



Smart AWC touch

Manual



Model

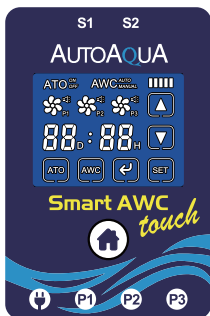
SAWC-200P

List of Parts (Can Be Purchased Separately)

Item	Pictures	Description
Smart AWC touch Controller X 1		<ol style="list-style-type: none">1. Controller with touch panel & Optical Level Sensor with wet side magnet X 2S1: Black sensorS2: Blue sensor2. Dry side magnet X 23. Max mounting thickness : 1/2 inch (12.7 mm)
Power Adapter X 1		Universal Power Supply : 100 - 240 VAC
DC Pump X 3		<ol style="list-style-type: none">1. Refill pump for ATO2. Drain pump for AWC3. Refill pump for AWC
Universal Tube Holder X 3		<ol style="list-style-type: none">1. Mount for the water tube2. For use on rimmed or rimless tanks3. Max mounting thickness : 1/2 inch (12.7 mm)
Siphon Break X 3		A connector to break the siphon
Tubing 19.6 ft (600 cm) X 1		Used with DC pumps

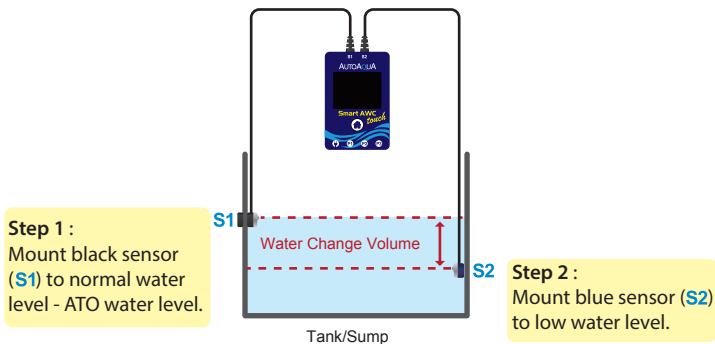
Installation

Smart AWC touch Controller

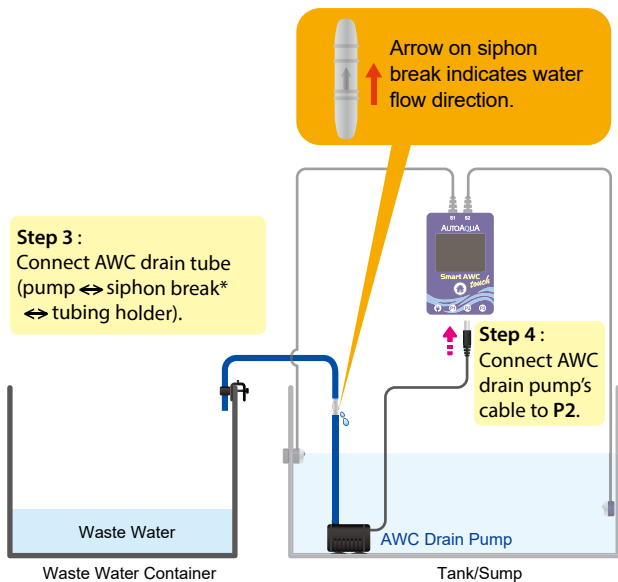


- S1** : ATO/AWC Sensor (Refill)
- S2** : AWC Sensor (Drain)
- : Power DC Jack
- P1** : ATO Refill Pump DC Jack
- P2** : AWC Drain Pump DC Jack
- P3** : AWC Refill Pump DC Jack

