Gavita™ Master Controller EL3

1 Introduction

Thank you for purchasing the Gavita™ Master Controller EL3. This manual describes mounting, installation and how to use the product. Mounting and installation of the Master Controller EL3 may only be executed by certified service personnel. Please read and understand this manual completely before using the product. Only use the product as specified in this manual. Failure to follow any of these directions for use and/or maintenance for this device will void any warranty on the product and the owner will be fully liable for any damages.

1.1 Used Symbols

Warning! A warning indicates severe damage to the user and/or product may occur when a procedure is not carried out as described.

Caution! A caution sign indicates problems may occur if a procedure is not carried out as described. It may also serve as a reminder to the user.

Note: A note gives additional information, e.g. for a procedure.

This symbol is an internationally recognized symbol used to designate recyclable materials.

This symbol is an authorized use mark employed on electronic products manufactured or sold in the United States, which indicates that the electromagnetic emissions from the device have been measured to be under the limits published by the Federal Communications Commission. The FCC logo is a mark that declares that the equipment is authorized to market and operate under the FCC's SDOC procedure.

This symbol shows that a product has been independently tested and certified to meet recognized standards for safety.

This symbol on material, accessories or packaging indicates that this product may not be discarded as household waste. By properly disposing the equipment, you will be helping to prevent possible risks to the environment and public health, which might otherwise be caused by improper handling of the discarded equipment. Recycling of materials contributes to the conservation of natural resources. Therefore, please do not dispose of old electronics and electrical appliances via household waste.

This symbol indicates the minimum distance (B) between the LED fixture (A) and the lit surface.

2 Product description

The Gavita Master Controller EL3 is a lighting controller with an 8" LCD touch screen display. Each controller can support up to 512 e-Series compatible fixtures on two channels.

The EL3 controller helps you control your lights to best suit your plants' growing needs. With this controller, you can program on and off setpoints and build out complete growth schedules that allow you to automate your lights from early veg to late flower. When using a compatible fixture (see Fixture Compatibility for reference), you can view their individual performance at a granular level. It also lets you pick high-temperature dimming and shutdown setpoints to protect your plants if the room temperature exceeds your desired level. An audible alarm can also be activated in the event that a setpoint is exceeded. The EL3 can also utilize compatible Titan Controls™ sensors to gather additional environmental information.* A unique feature of the EL3 is its data-logging capabilities, which allow you to look at your growing environment's historical metrics for temperature, lighting cycles, humidity, CO_2,* EC,* VWC, and substrate temperature.*

*This data is gathered when using compatible Titan Controls sensors only (sold separately).

3 Product information and specifications

3.1 General product information

Product name	Gavita™ Master Controller EL3
Manufacturer	Hawthorne Hydroponics LLC
Part number	HGC906174
UPC	849969000436

3.2 Technical specifications

Adapter Input:	100-240 V, 50/60 Hz 1.5 A
Controller Input:	15 Vdc, 3 A
Certified / Authorized:	ETL, FCC
Enclosure protection level:	IP20
Maximum cascade distance:	800m
Maximum number of luminaires:	512 (256 per zone)
Number of sensors that can be carried	16
Temperature range:	32-122°F (0-50°C)
Working environment:	Humidity ≤ 90%
External dimming analog output accuracy:	1%
Operating temperature:	32-122°F (0-50°C)
Temperature accuracy:	±0.54°F (T-A, T-B)
Weight:	3.75 lb
Dimensions:	L: 9.84 in x W: 5.41 in x H: 1.38 in
Warranty:	3 year

This device complies with Part 18 of the FCC Rules. This product may cause interference to radio equipment and should not be installed near maritime safety communications equipment or other critical navigation or communication equipment operating between 0.45-30 MHz. A simple measure to correct interference is to add ferrites to the ends of power cords and/or lengths of communication cables.

