

Overfill Alarm

Installation Guide

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Introduction

This manual contains installation procedures for the Veeder-Root Overfill Alarm and Acknowledgment (Ack) Switch.

The Overfill Alarm unit contains:

- Red flashing light
- Alarm horn

The Acknowledgment Switch unit contains:

- ACKNOWLEDGED light
- RESET push button
- TEST push button

Compatible Consoles

- TLS-3XX/4XX Series
- TLS-IB
- TLS-50
- TLS-HLD
- TLS2

Related Manuals

Depending on your installed console, you should reference the appropriate manuals below, to connect/setup the Overfill Alarm:

576013-879	TLS-3XX Series Site Prep Manual	576013-623	TLS-3XX Series Setup manual
577013-608	TLS-50 Site Prep manual	577013-609	TLS-50 Setup manual
577013-756	TLS2 Site Prep manual	577013-757	TLS2 Setup manual
577013-719	TLS-IB Site Prep manual	577013-785	TLS-HLD Setup manual
577013-784	TLS-HLD Site Prep manual	577013-879	TLS-4XX Site Prep Manual

Contractor Certification Requirements

Veeder-Root requires the following minimum training certifications for contractors who will install and setup the equipment discussed in this manual:

Service Technician Certification (Previously known as Level 2/3): Contractors holding valid Technician Certifications are approved to perform installation checkout, startup, programming and operations training, system tests, troubleshooting and servicing for all Veeder-Root Series Tank Monitoring Systems, including Line Leak Detection.

TLS-3xx Technician Certification: Contractors holding valid TLS-350 Technician Certifications are approved to perform installation checkout, startup, programming and operations training, troubleshooting and servicing for all Veeder-Root TLS-300 or TLS-350 Series Tank Monitoring Systems, including Line Leak Detection and associated accessories.

TLS-4xx Technician Certification: Contractors holding valid TLS-450 Technician Certifications are approved to perform installation checkout, startup, programming and operations training, troubleshooting and servicing for all Veeder-Root TLS-450 Series Tank Monitoring Systems, including Line Leak Detection and associated accessories.







All service personal on site must comply with all recommended safety practices identified by OSHA and your employer.

Review and comply with all the safety warnings in this and any related documents, and any other Federal, State or Local requirements.

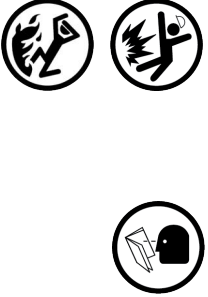
Warranty Registrations may only be submitted by selected Distributors.

Safety Symbols

The following safety symbols are used throughout this manual to alert you to important safety hazards and precautions.

 <p>EXPLOSIVE Fuels and their vapors are extremely explosive if ignited.</p>	 <p>FLAMMABLE Fuels and their vapors are extremely flammable.</p>
 <p>ELECTRICITY High voltage exists in, and is supplied to, the device. A potential shock hazard exists.</p>	 <p>TURN POWER OFF Live power to a device creates a potential shock hazard. Turn Off power to the device and associated accessories when servicing the unit.</p>
 <p>NOTICE is used to address practices not related to physical injury.</p>	 <p>READ ALL RELATED MANUALS Knowledge of all related procedures before you begin work is important. Read and understand all manuals thoroughly. If you do not understand a procedure, ask someone who does.</p>

Safety Warnings

⚠ WARNING	
	<p>This product is to be installed in systems operating near locations where highly combustible fuels or vapors may be present.</p> <p>FAILURE TO COMPLY WITH THE FOLLOWING WARNINGS AND SAFETY PRECAUTIONS COULD CAUSE DAMAGE TO PROPERTY, ENVIRONMENT, RESULTING IN SERIOUS INJURY OR DEATH.</p> <p>Fire or explosion resulting in serious injury or death could result if the Overfill Alarm and Ack switch units are installed in a volatile, combustible or explosive (Class I, Division I and Division II) atmosphere.</p> <p>Explosion could occur if alarm wires share tank monitor or console probe or sensor wire conduits or wiring troughs. Do not run Overfill Alarm and Ack Switch wires with console probe and sensor wires.</p> <ol style="list-style-type: none">1. Read and follow all instructions in this manual, including all safety warnings.2. Comply with all applicable codes including: the National Electrical Code; federal, state, and local codes; and other applicable safety codes.3. Do not alter or modify any component or substitute components in this kit.

