



Department of Environmental Protection

2600 Blair Stone Road ♦ Tallahassee, Florida 32399-2400

DEP Form: 62-761.900(9)

Form Title: Storage Tank Equipment

Registration Form

Effective Date: July 2019

Incorporated in Rule 62-761.850, F.A.C.

Storage Tank System Equipment Registration Form

Fill out completely

General Information

Company Name: PMP Corporation Contact Name: James Longworth
Company Address: 25 Security Drive City, State: Avon Zip: 06001
E-mail: jlongworth@pmp-corp.com Contact Number: 860-677-9656
Product Name: Sump Sensor
Model Number(s): 63510 Product Type: Leak Detection / Liquid Detector
Rule(s) citation that registration is being requested within Chapter 62-761 (UST), and/or 62-762 (AST),
62-761 (UST) and 62-762 (AST)

F.A.C.: Write a brief description of equipment registration request including product limitations:

PMP 63510 is single point non-discriminating sump sensor for use with Franklin Fueling Systems (formally Incon) EVO Fuel Management Systems, Tank Sentinel TS-1000/TS-2000 Systems, Tank Sentinel TS-1001/TS-2001 and TS-5xxx Series consoles. These sensors are easily tested and reusable.

Information Checklist (Choose Yes, No, or N/A - Not Applicable):

	Yes	No	N/A
1. Third-party Certification by a Nationally Recognized Testing Laboratory? (Required)	☒	☐	☐
2. Documentation of third-party evaluation that the equipment meets DEP Rules?	☒	☐	☐
3. Documents included about the qualifications of the Nationally Recognized Testing Laboratory?	☒	☐	☐
4. Technical information and drawings included?	☒	☐	☐
5. Installation instructions included?	☒	☐	☐
6. Annual Operability Testing Requirements (Rules 62-761.500, 62-762.501, & 62-762.502 F.A.C.)?	☒	☐	☐
7. Integrity Testing Requirements (Rules 62-761.700, 62-762.701, & 62-762.702, F.A.C.)?	☐	☐	☒
8. Compatible with fuel blends containing >10% ethanol or >20% biodiesel?	☒	☐	☐
9. Has the product been approved or registered in other countries or states? (If so provide list)	☐	☒	☐
10. Any requirements for company-certified installers or trainers?	☐	☒	☐
11. Was this product(s) previously approved or registered by the Department? If yes, EQ- _____	☐	☒	☐
12. Any changes or modifications to the equipment since the last submittal to DEP?	☐	☐	☒

Document Information: Provide supporting documents indicated as "Yes" above including this form via email to Tanknotify@floridadep.gov, or documents can be sent to FDEP, Division of Waste Management, 2600 Blair Stone Road, MS 4560, Tallahassee, FL 32399.

Write a brief description of equipment installation and performance in the U.S.:

This sensor detects the presence of fluid in a dry interstitial space of fiberglass tanks. If the liquid level in the interstice rises above the threshold of the sensor, an alarm condition is generated at the leak detection console. This would indicate there is liquid present in the area where the sensor is installed. A console alarm is indicated by an audible alarm, a displayed message and a printed report (if the console is equipped with a printer). The alarm is also recorded as part of Alarm History Report.

Equipment Registration Certification:

To the best of my knowledge and belief, all information submitted on this form is true, accurate and complete.

James Longworth - Electronic Products Engineer

Printed Name and Title

James Longworth Digitally signed by James Longworth

Signature (right click to sign)

Date: 2020.01.17 11:32:15 -05'00'

09/03/2021

Date

For Department Use Only:

Date Application Received: 09/07/2021 Application complete: Yes: ☒ No: ☐

EQ- 963 Date of complete or incomplete letter sent: 09/10/21 Date Equipment Requires Renewal: 09/10/2026

Storage tank system equipment requires renewal every 5 years in accordance with subsection 62-761.850(2), F.A.C.

Results Of U.S. EPA Alternative Evaluation Sensors

This form documents the performance of the sensor described below. The vendor, or a consultant to the vendor, conducts the evaluation according to the U.S. EPA's requirements for alternative protocols. The full evaluation report includes a report describing the method, a description of the evaluation procedures, and a summary of the test data.

Tank owners using this release detection system should keep this form on file to prove compliance with the federal UST regulation. Tank owners should check with regulatory authorities to make sure this form satisfies their requirements.

Method Description

Name PMP Corporation Steel Tank Interstitial Sensor.

