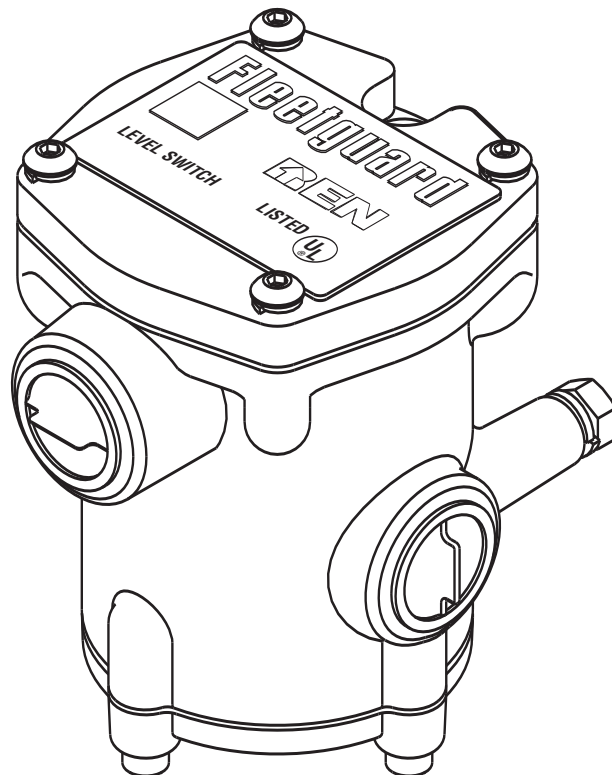

Fleetguard[®]



REN[™]

Liquid Level Switch Installation Instructions



CAUTION: These instructions are intended for use by professional mechanics who are trained in the proper use of power and hand tools, using appropriate safety precautions (including eye protection).

Introduction

The REN™ Liquid Level Switch is used to indicate levels of engine oil, hydraulic fluid and coolant antifreeze. The switch can be used in most applications where the level of a container, high or low, or the absence of fluid in a line needs to be detected. A single pole, double throw, magnetically actuated switch is double sealed from explosive environments through the use of two barriers; a stainless steel housing and a hermetically sealed glass switch housing. Four inlet / outlet ports and an adjustable mounting pad allow great flexibility in installation. Wiring is simple using the unit's removable electrical housing cover.

Preinstallation Notes

- The Liquid Level Switch is designed for stationary applications only.
- Use pipe or hose material appropriate to the application for which it is being used.
- Route pipes and cables away from heat sources and moving components.

Installing a Low Level or High Level Switch in a Container

Step 1 - Mount the Liquid Level Switch to a solid structure so that the switching level (see Figure 1) is equal to the level that the switch needs to activate.

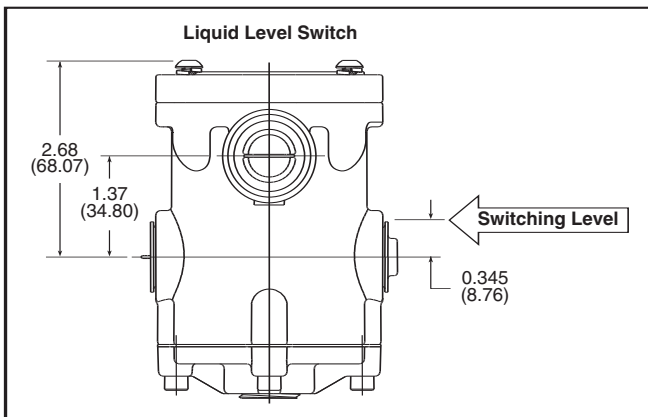


Figure 1 - Switching Level

Step 2 - Run a 3/8" (9.53 mm) ID minimum line from the container at a level below the switch point to one of the ports on the bottom of the Liquid Level Switch.

Step 3 - Run a 3/8" (9.53 mm) ID minimum line from the vent on the top of the Liquid Level Switch to the container at or near the highest point on the container (see Figure 2).

