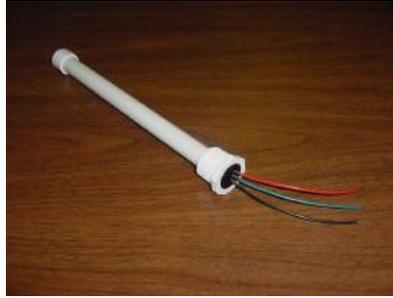


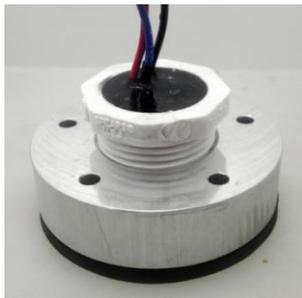
# PVC Rod Sensors



This sensor is designed for use in metal tanks, wood-cored fiberglass tanks, or any plastic tank whose walls are unsuitable or inaccessible for installation of our external MODA foil-based sensors.

Have you ever had a float sensor foul or fail in a waste tank? Our PVC rod-style sensors solve this problem as it is a completely solid-state design with no moving parts to foul. PVC rod sensors use the same sensing technology as the exterior MODA sensors. That technology is just put down into the rod which is put into the tank.

This sensor installs through a 1" NPT threaded hole in the top of the tank you want to monitor.



If your tank already had a float sensor installed in may be that there is already a suitable hold through which to install this sensor. If this hole has 5 smaller holes surrounding a larger central hole, it is likely that this is the standard SAE-5 lug sensor pattern for which we have an adapter plate which will greatly simplify your installation. You can purchase this adapter plate for \$35 using part number "PVC1-5HOLE". If you are using this adapter, you will need to add 1¼" to your rod length.



If you do not already have a hole in your tank and need to drill one, you can purchase a pipe flange adapter (511-605HC) for \$12. You will need to add approximately 1" to the pipe length if you are using this adapter. You can also purchase this at most hardware stores. You can glue (silicone) down this adapter then screw it into the top of your tank.



About ¾" of clearance above the female threads (measured from the top of the PVC sensor threads) is required to install this sensor (please also account for any adapter you will be using). The below adapter can be purchased at any plumbing store.

The length of these sensors are specified at time of order. To get the length of the rod needed, measure from the top of the outside to the bottom of the inside of the tank minus about ½" as you do not want the rod touching the bottom of the tank. Include any adapters you may need. The pictures above show about how far the pipe will screw into the tank.

## **Required additional tools & materials:**

In addition to the sensor and the contents of the monitoring panel kit, you will need to provide the following tools and materials to install these sensors on your tanks.

- 1) Tools appropriate to cut and tap the 1" NPT threaded hole into the top of your tank. Or the above adapter (511-605HC) with stainless steel screws.
- 2) If your tank already has a SAE-5 lug pattern then we recommend the use of our PVC1-5HOLE adapter plate.
- 3) A Wrench large enough to screw the sensor into the mounting hole
- 4) Wire cutter, stripper and terminal crimper for 18 Awg wire (inexpensive combination tools are usually available at most auto parts or hardware stores)
- 5) Crimpable insulated butt connectors for 18 Awg wire (you will need 3 for each sensor you are intending to install)

You will need additional tools and materials to install the monitoring panel for your system. Refer to the owners manual for your panel for a list of these items.

## **Panel Installation:**

The first step in installing the monitoring system is to install the monitoring panel and pull the wires from the panel location to each monitored tank. Refer to the owners manual you received with your monitoring panel for installation instructions. This sensor requires wires for power, sensor return and local ground.

## **Mounting the Sensor:**

To mount the sensor through the PVC1-5HOLE adapter plate, first remove the old sensor. The screw holes in both the adapter and gasket will only fit onto the tank one way. If all 5 holes do not line up with the holes in the tank, rotate the adapter and gasket until they do. Once all the holes are properly aligned, secure the adapter plate in place with the 5 screws supplied.

If you are using the 511-605HC adapter above, make sure to talk to your plumbing specialist regarding what adhesive you should use to securely adhere it to the material your tank is made of. You will also need stainless steel screws to screw it into your tank.

Next insert the sensor rod through the large threaded opening in the adapter plate and screw securely in place (If using the PVC1-5HOLE). If using the plumbing adapter or a tapped, threaded hole, use Teflon tape or other appropriate sealing tape around the threads of the sensor rod.

## **Sensor Wiring:**

The wiring is the same as the MODA sensor. The red and blue wires run up to the panel and the black wire gets grounded. See your panel instructions to see which wire the red and blue wire need to connect with as it is different on each panel.