PMP CORPORATION

Manual Number: **01-64-640**
Revision : **2.6**
Date: **12/5/18**

Installation Instructions

New PMP Piping Sump Sensor

PMP p/n:
63228 with 10’ cable
63229 with 30’ cable

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Related Manuals

This installation requires specific knowledge of Veeder-Root equipment and you may need to refer to the following OEM manuals to complete the installation:

576013-879	TLS-3XX Series Console Site Prep and Installation Manual
577013-879	TLS-4XX Series Console Site Prep and Installation Manual
576013-301	Sump Sensor Installation Guide
577013-750	Sensor Product Application Guide
577013-814	Operability Testing Guide

Safety Symbols

The following safety symbols are used to alert you to potential hazards and precautions that should be taken. These symbols are not intended to alert you to all of the potential hazards you could be exposed to while working in a service station environment. These symbols cannot replace common sense and industry practices.

	READ ALL RELATED MANUALS Read and understand all of the written material related to the installation of this product. If you are un-sure of any aspect of this product, contact PMP for clarification
	WARNING Attention. Pay particular attention to the text adjacent to the use of this symbol to alert you to safety or operational issues.
	TURN OFF POWER Remove / disconnect all power before proceeding with this installation.
	ELECTRICITY Potential shock hazard. Test circuit to verify power has been disconnected
	BARRIERS Cordon off work area with barriers to avoid contact with traffic
	EXPLOSIVE Potentially explosive materials and or atmosphere. Take necessary precautions.
	FLAMMABLE Potentially flammable materials and or atmosphere. Take necessary precautions.
	ESD (Electrostatic Discharge) Take necessary precautions to avoid damaging sensitive electronics
	SAFETY Use appropriate safety equipment including equipment that may be mandated by federal, state and local regulations.
	GLOVES Wear gloves during this operation.

BEFORE YOU BEGIN

- **Service station equipment has both electricity and hazardous, flammable and potentially explosive liquid. Failure to follow the precautions below and instructions in this guide may result in serious injury and death. Follow all rules, codes and laws that apply in your area.**
- **Veeder-Root requires training certifications for contractors who install and set up equipment related to the TLS-350. Installers of this product must have a Veeder-Root® certification of Level 2/3. Be sure that you have familiarized yourself with these requirements and determined if you are qualified to perform this installation.**
- **PMP shall not be liable for errors contained herein or for incidental or consequential damages in connection with furnishing, performance or use of this publication.**
- **PMP reserves the right to change product features or the information contained in this publication.**
- **Failure to install this product in accordance with OEM instructions and warnings will result in voiding of all warranties connected with this product and may damage the environment.**

SAFETY PRECAUTIONS FOR INSTALLATION AND MAINTENANCE

- **Only a person with knowledge and experience with service station equipment should perform this work.**
- **Always make sure ALL power to the equipment you are working with is turned OFF before starting any maintenance.**
- **Note that more than one disconnect switch may be required to de-energize the equipment for maintenance and servicing. Use a voltmeter to make sure ALL circuits in the dispenser are de-energized. Failure to do so may result in serious injury.**

Description

PMP Corporation's 63228 and 63229 Piping Sump sensors are single-point, non-discriminating sensors. The 63228 and 63229 sensors are identical except the length of wire provided. These sensors are equivalent to Veeder-Root 798480-208 & 794380-209 sensors respectively.

Used in conjunction with a Veeder-Root TLS console, these sensors will detect the presence of fluid in dispenser pans and containment sumps. If the liquid level rises above the threshold of either sensor, an alarm is generated and logged in the ATG console so that a historical record of the alarm is recorded. This alarm would indicate there is liquid present where the sensor is installed. After the cause of the alarm has been determined and corrected, the sensor can easily be removed, cleaned and put back into service.

In order for this sensor to operate properly, it is vital that the sensor be installed properly and that the TLS console be programmed correctly.

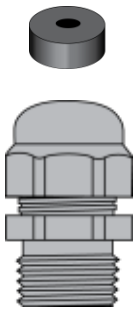
Sensor Models

PMP Number	OEM Number	Description
6X208	793480-208	Sump Sensor with 12' cable
6X209	793480-209	Sump Sensor with 30' cable

Note:
Installation of this sensor may require additional hardware not included with the sensor. Consider purchasing PMP Universal Sensor Mounting Kit 80205 to provide alternative installation hardware not included.

