

Liquid Level Monitoring System



Measuring marine water and holding tanks requires a reliable system. The new generation of Fireboy-Xintex liquid level monitoring senders and display gauges were designed with no moving parts to stick or clog, giving you peace of mind knowing that you are getting the most accurate readings possible.



- Xintex tank senders use pneumatic (pressure) reading technology to accurately measure tank levels
- No moving parts; electronics do not come in contact with waste material, virtually eliminating troublesome clogging
- Solid-state, advanced micro-processor controller accurately measures pressure changes to measure tank levels
- Not affected by atmospheric changes
- Two-wire sender connection
- New PTS and PFS Senders replace all Xintex TS and FS Senders (two-wire) and are compatible with existing LLM-1/LLM-2 Series gauges for convenient system retrofit

Note: For monitoring three or more tanks, select additional display(s) as needed.

Displays

Easy-to-read display with five green LED's indicating empty, 1/4, 1/2, 3/4, and full. Press the pad to instantly see tank levels.



LLM-1



LLM-2

Awarded
Practical Sailor's
"Best Choice"
2008

Tank Senders



Flanged Sender (PFS)

Threaded Sender (PTS)

Threaded senders easily install into plastic or metal tanks with 1 1/2" NPT threads. Flanged senders are available for tanks without a threaded top port and utilize a five-bolt pattern for installation.

1-Year Limited Warranty

Today's solution for monitoring fresh water & holding tanks

PTS/PFS Installation Instructions

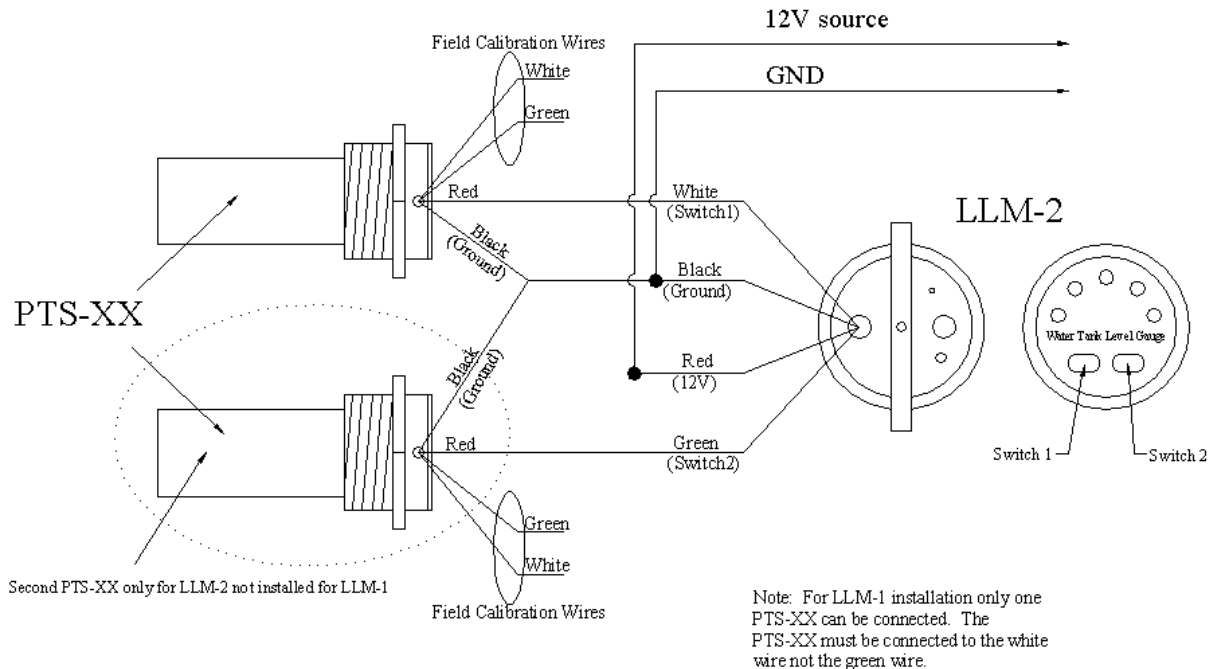
Important!

Do not silicone the wire way. Completely sealing the top of the PTS-XX will cause it to stop working.

Do not over-tighten PTS-XX to tank. Thread in finger tight and then turn an additional ¼ turn.

Do not expose the sender to vacuum. Prolonged exposure to vacuum will damage the sender.

Figure 1 Wiring Schematic



Normal Operation:

The PTS-XX is constantly measuring tank level but to conserve power the display is only active when the switch is pressed.

To check tank level press the corresponding switch on the LLM-2.

LED's will illuminate to indicate current tank level.

Trouble Shooting:

If the empty LED flashes check all connections between the PTS-XX and the LLM-2.

If all connections are correct remove power for 20 seconds and then re-apply.

If gauge reads correctly initially but slowly drops in level, most likely the sender has a leak and needs to be returned for repair.

If gauge reads full all of the time regardless of level, try to recalibrate using the instructions on the back of this sheet. If this does not resolve the problem the transducer is most likely damaged. Examine tank system and make sure there is no plugged vents which could cause a vacuum. Vacuum will damage the sender.

If the problem persists contact the technical service department by calling 1-866-350-9500.

System Parameters:

Operating Voltage:	10.8V to 16V
Max Pressure:	10 psi
Media:	Waste/Fresh Water
Max Sender Length:	36" (1.2 psi H2O)

Optional Field Calibration Method

If required the PTS-XX can be cut shorter and re-calibrated. (Note units are shipped calibrated)

1. Connect the sender to display as shown in the figure below
2. Remove the pre-stripped sheathing from the green and white wires and connect them together.
3. Submerge the sender to the level you want the display to read empty.
4. Connect the red and black wires from the display to a 12V source.
5. Wait 30 seconds
6. Submerge the sender to the level you want the display to read full (Factory Setting is 2" from top of the sender).
7. Disconnect the green and white wires.
8. Wait 30 seconds
9. Remove power and the unit is now calibrated to those levels.
10. When calibration is complete snip the exposed green and white wires back to avoid accidental entry into calibration mode.

Determining Sender Length

$$(\text{Height of Tank}) - (1.5'')^* = \text{Sender Length}$$

*1.5" subtracted to prevent sender from bottoming out on the tank.

Notes on Field Calibration

When liquid rises above where the empty point was calibrated the ¼ light on the display will turn on.

When liquid drops past that point the ¼ light on the display will turn off and only the "E" light will be on.

When liquid rises above where the full point was calibrated the "F" light on the display will turn on. When liquid drops past that point the "F" light on the display will turn off.

