

Sump Sensor

Installation Guide

Notice

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Contact TLS Systems Technical Support for additional troubleshooting information at 800-323-1799.

DAMAGE CLAIMS / LOST EQUIPMENT

Thoroughly examine all components and units as soon as they are received. If any cartons are damaged or missing, write a complete and detailed description of the damage or shortage on the face of the freight bill. The carrier's agent must verify the inspection and sign the description. Refuse only the damaged product, not the entire shipment.

Veeder-Root must be notified of any damages and/or shortages within 30 days of receipt of the shipment, as stated in our Terms and Conditions.

VEEDER-ROOT'S PREFERRED CARRIER

1. Contact Veeder-Root Customer Service at 800-873-3313 with the specific part numbers and quantities that were missing or received damaged.
2. Fax signed Bill of Lading (BOL) to Veeder-Root Customer Service at 800-234-5350.
3. Veeder-Root will file the claim with the carrier and replace the damaged/missing product at no charge to the customer. Customer Service will work with production facility to have the replacement product shipped as soon as possible.

CUSTOMER'S PREFERRED CARRIER

1. It is the customer's responsibility to file a claim with their carrier.
2. Customer may submit a replacement purchase order. Customer is responsible for all charges and freight associated with replacement order. Customer Service will work with production facility to have the replacement product shipped as soon as possible.
3. If "lost" equipment is delivered at a later date and is not needed, Veeder-Root will allow a Return to Stock without a restocking fee.
4. Veeder-Root will NOT be responsible for any compensation when a customer chooses their own carrier.

RETURN SHIPPING

For the parts return procedure, please follow the appropriate instructions in the "General Returned Goods Policy" pages in the "Policies and Literature" section of the Veeder-Root **North American Environmental Products** price list. Veeder-Root will not accept any return product without a Return Goods Authorization (RGA) number clearly printed on the outside of the package.

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Introduction

This manual contains installation procedures for the Veeder-Root Sump Sensor (Part No. 794380-208 or 794380-209).

This manual assumes field wiring has been run from the console to the sump in which the sensor will be installed following instructions in the appropriate console's site prep manual.



Important! Sump Sensor field wiring must not be connected to the console prior to sensor installation.

Contractor Certification Requirements

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

Installer (Level 1) Certification: Contractors holding valid Installer Certification are approved to perform wiring and conduit routing; equipment mounting; probe, sensor and carbon canister vapor polisher installation; wireless equipment installation; tank and line preparation; and line leak detector installation.

ATG Technician (Level 2/3 or 4) Certification: Contractors holding valid ATG 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. In addition, Contractors with the following sub-certification designations are approved to perform installation checkout, startup, programming, system tests, troubleshooting, service techniques and operations training on the designated system.

- Wireless 2
- Tall Tank

Warranty Registrations may only be submitted by selected distributors.