1. AWC (Automatic Water Change)



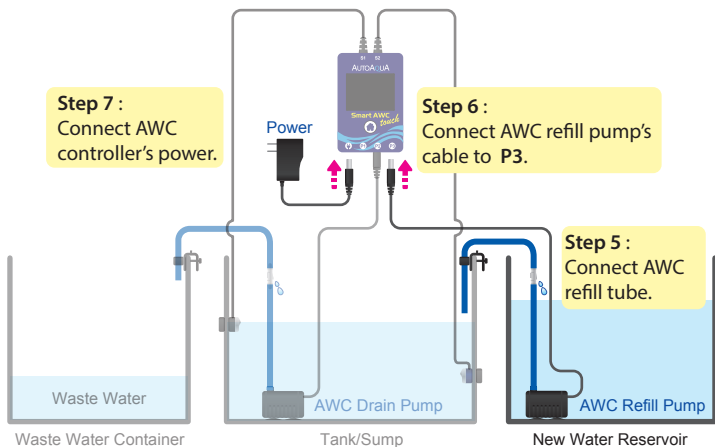
Change for Simple



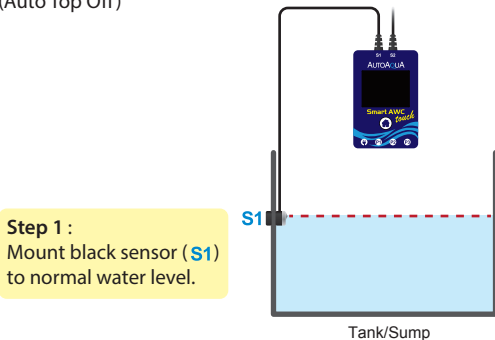
*Note : Place siphon break inside the tank/sump but above the water level.

Air In : Siphon break allows air in to break the siphon when the pump turns off.

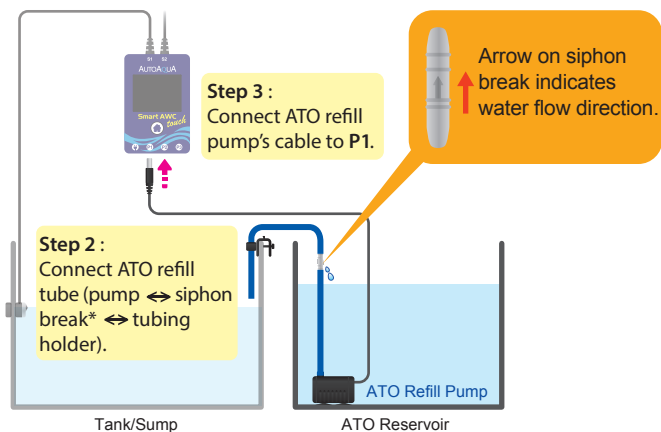
Water Out : Water drops out of the hole are normal when the pump is on.



2. ATO (Auto Top Off)



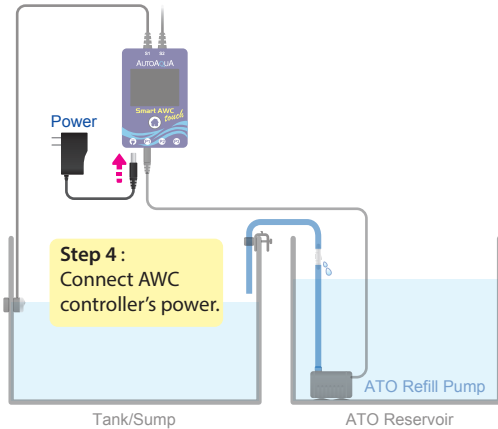
Change for Simple



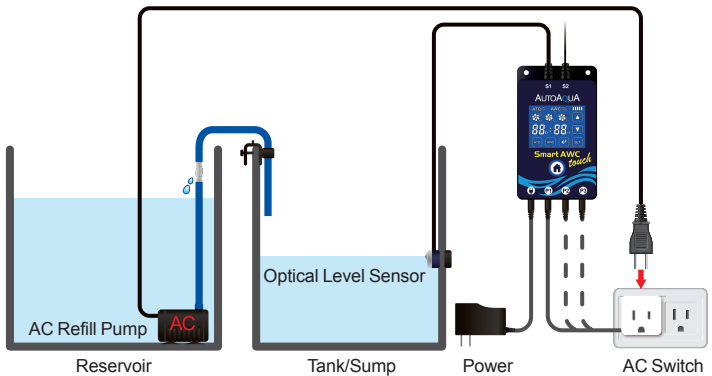
***Note :** Siphon break must be higher than the water level in the reservoir.