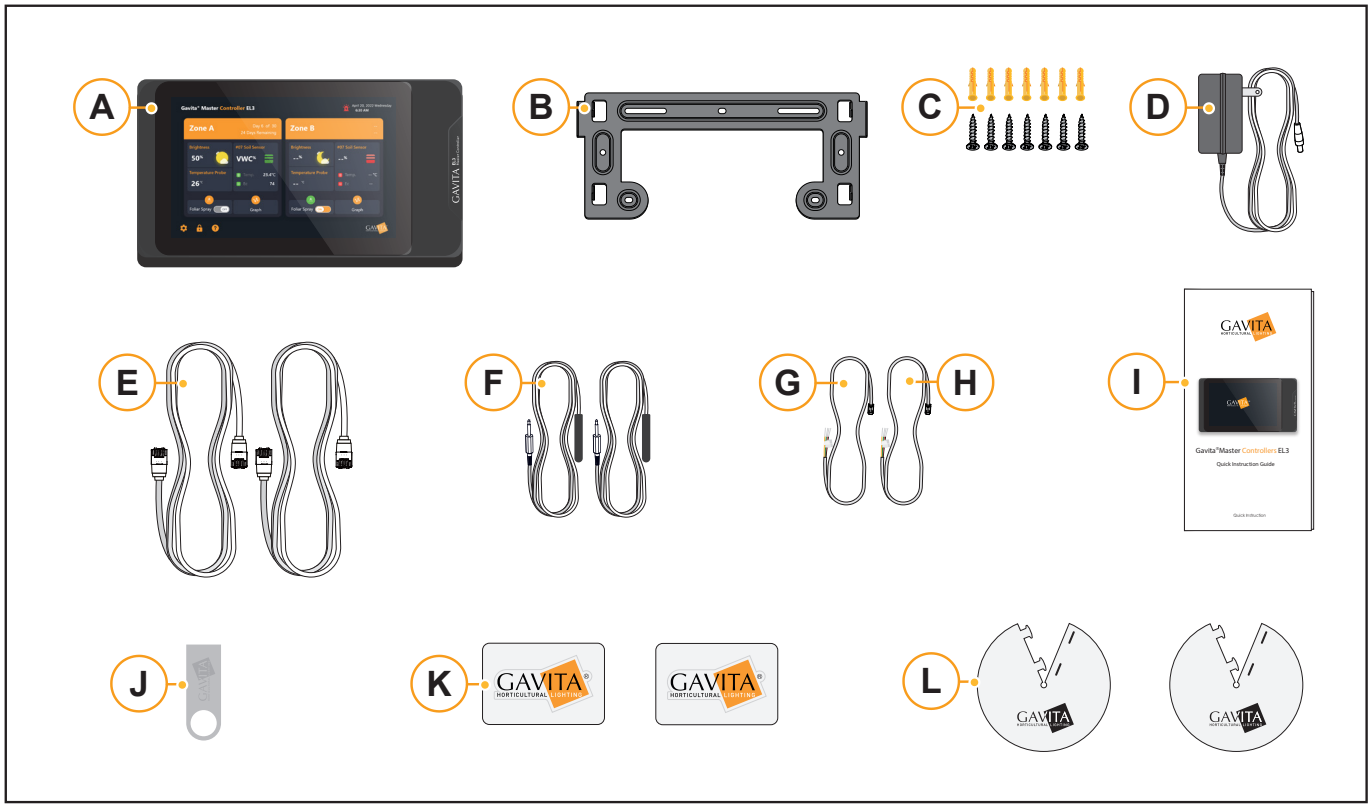
This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Note: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