Product Marking Information

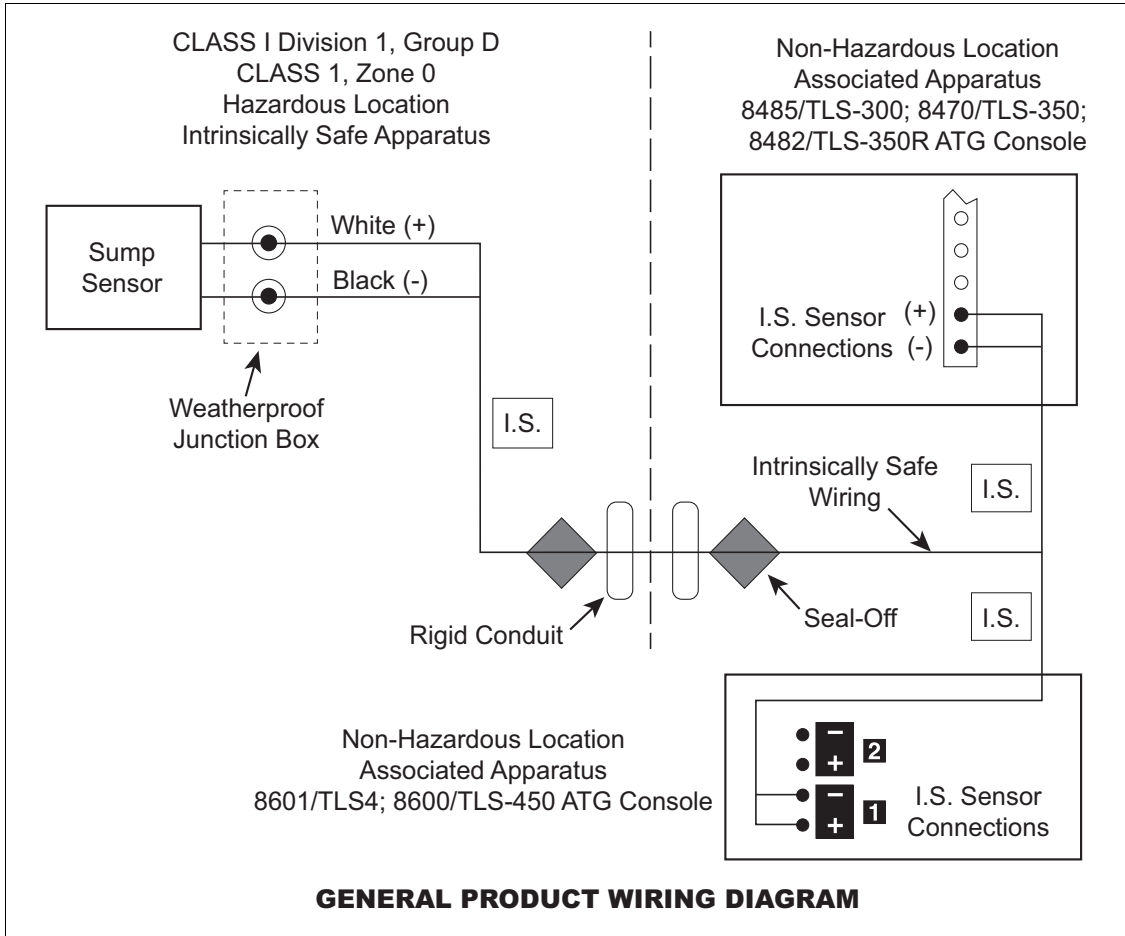
RELATED DOCUMENTS

Documents Required to Install Equipment

This intrinsically safe apparatus is only for use as part of a Veeder-Root Automatic Tank Gauging System (ATG Console with probes and sensors). To install intrinsically safe apparatus, use the specific control drawing that appears on the nameplate of the applicable associated apparatus (ATG Console):

Equipment	UL/cUL Control Drawing Document No.
Associated Apparatus	
TLS-450/8600	331940-008
TLS-350, TLS-350R	331940-011
TLS-300	331940-013
TLS4/8601	331940-018







The control drawings contain information related to the correct installation of the overall intrinsically Safe System. This includes information such as maximum number of apparatus, specific apparatus allowed in the system, maximum cable lengths, references to codes, proper grounding and so on. Control drawings can be found on the accompanying Compact Disk (TECH DOCS CD) or on the internet at veeder.com under SUPPORT; VR TECHNICAL DOCUMENTS; DRAWINGS.



Product Label Contents

	I.S. CIRCUIT FOR HAZLOC SENSOR
	F/N 794380-XXX
CL I, DIV. 1, GP.D	S/N XXXXXX
CL I, ZONE 0	
AEx ia IIA	$-40^{\circ}\text{C} \leq T_a \leq +60^{\circ}\text{C}$
Ex ia IIA	MANUAL NO. 576013-301
TC=T4	
SECURITE INTRINSEQUE	