Air In : Siphon break allows air in to break the siphon when the pump turns off.

Water Out : Water drops out of the hole are normal when the pump is on.



* The DC pumps can be replaced with larger AC pumps with AUTOAQUA Smart AC Switch.



Calculating the Water Change Volume

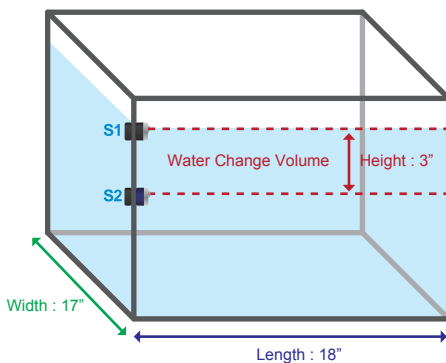
The volume can be calculated by multiplying the width and length of your tank and the distance between the pyramids of the two sensors. *

For example, a tank is 18 inches in length and 17 inches in width. If the distance between the two sensors is 3 inches, the water change volume is approximately 4 gallons.

$18'' (L) \times 17'' (W) \times 3'' (H) = 918$ cubic inches (around 4 gallons)**

*The water volume might be influenced by factors such as the speed of return pump. Slower refilling speed could reduce the variation. Please refer to the 3rd part of Programming section.

**231 cubic inch = 1 US gallon



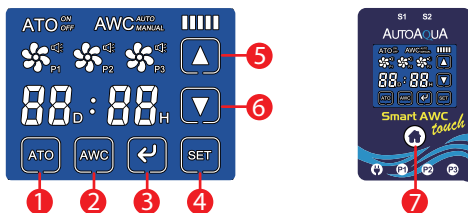
Auto Water Change Process

1. Old water in the tank/sump is pumped out until the water level reaches **S2**.
2. There is a 3-minute pause before refilling new water.*
3. New water is refilled into the tank/sump until the water level reaches **S1**.

*Users can skip the pause by touching .



Icons & Buttons for Setting

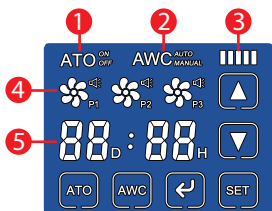


No. Icon/Button Function

1		Turn ATO on or off
2		Choose AWC mode : MANUAL / AUTO or turn AWC off
3		<ol style="list-style-type: none"> 1. Start the AWC process 2. Pause / resume the AWC process 3. Dismiss alarm
4		Choose the setting item in the AWC MANUAL / AUTO mode
5		Increase time / speed
6		Decrease time / speed
7		<ol style="list-style-type: none"> 1. Wake up the LCD display 2. Dismiss alarm 3. Return to AWC setting page* 4. Resume the process 5. Reset (hold at least for 8 seconds)

*During water change process, pressing button will stop the process and return to the previous AWC MANUAL/AUTO setting status. Also, ATO will be forced to be turned off if its previous status is on and at the same time the controller will give a five-second audible and visual alert (ATO flashing **OFF**).

Display Indication



1 Status of ATO

ATO^{ON} : ATO is on.

ATO^{OFF} : ATO is off.

2 Status of AWC

AWC : AWC is off.

AWC^{MANUAL} : AWC is in MANUAL mode.

AWC^{AUTO} : AWC is in AUTO mode.

3 Speed (For AWC Refill Pump) *

||||| : Speed 5

|||| : Speed 4

||| : Speed 3

|| : Speed 2

| : Speed 1

*For further details, please refer to the 3rd part of Programming section.

4 Status of Pump

P1 : ATO refill pump is connected.

P2 : AWC drain pump is connected.

