

# Float Switches

## Pump Up vs. Pump Down

A Pump Up application means: the storage tank is pumped up to full.

A Pump Down application means: the storage tank is drawn down to empty (the pump draws from the tank).

It follows that a Pump Up float lets the pump run until it fills the storage tank. Likewise, a Pump Down float lets the pump draw the tank down to (near) empty. The trick is, this rule is true only for systems without LCBs (Linear Current Boosters). An LCB's float terminals use reverse logic, so the reverse float is needed. Slowpumps, Solar Forces, and Solarams in PV-direct applications use LCBs. SunCentrics in PV-direct applications do NOT use LCBs. Any Conergy pump in a battery-based system (like a Flowlight Booster Pump or Solar Force used to pressurize) does NOT use an LCB.

So, to shut the pump off when the storage tank is **full**:

- Use a Pump Up float when NOT using an LCB.
- Use a Pump Down float when using an LCB.

To shut the pump off when the storage tank is **empty**:

- Use a Pump Down float when NOT using an LCB.
- Use a Pump Up float when using an LCB.

Sometimes the terms 'Normally Open' and 'Normally Closed' are used to describe float switches.

- Normally Closed = Open on Rise = Pump Up
- Normally Open = Close on Rise = Pump Down

All our float switches are certified safe for drinking water applications, EXCEPT those rated for 25 amps (DSP-11007 and DSP-11009). The 25A units contain mercury and risk contaminating the system if they break.

The current (amps) rating of a float comes into play only when the power to the pump passes through the float (non-LCB systems). With an LCB, the float is wired to the controller's float terminals, so the power to the pump does not pass through the float; only a very small signal current from the float terminals passes through the float.

Windy says that the current ratings we give to the float switches we sell are based on 24VDC nominal operation. The current ratings should be halved when used with 48V systems. This ratio is not precise, but it has shown itself to hold true.