



How to test an Exterior Moda Sensor

You can test your moda sensor using a standard volt meter set to DC Voltage. If you do not have a meter or the ability to get one locally, we sell simple ones on our web site.

Please note that the wiring colors vary from panel to panel so you will need to have the owner's manual for your panel to see which wires go down to the Red and Blue wires at each sensor. Also, the wiring that was used to hook up the panel to the sensor was determined by the installer and will therefore not be consistent between systems. If you do not have your manual, you can download most manuals off of our web site at www.tankedge.com under the Tech Support page.

If you have a Hunter system then read this paragraph, if not, skip to the next one: Hunters wiring colors are completely different as they wanted their own wire colors when these systems were manufactured. The wires on the sensor correspond to our current Moda sensors wires as follows: The Orange wire for Hunter moda sensor is the same as the Red wire on a standard system and the Pink wire on a Hunter sensor is the same as a Blue wire on a standard system. The Black wire on each sensor is ground. Wiring at the panel is different as well. If you cannot seem to figure out what wiring goes where, give our tech support a call and we work on helping you out.

For systems that only come on while the button is pressed, you will need an extra person to press buttons for you while you are testing at the tank.

Section 1: First check the voltage going down to the sensor:

- 1) First you will want to check to make sure that the voltage is leaving the panel and getting down to the sensor. To do this, you will need to measure between the red and black wires at the sensor while the voltage signal is being sent down to it.
 - a. If you have the **iSeries** panel, you can put your panel in the calibration mode and select the tank you are testing. This will send a continuous signal.
 - b. If you have the **Ultra 8** panel, you can also put the panel in the calibration mode at the tank you are testing. This will send a pulsing signal that corresponds to the beeping of your panel if beeping is heard while in calibration mode so you will have to watch/listen carefully to get the reading at each pulse. As the tanks are labeled as channels on this system, you may not know which channel is for which tank. To figure out which tank is which channel; When you turn your panel on, the first tank that shows up is channel 1, when you push the UP arrow, the next tank is channel 2, press the UP arrow again and you will get channel 3, etc.
 - c. If you have a panel that has **push buttons for each tank**, someone will have to be pushing the button for that tank to send the signal down.
 - d. If you have a **panel that does not work**, you can apply battery voltage to the sensor by putting the black wire on the negative and the red wire on the positive. You will need about 10 to 15 volts. Sending too much voltage could possibly damage your sensor.
- 2) If you cannot get to your tank, you will not be able to check if the wiring is OK but you can still check if the signal is leaving the panel OK. You will have to check the manual for your panel to see the wiring diagram coming out of your pigtail harness. You will need to see which wire goes down to the red wire on the

sensor at the tank you are trying to check. You will have to remove your panel from the wall while leaving it connected in the wiring harness. You can check the reading between the wire going down to the red wire at the sensor and the ground wire.

- 3) You should get a voltage reading between the red and black wires somewhere around 10 volts for the iSeries & Ultra 8 panels and whatever the voltage of your power source for the other systems (possibly around 12 volts). If you are checking at the sensor on the tank and do not get this reading, verify that you have voltage going down to the sensor. If you are correctly sending voltage out of the panel (correct tank selected, etc) then you have a wiring issue between the panel and the sensor. Check all wiring connections to make sure they are good.
- 4) If you don't have the appropriate voltage coming out of your panel, then there is something wrong with your panel or the power getting to the panel. Depending on which panel it is, you can send it in for testing. We do not charge for testing on any panel or sensors that we currently service. You will only need to pay for return shipping. Give us a call to let us know you are sending the panel in for testing so we can let you know if it is a system we currently service. If your panel is bad, we can discuss repairing the panel or replacement products available to fit your needs.

Section 2: Then Check the voltage going through the sensor

- 1) Once you have verified that you are getting voltage to the sensor, you will need to check the voltage coming out of the sensor across the blue to black wires at the sensor. This also needs to be done while the voltage is being sent down to the sensor just as above. This reading will vary depending on the liquid level in the tank. It should not be over 5 volts but could be very small, even a fraction of a volt with low levels. If your tank is completely empty, you may get no reading at all. Because of this, it's best if you have some fluid in your tank. The more the better/easier it is to read. You can put your hand across the two aluminum strips and you should see that voltage reading jump up. If you are getting no signal out of the blue wire even after you have put your hand across the 2 aluminum strips, then your sensor is probably bad. Make sure that the solder connections between the white wires and the copper pads are good and double check that signal is getting down to the sensor. If these are good, then the sensor is probably bad.
- 2) If you are getting any signal out of the blue wire and it varies when you put your hand over the aluminum strips, then the sensor is probably good.

Section 3: Then Check the voltage going from the sensor back to the panel

- 1) To verify if the wiring is good coming back from the sensor after you have tested it at the sensor, you can do this check using the method described in #2 in the first section but for the blue wire instead of the red one. You should get approximately the same voltage you detected in Section 2 of the testing. If not, then the wiring going back to the panel probably has problems. Check all the connections.

If you noticed that there is a bad solder connection between the white wires and the copper pads, you can purchase a repair kit on our web site which comes with 2 copper pads with white wires soldered to them and 2 butt connectors. You can then just cut your current sensor off at the white wires and splice them into the new copper pad connections. You then can clean a spot on the aluminum strips to put the new pads in a different location than the old ones, leaving the old ones there while making sure that no wire is still coming out of them.

We also sell repair kits with 4½ ft. of aluminum tape as well, if your tape seems to be in bad shape. Check for tears or cracks the full height of your tanks on both strips.

This should cover most options of checking the sensors. If you have a question when you are testing or these procedures did not answer your questions, you are welcome to call our tech support department at the below number.

Tech-Edge Manufacturing LLC
www.TankEdge.com · 541-610-0401
4296 Osage St. · Sweet Home · OR · 97386