Warnings and Important Notes

⚠ 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> <ol style="list-style-type: none"> 1. Read and follow all instructions in this manual, including all safety warnings to protect yourself and others from serious injury, explosion, or electrical shock. 2. Comply with all applicable codes including: the National Electrical Code; federal, state, and local codes; and other applicable safety codes. 3. To protect yourself and others from being struck by vehicles, block off your work area during installation or service. 4. Do not alter or modify any component or substitute components in this kit. 5. Warning! Substitution of components may impair intrinsic safety. 6. Field wiring to the Sump Sensor must not share a conduit with any non-intrinsically safe device's wiring. 7. Warning! To prevent ignition of flammable or combustible atmospheres, disconnect power before servicing. 8. Before installing or taking the unit into a hazardous area, earth the unit in a safe area to remove any static charge. Then immediately transport the unit to the installation site. Do not rub or clean the unit prior to installation. Cleaning is not required under normal service conditions. Do not rub or clean the unit after installation. If the unit is not fixed to a known earth point when installed, ensure that a separate earth connection is made to prevent the potential of a static discharge. When fitting or removing the unit, use of anti-static footwear or clothing is required. 9. Materials used in the construction of this device do not contain, by mass, more than 10% in total of aluminum, magnesium, zirconium and titanium or 7.5% in total of magnesium, titanium and zirconium.

NOTE Failure to install this product in accordance with its instructions and warnings will result in voiding of all warranties with this product.

Safety Precautions

The following safety symbols may be used throughout this manual to alert you to important safety hazards and precautions

 EXPLOSIVE Fuels and their vapors are extremely explosive if ignited.	 FLAMMABLE Fuels and their vapors are extremely flammable.
 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.	 INJURY Careless or improper handling of materials can result in bodily injury.
 GLOVES Wear gloves to protect hands from irritation or injury.	 WEAR EYE PROTECTION Wear eye protection when working with pressurized fuel lines or epoxy sealant to avoid possible eye injury.
 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.	 USE SAFETY BARRICADES Unauthorized people or vehicles in the work area are dangerous. Always use safety cones or barricades, safety tape, and your vehicle to block the work area..

Sensor Installation

Installation Hardware

The Sump Sensor's Installation kit is shown in Table 1:

Table 1.- Sump Sensor Installation Kit (P/N 330020-076)

Item	Qty.	Description	Part No.
1	2	Mounting strip	330314-001
2	2	#4-20 x 3/8" Plastite screw	510500-398
3	3	1/4"-20 x 1/2" Bolt, hx hd	503328-001
4	3	1/4"-20 Speed nut	511000-232
5	2	Wire nut	576008-461
6	1	Sealing pack	514100-304
7	1	Cord grip	331028-001
8	2	Tie wrap	510901-337

Site Preparation

Check that the Sump Sensor's field wiring is not connected to the console.

Mounting Sensor to Support Member

1. Make sure no liquid exists in the sump. Failure to comply can result in undetected potential environmental and health hazards.
2. Attach one of the mounting strips to the top of the sensor using the 2 Plastite screws provided as shown in Figure 1.

Important! The sensor must be positioned in the lowest part of the sump and it must be mounted in a true vertical position to ensure proper operation of the float switch contained inside.

3. Depending on your mounting requirements (again see Figure 1), attach the second mounting strip to the first strip using two 1/4-20 x 1/2-inch screws and speed nuts. With the sensor resting on the bottom of the sump, wrap the mounting strip around the support member and secure it using a 1/4-20 x 1/2-inch screw and speed nut.
4. Carefully bend the mounting strip so that the sensor is in a true vertical position and still rests on the bottom of the sump.
5. Install the cord grip into the junction box. Feed the sensor cable through the cord grip on the junction box. Tighten the cord grip nut to ensure a water-tight seal at the cable entry.

