TSM1000 Tank Monitor
Remote Battery Setup Instructions, Hazardous Locations

TankScan | Powered by AquaPhoenix

⚠️ **WARNING: DO NOT OPEN WHEN AN EXPLOSIVE ATMOSPHERE IS PRESENT**
AVERTISSEMENT: NE PAS OUVRIR EN CAS DE PRESENCE D'ATMOSPHERE EXPLOSIVE

⚠️ **WARNING: DO NOT INSTALL BATTERY WHEN AN EXPLOSIVE ATMOSPHERE IS PRESENT**
AVERTISSEMENT: NE PAS INSTALLER LES ACCUMULATEURS SI UNE ATMOSPHERE EXPLOSIVE PUET ÊTRE PRÉSENTE

Connect Battery and Test Connection

⚠️ **WARNING: THIS MUST BE DONE IN A NONHAZARDOUS ENVIRONMENT**

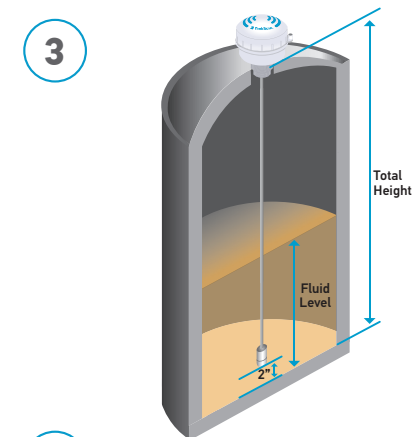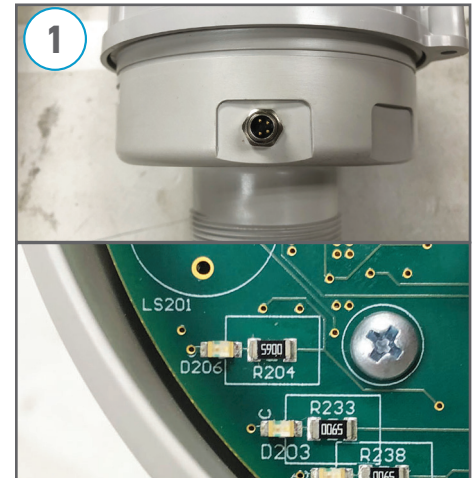**1** Set up gateway before connecting battery. Remove cover from monitor.

To power up TankScan Monitor, remove Remote Battery Pack housing cover and connect battery connector to Remote Battery Pack housing connector. Next, reinstall cover and tighten screws, then connect cable between monitor and Remote Battery Pack enclosure.

Monitor will wake up and indicator D206 will turn on when the monitor begins to take a reading and go off after the data is transmitted. This whole process should take under 3 minutes If there was an error during this process, D206 will flash for 5 seconds before turning off. If this happens, please contact TankScan Technical Support.

Upon successful transmission of the data, reinstall monitor cover and hand tighten firmly. Remove cable from Remote Battery Pack and monitor prior to installing on tank.

▶ **Note:** Monitor and Remote Battery Pack covers must remain on when monitor is moved into hazardous location

⚠️ **WARNING – USE ONLY BATTERY PACK #TSTRB02000**
AVERTISSEMENT - UTILISER UNIQUEMENT DES ACCUMULATEURS ATEK #TSTRB02000

Take Measurements

2 Remove any equipment from tank port to be used by monitor. TSM monitor can be connected directly to tanks with a 1.5" or 2" NPT threaded opening.

3 Measure tank height from inside bottom of tank to top of tank port and to top of fluid level in tank. Record and report this measurement to TankScan Technical Support.

Total Height:

_____

Cut Probe Wire to Length

4 Determine probe wire length using Probe Length Calculation diagram then measure probe wire length from wire exit point in housing base until calculated length is reached. Make a mark at this point and trim excess wire.