Version Compatible with the following Franklin Fuel Systems formally Incon) ATG consoles: EVO Fuel Management Systems,

Vendor Tank Sentinel TS-1000/TS-2000 Systems, Tank Sentinel TS-1001/TS-2001, and TS-5xxx Series.

PMP Corporation, 25 Security Drive

Street address

Avon

CT

06001

City

State

Zip

Sensor output type Qualitative

Sensor operating principle Float Switch

General description of the sensor

Style 63510 ULS Sensors. These sensors employ a float switch to detect liquid in the interstitial space of double walled steel tanks.

Evaluation Results

The sensor listed above was tested for its ability to respond to a change in condition when tested in a controlled test vessel. The following parameters were determined from this evaluation.

- Precision standard deviation – Agreement between multiple measurements of the same product level.
- Detection time – Amount of time the detector must be exposed to product before it responds.
- Recovery time – Amount of time before the detector stops responding after being removed from the product.
- Specificity – Types of products that the sensor will respond to.

Parameter	Ethanol-blended Gasoline (10 %)	Water	Diesel
Average detection height in inches	1.05	0.85	0.94
Precision in inches	0.01	0.01	0.00
Average detection time as hh:mm:ss	< 1 second	< 1 second	< 1 second
Recovery time as hh:mm:ss	< 1 second	< 1 second	< 1 second

Specificity	100%	100%	100%

Limitations On The Results

Limitations specified by the vendor or determined during testing

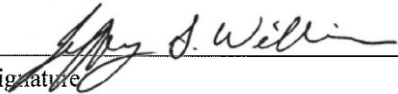
None

Certification Of Results

I certify the sensor was operated according to the vendor's instructions. I also certify the evaluation was performed according to the standard EPA test procedure for tank tightness testing methods and the results presented above are those obtained during the evaluation.

Jeffrey S. Williams

Printed name



Signature

3/29/2021

Date

Solution Engineering Group

Organization performing evaluation

Montgomery, IL 60538-1367

City, state, zip

630-701-7703

Phone number

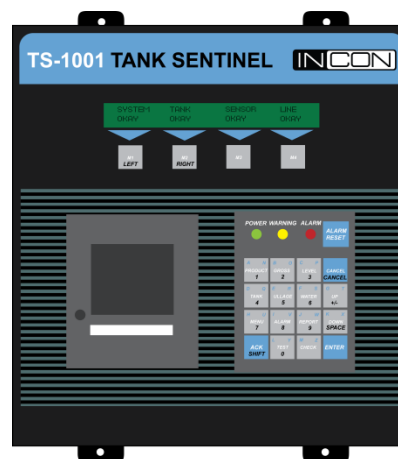
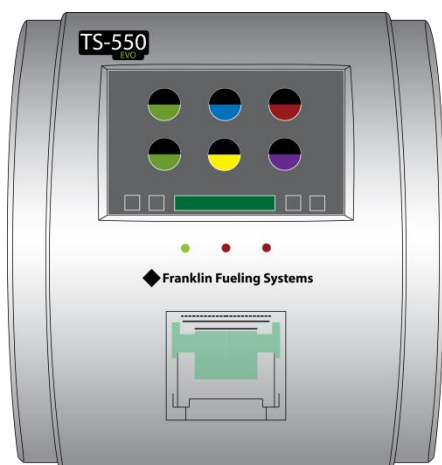
Installation Instructions

New PMP ULS sensors for Incon[®] applications

PMP	OEM	Name	Typical Application
63510	TSP-ULS FMP-ULS	Universal Liquid Sump Sensor	May be installed in sumps, dispenser pans, steel double wall tanks or other locations where the presence of liquid indicates a leak has occurred

Compatible with the following Franklin Fueling Systems (formerly Incon) ATG consoles:

EVO[™] Fuel Management Systems
Tank Sentinel TS-1000/TS-2000 Systems
Tank Sentinel TS-1001/TS-2001, and TS-5xxx Series



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Disclaimer

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Related Manuals

This installation requires specific knowledge of Franklin Fueling Systems (Incon) equipment and you may need to refer to the following OEM manuals to complete the installation:

EVO™ TS-550 and TS-5000	000-2171	Operators Guide
EVO™ TS-550 and TS-5000	000-2170	Installation Guide
EVO™ TS-550 and TS-5000	000-2173	Programming Guide
EVO™ 200 and EVO™ 400	228180016	Operators Guide
EVO™ 200 and EVO™ 400	228180003	Installation Guide
EVO™ 200 and EVO™ 400	228180015	Programming
TS-1001, 2002, 504, 508, & 750	000-1052	Operators Guide
TS-1001, 2002, 504, 508, & 750	000-1050	Installation Guide

TS-1001, 2002, 504, 508, & 750

000-1053

Programming

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.
- Installation should only be performed by a Franklin Fueling Systems certified installer or service person allowed to access both the user interface keypad and areas internal to the Tank Sentinel console.



