

Hydro-X Plus

Upgraded Version of Hydro-X System

The Hydro-X Plus (HCS-3) controller is an upgraded version of the Hydro-X controller. It's a professional-grade single-zone environmental control system. It has an 800x480 7" LED touch-screen monitor, multiple advanced light control functions and expanded device control capacity.



HCS-3 for Hydro-X Control System

Connection

Daisy Chain Connection



The sensors and control modules (device stations) are connected to the HCS-3 with a standard RJ12 cable and RJ12 Y-splitters, making installation as simple as plug-and-play. The modules are "daisy chained" together using the RJ12 cables allowing for flexible installation and future expansion. To make installation even easier, you can also use the SPH-1 8-port hub instead of using the Y-splitters.

Remote Control

App-based iOS / Android



Besides the onboard user interface / touch-screen, the Tronmaster app will provide real-time data and user notifications from the HCS-3. The HCS-3 also offers a free App TMR that allows remote control and monitoring through the internet with any smartphone or tablet.

Specifications

HYDRO-X Plus (HCS-3)

Product Capacity

4-in-1 (Temp & Humidity & CO2 & Day/Night) Sensor

Max. 1pc per HCS-3

Par Sensor

Max. 1pc each per HCS-3

Smoke & Water Detectors

Max. 12pcs each per HCS-3

Temp Device Stations

Max. 8pcs per HCS-3

Humidity Device Stations

Max. 8pcs each per HCS-3

CO2 Device Stations

Max. 4pcs each per HCS-3

Program Device Stations

Max. 12pcs per HCS-3

Light Channel(s)

2 per HCS-3

Number of Lights

*Unlimited With the correct adapters

Display & Control

Size 800*480mm (7" LCD Screen)

Control Touch Screen Control

Language English (International)

micro-SD Save/ Copy/ Import/ Export Data

Environment Setting

Temperature 43-100 °F

Humidity 20-99%

CO2 300-2500PPM

Light Intensity 0-2000 PPFD

Fourteen setting range

Operating Requirements

Temperature 32 °F to 120 °F (0 °C to 49 °C)

Humidity 5% to 90% RH, non-condensing

Power Supply

Supply Voltage 100-240VAC, 50/60Hz, 3A

Dimensions & G.W.

Dimensions 220*140*27mm

Approx. G.W. 0.5 kg
Display & Control



Hydro-X Plus

Advanced Lighting Features



Group Control

(Up to 10 Groups) of lighting control for ThinkGrow brand LEDs allows a customized combination of light settings for up to 10 separate groups of LEDs on a single HCS-2 controller.



4 Adjustable Spectrum

Ultimate control on UV, White, Deep Red and Far Red spectrums for creating special light recipes.



DLI (Daily Light Integral) Control and Monitoring

Can be used to calculate the exact amount of light needed based on the PPFD to enhance growth rates and to save energy.



Cloud Effect

The HCS-2 can simulate natural cloud movements to mimic a natural outdoor environment which ensures less stress on the plants and will also save electricity.

Lighting Control

With Hydro-X System

Light Control

The Hydro-X Pro can control almost all horticultural lighting systems (LED / HID) in the market using one of Troilmaster's LMA series of lighting adapters. Two separate lighting control channels allow users to control two different lighting systems with separate setpoints.

When used with Hydro-X Pro, the LMA-T can provide user's ultimate control over ThinkGrow LED (i.e. individual control on 4 different spectrums of the PLUS series), and allows users to adjust and control the light spectrum according to their individual needs.



MBS-PAR Sensor

The PAR sensor can be incorporated into the Hydro-X Pro system to provide a measurement of "PAR" (Photosynthetically Active Radiation). After entering the value of the desired amount of PPFD to HCS 2, the PPFD sensor will automatically increase or decrease the output level of the supplemental lighting systems to continuously maintain the exact lighting level (in terms of PPFD) selected.



4-in-1 Sensor MBS-PRO

Temp/Humidity/CO₂/Photocell

This sensor will measure air temperature, humidity, CO₂ (PPM) and has a photocell to detect Day or Night operation, making it a perfect all-in-one environmental sensor. The sensor will detect the environmental parameters then send the collected data back to the Hydro-X Pro. By using different modules connected to the Hydro-X Pro system, the controller will then send signals to the modules and control those devices based on the environmental readings provided by the 4-in-1 sensor.

* Photocell sensor detects only the presence of light, not light intensity.



Temperature

Temperature can be regulated with the modules by controlling the temperature control devices.

For example, the ARS-1 can control mini split AC, TS-2 can control HVAC system etc.



Humidity

Humidity can be regulated with the modules by controlling the humidity control devices.

For example, the HS-1 can control dehumidifiers, TSH-1 can control EC fans etc.



CO₂

CO₂ level can be regulated with the modules by controlling the CO₂ control devices.

For example, the OSC-1 can control CO₂ tank regulators and CO₂ generators etc.

All DS modules are universal and multi-purposed in the Hydro-X Pro system.

Other Control & Sensor

For Different Circumstances

Other Control

There are other modules that can be used to control devices in different circumstances in accordance with user's need.

For instance, devices like fans or pumps can be controlled based on time rather than Temperature, Humidity, and CO₂ with the Timer Control module the DSP-1.

The DCC-1, DSV-1 and the ARS-1 Expander Station offer dual condition control, low voltage control and multiple device control respectively.

Other Sensor Alert

These 3 sensors: MBS-SQ, WD-2, WCS-1, are used to detect smoke, water leakage and abnormal moisture level of medium. Warning alerts will be sent to users on the TroiMaster App when abnormal conditions are detected to alert them about potential problems before things get out of hand.

