

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 | | |

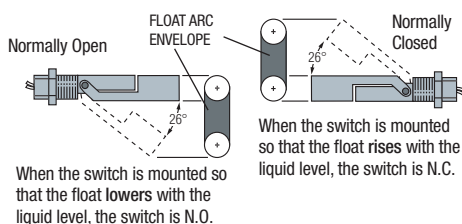
Media Compatibility

| 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™ |

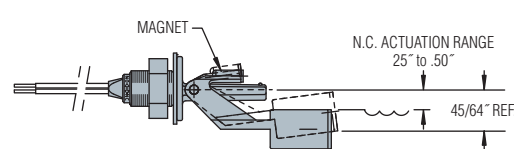
Switch Operation

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).

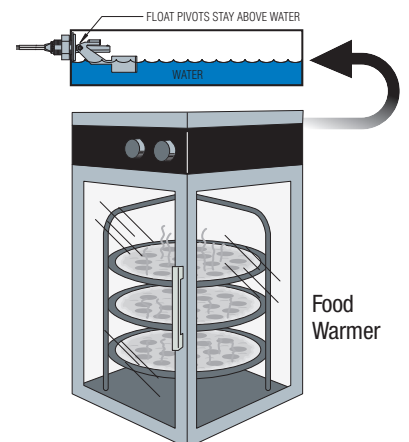
Types 3, 5, 7, 10 and 13



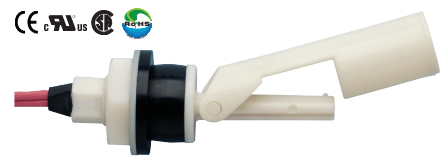
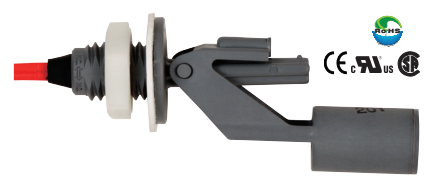

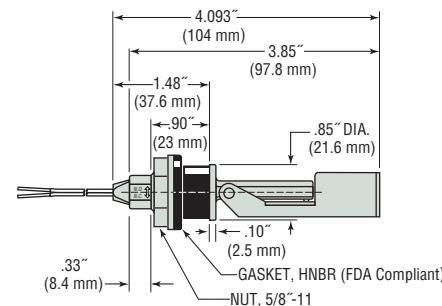
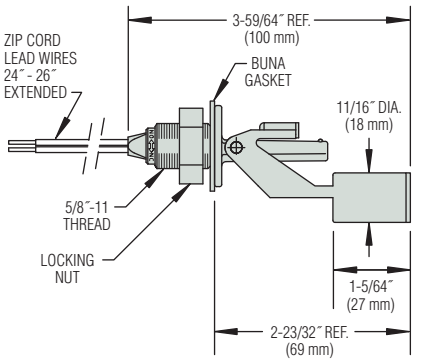
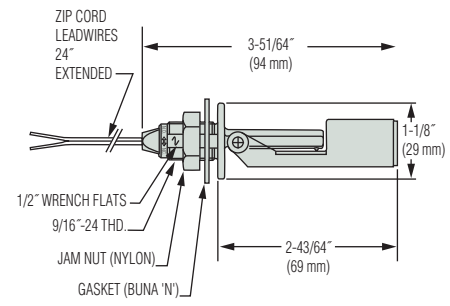
Type 12 – N.C. "Drop Float" Design



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 | | | 164520 ⚡ | | | | |
| | Versaplast™ | | | 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 | | | 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 | | | 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 | | | 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 |

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

See alloy versions on next page.

