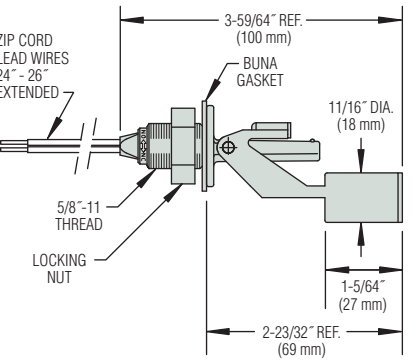
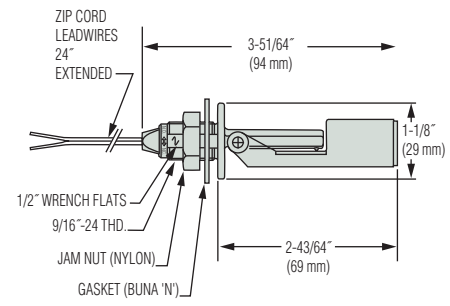
Type 12 – N.C. "Drop Float" Design



The LS-7 Type 12 is ideal for use on food warmers, hot water heaters, steam cookers, small boilers or wherever water evaporation occurs. The switch is used effectively for either high fluid level alarms or water make up systems. The units are made of Noryl®, which carries NSF approval for use in potable water, and are supplied with FDA-approved Buna gaskets.



- ▶ Nylon is ideal for oils and fuels.
- ▶ NSF Standard 169 polypropylene is ideal for potable water and broad chemicals.
- ▶ Versaplast™ is ideal for corrosive fluids, hot water, antifreeze, chemicals and oils.

Type 10 External Mounting	Type 12 Internal Mounting	Type 13 Internal Mounting
 <p>Externally mounts through and seals non-threaded holes using a HNBR compression gasket.</p>	 <p>Side mount “Drop Down” design for calcifying hot water applications. NSF compliant Noryl®.</p>	 <p>Polypropylene or Nylon.</p>
 <p>Note: Recommended hole size = 7/8" dia. x 1/32" - 5/32" thick panel.</p>		

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

Mounting Type	Materials*			Min. Liquid Sp. Gr.	Operating Temperature	Operating Pressure, Max.	Float Arc Envelope	Part Number
	Stem and Mounting	Float	Lead Wire Jacket					
3	Nylon	TPE†		.65	-40°F to +250°F (-40°C to +121.1°C)	100 psi @ 70°F (6.8 bar @ 20°C)	2.20	165570 ⚡
	Polypropylene			.55	-40°F to +225°F (-40°C to +107.2°C)			164520 ⚡
	Versaplast™			.80	-40°F to +250°F (-40°C to +121.1°C)			182600
5	Polypropylene	TPE†		.55	-40°F to +225°F (-40°C to +107.2°C)	100 psi @ 70°F (6.8 bar @ 20°C)	1.25	131100 ⚡
	Nylon			.65	-40°F to +250°F (-40°C to +121.1°C)			140620 ⚡
	Versaplast™	Teflon®	.80	-40°F to +300°F (-40°C to +148.9°C)	177100 ⚡			
5 - BSP	Versaplast™	TPE†		.80	-40°F to +250°F (-40°C to +121.1°C)	100 psi @ 70°F (6.8 bar @ 20°C)	1.25	189422
7	Polypropylene	TPE†		.55	-40°F to +225°F (-40°C to +107.2°C)	100 psi @ 70°F (6.8 bar @ 20°C)	1.50	160450 ⚡
	Nylon			.65	-40°F to +250°F (-40°C to +121.1°C)			160460 ⚡
10	Polypropylene	TPE†		.55	-40°F to +225°F (-40°C to +107.2°C)	50 psi @ 70°F (3.4 bar @ 20°C)	2.08	165800 ⚡
	Nylon			.65	-40°F to +250°F (-40°C to +121.1°C)			165900
12	Noryl®	TPE†		.80	-40°F to +225°F (-40°C to +107.2°C)	100 psi @ 70°F (6.8 bar @ 20°C)	.70	191080 ⚡
13	Polypropylene	TPE†		.55	-40°F to +225°F (-40°C to +107.2°C)	100 psi @ 70°F (6.8 bar @ 20°C)	2.20	197050

See alloy versions on next page.

\* Polysulfone and Ryton® R-4 are available upon request.  
 † Thermoplastic Elastomer Zip Cord, 22 AWG.  
 Note: NSF 169 Versions available. Contact factory.

⚡ – Stock Items.