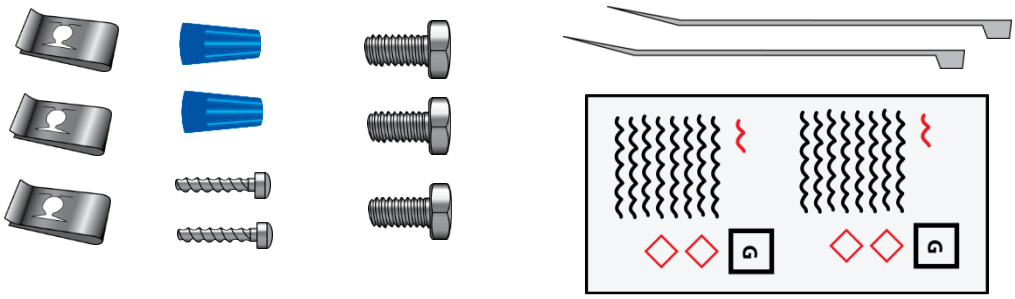
In the box

Qty	Description
1	Piping sump sensor
2	Screw - #4-20 x 3/8
3	Bolt – 1/4-20 x ½”
2	Tie-wrap
2	Wire nut – P2 Blue
3	Tinnerman style Speed Nut
1	Grommet
1	Seal pack
2	Mounting straps



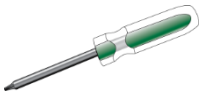
Note:
An additional rubber insert, for the cord grip, has been provided to accommodate smaller gauge wire such as the one used on this sensor.

Depending on your installation, you may need to replace the rubber insert to ensure a water tight connection.



Tools required

- T10 Torx driver
- 7/16” wrench

Symbol	Tool required
	T10 Torx
	7/16” Hex

Installation of the Sensor

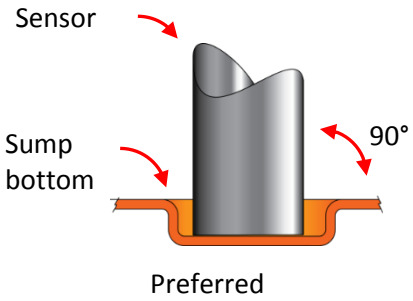
You must refer to the OEM manuals listed earlier in this manual for detailed instructions for console setup and site preparation.

There are an infinite number of ways to mount a Piping Sump Sensor. Most will be dictated by site specific constraints, many will be determined by regulations.

This manual can only provide samples of typical installations. It is the installer’s responsibility to ensure that their installation complies with all state, local and federal regulations.

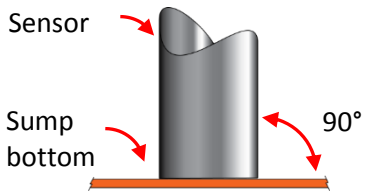
Choosing a location for the sensor

1. Determine where the sensor will be mounted in the sump. In all cases, this should be the lowest spot in the sump. Try to choose a location that will not get damaged during routine maintenance and is easily accessible for periodic testing.



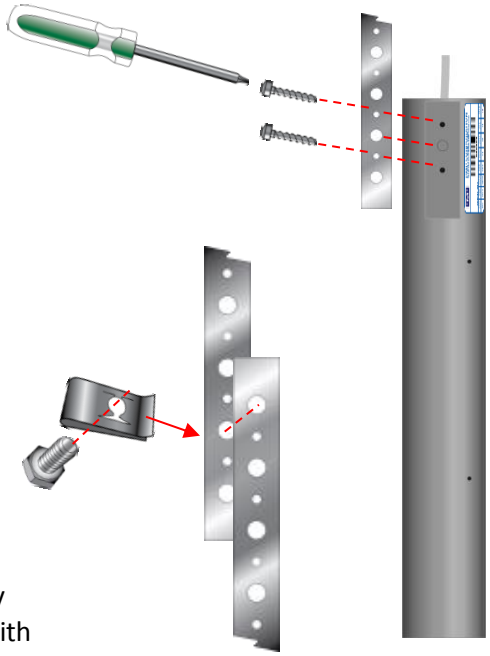
Some sumps will have a feature (cup) molded into the bottom of the sump specifically for mounting a sensor. If one is available, locate the sensor so that it can be used.