⚡ – 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

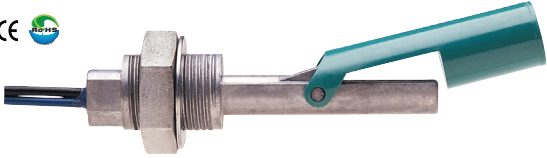

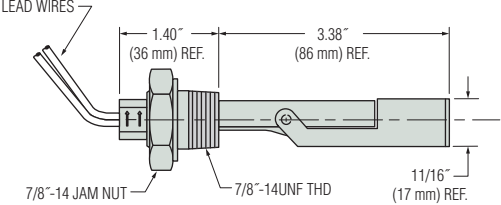
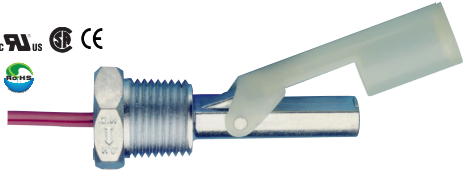

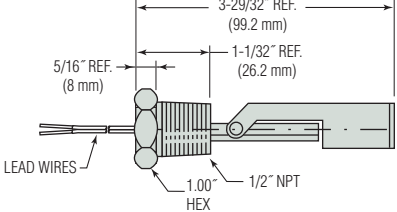


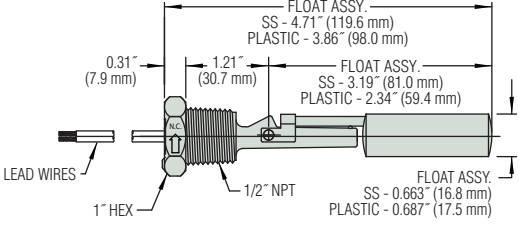
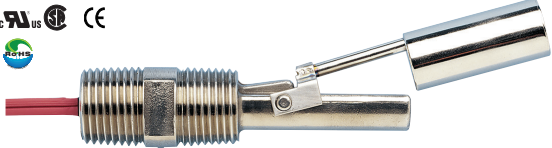

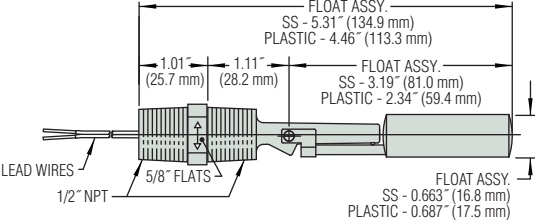


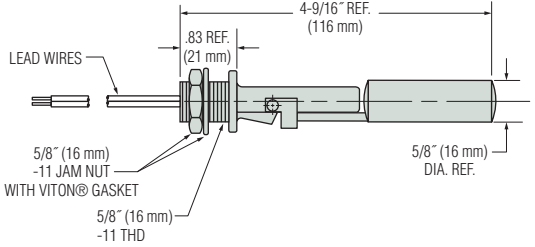
Switch Rating*: SPST, 20VA

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

Mounting Attitude: Horizontal.

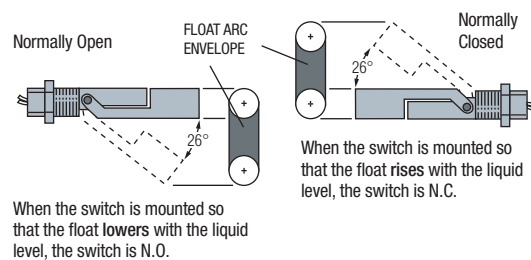
RoHS: In compliance with EU-directive 2011/65/EC requirements for chemicals and substances.

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

| | | |
|---|--|--|
| <p>Type 6 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"-14UNF THD</p> <p>11/16" (17 mm) REF.</p> |
| <p>Type 8 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>Type 9 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>Type 9 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>Type 11 Internal Mounting</p> |  <p>cULus  CE</p> <p>316 Stainless Steel body with 316 S.S. float.</p> |  <p>LEAD WIRES</p> <p>.83" REF. (21 mm)</p> <p>4-9/16" REF. (116 mm)</p> <p>5/8" (16 mm) -11 JAM NUT WITH VITON® 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 [†] | .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 [†] | .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 [†] | .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 [†] | .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® | .80 | -40°F to +250°F (-40°C to +121°C) | 300 psi @ 70°F | 1.65 | 179445 |

[†]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.