- 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

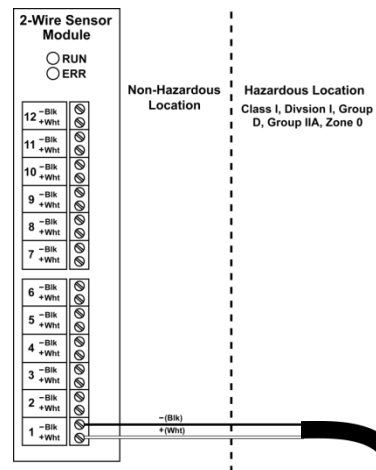
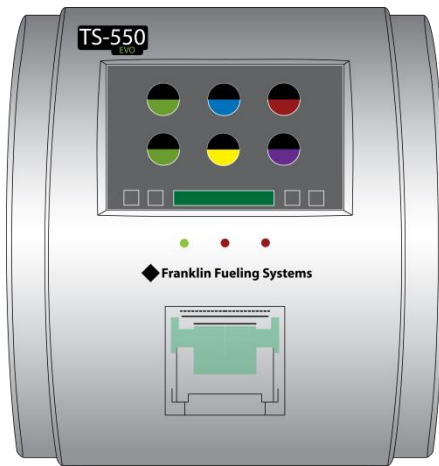
PMP Corporation's 63510 ULS (Universal Leak Sensor) sensors are single-point, non-discriminating sensors. These sensors are equivalent to the Franklin Fueling Systems (Incon) TSP-ULS and FMP-ULS.

Used in conjunction with an Incon ATG console, these sensors will detect the presence of fluid in dry sump application. Before installation, confirm you have the correct model sensor for your application.

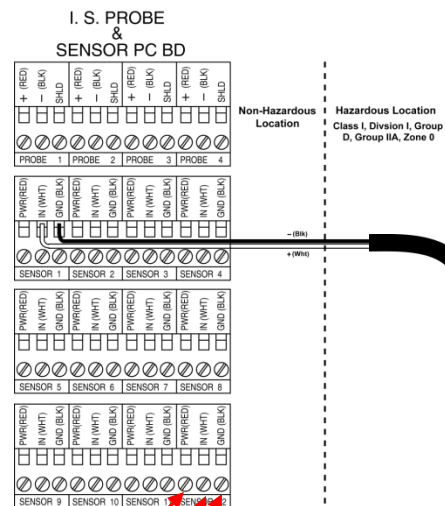
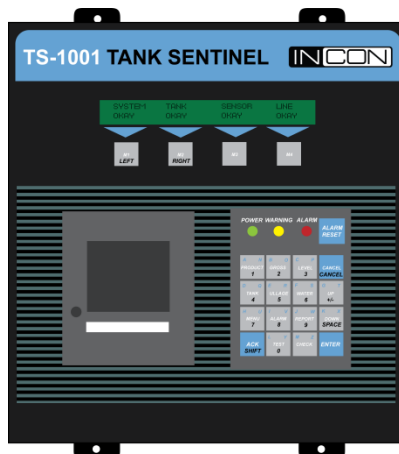
In order for this sensor to operate properly, it is vital that the sensor be installed properly and that the ATG be programmed correctly.

Connection examples

These examples are for reference only. Refer to the OEM manuals for your specific console.



Note: Franklin Fueling Systems documentation indicates the following wire polarity:
Black wire = Ground
White wire = Signal



