

Sensometer™ CP Test Station Monitor Install Guide

The following instructions are for general installation of the Sensometer™ CP Test Station Monitor (part no. 301578), to a standard 3" diameter BigFink® Terminal Enclosure. For more information, scan the QR code (at the right) for the Sensometer™ CP Test Station Monitor User Manual.



Required Tools

- Multimeter
- 7/16" socket
- 5/16" screwdriver
- Wire stripper and cutter
- 1/8" precision screwdriver, flat blade (width=3.5 mm, thickness=0.6 mm)

WARNING! Follow standard Lockout/Tagout procedures. Do not attempt installation until all equipment is disconnected, and hazardous voltage are removed.

WARNING! Electrostatic Discharge (ESD) can damage electronic devices. Be certain to always wear an anti-static wrist band, attached to an unpainted, grounded metal object.

Remove Hardware

- Remove BigFink® cap
- Using a 7/16" socket and/or 5/16" slotted screwdriver, remove all existing nuts and bolts from the Terminal Board



System Wiring

- Cut any existing terminal connections from the wires
- Strip about 0.275" (7 mm) of insulation from each wire (wire gauge can be 12-24 AWG)
- Insert and secure the wires per the connection table below, using the precision screwdriver

Connector Pin:	Description:
4 (left-most)	Structure 1
3	Reference Cell 1
2	Structure 2
1 (right-most)	Reference Cell 2



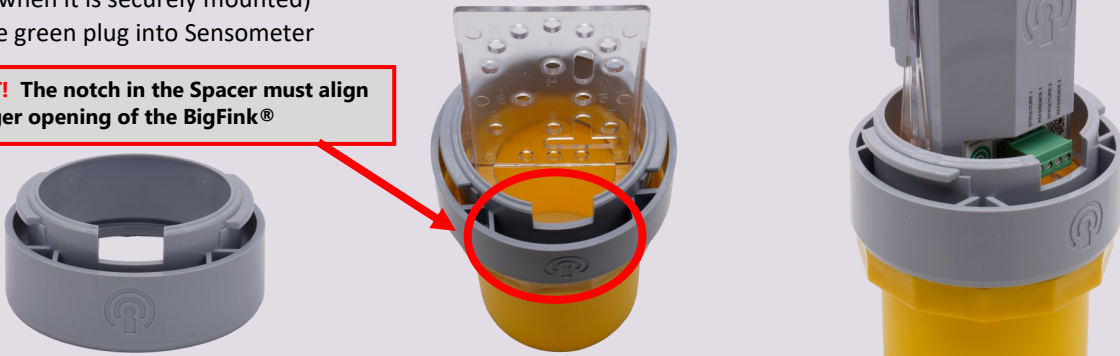
IMPORTANT! Potential measurements are taken differentially from Structure 1 to Reference Cell 1, and Structure 2 to Reference Cell 2. Therefore, when measuring only one Structure with two Reference Cells, jumper pins 2 and 4 together and connect to the Structure.

IMPORTANT! The maximum wire gauge for this plug is 12 AWG

Install Sensometer™ Spacer and TSM

- Place Spacer onto test station post
- Rotate clockwise until it is secured
- Place Sensometer™ onto the BigFink® Terminal Board as shown (you should hear a “click” when it is securely mounted)
- Insert the green plug into Sensometer

IMPORTANT! The notch in the Spacer must align with the larger opening of the BigFink®

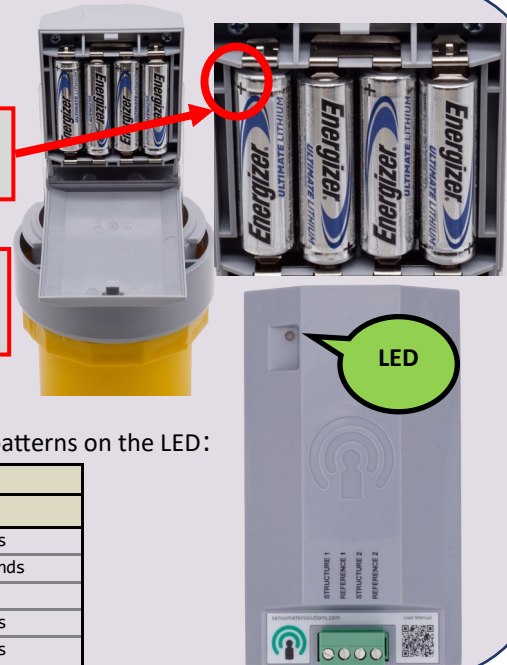


Commissioning Process

- Install the included Energizer L91 Ultimate Lithium AA batteries as shown

WARNING! Only Energizer L91 Ultimate Lithium batteries are approved for use.
WARNING! Note the battery polarity when installing

IMPORTANT! Once the batteries are installed, various LED flash patterns will be shown on the bi-color LED. These patterns will indicate the current step of the commissioning process and will repeat after an approximate 1 second pause.



- The table below indicates the typical commissioning sequence and flash patterns on the LED:

Table 2: Green LED Flash Patterns		
LED Flash(es)	Action	Duration
1	Time and Date Being Acquired	10 seconds
2	Signal Strength Being Measured	5-10 seconds
3	Pipe-to-Soil Measured	5 seconds
4	Cloud Measurement Transmission	15 seconds
On Solid	Commissioning Successful	10 seconds

Diagnostics & Troubleshooting

- The table below indicates various scenarios where the commissioning process cannot be completed:

Table 3: Red LED Flash Patterns		
LED Flash(es)	Issue	Recommended Action
1	Insufficient battery Voltage, commissioning cannot begin	Check battery polarity, use ONLY Energizer L91 Ultimate Lithium batteries
2	Temperature Out of Range	Remove batteries and try at different time of day
3	Insufficient battery voltage, commissioning cannot complete	Replace batteries, use ONLY Energizer L91 Ultimate Lithium batteries
4 or 7	Hardware Fault	Remove batteries, return to manufacturer
5	Cannot Connect to Cellular Network	Re-position Sensometer, then re-install batteries
6	Cannot Complete Transmission to Cloud	Remove batteries and try at different time of day