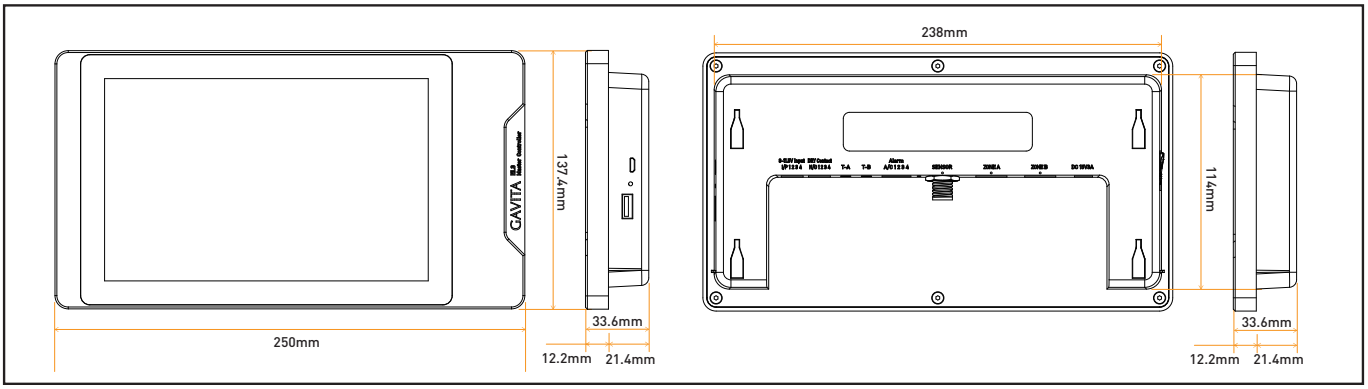
⚠ **CAUTION** – Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

4 Contents (What's included in the box)

A. 1 x Gavita™ Master Controller EL3
B. 1 mounting plate
C. 7 x (expandable tube self-tapping screws)
D. 1 x power adapter
   100-240V Ac/DC 15V@3A
E. 2 x 5m luminaire cables
F. 2 x 5m temperature probes
G. 1 x 610mm RJ10 4P4C cable-1
H. 1 x 610mm RJ10 4P4C cable-2
I. 1 x Quick Start Guide
J. 1 USB flash drive (8 GB)
K. 2 x LOGO stickers
L. 2 x caps

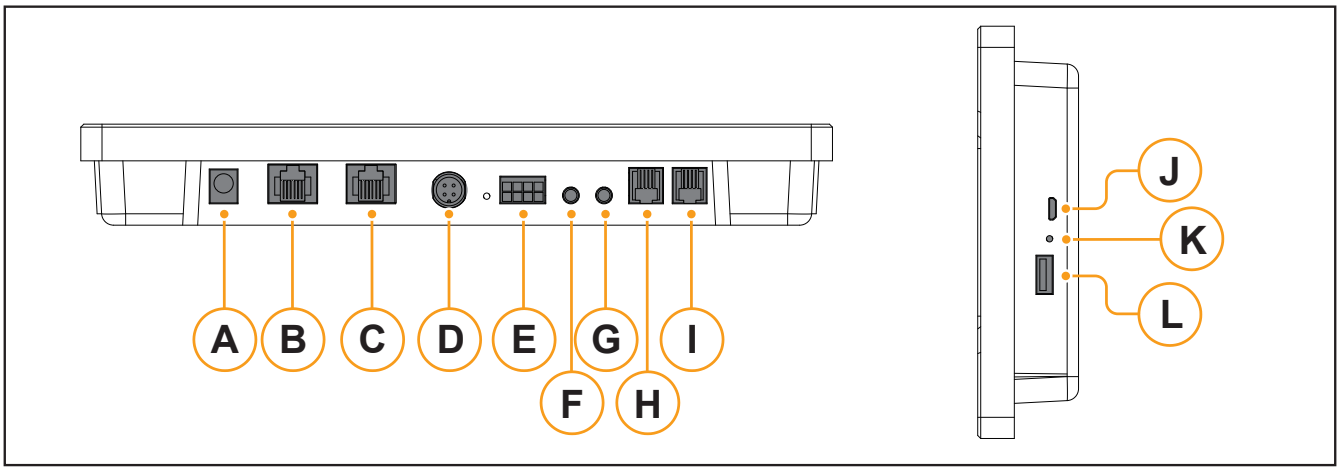


5 EL3 Controller Dimensions



6 Connection Interface Introduction

A. DC 15V 3A DC Power Adapter
B. Zone B Dimming
C. Zone A Dimming
D. Sensor Digital Sensor
E. ALARM
F. T-B Zone B Temperature Sensor
G. T-A Zone A Temperature Sensor
H. Dry Contractor A&B
I. 0-11.5V Input A&B
J. Debug Port
K. Reset Key
L. USB Port