1

3

Total Height

Fluid Level

2"

4

Probe Length Calculation
Tall Tanks (for 144" Monitors and longer)

Using 1.5" Thread:
Probe Length = A - 2

Using 2" Thread:
Probe Length = A - 2.50

Measure from probe wire exit point

If this equipment is used in a manner not specified, the protection provided by this equipment may be impaired.

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Attach Accessories

(5) **Float Assembly** - Slide onto probe wire if included with monitor.

(6) **Probe Wire Weight** - Slide onto probe wire such that wire extends and is flush with end of weight. Tighten weight clamp using provided hex wrench.

Determine if Probe Wire Guard (PWG) is Needed

(7) For monitors installed on risers greater than 3 inches long, a PWG is recommended to prevent probe wire from contacting riser. Refer to **TankScan Probe Wire Guard Installation Guide** or visit tankscan.com/support.

▶ **NOTE: Return to these setup instructions to complete monitor installation after Probe Wire Guard installation.**

If PWG is required but not provided as a field-installable kit, contact TankScan Technical Support to order PWG Field Install Kit before proceeding.

If PWG is not required, then proceed to step 8.

Mount TSM Monitor to Tank

(8) Lower probe wire with weight gently through tank port into tank. Position monitor over tank port and hand tighten until secure.

(9) Seal pipe threads of monitor using product appropriate for this application prior to tightening into tank port. Remote Battery Pack cable should be removed for ease of installation then plugged in once monitor is fully mounted.

(10) Connect battery cable to Remote Battery Pack and mount Remote Battery Pack at base of tank such that the cable connector is facing down. If mounting Remote Battery Pack to a plastic tank, apply hook and loop fastener strips to edges of magnet face of Remote Battery Pack.

Test Setup

(11) Test monitor by swiping magnet end of supplied screwdriver along cover's rim above triangle indicator on housing base. Monitor will take a level reading and then report to AquaPhoenix Intelligence Platform (AIP).

(12) Confirm monitor reading is correct on AIP or call TankScan Technical Support to confirm reading.

▶ **NOTE:** Step 12 must be completed to ensure monitor is functioning properly.

TankScan Technical Support   877-847-7226

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(5) **Float Assembly**

(6)

Probe Wire Weight

(7)

Probe Wire Guard

(9) **(10)**
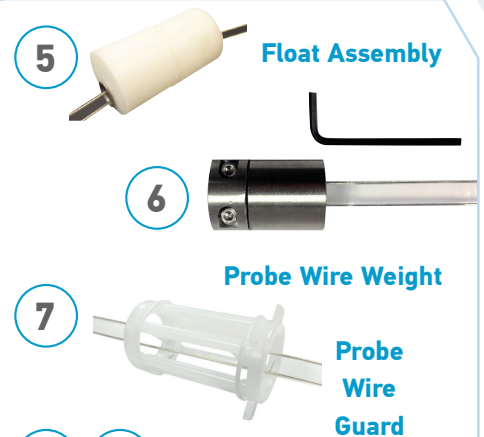
Capacitance of all unearthed metallic parts of the Tank Level Monitor enclosure, Remote Battery Pack enclosure and cable shall not exceed a 3pF maximum capacitance limit for the EPL Ga, Group IIA. When installed in an EPL Ga environment, the end user shall carry out a risk assessment to ensure that the possibility of the enclosure M8 connectors and the cable producing a potentially incendive spark is negligible based on the following capacitance measurements:

- Maximum capacitance measured across Remote Battery Pack enclosure M8 connector: 3.8 pF
- Maximum capacitance measured across Remote Battery Pack cable M8 connectors: 3.7pF
- Maximum capacitance measured across the Tank Level Monitor enclosure M8 connector: 6.5 pF

(10) **(11)**

Cellular
Contains FCC ID: 2ANPO00NRF9160
Contains IC ID: 24529-NRF9160
Rf
Contains FCC ID: MCQ-XBEE3
Contains IC: MCQ-XBEE3
Operation is subject to the following 2 conditions:
1. This device may not cause harmful interference and
2. This device must accept any interference received, including interference that may cause undesirable operation.

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