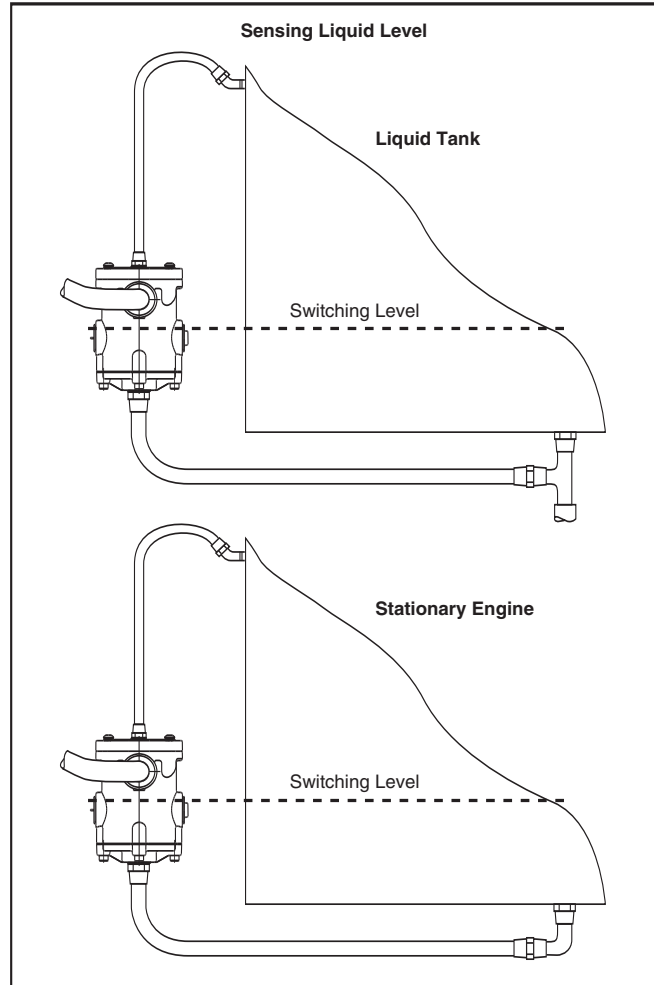


Figure 2 - Sensing Liquid Level

Step 4 - Remove the screws securing the electrical housing cover and remove the cover (see Figure 3).

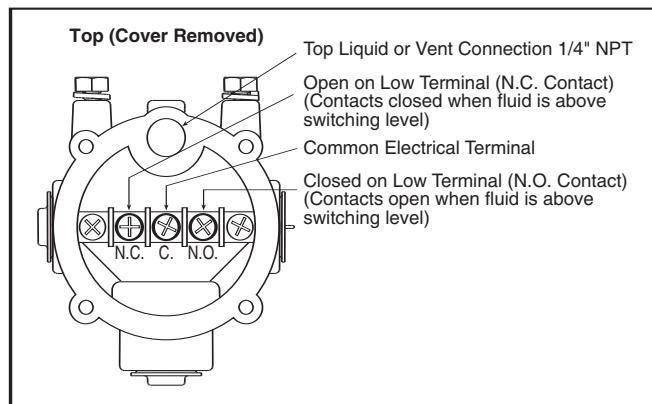


Figure 3 - Liquid Level Switch Terminals

Step 5 - Route 16 gauge wire through the electrical conduit port and attach to the terminals according to your specific application. See Figure 4 for electrical wiring options.

Note: Connection options are not limited to examples shown.

Step 6 - Replace the electrical housing cover and secure with the original screws.

Installing an Empty Line Detection Switch

Step 1 - Mount the Liquid Level Switch to a solid structure in-line with the line to be monitored.

Step 2 - Connect the fluid lines to the Liquid Level Switch. Hose or pipe connections must be 1/2" (12.70 mm) ID minimum. Vent lines must be 3/8" (9.53 mm) minimum ID and must be routed with no dips, traps or horizontal segments where fluid could accumulate. See Figure 5 for vertical line or elbow line connection diagrams.