	NAME	DESCRIPTION	SPECIFICATION
A:	DC 15 V 3 A	DC Power Input	•
!	**Attention:** The input voltage should be kept above 13V and below 18V DC; the input current should not be lower than 3A; otherwise, the product may not work properly.		
B:	Zone B	Control the dimming of luminaires in Zone B	•
C:	Zone A	Control the dimming of luminaires in Zone A	•
	Attention: The original cable provided by the manufacturer must be used to connect to this port.		
D:	Sensor	For compatible Titan Controls Sensors (sold separately)	•
!	**Attention:** Do not connect the fixture to the sensor port. Use only for the sensor; otherwise, permanent damage to the sensor and controller may occur.		
E:	Alarm	Switching control of alarm	**1)** Positive alarm equipment switch signal line access point **2)** Positive alarm equipment switch signal line access point **3)** Reverse alarm device switch signal line access point **4)** Reverse alarm device switch signal line access point
!	**Attention:** The port output is a switching signal and does not have voltage/current drive capability. If voltage and current are applied to the port, the nominal switching capacity should not exceed: 1A 30V DC, 0.3A 125V AC (resistive load).		

	NAME	DESCRIPTION	SPECIFICATION
F:	T-B	Zone B temperature detection	•
G:	T-A	Zone A temperature detection	•
!	**Attention:** Only a compatible temperature probe may be used.		
H:	Dry Contact	Output switch signals to control Zone A and Zone B	**N/O 1)** Access point for signal line of controlled equipment switch in area B **N/O 2)** Access point for signal line of controlled equipment switch in area B **N/O 3)** Access point for signal line of controlled equipment switch in area A **N/O 4)** Access point for signal line of controlled equipment switch in area A
!	**Attention:** The port output is a switching signal (no positive or negative polarity) and does not have voltage/current drive capability. If voltage and current are applied to the port, the nominal switching capacity should not exceed: 1A 30V DC, 0.3A 125V AC (resistive load). The original cable provided by the manufacturer must be used to connect to this port.		
I:	0-11.5V Input T	Dimming and switching of third-party input control connections	**I/P 1.1 B-** Ground Zone B **I/P 1.2 B+** 0-11.5V DC Zone B **I/P 1.3 A+** 0-11.5V DC Zone A **I/P 1.4 A-** Ground Zone A
!	**Attention:** The input should be a voltage signal and will not recognize current signals; VPP of the input voltage should be less than 200mV; otherwise, it may cause the EL3 external dimming accuracy to error at more than 1%. The original adapter provided by the manufacturer must be used and no adapter from other manufacturers should be used.		
J:	Debug Port	Used only by Tech Support	•
K:	Reset Key	Used to reset EL3 to factory settings	•
L:	USB Port	Used to import/export setting as well as update firmware	•

7 Lighting Fixtures and Sensors

Lighting fixtures and digital sensors are sold separately. Please visit www.gavita.com for Gavita's latest products.

Safety Precautions

⚠ **Warning!** Keep the controller away from fire, excessive heat, water, dust, and contamination.
⚠ ***Attention!*** *Gardez le contrôleur loin du feu, de la chaleur excessive, de l'eau, de la poussière et de la contamination*
⚠ **Warning!** The Gavita Master Controller EL3 should only be used to control compatible Gavita e-Series ballasts. Do not connect the controller to other products, as this can be dangerous and may cause the connected equipment to malfunction. Doing so will void the warranty.
⚠ ***Attention!*** *Le contrôleur Gavita Master EL3 ne peut être utilisé que pour contrôler les ballasts compatibles de série électronique Gavita.Ne connectez pas le contrôleur à d'autres produits car cela peut être dangereux et peut causer des défaillances dans l'équipement connect é. Cela annulera la garantie.*
⚠ **Warning!** Do not open or disassemble the controller; there are no serviceable parts inside. Opening the controller will void its warranty.
⚠ ***Attention!*** *Ne pas ouvrir ou désassembler le contrôleur, il ne contient pas de pièces serviceables. Ouvrir le contrôleur annulera sa garantie.*
⚠ **Warning!** Make sure the signal wires do not touch the reflectors. The reflectors can get very hot.
⚠ ***Attention!*** *Assurez-vous que les câbles de signal ne touchent pas les réflecteurs. très chauds.*
Lighting fixtures and digital sensors are sold separately. Please visit www.gavita.com for Gavita's latest products.

