Smart ATO
User Manual

The sensor is a mini optical infrared sensor for extremely precise regulation. It checks/fills frequently, the water level Max to Min is no more than 5mm, meaning a lesser amount of water fluctuation; where is suitable for small tanks. It has a magnetic suction cup, so it can be easily and safely mounted within the fish tank. Safety for using in Marine or Fresh water, built in Alarm

① Power DC Jack
② Pump DC Jack
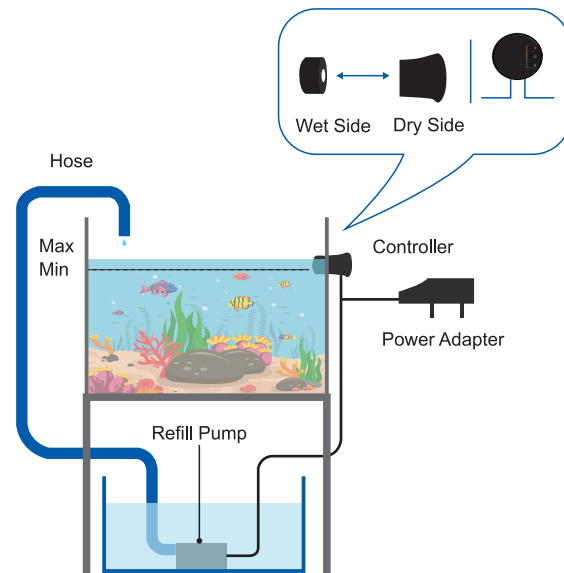③ Power (Green Led)
④ Alarm(Blue Led)
⑤ Pump(Red Led)

Installation

1)Mount the ATO on the tank/sump.
2)Connect the DC Pump wire into the ATO and install the water tubing
3)Connect the power adapter into the ATO
4)Adjust the position of the ATO.
5)Fix the tube holder on the tank/sump.
6)Connect the tube with water pump and install it in the tank/sump.

Note:

1 Set the tube higher than the water level in case of siphon.
2 Don't set the ATO too close to the light/bulb.
3 The logo should be put right

Max fish tank thickness:13mm

Wet Side Dry Side

Hose

Controller

Max
Min

Power Adapter

Refill Pump

LED Indicator

LED Color	Status	Meaning	Action
·Green LED (POWER)	Light on	Power on	
	Flashing slowly	Refilling/ Pumping	
·Blue LED (ALARM)	Flashing slowly with audible alert	Misalignment	Adjust the alignment of SC,and system will automatically go back to normal after refilling
		Algae	Clean the algae,and system will automatically go back to normal after refilling
·Red LED (PUMP)	Flashing slowly with audible alert	Water empty	Add water to the tank/ sump,and then reset
		Bubble noise	Reduce the bubble of the tank/sump,and then reset
	Flashing quickly with audible alert	Bad connection (pump)	Reconnect the pump wire by hand,and then reset
		Pump malfunction	Replace the pump to a usable one,and then reset

Auto Feedback Security (AFS) Technology

AFS Technology is safety function to secure the system dynamically and real-time protection against any failure situation.

Blue LED(Non-filling alert): SC will alert when it sensed the next non-filling period is 2 times greater than the last period. For example, if the non-filling period was 13 hours, and SC will alert when the next non-filling period is over 26 hours.

Non-filling period	5h	12h	13h	15h	20h
Next non-filling alert (Minimum 24 hours)	>24h	>24h	>26h	>30h	>40h

Noted:SC will alert if non-refilling period is over 48 hours after installation and first refilling.

Red LED(Over-filling alert): SC will alert when it sensed the next refilling time is 3 times greater than the last one. For example, if the SC refills for 10 seconds, and SC will alert when the next refilling time is over 30 seconds.

Refilling time	4s	5s	10s	15s	25s
Next refilling alert (Minimun 15 seconds)	>15s	>15s	>30s	>45s	>75s

Note: There is no minimum time control for the first refilling.

Notice

1).Please read the specification in detail before installation

2). Keep the power adapter dry and away from water to avoid any safety issues.

3). Please clean the sensor every 6 months to prevent non-fill issue.

4).Avoid installing controller in an area with micro bubbles or direct lighting.

5). The "Water Tube Output" must be higher than the "Normal Level" in the Tank/Sump and"High Level" in the reservoir to avoid a siphon issue.

Reservoif   Tank/Sump