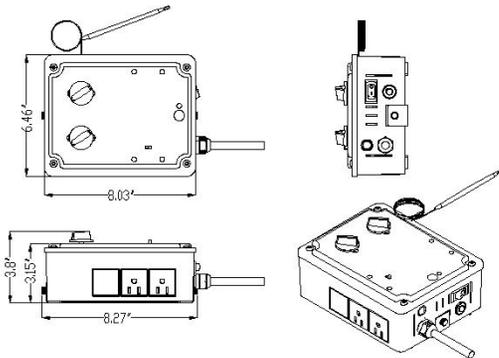


Troubleshooting & Specs

EVC-1

Amps / Volts requirements	15 amps @ 120 volts
Min / Max operating temperature	32 to 120° F
Temperature Accuracy	+/- 2° F
Temperature Mode	Cooling
Min / Max Humidity	0-99% RH
Humidity Accuracy	+/- 7% rH
Humidity Mode	Humidify or Dehumidify
CO2 Mode	Daytime
Weight / Dimensions	7 lbs / 8" x 6.5" x 3.1"
Thermostat type	Remote bulb 30"
Life Expectancy	> 10 years



All Sentinel Timers and controllers offer a **3-year** warranty.

Ask your retailer for details.

Sentinel products are distributed by:

GPS / Global Product Solutions LLC.



www.growgps.com



Instruction Manual

EVC-1

Environmental Controller



Temperature... Humidity & CO2. What do they have in common? They are all environmental conditions inside a growing area that need to be controlled for successful gardening.

The EVC-1 Environmental Controller controls all that and more. If you want a simple-to-use and reliable controller without spending hundreds of \$, check out the EVC-1.

CONTENTS

A quick look at the EVC-1
Installation of the EVC-1
Operating the EVC-1
Connection Examples
Troubleshooting
Specifications

The EVC-1 has been designed to maintain a specific temperature and humidity within an area. It controls temperatures by operating a device such as an air-conditioner or exhaust fans.

The humidity is separately controlled and can be set to either increase or decrease the humidity to a specific level. It can also

coordinate the use of supplemental CO2 with the temperature control function. It is the best and most cost effective “analog” controller on the market. Here is some of it’s features and what it can do:

- Control Temperature & Humidity separately OR together. A selector switch let YOU customize the controller.
- Can either increase OR decrease the humidity level. Again... a selector switch let YOU customize the controller.
- Built-in Photocell determines whether it is Day or Night. Activates CO2 device only during Daylight hours.
- A built-in feature that is very useful is the Night Device outlet. Connect your Night only device into this outlet. Control an exhaust fan, heater or dehumidifier...
- Heavy-duty #14 AWG power cable. Fuse protected by a 15-amp e-settable circuit breaker.
- Built using only the best UL or CSA certified components.
- “Over-built” with over-rated components such as 30-amp relays, 20-amp power switches and terminals.
- The EVC-1 carries a full 3-YEAR warranty!

Troubleshooting

Problem: The unit does not power up at all.

Check and reset the circuit breaker. A small red button will pop out at the bottom of the unit, press it in to reset. If the problem continues, reduce the number of devices connected to the unit.

Problem: The Temperature or Humidity control function do not seem to be working correctly.

The user can select 3 different modes. Refer to Operating the EVC-1 for a full explanation of the modes and how they affect operation.

Problem: The Humidity control function seems to be working reverse.

The humidity can be set to either increase or decrease the Humidity level. Refer to Operating the EVC-1 for a full explanation of the Humidity modes and how they affect operation.

Problem: Both the Temperature & Humidity device turn ON at the same time.

The Temperature & Humidity can either operate independently or they can be combined to function together. Refer to Operating the EVC-1 for a full explanation of the Humidity modes and how they affect operation.

Problem: The Temperature & Humidity device do not turn ON at the same time.

The Temperature & Humidity can either operate independently or they can be combined to function together. Refer to Operating the EVC-1 for a full explanation of the Humidity modes and how they affect operation.

Problem: The CO2 device does not turn ON.

2 things affect the CO2 outlet. The photocell must receive enough light to activate the CO2. The Temperature Device outlet will over-ride (shutoff) the CO2 Device outlet. While the Temperature control device is ON, the CO2 Device will remain OFF.

Problem: The circuit breaker trips repeatedly.

The entire unit can control up to 15-amps @ 120 volt. If the circuit breaker keeps tripping, you either have one device connected that is faulty or there is too much “load” on the unit. Reduce the number / amount of devices connected.

Connection examples

For indoor growing, Cooling devices such as ventilation fans or air-conditioners connect to the Temp-Exhaust Device receptacle



OR



Heaters for cooler climate greenhouses can be connected to the Night Device receptacle.



Connect your 120 volt compressed CO2 solenoid / regulator assembly OR a CO2 generator to the CO2 device receptacle.