8 Cautions/Reminder

8.1 Attention/Conseils

Before using this product, please read all cautions and warnings.

Avant d'utiliser ce produit, veuillez lire attentivement les conseils pertinentsLe contrôleur El3 appartient aux produits de précision de haute technologie, veuillez lire attentivement les conseils suivants.

The EL3 features non-volatile memory, which will allow it to retain its settings and data in the event of a power loss. However, it does not have a backup battery to enable it to run when disconnected from power.
Comme il n'y a pas de batterie au lithium dans le contrôleur El3, l'adaptateur secteur ne peut pas être déconnecté lorsque le contrôleur El3 fonctionne, sinon il ne peut pas fonctionner.

External devices connected to the EL3 controller can only be used if properly connected.
L'équipement externe connecté au contrôleur El3 ne peut être utilisé que lorsqu'il est normalement connecté.

LCD Display Maintenance
Entretien de l'écran LCD.
The LCD screen is fragile. Please handle it with care.
L'écran LCD est fragile. Veuillez le manipuler avec soin.
Do not place any heavy objects on the EL3 controller's display.
Ne placez aucun objet lourd sur l'écran d'affichage du contrôleur El3.
Do not scratch, distort or hit the LCD screen surface.
Ne pas rayer, tordre ou frapper la surface de l'écran LCD.
Do not place the LCD in a hot or humid environment.
Ne placez pas l'écran LCD dans un environnement chaud ou humide.
Do not expose the LCD screen to direct sunlight or strong fluorescent light for long periods.
N'exposez pas l'écran LCD à la lumière directe du soleil ou à une forte fluorescence trop longtemps.
Do not wipe the LCD screen with caustic cleaners; this may damage the screen.
N'utilisez pas de détergent corrosif pour essuyer l'écran LCD, car cela l'endommagerait.

Do not unplug the EL3 controller while the system is operating; this may damage the device.
Veuillez ne pas retirer le contrôleur El3 lorsque le système fonctionne, cela endommagera l'équipement.

When unplugging the power supply, avoid pulling on the power cord directly. Always pull the power cord out by the connector to ensure safety. Be sure to unplug the power supply before cleaning the screen. Do not disassemble the power adapter.
Lorsque vous débranchez l'alimentation, évitez de débrancher directement l'alimentation. Assurez-vous de le retirer de la prise pour assurer la sécurité.

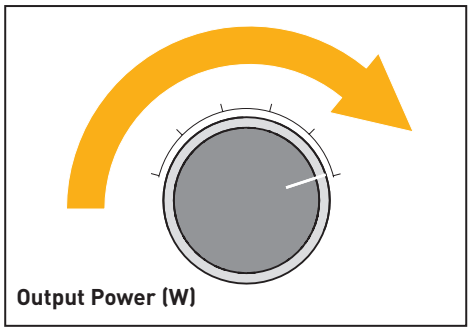
Do not use any other power adapter than the one that is provided with the EL3.
N'utilisez pas d'adaptateur secteur spécial qui ne convient pas à cette machine, sinon le contrôleur El3 pourrait être endommagé.
Do not leave the EL3 controller unsecured from wall mount brackets.
Ne laissez pas le contrôleur El3 déséquilibré.

The EL3 controller should only be disassembled by service personnel; otherwise, your warranty may be affected.
Le contrôleur El3 ne peut être démonté que par le personnel de service autorisé Hawthorne, sinon cela peut affecter votre service de garantie.