2. In all installations, the sump sensor must be mounted vertically and resting flat on the bottom of the sump.



Assembling the sensor

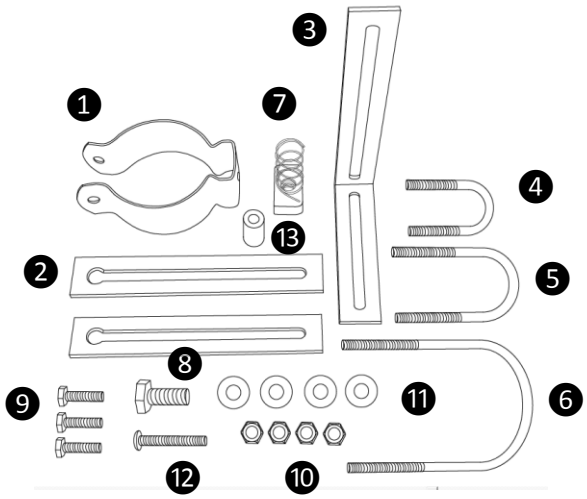
1. Align the mounting strap provided with the mating feature on the sensor housing.
2. Secure the strap using the two T10 Torx screws



3. If necessary, extend the length of the mounting strap by overlapping the straps to the desired length. Clip the Tinnerman style speed nuts over the straps and secure with the ¼”x 20 bolts provided.

Mounting the sensor

1. As mentioned earlier, installation of this sensor may require additional hardware which is not included with the sensor. Consider purchasing PMP Universal Sensor Mounting Kit 80205 (shown at right) to provide alternative installation options and methods. The kit includes items listed below:



Item	Contents	Qty
1	2” Conduit Clamp	1
2	Extension Bracket	2
3	“L” Mounting	1
4	¾” U-bolt	1
5	1” U-bolt	1
6	2” U-bolt	1
7	⅜” Spring Nut	1
8	⅜” – 16 x ⅞ Bolt	1
9	¼” – 20 x ¾” Hex	3
10	¼” – 20 Hex Nut	4
11	¼” Flat Washer	4
12	¼” – 20 x 1 ½”	1
13	¼” x 1” Spacer	1

2. Some sump containment sump manufacturers provide features in the sump, such as U-channel, specifically designed for mounting hardware and other devices. If these features are available, it is recommended that you use these solid mounting locations.
3. Secure the sensor making sure it is resting on the bottom of the sump and that it is vertical.

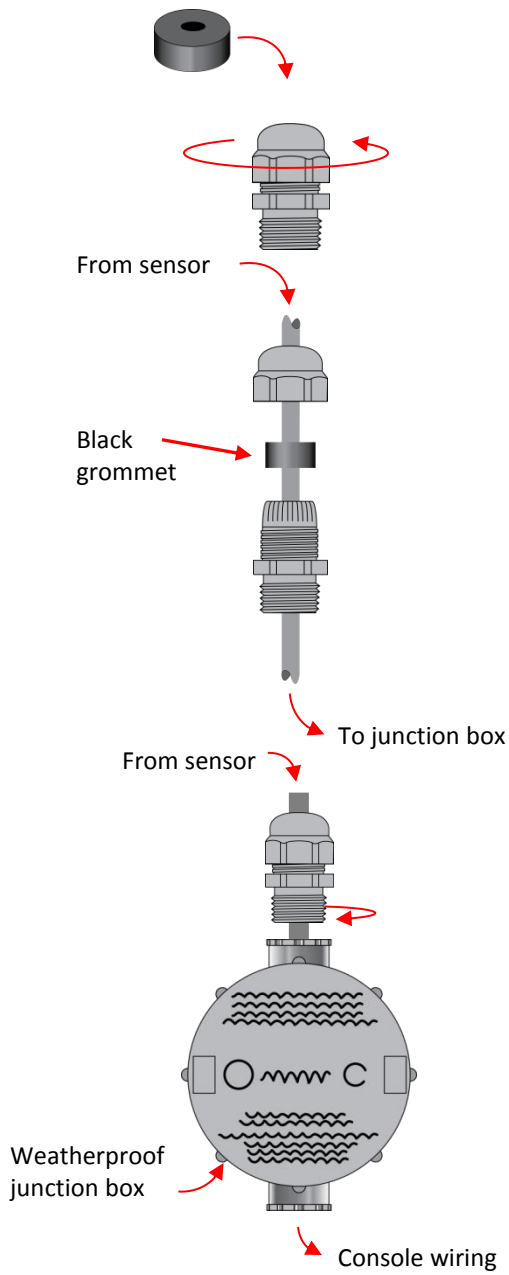
   Do not mount on flexible product lines.