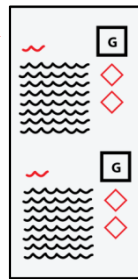
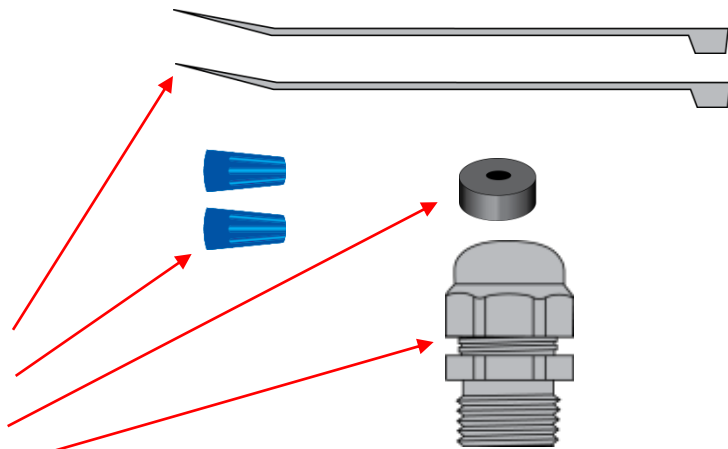
Note: The PWR (red) terminal is not used with 2-wire sensors

Only remove the jumper link between: IN (wht) and GND (blk) when a sensor channel is wired



In the box

Qty	Description
1	Universal Liquid Sensor
1	Installation Instructions
2	Tie-wrap
2	Wire nut – P2 Blue
1	Grommet
1	Cord grip
1	Seal pack



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.

Installation Prep



1. Turn-off power to the system.
2. Block off the work area.
3. Confirm you have the correct sensor for your application.
4. Confirm that there is no liquid in the interstitial space prior to installing the sensor.



63510 for Dry Sump Installations



Before you begin: refer to the OEM manuals listed earlier in this manual for detailed instructions for installation and console setup.

Example shown: Steel Tank Interstitial Installation

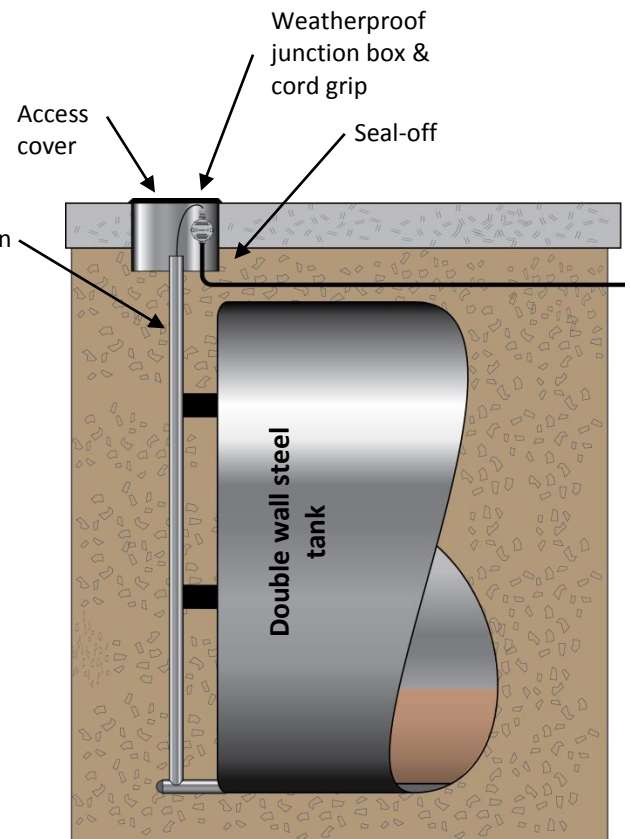
1. Lower the sensor into the riser. Note that the riser must be a 2" minimum diameter.
2. The sensor must sit flat at the bottom of the riser.
3. Feed the sensor wire through the riser cap and cord grip.
4. Determine the length of wire required. Lower the sensor so it rests at the bottom of the interstitial riser. **Do not suspend the sensor from the cable.**
5. Thread the cord grip into the riser.
6. Tighten to ensure a watertight seal.



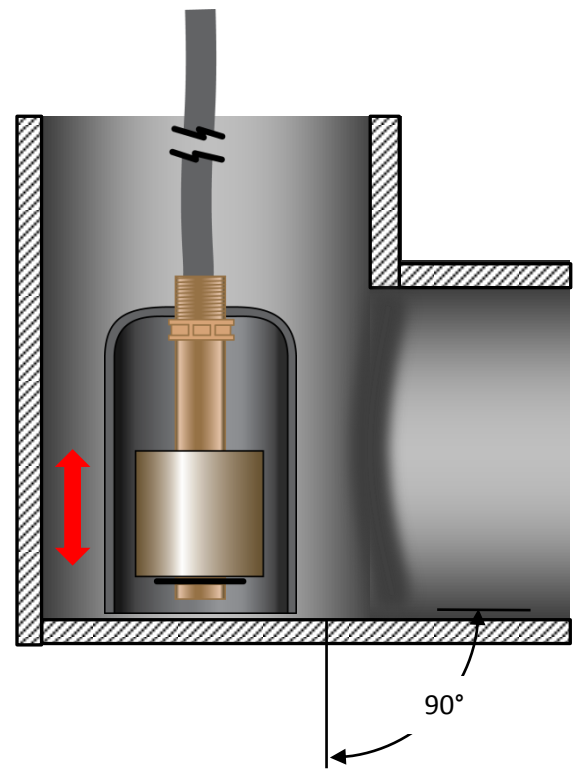
Note: You can confirm the proper sensor operation by using an ohmmeter across the sensor wires.

