

Complete Environmental Controller

BECC-B2

All-in-One (CO₂, Humidity, and Temp)



Specifications

Max Amp: 10 amps @ 220-240V AC 50Hz
 Power Cord Length (ft/m): 6.5 / 2
 Sensor Cord Length (ft/m): 15 / 4.5
 CO₂ Range (PPM): 400-2000
 CO₂ Accuracy (PPM): +/-100
 Temp Setting:
Cool Mode (F/C):
 Adjustable 50-122 / 10-50
Heat Mode (F/C):
 Adjustable 40-112 / 5-45
Temp Deadband (F, C):
 Adjustable 2/4/6, 1/2/3
Temp Accuracy Rating (F/C): [+/-] 2 / 1
High Temp Setting (F/C):
 Adjustable 85-115 / 30-45

Low Temp Setting (F/C):
 Adjustable 40-70 / 5-20
 Humidity Setting Range (RH): 5% to 95%
 Humidity Accuracy (RH): +/-3%
 Humidity Deadband (RH): 5% RH
 Weight (lbs/kg): 3.5 / 1.6
 Dimensions (inch/mm):
 8x7.5x3.3 / 202x191x85

Indoor Use Only
 For Altitudes up to 6500 ft / 2000 m
 Operating Temperature: 5°C to 40°C
 Maximum Relative Humidity: 80%
 IP Rating: IP 20

Overview

The BECC-B2 offers complete and professional management of the garden environment by coordinating control of CO₂, heating, cooling, and humidity devices via the four 240V receptacles. Featuring a remote sensor on 4.5m cable which accurately monitors temperature, relative humidity, and CO₂ levels in real-time. Fuzzy logic operation mode can be activated for ultimate precision of a CO₂ tank and regulator setup. The integrated photocell feature also offers advantages by allowing separate day and night temperatures / humidity to be programmed. High & low temperature protection set points automatically maintain safe garden conditions and optimize yields. ETL, CE, and FCC approved for safety and dependability.

★ High & Low Temperature Protection:

High Temperature Protection:

If the garden temperature exceeds the limit, the controller will deactivate the CO₂ Output when in PPM-UP mode (CO₂ generator use), regardless if the CO₂ PPM level has reached the set-point.

Example: If High Temperature set to 35°C, when current temp is 36°C, CO₂ PPM display will blink and display "Hot" ① and CO₂ PPM alternately, Temperature display will blink and display current temperature.



Low Temperature Protection:

If the garden temperature drops below the low-limit set point the humidity output will then be deactivated. When the temperature rises 10 F/5°C above the low-limit temperature set point the humidity output will be reactivated.

Example: If Low Temperature set to 20°C, when current temp is 19°C, Humidity display will blink and display "COLD" ② and humidity alternately, Temperature display will blink and display current temperature



How to set:

For daytime, press "DAY TEMP" knob for 3 seconds, the display read "H XX" ③ repeatedly, turn the knob to change, press again to save the setting;

the next display is the "L XX" ④ repeatedly, turn the knob to change the low limit temperature setting and press again to accept it.

For night time, is the same setting as day time.



Instructions

CO₂ & Temp Lock Switch

Lock: The CO₂ OUTPUT will be deactivated when the COOLING OUTPUT is activated to prevent wasted CO₂ production.

Screen will display **0000**.

Unlock: The CO₂ and COOLING outputs function independently.

Hum & Temp Lock Switch

Lock: The COOLING and HUMIDITY outputs are always activated in conjunction, if either output is activated the other will be as well. Best suited when utilizing only fans for temperature and humidity control.

Unlock: The COOLING and HUMIDITY outputs function independently. Best suited when utilizing an air conditioner and dehumidifier / humidifier.

Current Mode Status & Error LED Indicators

Error LED will blink if an error occurs.

5.5.5 Please ensure the sensor connection is secure.

0000 the controller doesn't observe the PPM / Humidity / Temperature set-point be reached in a 2 hour period, screen flash with error code. Press either of corresponding knobs to reset error. It will self-heal if the set-point reached.

Humidity Set Point Programming

Click the DAY HUM or NIGHT HUM knob and turn to select the desired set point for each, click the knob again to save the setting.

Humidity MIN/MAX Recall Function

Click both knobs simultaneously to display the recorded MIN & MAX values- reads L XX, H XX. The screen will return to normal operation after a period of 5 seconds and the recorded values will be reset.