Mounting Instructions

Overfill Alarm and Acknowledgment Switch Dimensions

Figure 1 shows the Overfill Alarm mounting dimensions and Figure 2 shows the Acknowledgment Switch mounting dimensions.

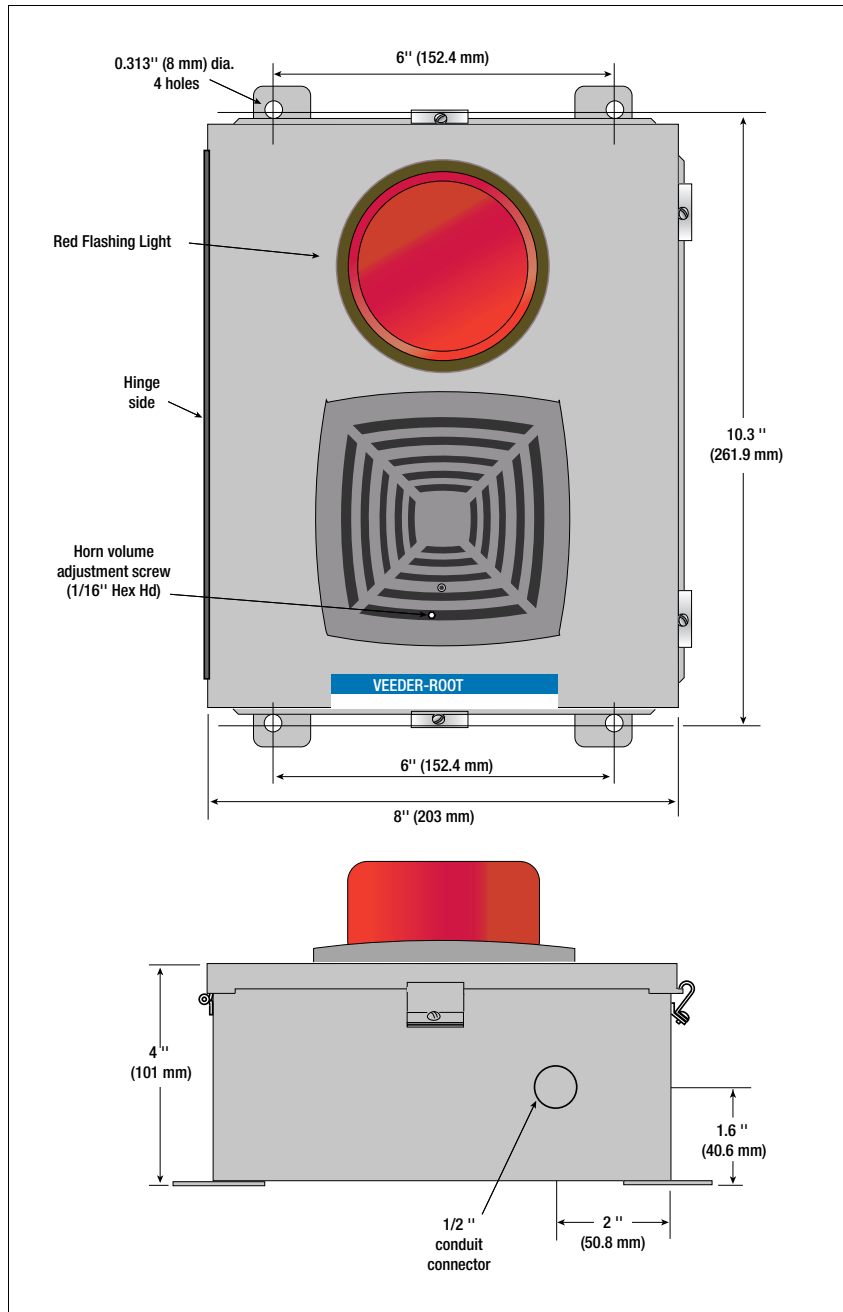


Figure 1. Overfill Alarm Mounting Dimensions

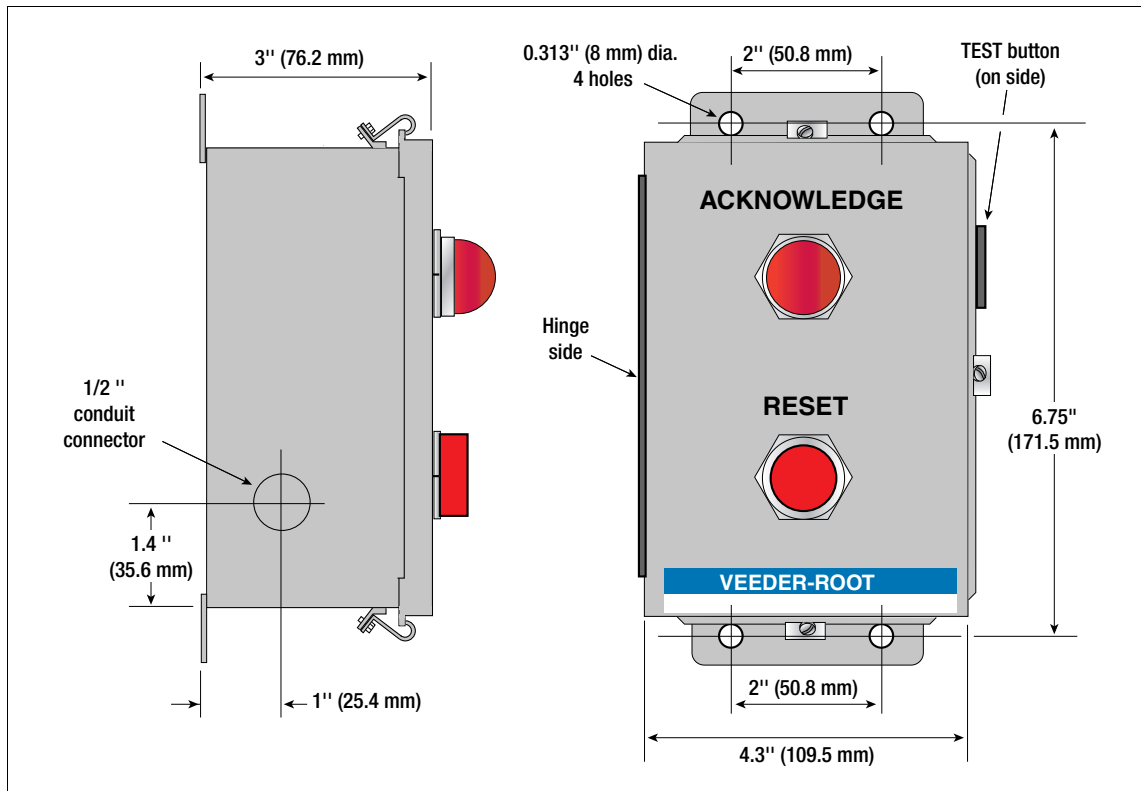


Figure 2. Acknowledgment Switch Mounting Dimensions

Mounting Instructions

Overfill Alarm

1. Select a mounting location where the Overfill Alarm can be seen and heard clearly from the area where the fuel tanks are filled. In addition, consider the ease of routing interconnection conduit.
2. Locate and mark mounting holes using the hole pattern in Figure 1.
3. Mount the Overfill Alarm using the four mounting tabs on the housing.

Acknowledgment Switch

1. Select a mounting location where the Acknowledgment Switch can be easily activated by the tank truck driver. In addition, consider the ease of routing interconnection conduit.
2. Locate and mark mounting holes using the hole pattern in Figure 2.
3. Mount the Acknowledgment Switch using the four mounting tabs on the housing.
4. Install conduit between the Acknowledgment Switch, Overfill Alarm, and TLS Console.

Wiring Instructions

NOTICE Wire used for this installation must have a temperature rating of at least 90°C, be either 14 or 16 AWG, and be color coded. Splicing alarm power with TLS Console power will cause improper operation of the monitor.

Wiring Overfill Alarm with Acknowledgment Switch

1. Pull two wires from the switch to the Overfill Alarm.
2. Pull two wires for line and neutral from the switch to the power panel.
3. Pull one wire from the switch to the TLS Console for connection to the alarm relay.
4. Pull one wire for line from the alarm relay in the TLS Console to the power panel.
5. Turn power Off and connect wiring according to the wiring diagram in Figure 3 and Table 1.

