



LTL CO2

CO2 CONTROLLER

ABOUT THE LTL CO2:

The LTL CO2 by LTL Controls is a water-resistant CO2 controller with a built-in photocell which automatically deactivates CO2 at nighttime. This controller communicates the current PPM level using a series of blinking LED lights and features an external CO2 sensor for the most accurate readings.

TECHNICAL SPECIFICATIONS

Input Voltage	120V AC
Maximum Amperage	14.5 amps @ 120V AC
CO2 Sensor Type	Non-Dispersive Infrared
CO2 Accuracy	+/- 60 PPM
CO2 Control Range	400 - 2500 PPM
CO2 Deadband	Adjustable 50–250 PPM

INSTALLATION:

1. Plug the controller into a standard NEMA 5-15 wall outlet. A 120V power supply is required. Install the external sensor at plant height, in a location with adequate ventilation. This controller is water resistant, however it is not water-proof, so do not install it anywhere it will come in contact with water.
2. Ensure that the device being connected to the controller has the proper voltage and will not exceed the maximum amperage rating.
3. Connect the device to the controller using the outlet on the front.

READING THE CO2 LEVELS:

Since this is an analog controller and does not have a digital display, the controller displays the current PPM setting using the flashing LED lights on the front of the controller. When first powered on the controller needs approximately 5 minutes to warm up. Once it's warmed up, the red x1k and yellow x100 LEDs will begin to flash. The number of times the red LED flashes indicates the thousands of PPM, and the number of times the yellow LED flashes indicate the hundreds. For example, if the red LED flashes once, and the yellow LED flashes 3 times, the current CO2 PPM is approximately 1300.

CHANGING THE SETTINGS:

CO2 PPM

Use the left knob to set the desired minimum CO2 PPM set point. If the CO2 level drops below this setting the controller will activate the connected CO2 device and it will remain on until the PPM level rises to the level indicated by the deadband setting (see below). When the CO2 device is activated the green LED labeled CO2 On will illuminate.

Please Note: The controller will not produce CO2 once the built-in photocell detects that it is nighttime (Daytime LED turns off).

Deadband PPM

Use the right knob to set the CO2 PPM Deadband. The CO2 deadband is the number of PPMs above the CO2 PPM setting at which the controller will deactivate the CO2 device. For example, if the CO2 PPM setting is 1250 and the deadband is 100 PPM, once the CO2 level dips below 1250 PPM the CO2 device will activate and it will remain on until the CO2 level reaches 1350 PPM.

CALIBRATING THE SENSOR:

1. Bring the controller outdoors in an uncrowded area away from people, animals, and cars (or any other CO2 producing objects) and power it on.
2. Let the unit warm up for approximately 10 minutes.
3. Turn the left knob (CO2 PPM) fully COUNTERCLOCKWISE and the right knob (Deadband PPM) fully CLOCKWISE.
4. After about 3 seconds the red LED will illuminate and the Calibration Mode will activate.
5. Walk away from the unit and leave it alone for approximately 6 minutes. The yellow LED will illuminate when the calibration sequence is complete.
Note: If the yellow LED is blinking, the calibration needs to be run again. Repeat the above steps.
6. Disconnect the controller from the power supply and adjust the knob settings back to normal before powering the controller back on.
7. Once power is restored, the controller will return to normal operation.

TROUBLESHOOTING:

1. Is the photocell working...?

During the daytime the green LED on the top right edge of the controller labeled Daytime will illuminate. During the night this LED will be off. The LED has a 30 second delay when switching between Day and Night.

2. The CO2 level doesn't seem to be accurate...

Make sure the sensor is in an area with adequate ventilation. Do not breathe on the sensor as that will raise the CO2 level. Bring the controller and sensor outdoors in an uncrowded area and check the CO2 level. After about 10 minutes it should read approximately 300 - 400 PPM. If not, calibrate the sensor and try again.

3. The yellow LED is flashing after calibrating the sensor...

This indicates the calibration was not successful. Repeat the calibration procedure. If the yellow LED continues to flash contact your retailer.

4. The red & yellow LEDs stay illuminated and do not flash...

This indicates there is a problem with the sensor. Contact your retailer.

5. The red & yellow LEDs are blinking on and off...

This indicates the controller has experienced a power overload and has shut down. Reduce the electrical load. Unplug the unit for 5 seconds to reset it.


6. The controller isn't powering on...

Ensure that the controller is fully inserted into the power outlet. Test the controller using a power outlet that is confirmed to be working. If it still does not power on and the LEDs do not illuminate, contact the retailer you purchased the controller from.