P3 : AWC refill pump is connected.

flower icon showing : The pump is off.

rotating flower icon : The pump is on.

flashing flower icon : The pump is paused.

flashing speaker icon : QST alarm*

*For further details please refer to page 11.

5 Status of Timer (For AWC AUTO Mode)















88:88 Timer's colon flashing : The timer is running.

88:88 Timer's numbers, D and H flashing : The timer is paused.

88:88 Timer's D flashing : DAY is being set.

88:88 Timer's H flashing : HOUR is being set.

Alarm and Reminder

Status	Meaning	Action
 flashes with an audible alert.	No or bad connection (pump)	Connect the pump cable.
	Pump malfunctions.	Replace pump.
 flashes with an audible alert.	Quick Security Technology (QST) alarm	<p>Verifying the Root Cause</p> <ol style="list-style-type: none"> 1. Empty Reservoir: Refill the reservoirs. 2. Bubble noise : Keep the sensors away from the outlet of tubing or bubbles. 3. Algae : Clean up the algae from the sensor. <p>Dismissing the Alarm</p> <ol style="list-style-type: none"> 1. Touch  or . 2. Reset.
 flashes with an audible alert.	The pump is paused for over 10 minutes.	Touch  or  to resume the process.
 . The timer flashes with an audible alert	The timer has been paused for over 10 minutes.	Touch  or  to resume the process.
 flashes with an audible alert.	The interval of water change is shorter than the duration of water change process.	<p>Dismissing the Alarm</p> <p>Touch  or .</p> <p>Suggested Actions</p> <ol style="list-style-type: none"> 1. Extend the water change interval. 2. Reduce the water volume to be changed. 3. Increase the refilling speed if the refilling speed is set to be slow.
 flashes with an audible alert.	When AWC is delayed 48 times or more than 48 times.	

Quick Security Technology (QST)

Smart AWC touch uses QST for real-time protection against any failure situation.* QST can detect the malfunction of the sensor the controller, and the empty reservoir to avoid the pump running dry. The controller will give an audible and visual alert when any one of the following situations occurs.

For ATO: Any refilling time is 3 times longer than the first refilling time.

For example, if the first refilling time is 10 sec, the controller will give an alert when any refilling time is over 30 sec.


For AWC: Any draining time or refilling time is 3 times longer than the first one.

For example, if the first draining or refilling time is 20 sec, the controller will give an alert when any draining or refilling time is over 60 sec.

*1. No security time control for the first refilling and draining.

2. The minimum security time for ATO refilling is 10 sec, while the minimum security time for AWC draining or refilling is 20 sec.

How to Reset?

Reset : Holding  for at least 8 sec is the only way to clear the QST memory (the first draining time and the first refilling time).

After reset, please unplug and replug the power cable.



Power Outage Security Measures



1. ATO will be turned off automatically (ATO flashing **OFF**) after restoration of power as if its previous status is on. It will be turned back on after 15 minutes automatically. Users could also turn it back on manually.
2. When the power outage occurs during the draining or refilling process, the process will be delayed for 15 minutes after restoration of power and then resume.
3. When the power outage occurs during the countdown to water change (the timer will pause during power outage*), the timer will retain the record and resume after power outage.

* Since the timer is not running during a power outage, the next water change process will be delayed. For example, if a water change process is set to be started at 3 p.m., however, a power outage occurs during the countdown and lasts for one hour, the next water change process will be started at 4 p.m.


Programming

1. AWC MANUAL Mode (One-time AWC)

In this mode, users have to manually start the AWC process.

- 1) Touch  to choose AWC MANUAL mode.
- 2) Touch  to set the refilling speed if needed.

* Please refer to Refilling Speed Setting.

- 3) Touch  to start water change process.*

*When water change is done, **AWC** flashes for 3 minutes with 5 beeps at last.



Change for Simple

2. AWC AUTO Mode (Periodic AWC)




Water change in AUTO mode will perform in two different ways when ATO is off and on.


