



## Environmental Products

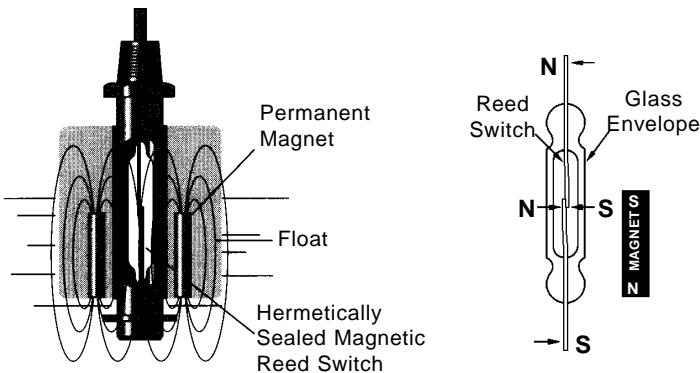
**These Sensors may not be compatible with indicating and alarm equipment supplied by other manufacturers**

**Note:** LS-750 sensors are non-voltage producing devices and do not contain energy storing components. However, since primary use is in hazardous locations, an appropriate intrinsically safe interface device is required.

With its compact size, the Gems LS-750 single float, liquid level sensor is ideally suited for use in steel double-wall tanks. It requires no calibration, and is easy to install and maintain. When positioned vertically at the bottom of a steel tank's stand pipe, it reliably senses the presence of a liquid. It detects hydrocarbons and water as low as 3/4" from the bottom of a tank or sump. The LS-750 sensor features an epoxy-encapsulated design providing an environmental seal, that makes it a fine choice for harsh environments. An integral slosh shield guards the float from debris; thereby assuring dependable service.

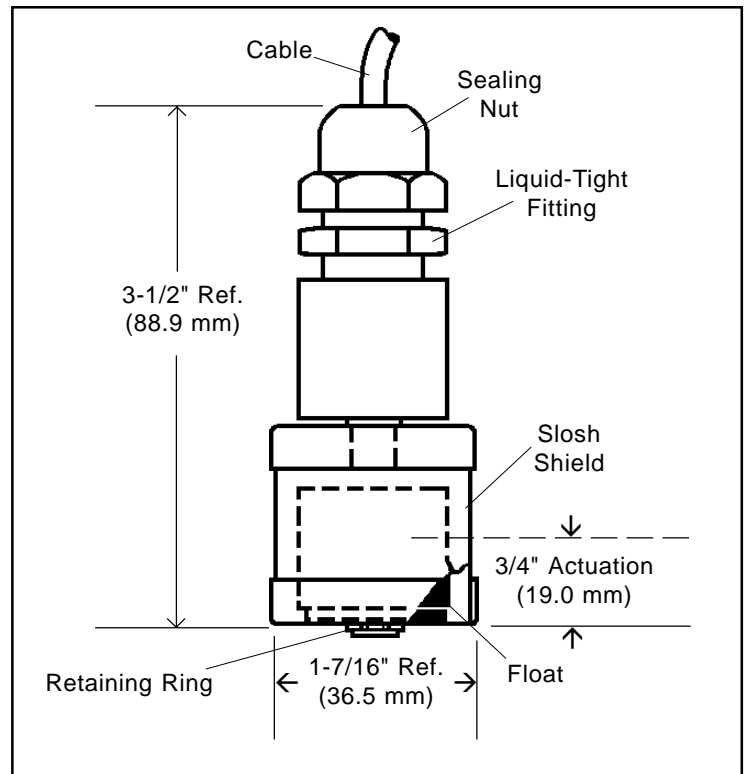
### Sensor Operating Principle

Gems LS-750 liquid level sensor operates on a direct, simple principle. A float is equipped with powerful, permanent magnets. As the float rises or lowers with liquid level, it actuates a magnetic reed switch mounted within the stem. This condition either opens or closes the electrical circuit to operate an external alarm or control circuit. When mounted vertically, this basic design provides a consistent accuracy of  $\pm 1/8$ th inch.

