

Monitoring pH and EC of the water being fed to the plants is critical. The **SPH-1** probe is used to monitor your water pH. The SPH-1 probe connects to the SWAT-1 module. The SWAT-1 is a special module that you will connect the Cromptiva pH probe and the combination EC/Temp probe. The SWAT-1 then sends both probes' data to the Cromptiva controllers. The main controller can then trigger high/low alerts (local and SMS) and provide a visual chart for ph, EC & water temperature.

\*The SWAT-1 occupies a single slot for sensors on the Cromptiva SEN-1, **Sentry** and **GUARD-1**, **Guardian** main controllers.

The controllers provides 24/7/365 monitoring for either a stock or fresh water tank, in-line (dosing system), or downstream monitoring of plant run-off. Besides displaying the sensors readings on the main controller, the SWAT-1 features it's own built-in digital display to make it easy to remotely check the sensor readings, and also to allow easy probe calibration right from the SWAT-1 module.

The SPH-1 probe comes with a standard BNC style connection. Connect the SPH-1 probe to your SWAT-1 module. To connect the SWAT-1 module, simply connect it to the RJ12 Sensor / Device port on your Cromptiva controller using the provided RJ12 cable and Y-splitters. You can replace multiple RJ12 Y-splitters with the UNIVERSAL multi-port RJ12 "powered" hub (RJ-HUB) to provide a centralized wiring "hub" to connect multiple device modules (AND sensors) to your Cromptiva main controller. The RJ-HUB and Cromptiva's UNIVERSAL expansion ports provide a cleaner and more effective cable connection system.

The SPH-1 probe is one of 3 parts that are needed to monitor pH, EC & water temperature. The other two parts required are the SWAT-1 module and the other probe the SEC-1 EC/Temp probe. First determine where the probes will be located. Each probe comes with a 16-ft / 5meter long cable that will need to be connected to the SWAT-1-1 module. Install the SWAT-1 module in a location that will NOT be exposed to water or spray etc. \* **The SWAT-1 module itself is NOT waterproof and must be positioned so that it is not exposed to mist or moisture directly.**

The SEC-1 and the SPH-1 probes can be used directly inside stock water tanks, they are weighted to sink to the bottom of the tank. The probes also feature a 3/4" threaded end, allowing them to easily be installed "in-line" with existing pipe / pvc. \* **DO NOT allow the tip of the pH probe to dry out. When not in use install the protective cap with some electrode storage solution.**

## SPH-1 / Specifications



Model	SPH-1 / pH probe - sensor
Protection Level	IP68
Operating Temperature	0-50°C / 32-122°F
Operating Humidity	Not applicable
pH Measurement range	0-14 pH
pH Accuracy	±0.1 pH
Probe Thread size	3/4" MNPT, tapered
pH probe Connection / Cable	BNC, 16ft / 5m cable