Float down = 0 Ω

Float up = OL (Overload)



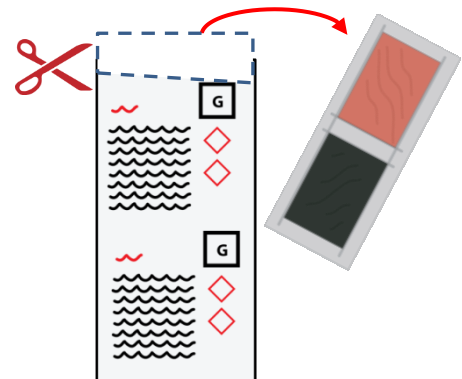
1. Verify that the sensor has been installed in the proper orientation by using an ohmmeter across the sensor wires. In this application, the sensor is Normally Closed. When the float is in the down position, you should read 0Ω .
2. Feed the sensor cable through the cord grip of the junction box. Thread the cord grip into the junction box.
3. Connect the sensor to the field wiring in accordance with applicable codes and regulatory requirements.
4. Use the seal kit provided to ensure water tight field connections
5. Enclose the wiring and seal kit in the junction box.
6. Re-install the junction box cover.
7. Check to be sure all of the cord grips have been tightened to make them water tight.
8. Restore power to the console and proceed with the sensor setup process.



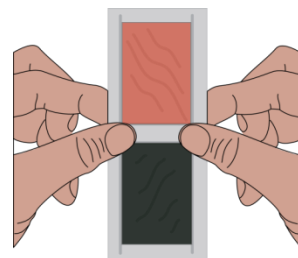
How to use the Connector Sealing Kit



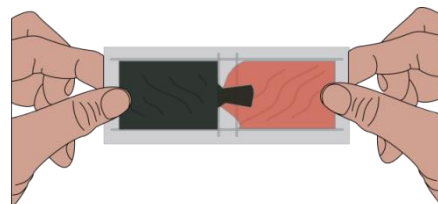
1. Carefully cut the bag and remove the seal pack.
2. Remove the two part seal pack.



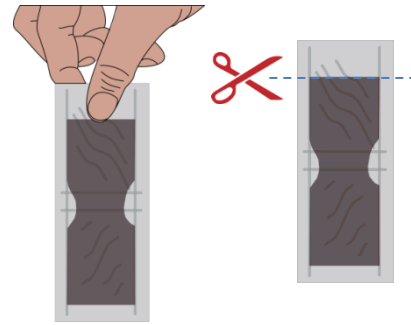
3. Grip the edges of the seal pack at the center and vigorously wiggle the plastic bag to weaken the barrier between the two halves.



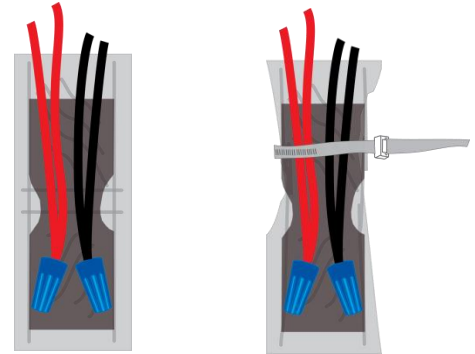
4. Squeeze the resin back and forth 25-30 times to thoroughly mix the two parts.