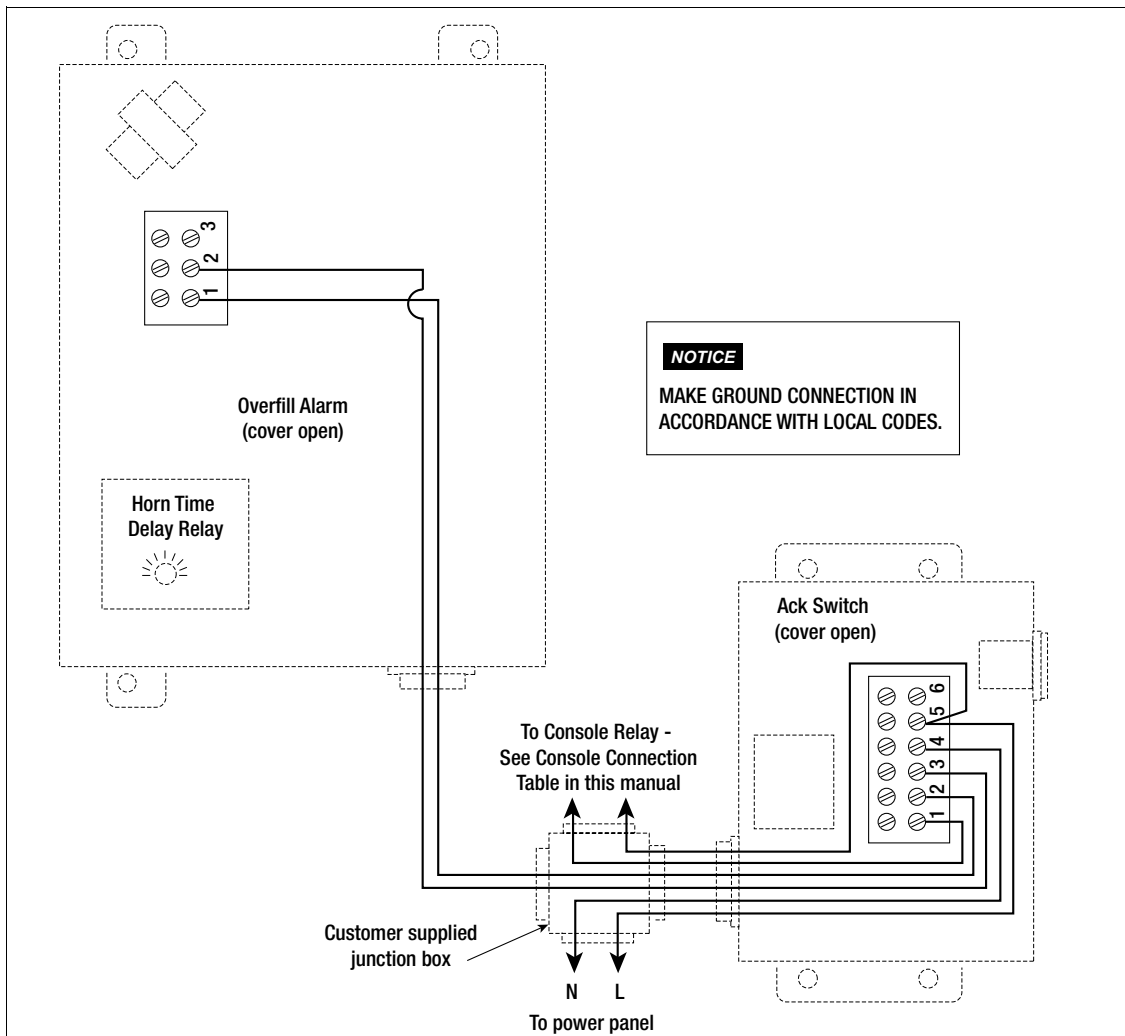


Figure 3. Overfill Alarm/Acknowledgment Switch wiring connections

Wiring Overfill Alarm without Acknowledgment Switch

1. Pull one wire for neutral from the Overfill Alarm to the power panel.
2. Pull one wire from the Overfill Alarm to the console for connection to the alarm relay.
3. Pull one wire for line from the alarm relay in the console to the power panel.
4. Turn power Off and connect wiring according to the wiring diagram in Figure 4 and Table 1.