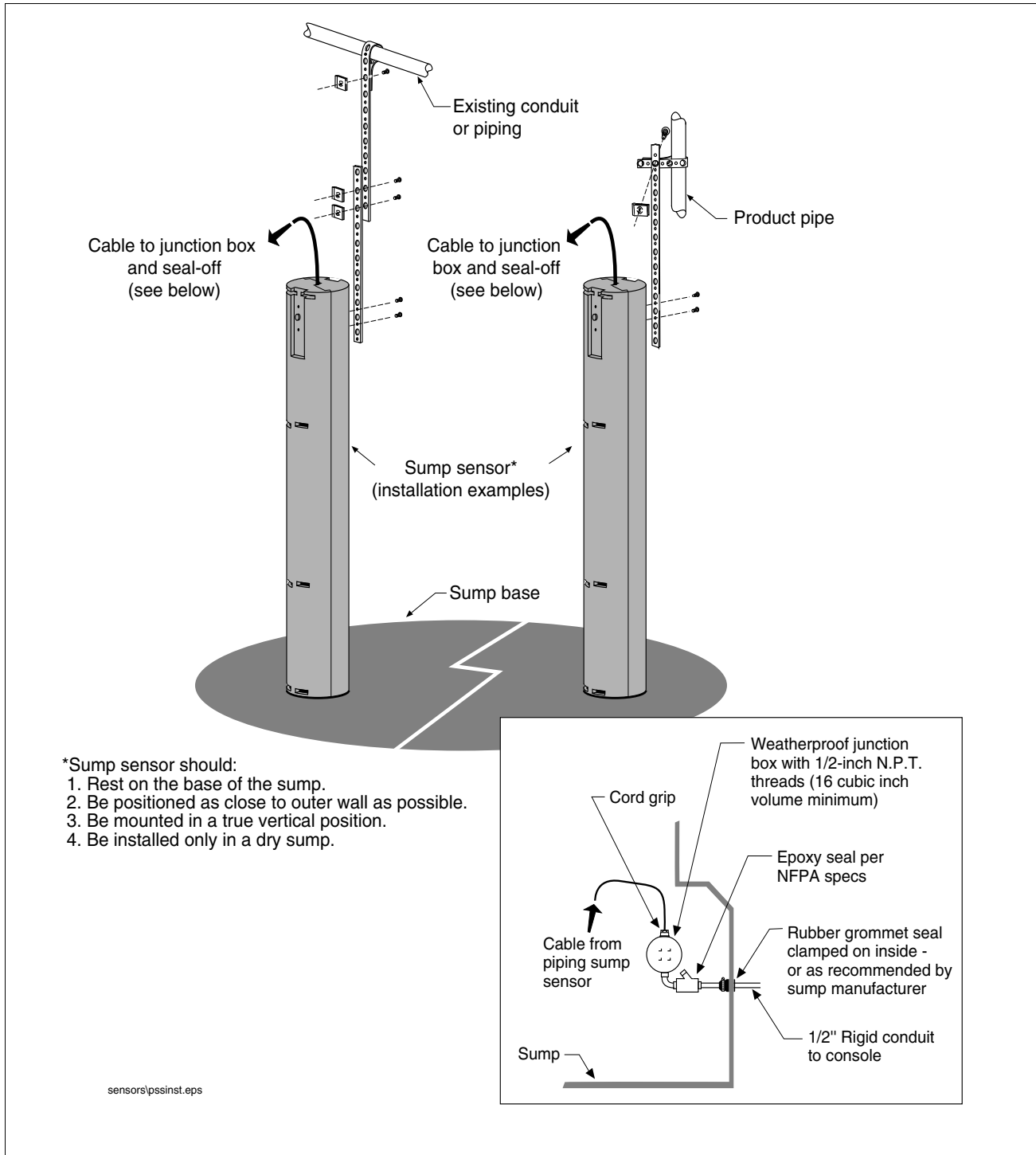


Figure 1. Sensor Mounting Examples

Wiring Procedure

- Using wire nuts, connect the two-wire sensor cable to the field wires in the sensor junction box (see Figure 2). Note, the Sump Sensor wiring has no polarity.