When ATO is off, it performs periodic AWC. Users set the timer to decide the water change interval. * The minimum water change interval is one hour while the maximum one is 99 days and 23 hours. **Water change process will be started after the completion of each countdown.**

When ATO is on, AWC does not perform in fixed intervals. Users set up timer to decide how many times AWC is expected to perform in a period. For example, if users would like to do water change 24 times per day, the timer is set for one hour. **Water change process will be started after the next ATO event.** Also, water change process will be done as many times in a row as it is delayed. For example, if you have set AWC every 1 hour and the ATO tops up every 3 hours, then after 3 hours the ATO will top up and directly afterwards the AWC will perform 3 AWC cycles.

- 1) Touch  to choose AWC AUTO mode.
- 2) Touch  to set the refilling speed if needed.







**Please refer to Refilling Speed Setting.*

- 3) Touch  again to enter DAY SETTING of timer.
- 4) Touch  again to enter HOUR SETTING of timer.
- 5) Touch  to start water change cycles.*

- *1. It is recommended to do water change in MANUAL mode to estimate the duration of water change process before doing water change in AUTO mode.
2. The water change interval must be longer than the duration of water change process. If the duration of water change process is longer than the water change interval, it will trigger 0000 or 1111 alarm, and the next countdown will not be started. It is recommended for users to extend the interval or shorten the duration of water change process.
3. When water change is done,  flashes for 3 minutes.

3. AWC Refilling Speed Setting

The refilling speed will select different lengths of refilling time. The lower the speed, the longer the refilling process.

	Speed 5	no pause during the refilling process	
	Speed 4	refill 20 sec and pause 200 sec repeatedly	
	Speed 3	refill 10 sec and pause 200 sec repeatedly	
	Speed 2	refill 5 sec and pause 200 sec repeatedly	
	Speed 1	refill 2 sec and pause 200 sec repeatedly	

For example, one refilling process takes 25 sec. At Speed 3, the pump will refill 10 sec and pause 200 sec repeatedly until the completion of the refilling.



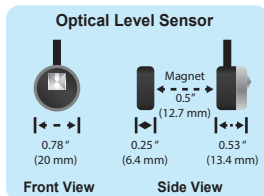
Benefits of AWC Refilling Speed Setting

Slower refilling of AWC water helps minimize temperature and chemistry changes so as to reduce stress on aquarium inhabitants. Also, it reduces the variation in water volume to be changed.



Specifications

1. Power Input : 100-240 VAC 50-60 Hz
2. DC Pump :
 - Head : 8.2 ft (250 cm)
 - Flow Rate : 74 gph (280 lph)
3. Max Mounting Thickness : 1/2 inch (12.7 mm)
4. Flexi Tubing : ID 6.5 mm / OD 9.0 mm



Notice

1. Please read the manual in detail before installation.
2. If using another ATO instead of the built-in ATO, please turn off your ATO before doing AWC.
3. Avoid setting up the sensors in an area with micro bubbles and direct light.
4. When power outage occurs during the process of top-off or water change, the process will continue within 15 minutes after restoration of power.

Limited Warranty

1. Limited warranty is provided by AUTOAQUA only if your AUTOAQUA Product ("Product") was purchased from an authorized distributor or an authorized reseller.
2. All warranty repairs or replacement are performed by the authorized distributor or authorized reseller in the region where the Product was first shipped by AUTOAQUA.
3. The limited warranty is valid for a period of 1 year under proper installation and normal use from the date of the original purchase listed on the proof of purchase or sales receipt.
4. In the event of a limited warranty claim, proof of purchase or sales receipt (issued to the original purchaser) is required.

Purchase Date

(Y/M/D)

Warranty Period

One year from the purchase date

Place of Purchase

(Store name, phone, email, address)

Service

AUTOAQUA Technologies Co., Ltd.
7F-7.,NO.229,Fuxing 2nd Rd.,Zhubei
City, Hsinchu County,Taiwan
E-mail : service@autoaqua.com.tw
www.autoaqua.com.tw

* Please go to AUTOAQUA website to
get the distributor information.

