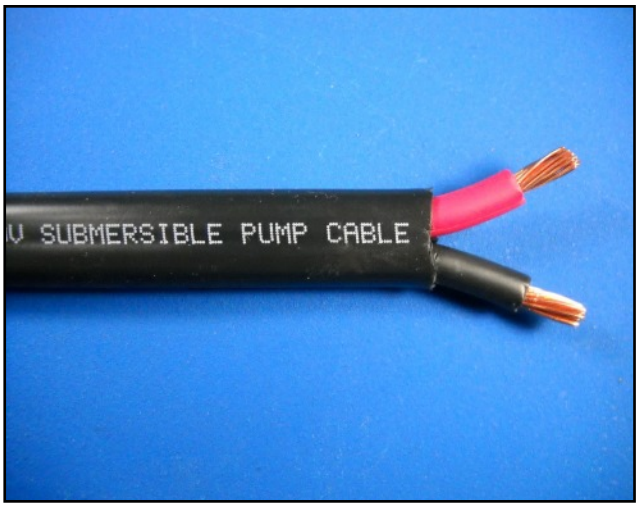
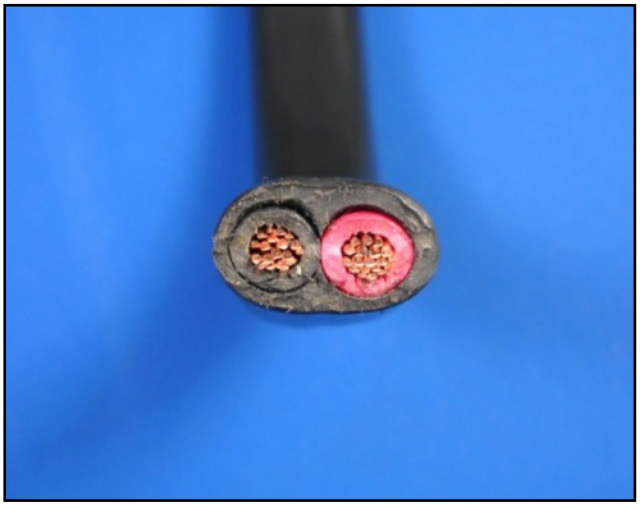
Shurflo 9300 Solar Water Pump Installation Instructions

One of the reasons the Shurflo 9300 Solar Water Pump is so popular with homesteaders, ranchers, and preppers is that it is easy to install. Since it weighs less than five pounds, it can be installed by one or two people with no special equipment or skills needed. A typical AC-powered submersible pump might require large diameter pipe or even rigid steel pipe, but with the Shurflo 9300, you only need inexpensive 1/2” black polyethylene pipe, the kind that comes on rolls. Following the correct installation procedure will prolong the life of your Shurflo 9300 installation. Improper installation procedure will void the warranty.

For the electric cable, use two conductor, solid core submersible pump cable. Don’t use Romex (AC house wire) It has a hollow core that lets water flow through it like a pipe, which allows water to get into the pump connections. This can cause corrosion and eventual failure of the cable connection. Also Romex uses a single strand wire instead of multi strand like submersible pump cable. Single strand wire can break under repeated flexing, causing loss of power to the pump.



Either oval or round cross section will work, but don’t use anything with grooved, irregular, or rough surfaces.

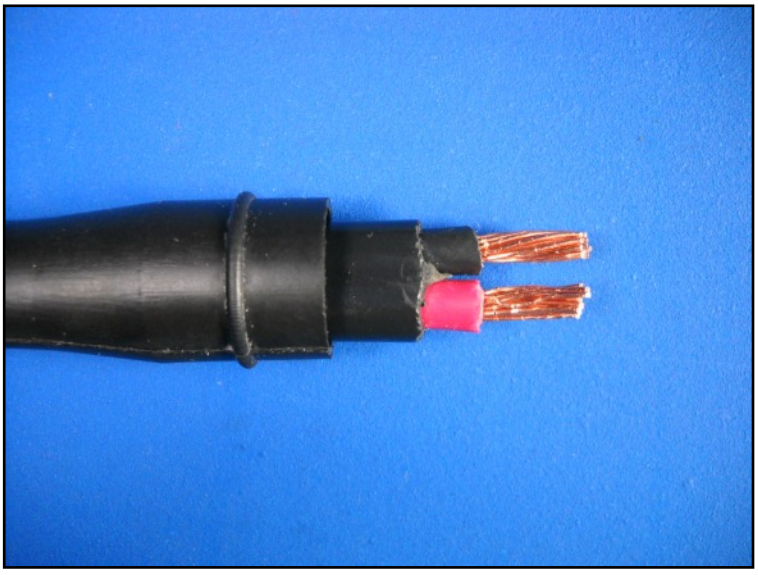


Strip the outer cable jacket back 2 inches. Cut an inch off one the wires.

