

# Sump Pump Switches Training Flyer

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In previous training flyers we have discussed the basics of [Sump Pumps](#) and [Back Up Sump Pumps](#). One thing they have in common is a switch. They need a way to be activated when the water is high enough and turned off when it is not. This flyer is intended to cover the different types of switches used and how they work. If you have not read the previous flyers yet you are encouraged to before reading this.

## Types of Switches:

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There are three main types of sump pump switches to consider when purchasing a pump. Tethered, Vertical, and Electronic. A brief overview of each is provided below.

**Tethered Switches** float upwards at an angle as water enters the basin to activate the pump. The pump turns on when bulb is nearly straight up and turns off when hanging nearly straight down.

- **Pros:** Provides a longer run time, and a longer 'rest' time for the pump. This means the pump can cool off more completely between cycles. Also, the amount of cord between the attachment (pivot) point and the float can be adjusted. This is great if you have an unusually large sump pit. You can "fine-tune" your pump's on and off points
- **Cons:** This type of switch requires a larger sump pit so that it does not get stuck on the walls of the pit.



**Vertical Float Switches** float moves straight up on a rod as water enters to activate the pump. It activates a switch at the top to turn on the pump. When the float goes to the bottom it pulls the rod down to turn off the pump.

- **Pros:** Since the float only moves straight up-and-down, this switch can operate in a very narrow sump pit. Also, there is a bit of adjustability to the switch's "off" point.
- **Cons:** The narrow range of operation makes the pump run more often, and provides less "rest" time between cycles for the pump to cool off.



**Electronic Switches** usually use a combination of metal probes to "feel" the water. When water touches the 'on' probe and the common one, the switch activates. When water no longer touches the 'off' probe, it turns off. *We do not stock this type of switch but we do have some in inventory.*

- **Pros:** No moving parts means there is nothing that can get stuck. This means the pump is very unlikely to fail to start or stop because of obstructions in the basin.
- **Cons:** If your ground water contains a lot of lime, calcium, or other contaminants, it is possible for those to collect on the probes. This could mean the probes will not "feel" the water and turn on.

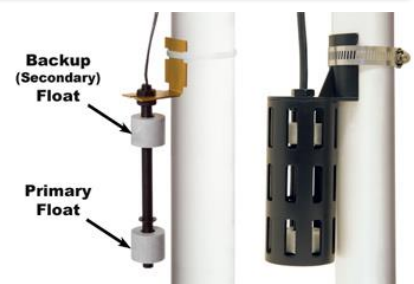


## Dual Float Switch:

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One type of switch we stock is called a dual float switch. This type of switch is similar to a vertical switch but it has two smaller floats, one placed higher than the other.

Having two floats and a protective cage lessens the chance of debris preventing the switch from working. This switch needs a controller in order for it to work. These are covered on the next page.



## Switch Controllers:

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A switch can be installed by itself or in conjunction with a controller. This is a separate box that monitors the pump and power conditions and sounds an alarm when problems are detected. For some controllers, if the power goes out an alarm is sounded. If there is an issue with the switch or the pump it will alert the home owner. Some controllers like the Glentronics Deluxe Controller also have terminals that can be connected to a wi-fi module.



There is also a Standard Controller offered that does not monitor the pump or switch. Below are some of the differences between the two controllers. Basically, you wouldn't use the standard controller unless the customer got a dual float switch and didn't want to the deluxe.

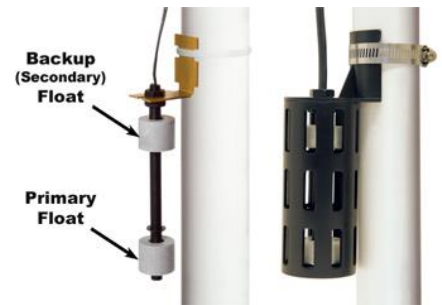
- The Standard Controller runs the pump for 10 seconds after the switch returns to original position. The Deluxe has an adjustable run time.
- The Standard does not monitor the pump, switch or electricity or have an alarm while the deluxe does.
- The Standard cannot be connected to wi-fi module and alert the home owner on their phone / the Deluxe can.
- The Deluxe Controller activates the pump weekly to exercise and extend pump life.

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Having two floats and a protective cage lessens the chance of debris preventing the switch from working. This switch is only sold with a controller.



## What do we stock?

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The main switches we stock are listed below:

### Vertical Switches:

- We stock a vertical switch which can be entered VS. This number is a basic vertical switch with no separate controller.
- We stock a vertical switch with the PHCC Deluxe Controller which can be found with VSC2.

### Tethered Switches:

- The tethered type switch we sell the most of can be entered MFS.

### Electronic Switches:

- Although we quit stocking these we still have some available if a customer chooses them. You can find these under USC3.

### Dual Float Switches:

- The PHCC Dual float switch is in Mincron paired with a standard Controller or a Deluxe Controller.
- The Dual float with Standard Controller is DFC1.
- The Dual float with the Deluxe Controller is DFC2.