



ELEMENT 1

ENVIRONMENTAL CONTROLLER

TECHNICAL SPECIFICATIONS

Input Voltage	120V AC
Maximum Amperage	14.5 amps @ 120V AC
Sensor Cord Length	15 ft
Temperature Control Range	41° to 113° F
Temperature Accuracy	+/- 1°F
Temperature Deadband (Hysteresis)	3°F
Humidity Control Range	5% to 95% rH
Humidity Accuracy	+/- 3% rH
Humidity Deadband (Hysteresis)	5% rH

INSTALLATION:

1. Secure the controller to a wall.
2. Place the external sensor in an area with good air movement, preferably at plant height. Avoid placing the sensor in direct sunlight or under direct HID Lighting. **NOTE: Do not place sensor anywhere it might get wet. SENSOR IS NOT WATER PROOF.**
3. The sensor has a quick connect cord to easily remove or connect the sensor to the controller. Secure the quick connect cord to the unit by plugging it in and securing the QD screw to the unit.
4. Plug the power cable into a standard NEMA 5-15 wall outlet. A 120V power supply is required.
5. Program the desired settings on the controller prior to connecting any devices. Continue reading for programming instructions.
6. Ensure that all of the devices being connected to the controller have the proper voltage and will not exceed the maximum amperage rating.

ABOUT THE ELEMENT 1:

The Element 1 by LTL Controls is an accurate and budget conscious solution for maintaining temperature and humidity within the growing area, and can also operate a CO2 device and a nighttime device. The Element 1 features a highly accurate solid-state temperature and humidity sensor which is designed to resist EMI/EFI from electronic/digital ballasts, a superiorly engineered circuit board, heavy-duty internal construction, and high-quality UL/CE listed components to ensure years of operation.

The Element 1 features the ability to control 1 cooling device (such as a fan) and 1 humidifier OR dehumidifier. It can also operate 1 CO2 device (which will activate only during the daytime) and 1 nighttime device. The Element 1 offers 3 operating modes for maximum versatility and ease of use.

CO2 OUTLET:

The outlet designated for a CO2 device will power on during the daytime only, and will deactivate when the cooling device is activated. It does not have any other controls or associated settings to monitor/regulate CO2. You may use this outlet for any other device that is compatible with these specifications as well.

NIGHTTIME OUTLET:

The outlet designated as the Night Output can be used for a variety of devices that only require power at night. This outlet simply powers on during the night, it does not have any other controls or associated settings.

SETTING THE DIALS:

The 2 dials on the face of the Element 1 are used to set the Temperature and Humidity set points.

Temperature

Use the dial on the left to set the maximum temperature for the growing area. If the temperature reaches or rises above this set point, the controller will activate the cooling device, and the cooling device will remain on until the temperature is reduced to 3°F below the set point.

Humidity

Use the dial on the right to set the desired humidity level. If the humidity in the growing area rises or falls above or below this setting (depending on whether the connected device is a humidifier or dehumidifier) the controller will activate the humidity device, and it will stay active until the level is raised or lowered by 5% rH.

OPERATING MODES:

The Element 1 has 3 operating modes to select from. This selection should be based on the type of devices being connected to the controller. Press the **Select Mode** button to change the mode.

Mode A

Use Mode A if you are connecting a cooling device (such as a fan) AND a dehumidifier to lower the humidity level. The controller will activate these devices independently based on the levels in the area and the set points.

Mode B

Use Mode B if you are using only 1 device to lower the temperature and humidity levels, and the controller will activate the connected device if the temperature rises above the set point AND/OR if the humidity level rises above the set point.

Mode C

Use Mode C if you are connecting a cooling device (such as a fan) AND a humidifier to raise the humidity level. The controller will activate these devices independently based on the levels in the area and the set points.

TROUBLESHOOTING:

1. If the Mode LED lights are flashing...

This indicates there is an error with the external sensor. Disconnect the quick connect cord and then reconnect it.

2. If the humidity is increasing instead of decreasing, or vice versa...

Ensure that you have selected the proper mode of operation. Mode A should be used if you are connecting a dehumidifier and Mode C if you are connecting a humidifier.

3. If the CO2 output is not activating...

The CO2 outlet only activates during the Daytime, when the photocell LED is illuminated. Make sure the external sensor is receiving adequate light. The CO2 outlet will also deactivate if the cooling outlet is activated.


4. The controller is not receiving power...

Reset your power switch and/or circuit breaker. If the problem continues reduce the number of devices connected to the controller or use a power multiplier to control devices with larger amperage.

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 récipient 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 insérée 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 placé 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



ETL LISTED
CONFORMS TO
UL STD 61010-1

Intertek
4001516

CERTIFIED TO
CAN/CSA STD
C22.2 No. 61010-1



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