



## Environmental Products

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

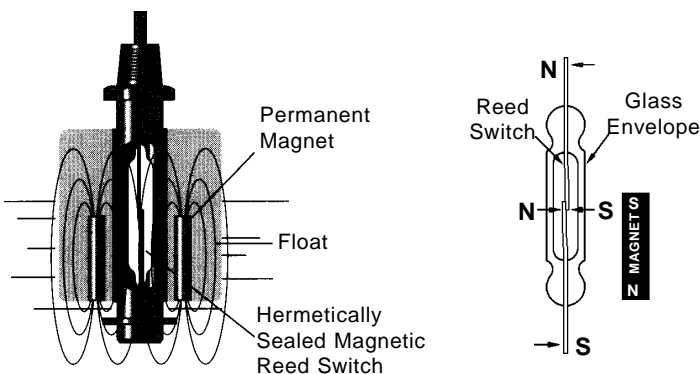
**Note:** LS-270 sensors are non-voltage producing devices and do not contain energy storing components. However, since primary use is in hazardous locations, an appropriate intrinsically safe interface device is required.

With an integral mounting bracket and slosh shield, the Gems LS-270 single float, liquid level sensor is ideally suited for use in containment sump areas. It requires no calibration, and is easy to install and maintain. When positioned vertically at the bottom of a sump, it reliably senses the presence of a liquid. It detects hydrocarbons and water as low as 1-3/8" from the bottom of a tank or sump.

Six feet of neoprene cable provides a waterproof electrical connection. A tough, polycarbonate shield protects the float from debris, and makes the LS-270 a fine choice for underground sump environments.

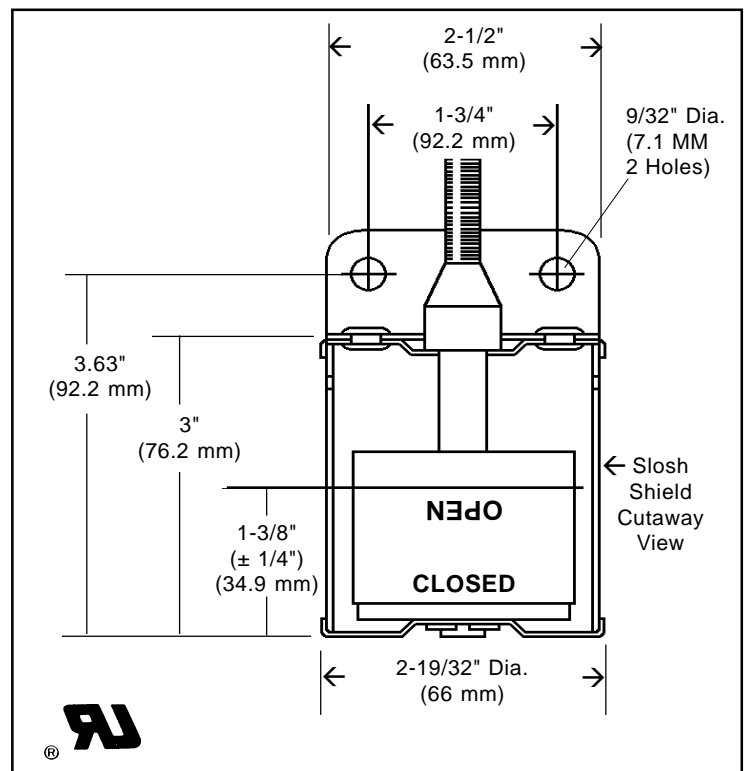
### Sensor Operating Principle

Gems LS-270 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  $\pm 1/4$  inch.

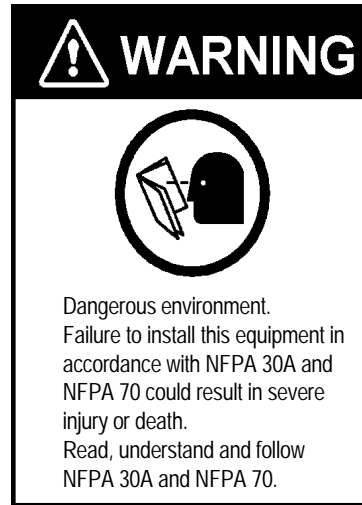
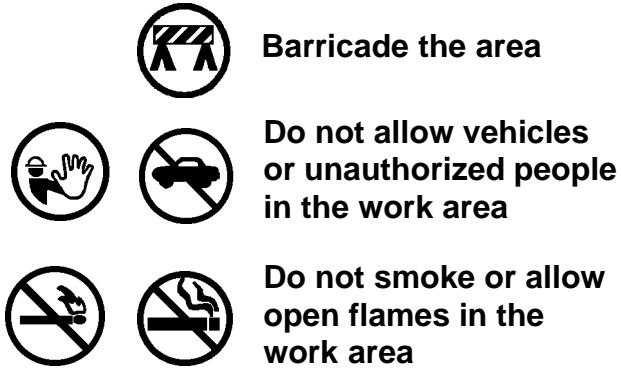


**Note:** Please refer to specific Gems outline drawings for operational specifications.

### Dimensions



# Read all instructions before beginning - Follow all safety precautions



## WARNINGS

Read the instructions and warnings carefully before installing the sensor. This unit must be installed in accordance with National Electrical Code ANSI/NPFA-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.***

**- 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.
2. Turn Power on.
3. Turn the LS-270 upside down. Audible and visual indicators should alarm.
4. To remove alarm condition, turn the sensor right side up.