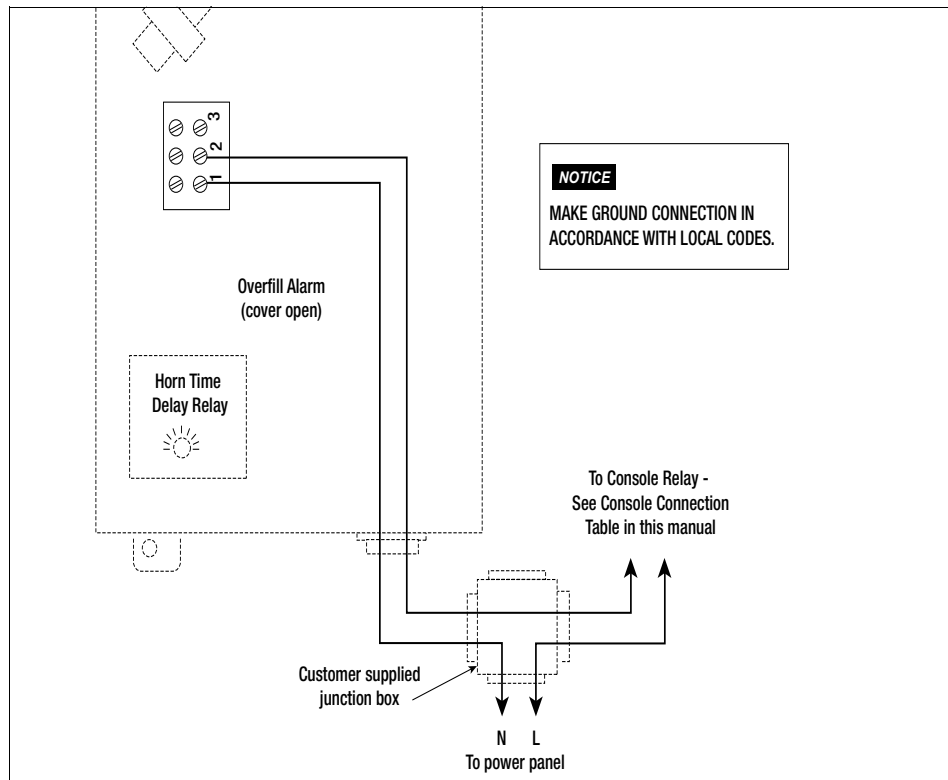


Figure 4. Overfill Alarm only wiring connections

Enclosure Grounding

There are two separate methods for grounding the Overfill Alarm. Ensure that the ground connection is made in accordance with all local codes.

If using a properly grounded rigid metal conduit or equivalent to enclose the external wiring for the Overfill Alarm, the ground hub that terminates the conduit provides an adequate grounding provision for the Overfill Alarm.

If using a ground wire within the conduit, terminate the ground wire on the grounding stud located in the bottom of the enclosure. Ensure that a star washer is between the enclosure and the lug attached to the ground wire and that the lug is secured in place by the included KEPS nut (see Figure 5).