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 these 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  symbol on the enclosure indicates that the receptacle beside it may have an output voltage, which can be dangerous. The output voltages are the same as the input voltage. This receptacle can only be inserted with standard SHUKO OR UK plugs. Don't insert any other plug in it.
7. Do not use this controller near water. For example, near a bathtub, washbowl, kitchen sink, or laundry tub, in a wet basement, or near a swimming pool, etc. The controller must not be exposed to dripping or splashing liquid and no objects filled with liquid, such as vases, should be placed on this product. The product is not water-proof, or shock-proof.

8. Any factory serviceable parts of the product can only be checked or replaced by the manufacturer or authorized agencies. An unauthorized person is NEVER allowed to open the enclosure.

9. If the power cable insulation is broken, please stop using the product! Immediately unplug the it and contact the retailer you purchased it from.

10. The product is equipped with a circuit breaker for short circuit or over current situations. The circuit breaker will automatically shut down the unit. All outlets on the controller all have the safety ground.

11. Do not install the enclosure near any heat source.


12. Do not block any ventilation openings.

13. This product is a Safety Class 1 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.

MESSAGE IMPORTANT

1. Conservez ces instructions. Ces consignes de sécurité et d'exploitation doivent être conservées dans un endroit sûr pour référence future.
2. Respectez tous les avertissements. Tous les avertissements sur ce produit et dans les instructions doivent être observés de près.
3. Suivez toutes les instructions. Toutes les instructions doivent être suivies.
4. Si les instructions fournies par le fabricant ne sont pas suivies d'endommager le produit peut entraîner.
5. Installez votre contrôleur au moins 8 pieds loin de tous les appareils qui produisent de grandes quantités de bruits électroniques, tels que les ballasts électroniques ou des générateurs d'ozone.



6.  Le symbole sur le boîtier représente que le réceptacle à côté il peut avoir une tension de sortie, qui peut être dangereux. Les tensions de sortie sont les mêmes que la tension de tension d'entrée. Cette prise ne peut être inséré à la norme NEMA 1-15P et NEMA 5-15P bouchons. Ne pas insérer d'autres plug en elle.
7. Ne pas utiliser ce contrôleur près de l'eau. Par exemple, près d'une baignoire, baignoire lavabo, évier de cuisine ou la lessive, dans une cave humide, ou près d'une piscine, etc. Le contrôleur ne doit pas être exposé à des éclaboussures et aucun objet rempli de liquides, tels que des vases, doit être place sur ce produit. Le produit n'est pas étanche à l'eau, ou antichoc.
8. Toutes les pièces d'usine Paré réparable du produit ne peut être vérifiée ou remplacée par le fabricant ou autoriser les agences. Une personne non autorisée n'est jamais permis d'ouvrir le boîtier.
9. Si l'isolation du câble d'alimentation est cassée, s'il vous plaît arrêtez d'utiliser le produit! Débranchez immédiatement l'appareil et contactez le revendeur vous l'avez acheté.
10. Le produit est équipé d'un disjoncteur pour un court-circuit ou sur des situations actuelles. Le disjoncteur se fermera automatiquement le produit à la fois. Toutes les sorties du produit ont tous la terre de sécurité.

11. Ne pas installer l'enceinte à proximité de toute source de chaleur.

12. Ne pas bloquer les ouvertures de ventilation.

13. Ce produit est une classe de sécurité 1 contrôleur. La fiche principale doit être insérée dans une prise électrique que s'ils sont fournis avec un contact de terre de protection. Toute interruption du conducteur de protection à l'intérieur ou à l'extérieur du produit est susceptible de rendre le produit dangereux et est interdit.

Limited Warranty

DL Wholesale Inc. doing business (collectively DL) warrants that for a period of three years from the date of purchase, this product will be free from defects in material and workmanship. DL, at its option, will repair or replace this product or any component of the product found to be defective during the warranty period. Replacement will be made with a new or remanufactured product or component. If the product is no longer available, replacement may be made with a similar product of equal or greater value. This is your exclusive warranty. DO NOT attempt to repair or adjust any electrical or mechanical malfunctions on this product. Doing so will void this warranty and may cause serious injury/death/damage.

This warranty is valid for the original retail purchaser from the date of the initial retail purchase and it not transferable. Keep the original sales receipt. Proof of purchase is required to obtain warranty performance. DL dealers, distributors, service centers and retail outlets selling DL products do not have any right to alter, modify or in any way change the terms and conditions of this warranty.

This warranty does not cover normal wear of parts or damage resulting from the following: negligent use or misuse of the product, use on improper voltage or current, use contrary to the operating instructions, use contrary to any and all applicable local, state, provincial or federal laws, disassembly, repair or alteration by anyone other than DL or an DL authorized service center. Future, the warranty does not cover: Acts of God, such as fire, flood, hurricanes, tornadoes, nor Acts of War or Acts of Terrorism.

**THIS PRODUCT CONFORMS TO USA AND
CANADA STANDARDS AS LISTED BELOW**

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