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.**

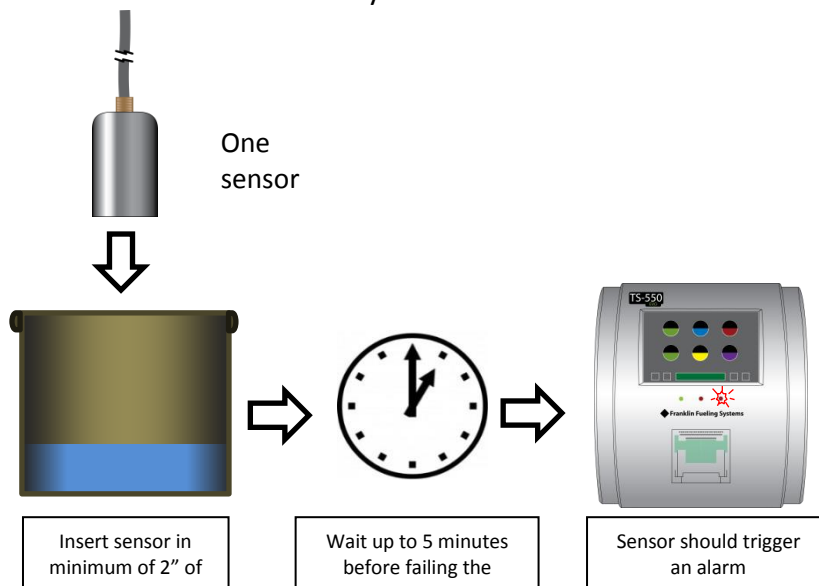


7. Use the wire tie provided to cinch the packet, where shown, to secure the wires in the epoxy pack during the curing process.

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

Functional / Maintenance Test Procedure for 63510 (Normally Open Applications)

1. Fill a container with a minimum of 2 inches of water.
2. Remove the 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 it is submerged.
5. The sensor should trigger an alarm on the ATG. Depending on the console and site configuration, it may take up to 5 minutes to trigger an alarm.
6. Clear the alarm on the ATG by pressing the Alarm / Test key or pressing the Alarm button twice on the ATG.
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/oust/cmplastc/cheklist.pdf

Equipment Calibration

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

Maintenance Procedures

Periodic maintenance 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 Ken Wilcox and Associates. 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.



PMP CORPORATION

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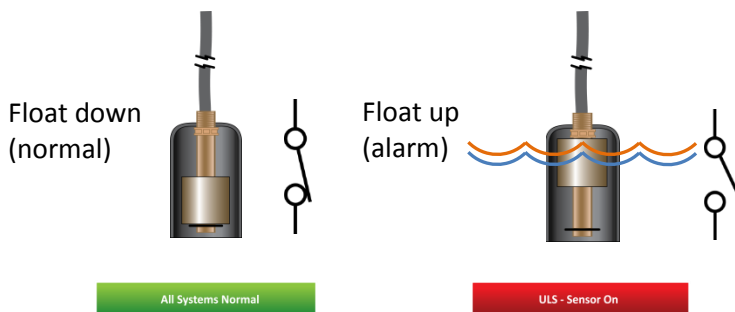
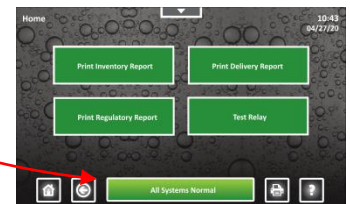
Equipment Check Guidelines for PMP Sensors p/n 63510 Franklin Fueling® EVO™ Series consoles

The purpose of this checklist is to provide regulators and inspectors quick access to information related to these sensors. This checklist cannot replace the EVO™ Series console manuals and assumes that the console has been properly configured for a sensor of this type.

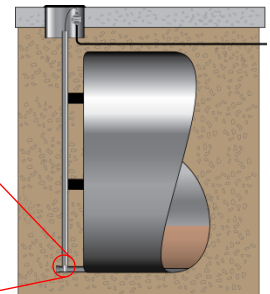
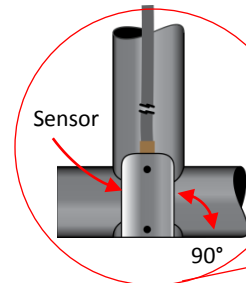
For detailed operational instructions of the EVO™ Series consoles, please refer to the OEM manuals.



1. Sensors must be inspected annually. The station owner should refer to documentation such as the EPA's "Operating And Maintaining UST Systems" and PEI RP900-17 "Recommended Practices for the Inspection and Maintenance of UST Systems. These documents provide information on visual inspection of the sensor installation and operability. Operability testing procedures for this sensor can be found at the back of the appropriate PMP Sensor manual.
2. Confirm the power is on to the console. The green *Power* lamp should be the only lamp illuminated.
3. From the Home screen, verify there are no active alarms in the System Status Bar. Under normal circumstances the console will display "All Systems Normal".
4. Verify the sensor is sitting upright at the bottom of the riser pipe.
5. The sensor is a float switch design and has two states when installed: Float Down and Float Up. It is programmed as a 2-Wire sensor in the console setup.



