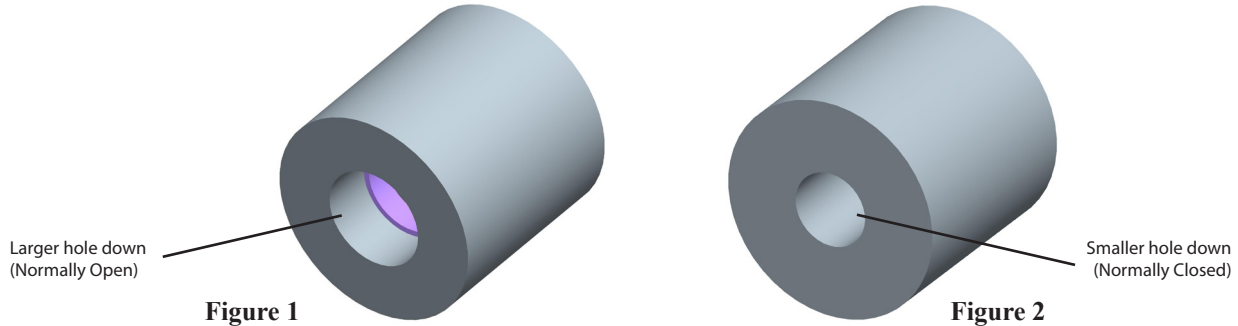


924LS Interstitial Liquid Sensor

Installation & Maintenance Instructions

The 924LS detects the presence of liquid in the interstitial space of a double wall tank or sump application. Once the liquid has reached the level of actuation, the sensor will send a signal causing the alarm, to which the sensor is connected, to be activated. This sensor is shipped in the Normally Open state with larger hole down (see Figure 1), but can also be used as Normally Closed by placing the smaller hole down (see Figure 2).



Failure to follow any or all of the warnings and instructions in this document could result in a hazardous liquid spill, which could result in property damage, environmental contamination, fire, explosion, serious injury or death.

Installation



Warnings

- **Fire Hazard** – Death or serious injury could result from spilled liquids.
- Any modification to this device other than those stated in these installation instructions will void the product warranty.
- This device is intended to be used as an auxiliary warning to the operator of a possible leak into an interstitial space/sump or of a tank overflow situation. It should not be the only system in place to prevent a tank from overflowing. It is the sole responsibility of the operator to continuously prevent any spillage regardless of the situation.
- Install in accordance with all applicable local, state, and federal laws.
- For your safety, it is important to follow local, state, federal and/or OSHA rules that apply to working inside, above, or around the storage tank and piping area. Use all personal protective equipment required for working in the specific environment.
- Tanks could be under pressure. Vapors could be expelled from tank vents, piping, valves or fittings while performing installation. Vapors could catch fire or cause an explosion. Avoid sparks, open flame, or hot tools when working on gauge.
- In the event of malfunction, contact Morrison Bros. Customer Service.

Sensors can be installed either resting on the floor of the tank interstitial space/sump, or suspended.

Steps

1. Inspect unit for shipping damage. Replace unit if damage is found.
2. Check float and inside float shroud area for foreign matter such as packaging material. Remove any that is found.
3. Turn power OFF to the alarming device.
4. No liquid should be present in the double wall tank or the sump and it should be clean of any debris.
5. Make sure the path that the wire takes is free of burrs or sharp edges that could damage the wire.
6. To ensure proper function, the sensor must be installed in the vertical position and the cable must be taut.
7. If using the 924LS sensor in a suspended application, it is recommended that the sensor is attached to a ½” npt fitting.

Electrical Switch Ratings

3 watt resistive load, 21VAC-210mA max / 30VDC-300mA max (*Ratings for resistive loads only.*)

*Do not use for inductive loads.

Wiring

Note: As defined in article 501 – Class 1 Locations of the National Electric Code, this apparatus and its connected wiring are intrinsically safe. Under normal conditions this apparatus and its wiring cannot release sufficient energy to ignite a specific ignitable atmospheric mixture by opening, shorting, or grounding.

Important: Wiring must be performed by a qualified technician, licensed by the appropriate local, state, and federal authority. All appropriate precautions and electrical codes should be followed.

Warning: Interconnect wiring between the Sensor and its destination must be kept isolated and separate from other wiring. This wiring must not share any junction box, conduit, raceway, or fixtures with circuits other than those defined by NEC as being intrinsically safe for all Class 1 locations.

A. All wires should run in conduits as appropriate per local, state, and federal codes.

B. The wires must be #18-22 AWG fuel and oil resistant wire.

8. Attach sensor to alarming device.

Sensor Testing

1. Once sensor is attached properly to the alarm device turn device on.

2. Slowly move float up on sensor until you here an audible alarm on your device.



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Maintenance

This device should be maintained and checked for proper operation per applicable codes or at least once a year.



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- Tanks could be under pressure. Vapors could be expelled from tank vents, piping, valves or fittings while performing installation. Vapors could catch fire or cause an explosion. Avoid sparks, open flame, or hot tools when working on gauge.
- In the event of malfunction, contact Morrison Bros. Customer Service.

Steps

1. Turn power OFF to alarming device.
2. Remove 924LS sensor from containment device or gain access to the float.
4. No liquid should be present in the interstitial space/sump and it should be clean of any debris.
5. Inspect wires for any damage that may have occurred over time. If damage is present, replace the unit.
3. Turn power ON to alarming device.
4. Slowly move float up on sensor until you hear the audible alarm on your device, verifying that the float has full range of travel.



Failure to follow any or all of the warnings and instructions in this document could result in a hazardous liquid spill, which could result in property damage, environmental contamination, fire, explosion, serious injury or death.