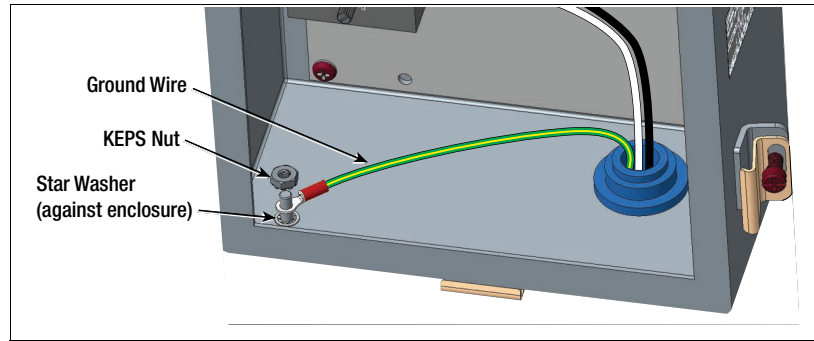


Figure 5. Overfill Alarm Ground Wire Termination

Table 1. Console Connections

Input	TLS2 or TLS-IB Connection	TLS-50 or TLS-HLD Connection	TLS-300 Output Relay Connection	TLS-350 I/O Combo Relay Connection	TLS-350 4 Relay Output Module Connection	TLS-4XX Overfill Alarm Relay Connector
Overfill Alarm without Acknowledge Switch (see Figure 4)						
Overfill Alarm terminal 2	J6, 1	J5, 1	NO	NO	NO	NO
Line (from power panel)	J6, 2	J5, 2	C	C	C	C
Overfill Alarm with Acknowledge Switch (see Figure 3)						
Ack Switch terminal 1	J6, 1	J5, 1	NO	NO	NO	NO
Ack Switch terminal 5 (line)	J6, 2	J5, 2	C	C	C	C

Setup and Test

Setting Overfill Alarm Horn Delay Time

1. Loosen the four screws that secure the Overfill Alarm cover clamps to the case. Slide the clamps away from the retaining lip on the door. Open the door.
2. Locate the Horn Time Delay Relay (see Figure 3).
3. Adjust the time the horn remains On from 0 to 60 seconds by turning the knob on the relay to the desired setting.
4. Close the door and tighten the four cover screws.

Testing the Overfill Alarm with the Acknowledgment Switch

Turn On power to the Overfill Alarm and Acknowledgment Switch. Depress and hold in the TEST Button on the right side of the switch. The Overfill Alarm horn will sound immediately, and the Overfill Alarm's red light will start flashing. The horn will turn Off at the preset delay time you set above (0 -60 seconds). The red light will continue to flash until the TEST button is released.

Setting the Overfill Alarm Horn's Volume Level

1. Locate the adjustment set screw (1/16" Hex wrench) on the exterior of the Overfill Alarm's horn cover (see Figure 1 on page 4).
2. Turn the adjustment screw counterclockwise to increase the dB level of the horn or clockwise to decrease its dB level.

Testing the Overfill Alarm with the Console

With the Overfill Alarm and Acknowledgment Switch (if installed) connected to the console, consult the setup instructions for your console and perform the Output Relay setup procedure to recognize the Overfill Alarm.

1. Turn power Off to the console and the Overfill Alarm. Put a jumper between the two Overfill Alarm relay connections in the console (see Figure 6).

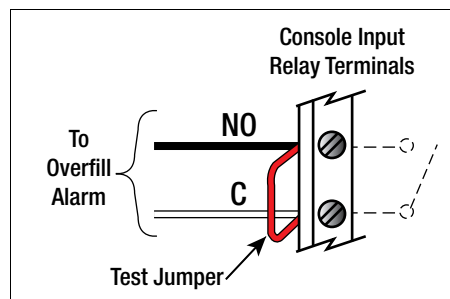


Figure 6. Overfill Alarm Test Jumper Console Connection

Testing Overfill Alarm W/o Acknowledgment Switch

1. Reapply power. If the Overfill Alarm was wired properly, the alarm horn will sound immediately followed by the red alarm light flashing.
2. Turn Off power to the console and to the Overfill Alarm. Remove the test jumper between the Output Relay connections.

**Testing Overfill Alarm With Acknowledgment Switch**

1. Turn power Off to the console and the Overfill Alarm. Put a jumper between the two Overfill Alarm relay connections in the console (see Figure 6).
2. Stand by the Acknowledgment Switch and have someone reapply power to the console and Overfill Alarm. If the Overfill Alarm was wired properly, the alarm horn will sound immediately followed by the red alarm light flashing.
3. Press the RESET button on the front of the Acknowledgment Switch. The alarm horn and red flashing light should shut off. The ACKNOWLEDGED light on the front of the switch should be On. (Pressing the RESET button shuts Off the alarms but does not clear the alarm. The cause of the alarm must be removed before the ACKNOWLEDGED light will turn Off.)
4. Turn Off power to the console and to the Overfill Alarm. Remove the test jumper between the console's Output Relay connections.
5. Reapply power to the console and to the Overfill Alarm. The ACKNOWLEDGED light should now be Off because the cause of the alarm (in this case, the test jumper) has been removed.





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