9 Installation of the Controller

9.1 Preparation

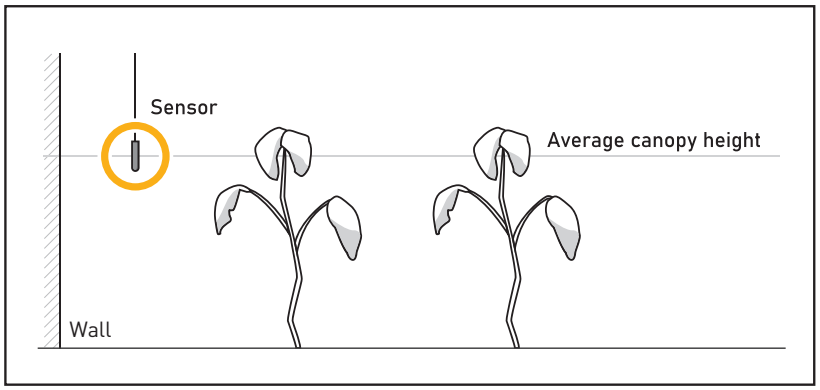
Install fixtures or ballasts according to your lighting plan. Follow the fixture or ballast manual instructions when connecting them to the controller. If the fixture has a manual dimming knob, ensure that the knobs on all fixtures are set to "EXT" (external control). Connect the fixtures to the power supply.



Each controller's two channels can control up to 256 e-Series fixtures or ballasts. These channels can control luminaires in two separate rooms or up to 512 luminaires in a single room.

⚠ **Warning!** Only connect EL3 controllers to compatible fixtures. For an up-to-date list of compatible fixtures, visit gavita.com/EL3.

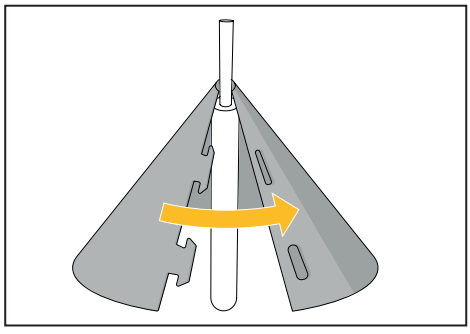
Please note that when installing the temperature sensor and controller, hang the sensor at average canopy height between plants, preferably not against a wall.



If there is a sensor for your HVAC system, install the controller near the sensor for that system. If necessary, the sensor cable can be extended by 5 meters using a standard 3.5 mm jack extension cable. Sensors with a cable length of 30 meters are also available (HGC906196).

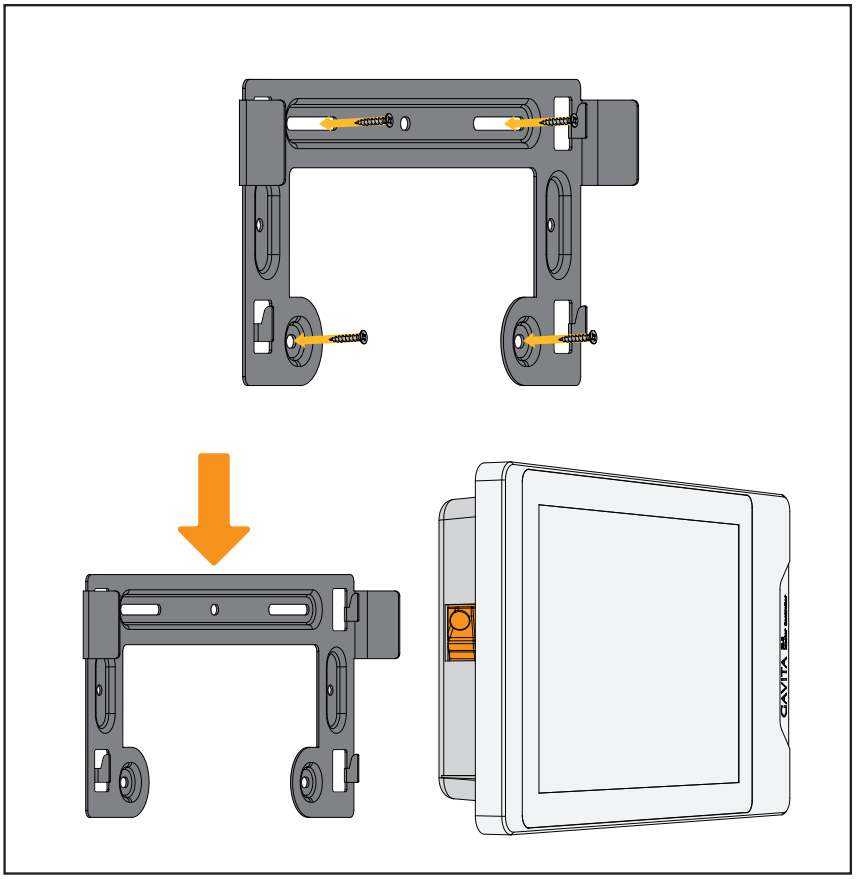
9.2 Install the controller's cover by folding it around the sensor.