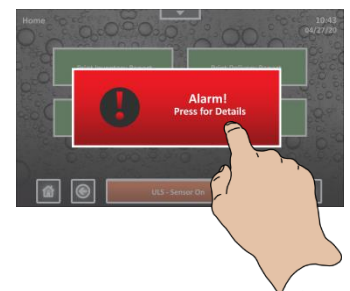
System Status Bar message



Active Alarms

1. If liquid is detected, the console will go into alarm. The *ALARM* LED will light on the front of the console and an alarm dialog box will appear. Note that the System Status Bar will also change to red and display the alarm message i.e. "Sensor On".

Depending on how the console is configured, the beeper may or may not sound and the printer may or may not print a report. These options are configured during installation.



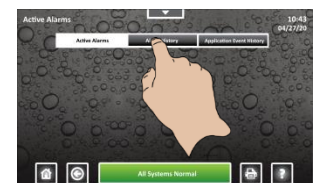
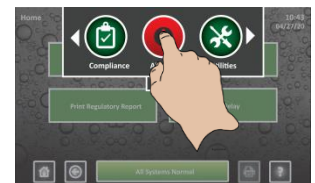
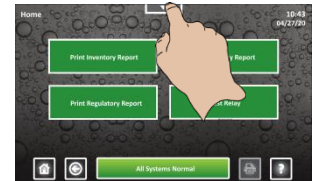
- The beeper will continue to sound until the *ALARM* dialog box is pressed. The LED will continue to flash until the alarm is acknowledged. Press the *ALARM* dialog box to acknowledge the alarm and jump to the *Active Alarm Screen*. This does not clear the alarm. The *Alarm* LED will continue to flash and the display will continue to display the current alarm until fault has been corrected. If there are multiple alarms, the messages will scroll on the System Status Bar.



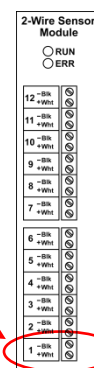
Alarm History

There are multiple ways to view and retrieve Alarm History. For this example, we are going to view alarm history. For more detailed console operation, refer to the OEM manuals.

- Start at the Home Screen shown.
- Press the down arrow to open the Quick Jump Menu
- When the Quick Jump Menu appears, select the Alarm icon. This will take you to the Active Alarm Screen.
- When the Active Alarm Screen appears, select Alarm History in the center of the bar.
- Alarm History will appear. If there are multiple alarms, you can scroll through the messages



This sensor must be programmed as a STD (standard) sensor and at the corresponding location on the terminal block. Connections should be made at the IN and GND terminals of the 2-Wire Sensor Module. The recommended termination colors are indicated at the connection point.



All product or company's names, trade names, trademarks, parts numbers and part descriptions may be the trademarks of their respective owners, and are used for reference or identification purposes only. PMP does not claim any right to or affiliation with such owners. The PMP product described here is manufactured or remanufactured and sold by PMP and is not the product of any other identified manufacturer.



PMP CORPORATION
P.O. Box 422 • 25 Security Drive
Avon, CT 06001

Local: 860-677-9656
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Toll Free Fax: 888-674-0196
Web: www.pmp-corp.com
E-mail: sales@pmp-corp.com



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A Veteran Owned and Managed Company

Equipment Check Guidelines for PMP Sensors p/n 63510 Franklin Fueling® Tank Sentinel® Series consoles

The purpose of this checklist is to provide regulators and inspectors quick access to information related to these sensors. This checklist cannot replace the Tank Sentinel® console manuals and assumes that the console has been properly configured for a sensor of this type.

For detailed operational instructions of the Tank Sentinel consoles, please refer to the OEM manuals.

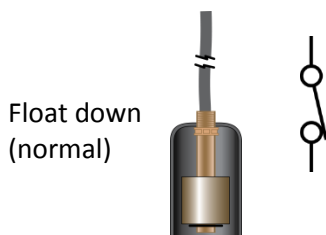
1. Sensors must be inspected annually. The station owner should refer to documentation such as the EPA's "Operating And Maintaining UST Systems" and PEI RP900-17 "Recommended Practices for the Inspection and Maintenance of UST Systems. These documents provide information on visual inspection of the sensor installation and operability. Operability testing procedures for this sensor can be found at the back of the appropriate PMP Sensor manual.