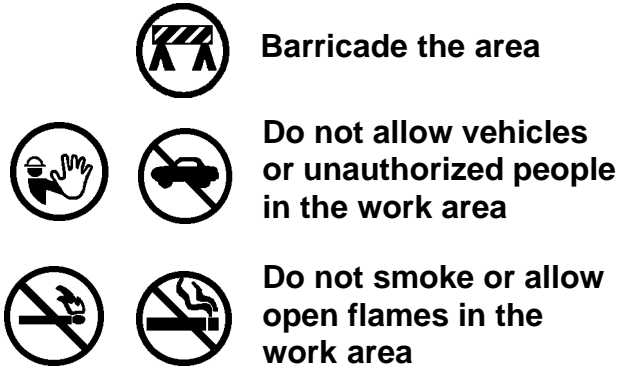


**Note:** Please refer to specific Gems outline drawings for operational specifications.

### Dimensions



# Read all instructions before beginning - Follow all safety precautions



! WARNING

Dangerous environment.  
 Failure to install this equipment in accordance with NFPA 30A and NFPA 70 could result in severe injury or death.  
 Read, understand and follow NFPA 30A and NFPA 70.



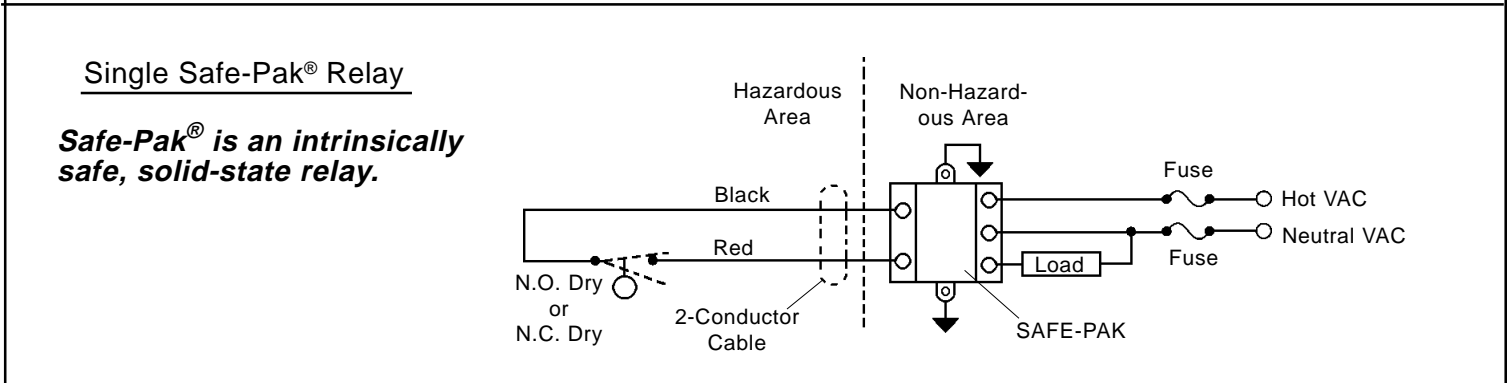
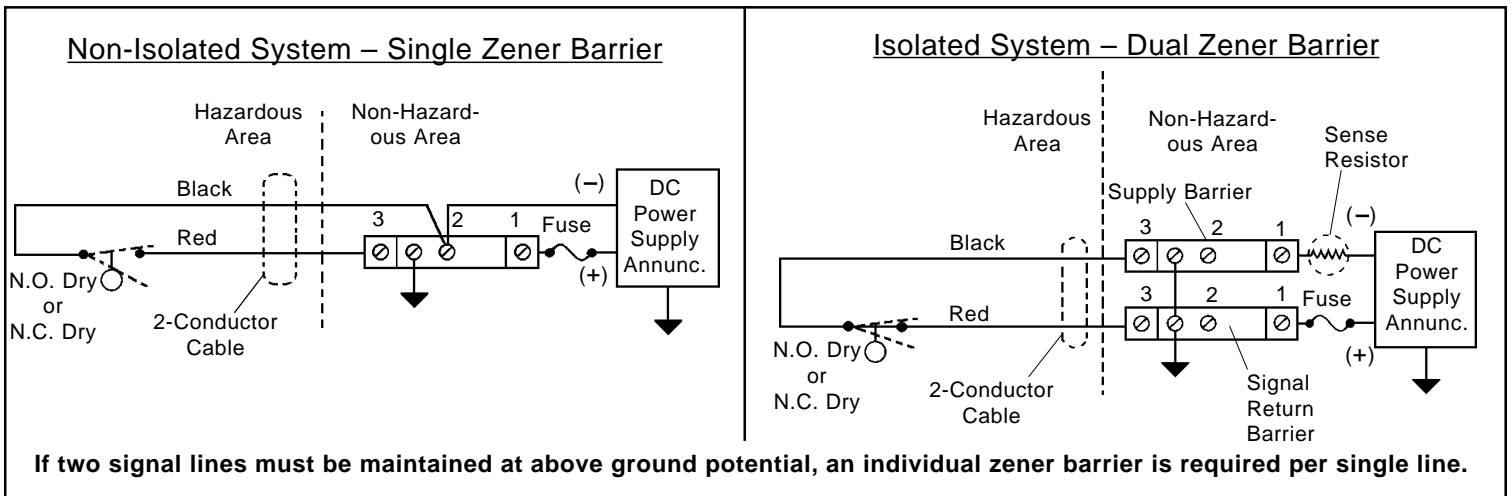
## WARNINGS