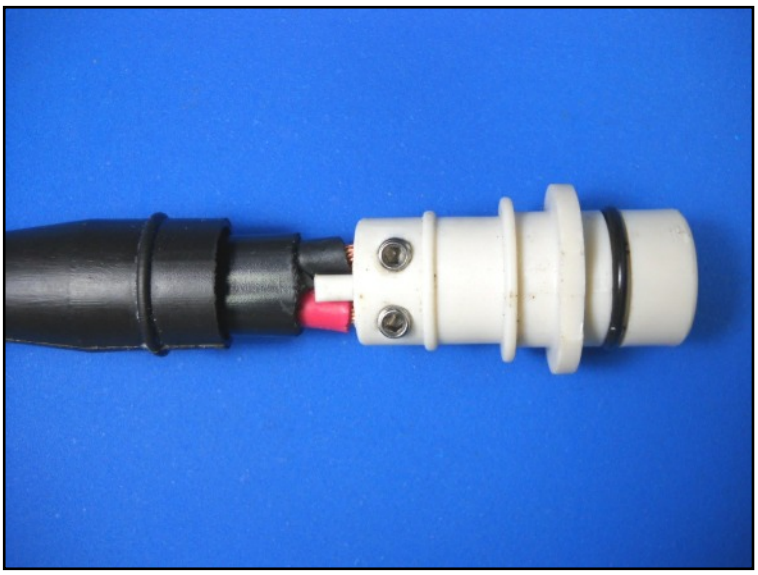
Wrap the end of the cable with 6 inches of black tape. This s to help the Inner Cable Boot and Outer Cable Boot slide over the cable.

Your Shurflo 9300 comes with rubber sleeves (Cable Boots) that will prevent water from getting into the electric connection area. Put a good coat of silicone grease (supplled with the pump) on the cable and slide the Cable Nut, Outer Cable Boot, and Inner Cable Boot over the taped area and onto the cable. The Cable Boots can stretch and break, so be careful.

Remove the tape, cut each wire about 3/4” long, and cut off 1/2” of insulation, leaving about 1/4” of insulation.



Slide the wires into the plug. Notice the divider between the wires. There shouldn't be any copper showing above the divider. To insert the wires, you may need to back out the small allen screws a little with a 5/64" allen wrench. You don't have to worry about polarity, the Shurflo 9300 will run fine either way. Then tighten the screws securely. Some people use silicone glue around the connection, but it's not necessary if you use the right cable and follow the preceding steps.



Slide the Inner Cable Boot until it snaps onto the first step on the plug.

Wipe off the grease from the cable and wrap a six inch piece of black tape around the end of the cable. This is to help the Outer Cable Boot slide over the Inner Cable Boot.

Lubricate the cable and taped area with silicone grease. Slide the Outer Cable Boot until it snaps onto the second step of the plug.

Apply grease to the Outer Cable Boot and tighten down the Cable Nut. Run the pump to make sure the connections are right. The Shurflo 9300 is a diaphragm pump, so you can dry run it without damage.

Here's what happens to the cable when you don't apply enough grease when tightening the Cable Nut. The cable twisted, the connection failed after three months, and the pump had to be pulled out of the well to repair the cable connection.

Install the supplied connector pipe to the pump. You will need a 3/8 to 1/2” adapter to connect to your output pipe.

Unroll enough pipe to equal the depth of the pump. Lay it out on the ground leading away from the well head. Then lay out the power cable, rope, water level sensors if you are using them.

For suspending the pump, use a polypropylene rope. Nylon stretches, which can cause stress on the electric cable. Secure the rope to the pump with a good knot.

Band rope, cables, and pipe together with zip ties or black tape or every five or six feet.
Before making your first band, put a little slack in the cables and pipe near the pump. That way the weight of the pump will be on the rope, not the cables or the pipe.

Then you are ready to lower your Shurflo 9300 Solar Water Pump into the well. Be careful not to abrade the water level sensor wires on the lip of the well head. Keep a firm grip on the rope/cable so you don’t lose the pump down the well. Tie the far end of the rope onto something if you need to. Keep the rope out of the sun or it will deteriorate.

