

## ABYSS CONTROLLER (WITH DRY SHUT OFF SENSOR PROBES)

### Installation of Controller:

1. If installing on a post, you may use the included bracket and screws
2. Connect the PV Cell panel cable, make sure the solar panels are covered against sunshine; correct connection will be indicated by the GREEN LED.
3. Attach the HI/LOW/GROUND sensors at the desired depth to the safety wire and the discharge tube.
4. Connect the Abyss pump cable. Tighten carefully!!
5. Test the function by switching the manual switch (inside the controller, upper right corner) to the "ON" position for a few seconds.
6. Connect all 3 sensor wires to the correct cable connector in the controller. HIGH sensor to HIGH Cable connector etc.

**To help make the controller less acceptable to heavy rain or water, please use window sealant around the cable connector openings on the bottom of the Abyss controller. After it seals you can always peel off the window sealant with no problem if you need to get into that area of the controller.**

### Installation of the Abyss pump!

- A. HIGH water level sensor turns the pump on. (mount the brass probe below the static water level at the desired turn on point.)
- B. LOW water level sensor turns the pump off. (mount the brass probe 1 foot above the ground sensor.)
- C. GROUND or common water level sensor probe must be under water at all times. Mount the brass probe 1 foot above the pump.

The distance between the HIGH & GROUND water level sensor should not exceed 2 feet. This depends on water conductivity.

### EXAMPLE OF ABYSS PUMP WITH ABYSS CONTROLLER (WITH DRY SHUT OFF SENSOR PROBES) HOOKED UP DIRECT WITH 12.5 VOLT BATTERY



NOTE: COLOR WIRES ARE NOT SPECIFIED, YOU DECIDE WHICH COLORED WIRE CAN BE DESIGNATED FOR HIGH, LOW OR GROUND WATER SENSOR  
3 rolls of 300 feet of spooled wire.

### Installation of the optional Remote Float Switch:

A remote float switch (remote ON/OFF circuit) is used to turn the Abyss on and off from a remote location, say a 55 gallon drum or a large storage tank. Simply purchase a float switch. This float switch will in essence if used correctly will "short" the two terminals to turn the pump off. The resistant on the wire should NOT exceed 250 ohms

### Function of the LED light on the Controller:

Green Light: The green LED is inside the controller. If the wiring from the panel is correct, then the green LED light will be on

Red Light: The red LED is on the front side of the controller. If the red light is on then:

- a) The float switch is on a high position and the reservoir is full.
- b) If the water table inside the well is lowered to the level of the LOW sensor and the dry running protection of the pump is in function.

SWITCH NUMBER	SET UP	1 DIP SWITCH	2 DIP SWITCH	3 DIP SWITCH	4 DIP SWITCH
25 VOLT SOLAR DIRECT	Two modules in series "direct"	ON	OFF	OFF	OFF
25 VOLT BATTERY BASED	Two batteries in series	OFF	ON	OFF	OFF
12.5 VOLT SOLAR DIRECT	One module "direct"	OFF	OFF	ON	OFF
12.5 VOLT BATTERY BASED	One Battery	OFF	OFF	OFF	ON

Installation on how to hook up the Abyss controller and pump to a photovoltaic cell(PV CELL)

- A. PV CELL-(IN) NEGATIVE WIRE FROM THE PV CELL
- B. PV CELL+(IN) POSITIVE WIRE FROM THE PV CELL
- C. PUMP-(OUT) NEGATIVE WIRE FROM THE PUMP
- D. PUMP+(OUT) POSITIVE WIRE FROM THE PUMP
- E. ON/OFF SWITCH manual switch TURNS THE PUMP ON AND OFF
- F. 12V/24V SWITCH SELECT SYSTEM VOLTAGE
- G. MOUNT AND GROUND CONTROLLER PROPERLY

**(PRESET ADJUSTMENT: 12 VOLTS)**

**IF THE CONTROLLER IS USED IN CONJUNCTION WITH BATTERIES AND CHARGE REGULATORS, THEN THERE MUST BE A 10AMP FUSE ON THE CABLE TO THE BATTERY.**

IMPORTANT WATCH FOR CORRECT ELECTRIC CONNECTION (POSITIVE (+) AND NEGATIVE (-) CABLE CONNECTION)

**DO NOT EXPOSE CONTROLLER INTO DIRECT SUNLIGHT OR HEAVY RAIN!!**