Read the instructions and warnings carefully before installing the sensor. This unit must be installed in accordance with National Electrical Code ANSI/NFPA-70, 1990; as well as Federal, State and local codes and any other applicable safety codes.

1. To avoid electrical shock, which could kill you, be sure AC power to monitor is off during installation.
2. The nature of the sensor is that it is a non-voltage producing device, containing limited energy-storing components. However, since its primary use is in a hazardous location, an appropriate intrinsically safe interface device must be used.

***Note: Failure to observe these warnings could result in serious injury and death, as well as undetected potential environmental and health hazards.***

## Typical Wiring Diagrams



**- IMPORTANT -**

**This manual assumes all preliminary site preparation is completed and that field wiring from the monitor to the sensor junction box is in place.**

**Installation Instructions**

**A. Pre-installation Sensor Testing**

1. Temporarily connect the two-wire sensor cable to the field wires in the sensor junction box. Turn Power on.
3. Turn the LS-750 upside down. Audible and visual indicators should alarm.
4. To remove alarm condition, turn the sensor right side up.
5. Secure the riser cap to the riser pipe.
6. Feed the sensor cable through the cord grip on the junction box.
7. Tighten the cable bushing nuts on the riser cap and junction box to ensure a watertight seal at the cable entry.
8. Using wire nuts, connect the two-wire sensor cable to the field wires in the sensor junction box.

**B. Sensor Installation Instructions**

1. Turn off power to the control. **Note: Do not install the sensor if any liquid is present in the annular space. Failure to comply will lead to an alarm.**