2. Confirm the power is on to the console. The green *Power* lamp should be the only lamp illuminated.

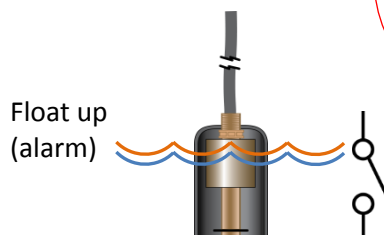
3. Verify there are no active alarms. Under normal circumstances the console will display "System Okay", "Tank Okay" and "Sensor Okay".

4. Verify the sensor is sitting upright at the bottom of the riser pipe.

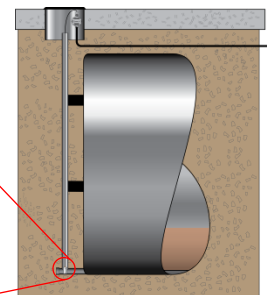
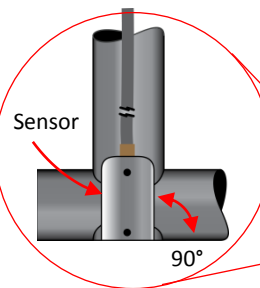
5. The sensor is a float switch design and has two states when installed: Float Down and Float Up. It is programmed as a STD (standard) sensor in the console setup.



SYSTEM OKAY	TANK OKAY	SENSOR OKAY
----------------	--------------	----------------



SYSTEM OKAY	TANK OKAY	SENSOR ALARM
----------------	--------------	-----------------



SYSTEM OKAY	TANK OKAY	SENSOR OKAY
----------------	--------------	----------------

6. If liquid is detected, the console will go into alarm. The display will change to "Sensor Alarm" and the *ALARM* LED will light. However, depending on how the console is configured, the beeper may or may not sound and the printer may or may not print a report. These options are configured during installation.

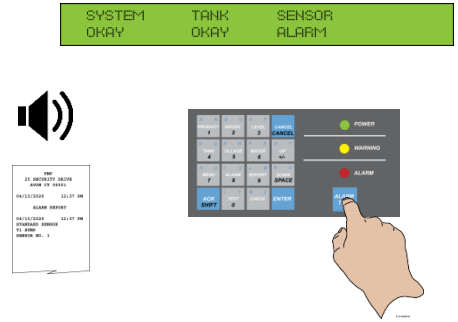


7. The beeper will continue to sound until the *ALARM / TEST* button is pushed. This does not clear the alarm. The *Alarm* lamp will continue to flash and the display will continue to display "Sensor Alarm" until the alarm is acknowledged.

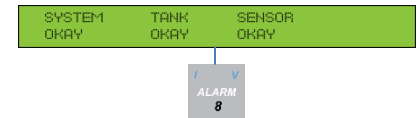
8. If the console cannot determine the status of the sensor, it will also result in a "Sensor Alarm". The display will change to "Sensor Alarm" and the **ALARM** LED will light. However, depending on how the console is configured, the beeper may or may not sound and the printer may or may not print a report. These options are configured during installation.

9. The beeper will continue to sound until the **ALARM / TEST** button is pushed. This does not clear the alarm. The **Alarm** lamp will continue to flash and the display will continue to display "Sensor Alarm" until the alarm is acknowledged.

10. To review the sensors alarm history, follow the steps shown:



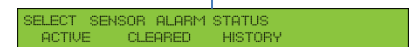
Starting from the main screen, press the **ALARM** button



Press the **M3** button to select "SENSOR" category



Press the **M3** button again to select "HISTORY" category



The descriptor that appears is programmed by the installer during setup and will vary from site to site.

"T" represents tank. The digit indicates the sensor number.



Use the **UP** and **DOWN** buttons to scroll through the alarm history.



This sensor must be programmed as a **STD** (standard) sensor and at the corresponding location on the terminal block. Connections should be made at the **IN** and **GND** terminals. The recommended termination colors are indicated at the connection point.



Sensor terminals, that are not in service, require jumper be installed between the **IN** and **GND** terminals. This jumper must be removed for the sensor to operate properly.

PWR (RED)	IN (WHT)	GND (BLK)	PWR (RED)	IN (WHT)	GND (BLK)	PWR (RED)	IN (WHT)	GND (BLK)	PWR (RED)	IN (WHT)	GND (BLK)
☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒
SENSOR 1	SENSOR 2	SENSOR 3	SENSOR 4								

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