## Small Size - Alloys

### LS-7 Series

#### Compact Alloy and Alloy/Plastics Side Mounts

Built for durability, our LS-7 Series switches utilize stainless steel, or zinc bodies. Ideal for any small tank or vessel destined for a rugged environment. All-stainless steel material of construction of Types 9 and 11 is generally recognized as safe with FDA for food contact regulations.

#### Common Specifications

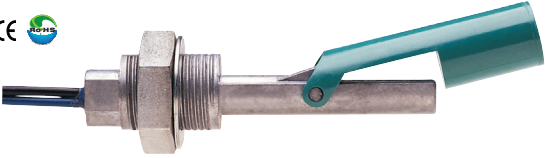

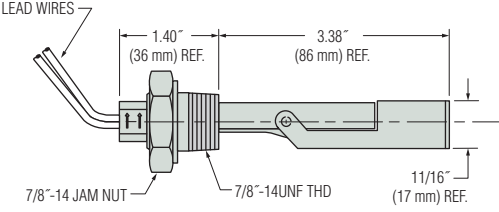
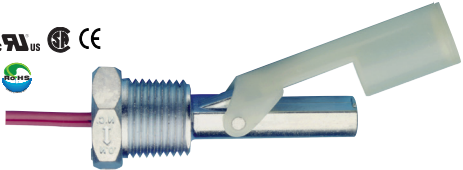

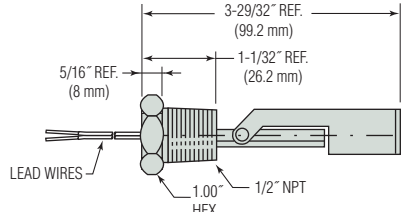


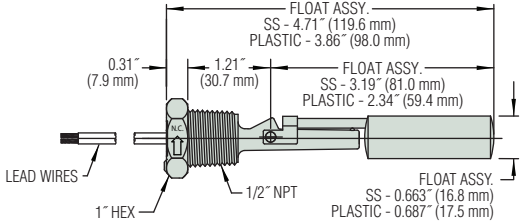
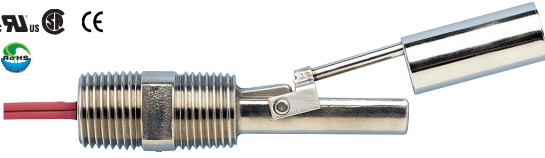

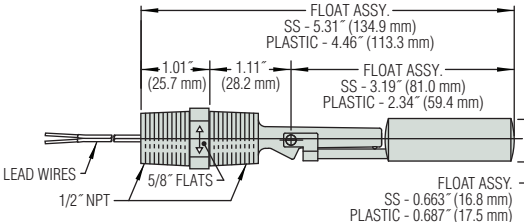


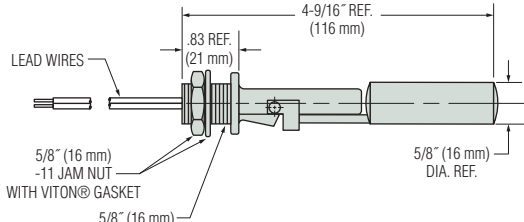
**Switch Rating\*:** SPST, 20VA

**Lead Wire:** 22 AWG, 24"-27" Extended

**Mounting Attitude:** Horizontal.

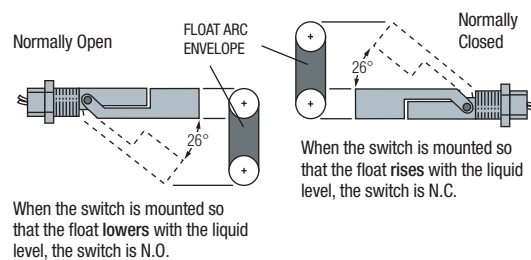
**RoHS:** In compliance with EU-directive 2011/65/EC requirements for chemicals and substances.

\*See "Electrical Data" on Page X-5 for more information.