Humidity Operation Mode Switch
 Humidify or Dehumidify

Temperature Deadband Switch
 (2/4/6°F) (1/2/3°C)

CO₂ PPM Set Point Programming

Click the CO₂ PPM knob and turn to set desired garden PPM level, press again to save the setting.

Example: When in PPM UP or FUZZY LOGIC mode, if CO₂ PPM=1000 PPM and Deadband=50 PPM, then the CO₂ output will be activated at or below 1000 PPM and turn off at 1050 PPM. For PPM DOWN, the fan will be activated at or above 1000 PPM and turn off at 950 PPM.

MIN/MAX RECALL

Click both knobs simultaneously to recall and display the recorded PPM MIN/MAX values - reads L XXX, HXXX. The screen will return to normal operation after a period of 5 seconds and the recorded values will be reset.

Calibration Process

Place the CO₂ sensor outdoors if possible (or in a room with fresh air ventilation) and press both knobs simultaneously for 3 seconds until the display reads CAL / 400. If necessary, the calibration point can be adjusted by turning the CO₂ PPM knob. Calibration will begin automatically after five seconds. During calibration keep the sensor out of direct sunlight, away from sources of CO₂, and be sure to not breath on the sensor. Allow 10 minutes for the calibration process to complete and stabilize the CO₂ reading. The display will stop flashing the PPM value once the calibration process is complete.

Deadband

Press knob and turn to set the desired deadband level. Press knob once more to save the set point.

CO₂ Control Modes

- PPM UP: Increases the CO₂ PPM level, recommended when using a CO₂ generator.
- FUZZY LOGIC: Increases the CO₂ PPM level, recommended when using compressed CO₂ and a regulator.
- PPM DOWN: Decreases the CO₂ PPM level, recommended when using a fan.

Temperature Programming

DAY TEMP Set Points — There is a DAY COOLING set point as well as DAY HEAT set point.

① To program the DAY COOLING set point, click the DAY TEMP knob once and COOL 5 will be displayed on the CO₂ display. Turn the knob to the desired DAY COOL set point and click again to save the setting.

② After confirming the DAY COOL set point the CO display screen will read HEAT 6 to indicate the DAY HEAT programming mode. Turn the knob to the desired DAY HEAT set point and click once more to save both set points.

NIGHT TEMP Set Points — program using the same process as above using the NIGHT TEMP knob.

Temperature MIN/MAX Recall Function

Click both knobs simultaneously to display the recorded MIN & MAX values- reads H XX, L XX. The screen will return to normal operation after a period of 5 seconds and the recorded values will be reset.

Change Temperature Unit

Press and hold both knobs for 3 seconds to access the temperature unit setting. Turn the DAY TEMP knob to switch the temp unit and click both knobs simultaneously to save the new setting.

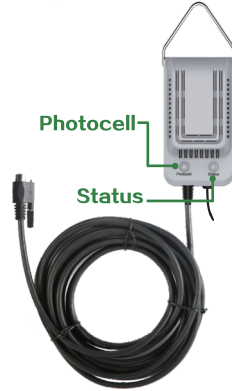


Pro-Leaf® BECC - B2 CO2 Controller / Instruction Manual



★ **DO NOT attempt to repair this controller. Please contact your retailer for service request information.**

Remote CO2 sensor



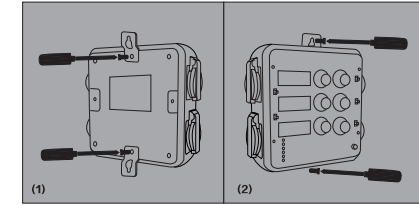
Humidity Deadband: 5 % rH
 CO2 PPM Setting: 1000 PPM
 CO2 Deadband: 50 PPM
 Calibrate CO2 PPM: 400 PPM
 Temp & Humidity Lock: Unlock
 Temp & CO2 Lock: Unlock
 High Temp Limit: 100°F/38°C
 Low Temp Limit: 50°F/10°C

Factory Settings

Temp Day Setting:
 Cool 80°F/26°C, Heat 55°F/13°C
 Temp Night Setting:
 Cool 70°F/21°C, Heat 55°F/13°C
 Temp Deadband:
 4°F/2°C, Heat and Cool
 Humidity Set Point: 50 % rH
 Humidity Mode: Dehumidify