Wiring the sensor

1. The cord grip provided is used in multiple applications. For use with this sensor, a grommet with a smaller internal diameter hole is provided.
2. Unscrew the cap from the cord grip and replace the gray grommet with the black grommet provided.
3. Feed the sensor wire through the cord grip nut and body as shown.
4. Thread the cord grip into the junction box.
5. Terminate the sensor wires in accordance with applicable codes using the wire nuts provided.

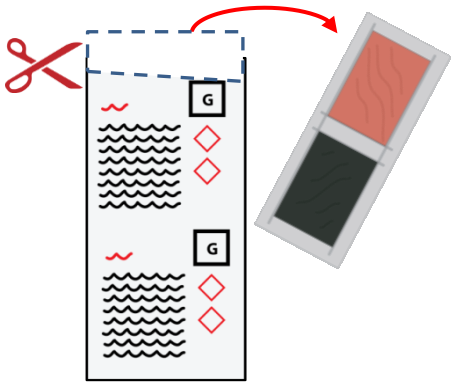
> Note: You can confirm the proper sensor operation by using an ohm meter across the sensor wires and turning the sensor upside-down:
> 100k Ω = ✓
> 0 Ω = ✖

6. Place the field wiring in the Connector Sealing Pack provided. See instructions below on how to use the Connector Sealing Pack (refer to "How to use the sealing pack" if you are unfamiliar with the process).
7. Enclose the wiring and seal kit in the junction box.
8. Re-install the junction box cover.
9. Check to be sure all of the cord grips have been tightened to ensure they are water tight.
10. Restore power to the console and proceed with the setup process.

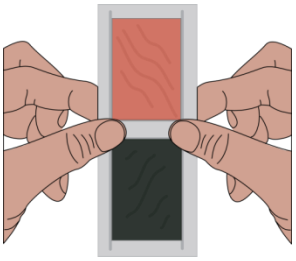


How to use the Connector Sealing Kit

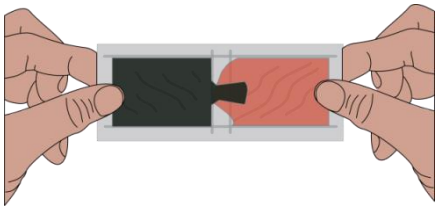
1. Carefully cut the bag and remove the seal pack.
2. Remove the two part seal pack.



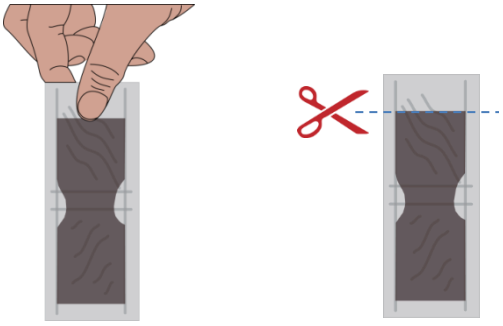
3. Grip the edges of the seal pack at the center and vigorously wiggle the plastic bag to weaken the barrier between the two halves.



4. Squeeze the resin back and forth 25-30 times to thoroughly mix the two parts.



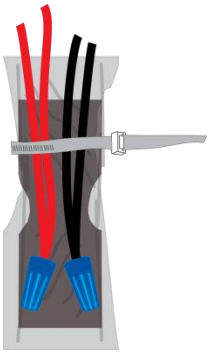
5. Squeeze the mixed resin to one side of the packet and cut off the other side.