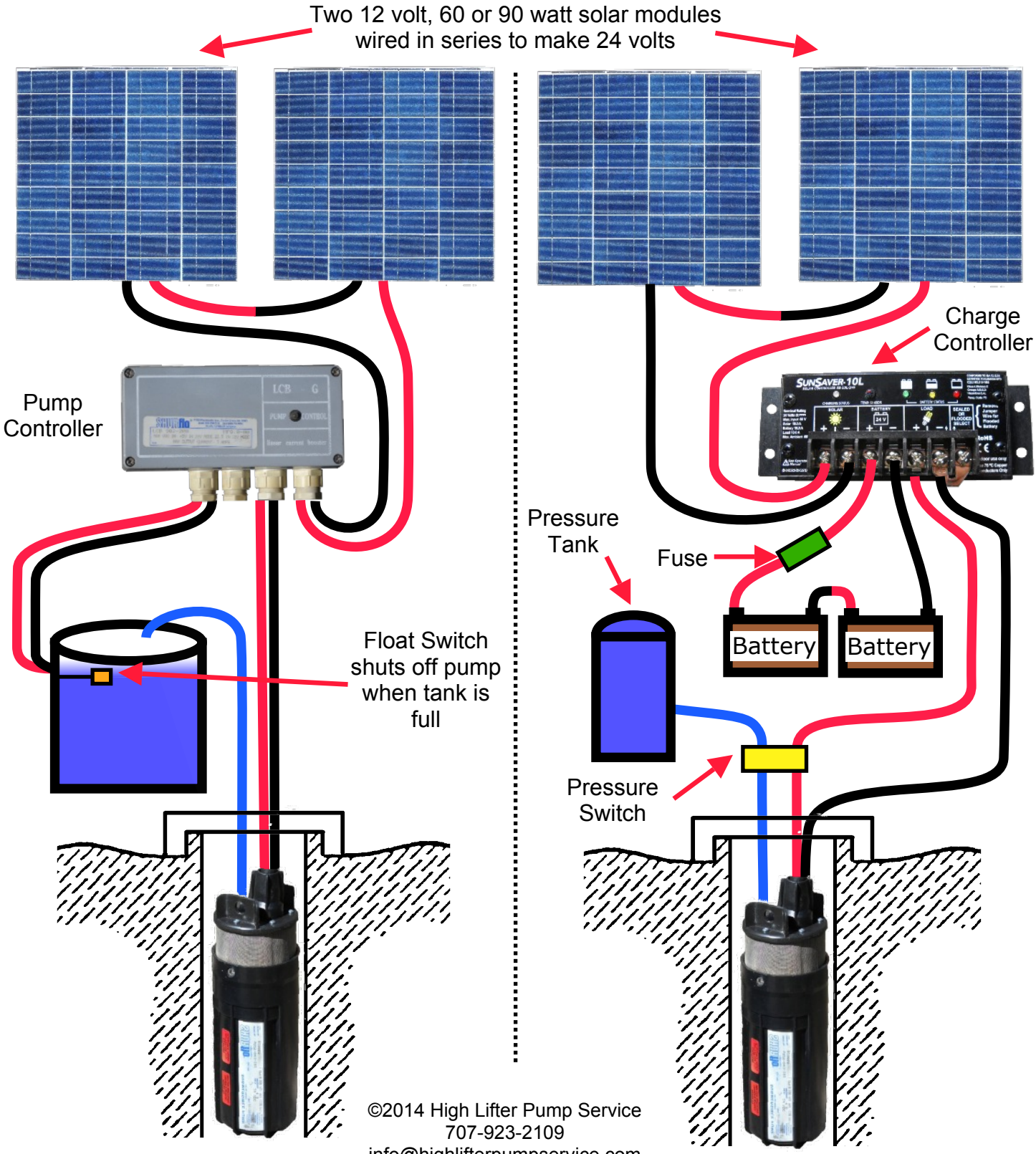
Shurflo 9300 Solar Water Pump Installation Diagram

“Open Tank” Set Up

Pump is set up to run without batteries. Pump runs when the sun shines and pumps into an open tank which gravity feeds to your home.

“Pressure Tank” Set Up

Pump is set up to run on batteries which are charged by solar modules. Pump runs when pressure drops in the pressure tank.



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