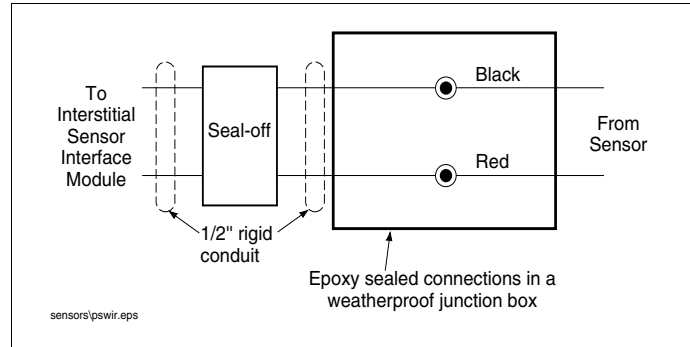


Figure 2. Sensor Field Wiring Diagram

- Do NOT terminate drain wire at this location, ground drain wire at console only.
- Seal wire nuts with epoxy sealant following the instructions in Figure 3.
- Push the epoxy sealed bag into the junction box. Replace and tighten the junction box cover.
- Consult the appropriate console site prep manual to connect the Sump Sensor to the console.

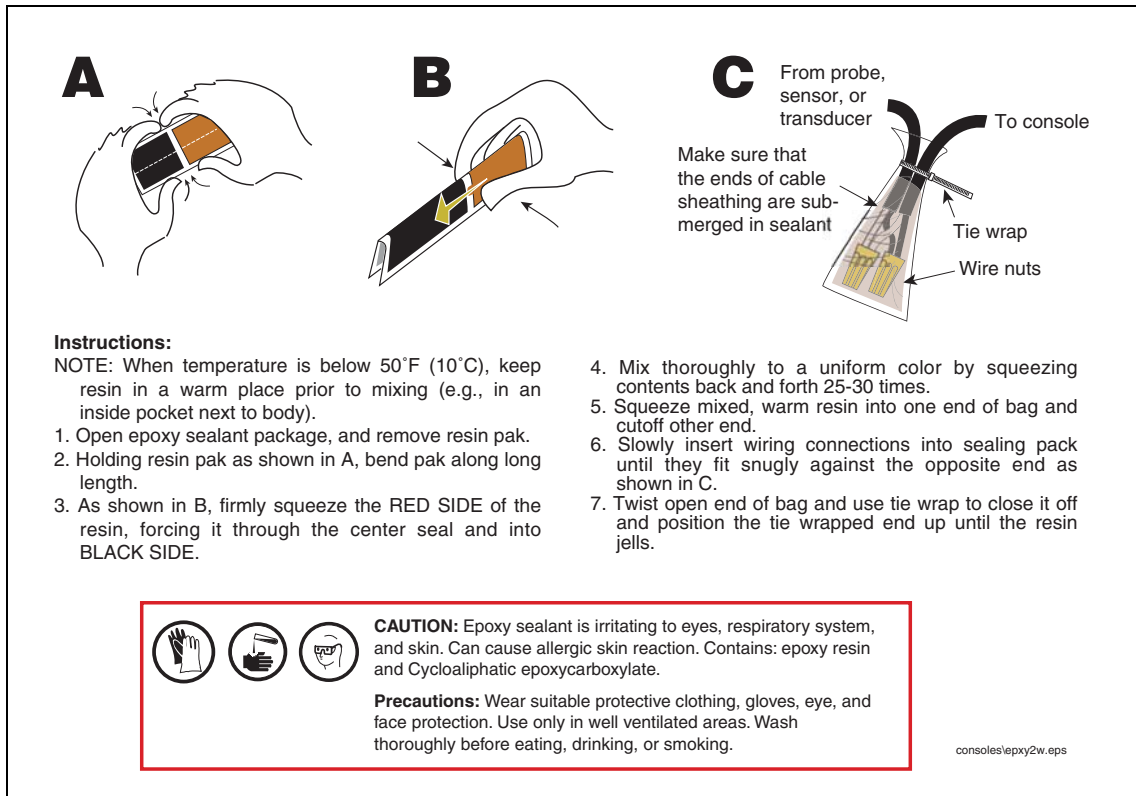


Figure 3. Epoxy Sealing Field Connections