6. Insert the connections made above. **Be sure the connections are inserted to the full depth of the seal pack to ensure a watertight connection.**

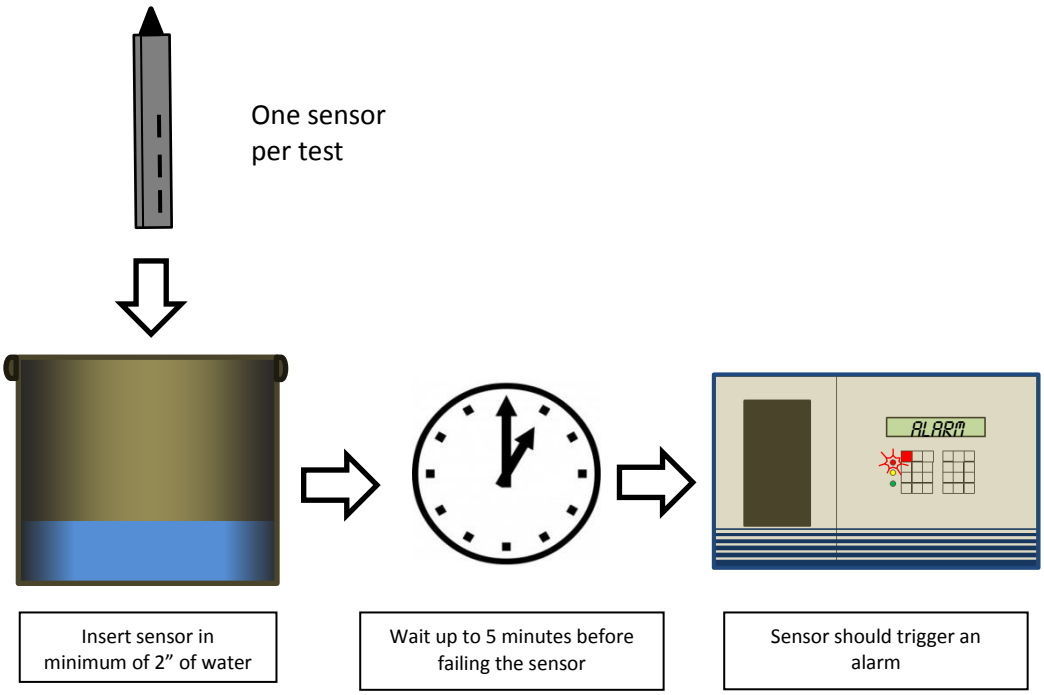
7. Use the wire tie provided to cinch the packet, where shown, to secure the wires in the epoxy pack during the curing process.

   Cure time is approximately 8-12 min @ 73°F.



Functional Test Procedure

1. Fill a container with a minimum of 2 inches of water.
2. Remove sensor from tank or sump.
3. Inspect the sensor for any physical damage including cables and connections.
4. Place the sensor in the container, oriented as it would be installed, until the bottom 2 inches of the sensor are submerged.
5. The sensor should trigger an alarm on the TLS. Depending on the console and site configuration, it may take up to 5 minutes to trigger an alarm.
6. Clear the alarm on the TLS-350 by pressing the Alarm / Test key or pressing the Alarm button twice on the TLS-450.
7. **If an alarm is not detected, the sensor has failed the test and must be replaced.**
8. If the sensor passed the test, allow the sensor to dry and reinstall per the installation instructions.
9. Record the test results for your records.



Quick Reference

Installation and Operation manuals

PMP provides an overview of the sensor installation with each sensor shipped. These installation overviews can also be found on the internet at www.pmp-corp.com. Refer to the OEM manuals listed above for detailed installation instructions.

Equipment Check Guidelines

No vendor specific checklist is provided for the equipment used to monitor these sensors. However, the EPA provides a useful checklist for Underground Storage Tank (UST) owners. This checklist is available on the EPA's website: www.epa.gov

Equipment Calibration

No calibration is required for the sensors discussed in this document.

Maintenance Procedures

There is no periodic maintenance required. However, periodic functional testing may be required by local regulations. Operability test guidelines for each sensor can be obtained from PMP or be found on the internet at www.pmp-corp.com. Sensors should be tested at least annually. However, Federal, State or Local regulations may require more frequent inspections and testing.

Test Results/Reports

Third party evaluations were conducted by Solution Engineering™ Group. Test results can be obtained from PMP.

Technical Contact

Support questions can be directed to the Engineering department at PMP. Refer to the contact information printed at the bottom of this page.

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