**B. Sensor Installation Instructions**

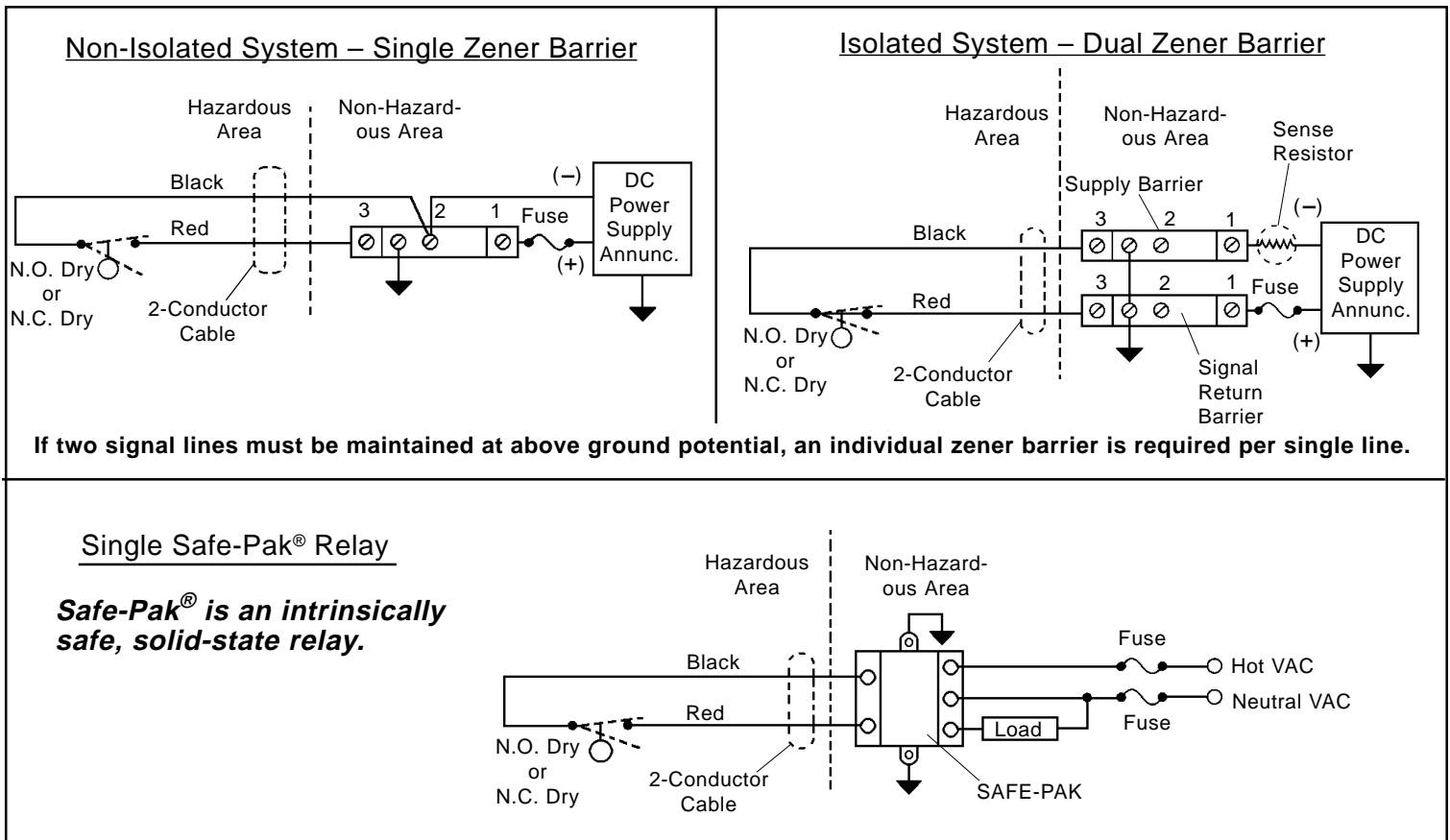
1. Turn off power to the control.

**Note:** Do not install the sump sensor if any liquid is present in the sump.

**Failure to comply can result in equipment damage or undetected potential environmental and health hazards.**

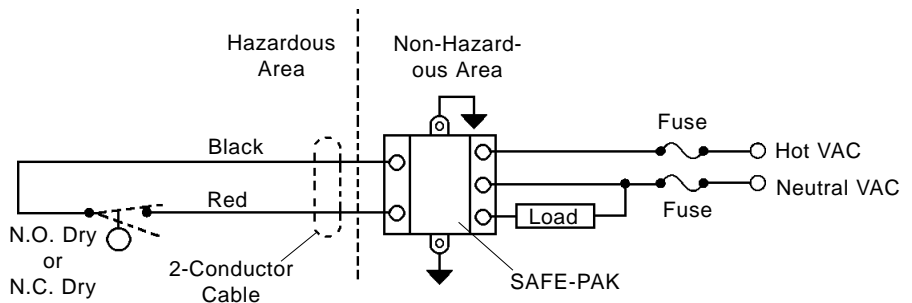
2. Make sure no liquid is present in the sump.
3. Attach the sensor (using the integral bracket) so that it sits at the bottom of the sump.
4. Feed the sensor cable through the cord grip on the junction box.
5. Tighten the cord grip nut to ensure a watertight seal at the cable entry.
6. Using wire nuts, connect the two-wire cable to the field wires in the sensor junction box.

**Typical Wiring Diagrams**



**Single Safe-Pak® Relay**

**Safe-Pak® is an intrinsically safe, solid-state relay.**



## 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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