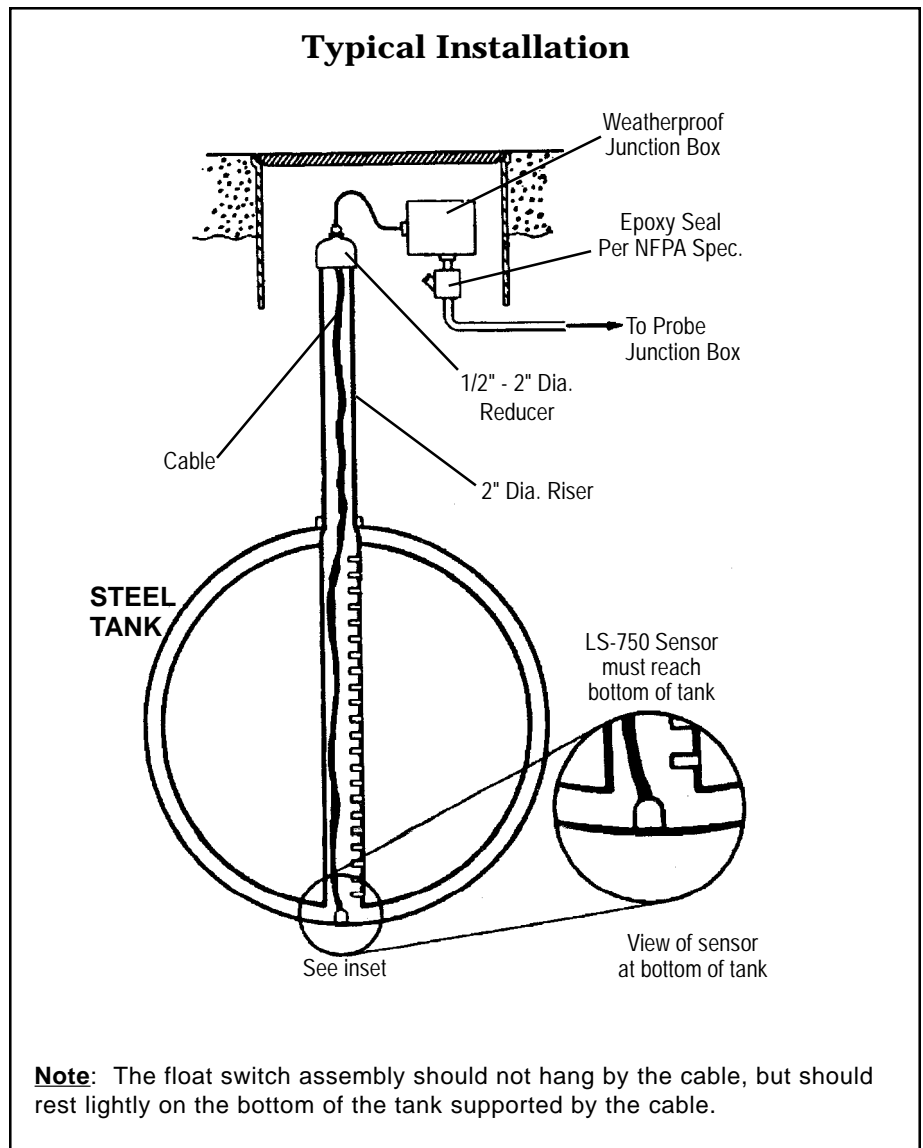
2. Make sure no liquid is present in the annular space.
3. To be sure the sensor will reach the bottom of the annular space, first measure the sensor riser pipe from the bottom of the pipe to the top. Then measure the same distance up the leader cable from its connection to the sensing element and mark the leader cable.

4. Lower the float switch assembly into the riser pipe until the float switch touches the bottom of the tank.
5. Keeping the cable taut, secure the sensor assembly in place by attaching the grip cord.

**Note: The float switch assembly should not hang by the cable, but should rest lightly on the bottom of the tank supported by the cable.**



This product is suitable for Class I and Class II applications only, per the requirements of standard EN60730 and any additional specific requirements for a particular application or medium being sensed. Class I compliance of metal bodied units requires a ground connection between the metal body and the earthing system of the installation. Class I compliance of plastic bodied units in contact with a conductive medium requires that the medium be effectively earthed so as to provide an earthed barrier between the unit and accessible areas. For Class III compliance, a supply at safety extra-low voltage (SELV) must be provided. Please consult the Factory for compliance information on specific part numbers.



## Maintenance

**Note:** Please consult your state E.P.A. office or appropriate regulatory agency regarding periodic inspection of the sensor. There are no user serviceable parts.

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## WARNING

Product must be maintained and installed in strict accordance with the National Electrical Code and the applicable GEMS technical bulletin and instruction bulletin. Failure to observe this warning could result in serious injuries or damages.

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## Warranty

Gems' standard warranty applies

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