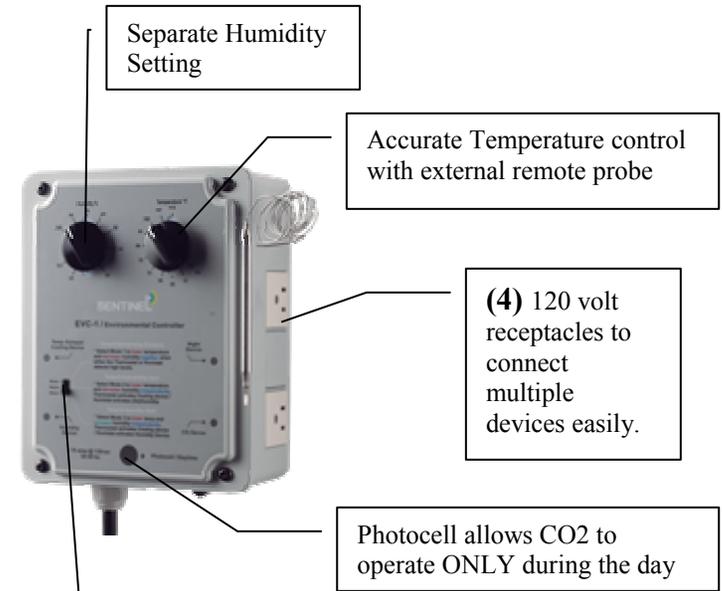
OR



Dehumidifier can be connected to the Humidity Device receptacle



A quick look at the EVC-1...



Multiple modes allow the user to choose how to coordinate the Temperature and Humidity



15-amp @ 120V Circuit breaker

Heavy-duty Power switch

Installing the EVC-1

1) Locate a suitable location. First secure the provided bracket to the wall. Next snap the controller into place and tighten the (2) thumb-screws on the top & bottom.

NOTE: *Note: Make sure the thumb-screws are in place before attempting to use the controller. The unit is fragile... falling to the ground would be very bad.

- 2) The unit requires a 120 volt, 15-amp power supply. Plug the power cable into a standard Nema 5-15 wall outlet.
- 3) The remote temperature sensor extends from the side of the unit. Position it at plant level.
- 4) The device that will be controlled must be 15-amps or less.
- 5) If you are using a cooling or heating device such as a air conditioner or exhaust fan, connect the device's power cable into the receptacle marked "Temp -Exhaust Cooling Device".
- 7) If you will also be using supplemental CO2, connect the CO2 device to the receptacle marked CO2 Device.
- 8) If you will be using either a dehumidifier / fan or humidifier, connect it to the receptacle marked Humidity Device.
- 9) If you will need to have a heater, fan or other device that operates only at night, connect it to the receptacle marked Night Device.
- 10) Determine what Mode you want to operate the unit with.
 - a) **Temp & Dehumidify Combine:** Select **Mode 1** to lower temperature and decrease humidity together when either the Thermostat OR Humistat detects high levels.
 - b) **Temp & Dehumidify Split:** Select **Mode 2** to lower temperature and decrease humidity independently. Thermostat activates Cooling device / Humistat activates De-humidifier
 - c) **Temp & Humidify Split:** Select **Mode 3** to lower temp and increase humidity independently. Thermostat activates Cooling device / Humistat activates Humidity Device.
- 11) Turn the power switch to the ON position and you are ready to go.

Operating the EVC-1

The section below discussed how the unit can be used and how to set the Thermostat, Humistat and select the correct mode.

Setting Temperature: Setting the Thermostat (temperature setting) is easy. Determine what the maximum temperature you want your area to get to. Turn the knob on the right labeled Temperature to the desired setting. When the temperature reaches this level, the Temp-Exhaust Cooling Device outlet will be activated. When the Temp-Exhaust Cooling outlet is activated, the CO2 Device outlet will be disabled. The thermostat has a "Dead-band" of 5 degrees F. That means that the Temp-Exhaust Cooling Device outlet will remain activated until the temperature is reduced by 5 °F before it is turned OFF.

Setting Humidity: Setting the Humistat (humidity setting) is almost as simple as setting the temperature. You have the choice of increasing the Humidity or decreasing the Humidity levels by selecting the mode that best works for you. **(See Mode Selection below)**

Once you have determined what Mode you want to use, determine what humidity level you want your area to get to be maintained to. Turn the knob on the left labeled Humidity to the desired setting. When the humidity reaches this level, the Humidity Device outlet will be activated. The Humistat has a "Dead-band" of about 7 % rH. That means that the Humidity Device outlet will remain activated until the humidity level reaches 7% higher (or lower) than the setpoint before it is turned OFF.

Mode Selection: The 3 modes of operation allow the user to select the best method of controlling the devices for YOUR setup.

Temp & Dehumidify Combine: Select **Mode 1** to lower temperature and decrease humidity together. When either the Thermostat OR Humistat detects high levels, both Temp and Humidity Device outs are activated. Use this mode when the temperature and humidity are to be controlled using the same device

Temp & Dehumidify Split: Select **Mode 2** to lower temperature and decrease humidity independently. Thermostat activates Cooling device / Humistat activates a Dehumidifying device

Temp & Humidify Split: Select **Mode 3** to lower temp and increase humidity independently. Thermostat activates Cooling device / Humistat activates Humidifying Device.