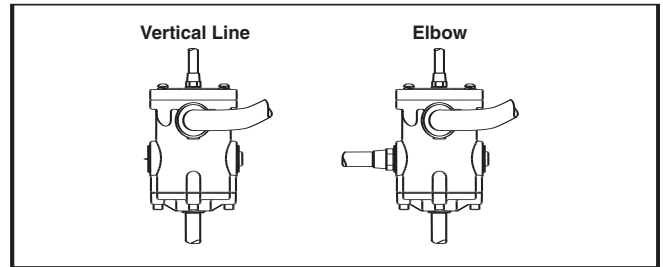


Figure 5 - Empty Line Detection Connections

Step 3 - Route 16 gauge wire through the electrical conduit port and attach to the terminals according to your specific application. See Figure 4 for electrical wiring options.

Note: Connection options are not limited to examples shown.

Step 4 - Replace the electrical housing cover and secure with the original screws.

Note: The liquid flow can be in any direction; the Liquid Level Switch signals when it is empty.

Note: Density of the liquid can affect the switch point.

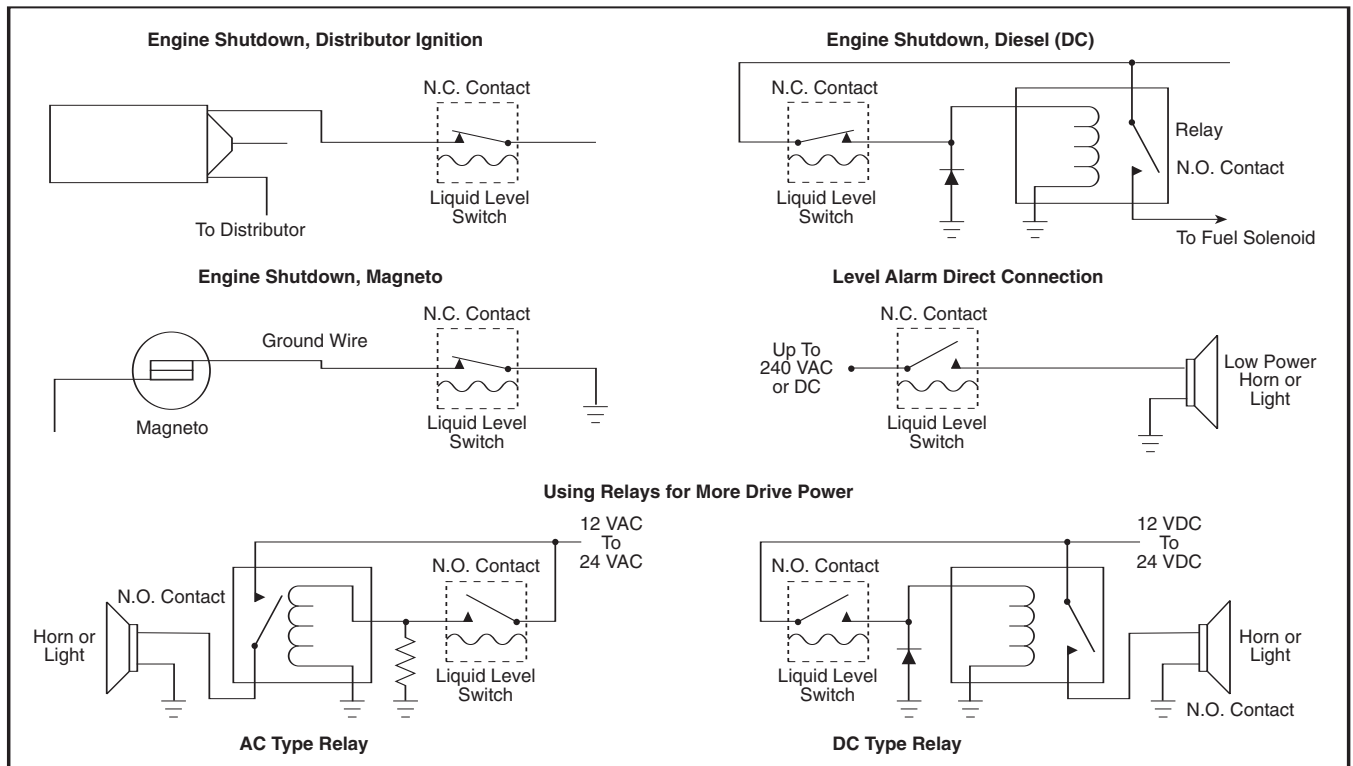
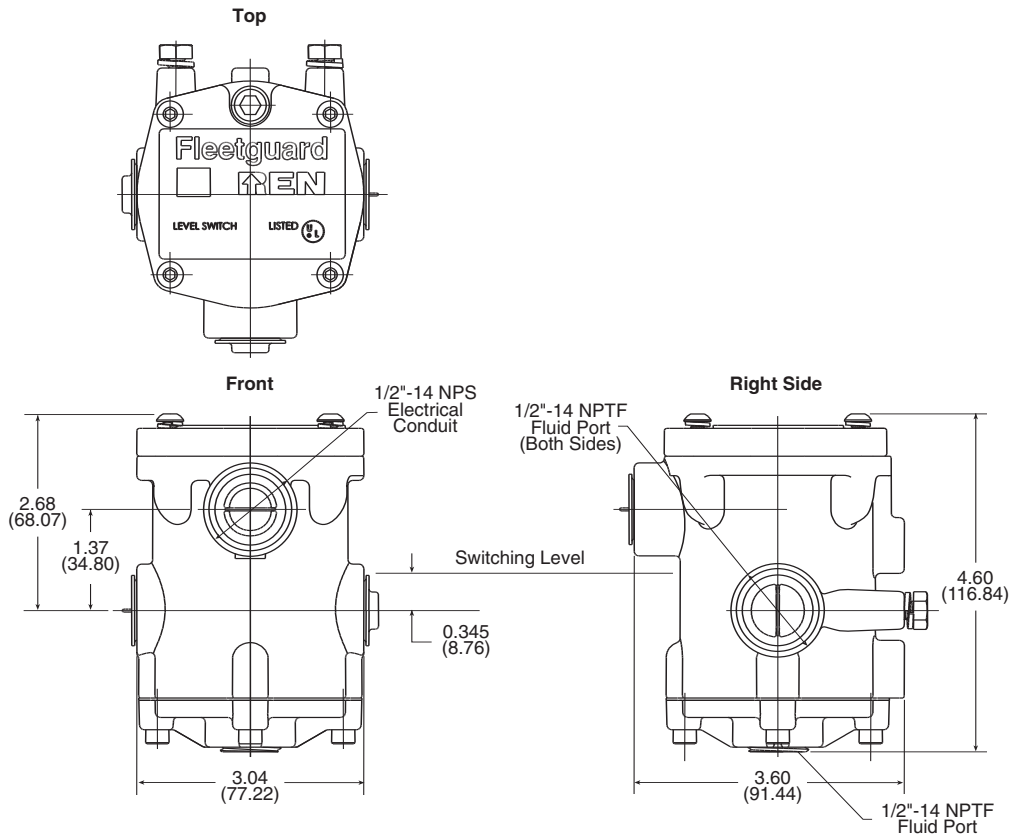


Figure 4 - Typical Electrical Wiring

Dimensions



Fleetguard REN™ Liquid Level Switch Specifications

Height Overall	4.60" (116.84 mm)
Depth Overall	3.60" (91.44 mm)
Width, Max.	3.04" (77.22 mm)
Weight	1 lb 12 oz (0.79 kg)
Switching Level (Petroleum Based Liquids)	±0.12" (3.05 mm)
Switching Hysteresis	0.06" (1.52 mm) Min. 0.12" (3.05 mm) Max.
Temperature Range	-40 °F to 248 °F (-40°C to 120 °C)
Fluid Seal Temperature, Max.	250 °F (121 °C)
Switching Current, Max.	3 A
Switching Voltage, Max.	240 VAC/DC
Switching Power	100 W, DC/VA Max. Resistive Load
UL Listed 4N51, Class I, Groups C & D Hazardous Locations	

Ordering Information

Part Number	Description
RN24011	REN Liquid Level Switch

