

INSTRUCTIONS

**autopilot™**

Environmental Controllers

PH SAMPLING ASSEMBLY



**APCEPH1SK**

## Specifications

Pump Input voltage	(USA)120vac
Pump specs	300LPH – 80 GPH @ 1.5M – 6ft lift
Tubing specs	20 mm – ¾" Food Grade
Tubing inlet / outlet size	¾" / 20 mm

## Basic Description

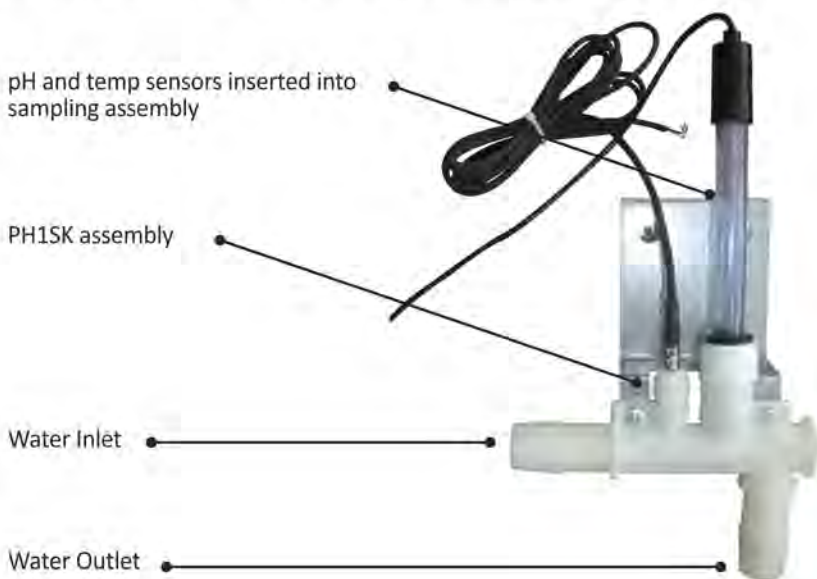
For best results, pH sensor should have a constant flow of water to ensure they are accurately measuring the pH of the water they are placed in. When using the APCEPH1SK or any other full-time pH monitor or controller, it is always best to also mix the water being tested using a mixing pump.

The SAM-1 sampling assembly provides a stable method to mount the pH sensor. It also uses a submersible pump to mix the water and to provide constant water flow across the sensors to accurately measure the water pH levels.

## Principal of operation

The APCEPH1SK consists of three components that work together with your pH sensor and temperature sensor. \*Sensors provided with your pH controller.

Sampling assembly: The sampling assembly holds the two sensors and provides water flow across the sensors to accurately measure the water temperature and pH level.



## Submersible Circulating Pump:

A circulating pump will constantly supply water to the sensor sampling assembly. The pump includes an inlet filter to ensure the sensors do not become fouled. The circulating pump will also provide good aeration of the water while operating



## 20 mm Tubing

1.25 meters / 5 ft of 20 mm / 3/4" tubing is provided to connect the circulating pump to the sampling assembly.



**Note: Two sensors are provided with the pH controller. A temperature sensor and a pH sensor. The pH sensor has a BNC style connector. The temperature sensor is connected to the controller with the interface cable. The PH1SK is designed to hold one temperature and one pH or TDS sensor.**

Sensor interface connects to controller

pH or TDS sensor

Temperature sensor



## Installation

### Sensor assembly

- 1) Insert the temperature and pH sensors into the sensor sampling assembly. The sampling assembly will have water pumped through it so that the sensors can constantly measure the water.
- 2) Secure the sensor sampling assembly in a position that allows the water circulating pump to be connected to one end of the sample assembly, and the other end of the sampling assembly will be positioned so the sampled water will be returned back to the storage tank or aquarium.

### Circulating pump

- 1) The circulating pump provides a constant flow of water to the sensors. The circulating pump should be connected to a constant power source.

**Note:** For aquarium use, a filter pump head can be used to provide constant water flow to the sensor assembly.

- 2) Connect the 20mm / ¾" tubing from your circulating pump to one of the inlets on the APCEPH1SK sampling assembly. (water can flow in either direction through the sampling assembly) The sampling assembly has been designed to mount on the side of the water tank/reservoir or a wall. The return side of the APCEPH1SK must be positioned so that the water will go back into the water tank/reservoir. A second piece of ¾" tubing can be used.

\*Note: The inlet filter on the submersible pump should be cleaned frequently to ensure the sensor probes do not become dirty.