<p><b>Type 6</b> External Mounting</p>	 <p>CE </p> <p>Zinc alloy body with polypropylene or nylon float. SAE Mounting.</p>	 <p>LEAD WIRES</p> <p>1.40" (36 mm) REF.</p> <p>3.38" (86 mm) REF.</p> <p>7/8"-14 JAM NUT</p> <p>7/8"-14 UNF THD</p> <p>11/16" (17 mm) REF.</p>
<p><b>Type 8</b> External Mounting</p>	 <p>cULus  CE</p> <p>Zinc alloy body with nylon or polypropylene float.</p>	 <p>3-29/32" REF. (99.2 mm)</p> <p>5/16" REF. (8 mm)</p> <p>1-1/32" REF. (26.2 mm)</p> <p>LEAD WIRES</p> <p>1.00" HEX</p> <p>1/2" NPT</p>
<p><b>Type 9</b> External Mounting</p>	 <p>cULus  CE</p> <p>316 Stainless Steel body with 316 SS, nylon or polypropylene float.</p>	 <p>FLOAT ASSY. SS - 4.71" (119.6 mm) PLASTIC - 3.86" (98.0 mm)</p> <p>0.31" (7.9 mm)</p> <p>1.21" (30.7 mm)</p> <p>FLOAT ASSY. SS - 3.19" (81.0 mm) PLASTIC - 2.34" (59.4 mm)</p> <p>LEAD WIRES</p> <p>1" HEX</p> <p>1/2" NPT</p> <p>FLOAT ASSY. SS - 0.663" (16.8 mm) PLASTIC - 0.687" (17.5 mm)</p>
<p><b>Type 9</b> External Mounting</p>	 <p>cULus  CE</p> <p>316 Stainless Steel body with 316 SS, nylon or polypropylene float.</p>	 <p>FLOAT ASSY. SS - 5.31" (134.9 mm) PLASTIC - 4.46" (113.3 mm)</p> <p>1.01" (25.7 mm)</p> <p>1.11" (28.2 mm)</p> <p>FLOAT ASSY. SS - 3.19" (81.0 mm) PLASTIC - 2.34" (59.4 mm)</p> <p>LEAD WIRES</p> <p>5/8" FLATS</p> <p>1/2" NPT</p> <p>FLOAT ASSY. SS - 0.663" (16.8 mm) PLASTIC - 0.687" (17.5 mm)</p>
<p><b>Type 11</b> Internal Mounting</p>	 <p>cULus  CE</p> <p>316 Stainless Steel body with 316 S.S. float.</p>	 <p>4-9/16" REF. (116 mm)</p> <p>.83" REF. (21 mm)</p> <p>LEAD WIRES</p> <p>5/8" (16 mm) -11 JAM NUT WITH WITON® GASKET</p> <p>5/8" (16 mm) -11 THD</p> <p>5/8" (16 mm) DIA. REF.</p>

### Switch Operation

Depending on the mounting position, the float on these switches can either rise or lower with the liquid level. By rotating the switch 180°, the switch operation can be Normally Open or Normally Closed.



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

Mounting Type	Materials			Min. Liquid Sp. Gr.	Operating Temperature	Operating Pressure, Max.	Float Arc Envelope	Part Number
	Stem and Mounting	Float	Lead Wire Jacket					
6	Zinc Alloy*	Nylon	TPE <sup>†</sup>	.65	-40°F to +250°F (-40°C to +121°C)	100 psi @ 70°F	1.36	155660 ⚡
		Polypropylene		.75	-40°F to +225°F (-40°C to +107°C)	100 psi @ 70°F	1.36	179870
8	Zinc Alloy*	316 S.S.	TPE <sup>†</sup>	.80	-40°F to +250°F (-40°C to +121°C)	300 psi @ 70°F	1.43	249315
		Nylon		.65	-40°F to +250°F (-40°C to +121°C)	100 psi @ 70°F	1.40	160950 ⚡
		Polypropylene		.55	-40°F to +225°F (-40°C to +107°C)	100 psi @ 70°F	1.40	162795 ⚡
	316 Stainless Steel	316 S.S.	TPE <sup>†</sup>	.80	-40°F to +250°F (-40°C to +121°C)	300 psi @ 70°F	1.43	249315
		Nylon		.65	-40°F to +250°F (-40°C to +121°C)	100 psi @ 70°F	1.40	247390
		Polypropylene		.55	-40°F to +225°F (-40°C to +107°C)	100 psi @ 70°F	1.40	247380
9	316 Stainless Steel	316 S.S.	TPE <sup>†</sup>	.80	-40°F to +250°F (-40°C to +121°C)	300 psi @ 70°F	1.43	164870 ⚡
		Nylon		.65	-40°F to +250°F (-40°C to +121°C)	100 psi @ 70°F	1.40	164850 ⚡
		Polypropylene		.55	-40°F to +225°F (-40°C to +107°C)	100 psi @ 70°F	1.40	164860 ⚡
11	316 Stainless Steel		Teflon <sup>®</sup>	.80	-40°F to +250°F (-40°C to +121°C)	300 psi @ 70°F	1.65	179445

<sup>†</sup>Thermoplastic Elastomer Zip Cord.

⚡ – Stock Items.

**\*Zinc Alloy Material Note:**

When mounted in certain cathodic metals, including stainless steel, and used in water-based liquids, galvanic corrosion may occur. Consult factory for information.