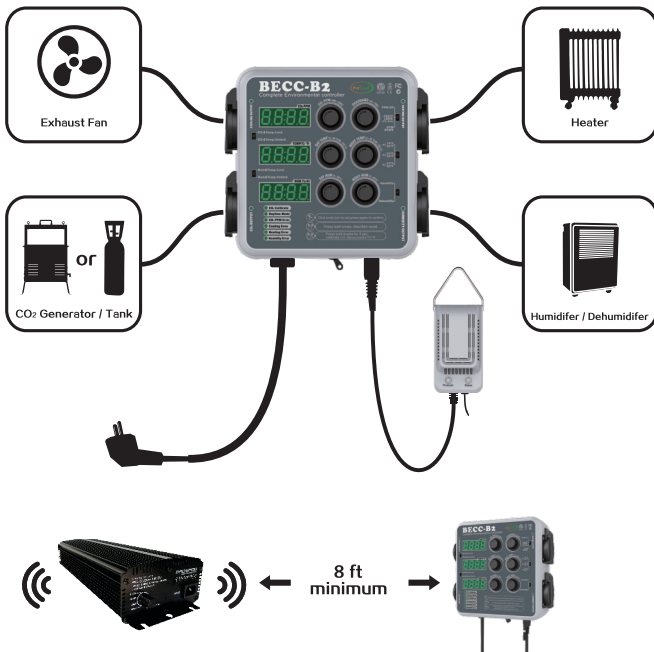
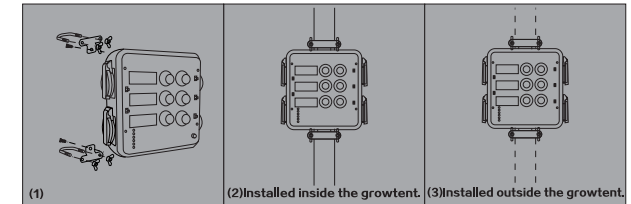
Installation Option 1

[Secure the unit to a wall]



Installation Option 2

[Screw the controller to the growtent tube with a U bolt]

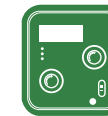


IMPORTANT MESSAGE

1. Save these instructions. These safety and operating instructions must be kept in a safe place for future reference.
2. Heed all warnings. All warnings on this product and in the instructions must be observed closely.
3. Follow all instructions. All operating instructions must be followed.
4. If the instructions as provided by the manufacturer are not followed damage to the product may result.
5. Install your controller at least 8 ft away from any devices that produce large amounts of electronic noise, such as electronic ballasts or ozone generators.
6. The output voltages of this controllers receptacles are the same as the input voltage. The receptacles can only be used in conjunction with the plugs conforming to local safety standards. DO NOT attempt to insert any other plug configuration into the controller receptacles.
7. DO NOT use this controller near a water source. The controller is not water-proof or shock-proof, and as such should not be exposed to direct water contact or extremely high moisture.
8. DO NOT attempt repair. Any factory serviceable parts of this controller are only to be repaired or replaced by the manufacturer or other authorized agencies.
9. If the power cable insulation is broken, please stop using the product. Immediately unplug the controller and contact the retailer from whom you purchased the unit.
10. The controller is equipped with a circuit breaker for short-circuit or over-current situations. The circuit breaker will automatically shut down the product at once. All outlets of the controller are grounded for safety.
11. Do not install the enclosure near any heat source.
12. Do not block any ventilation openings.
13. This product is a Safety Class I Controller. The main plug should be inserted in a power socket outlet only if provided with a protective earth contact. Any interruption of the protective conductor inside or outside of the product is likely to make the Product dangerous and is Prohibited.

Available Environment Controller Models:

Single Function



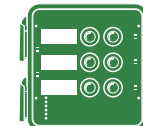
PPM-B1
 (CO2 PPM Controller)
 LIGHT-B1
 (Digital Lighting Controller)
 TIMER-B1
 (Recycle Timing Controller)
 TEMP-B1
 (Temperature Controller)

CO2 Generator



BBL-LP-4
 BBL-LP-8
 BBL-LP-10
 BBL-NG-4
 BBL-NG-8
 BBL-NG-10

Multi-Function



BECC-B2
 (CO2, Humidity, and Temperature)
 BETC-B2
 (Temperature, Humidity, and Recycle Timer)
 BTLC-B2
 (Lighting Controller and Recycle Timer)