Light projected directly onto the sensor can interfere with temperature measurements.

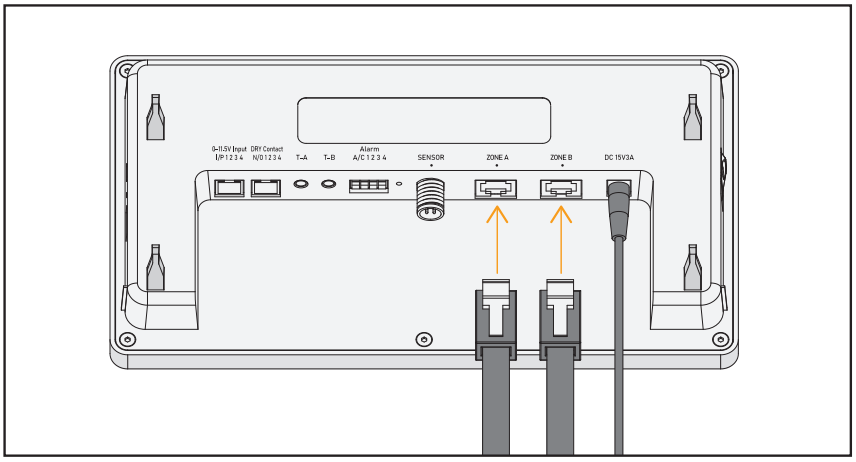


9.3 Take the controller and carefully remove the mounting plate from the body.

Use countersunk screws to secure the mounting plate to the wall

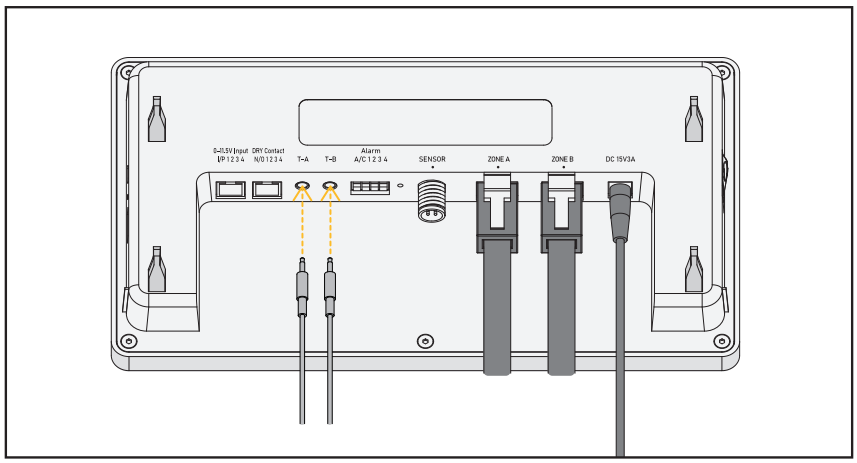


9.4 Connect the luminaire cable to the controller



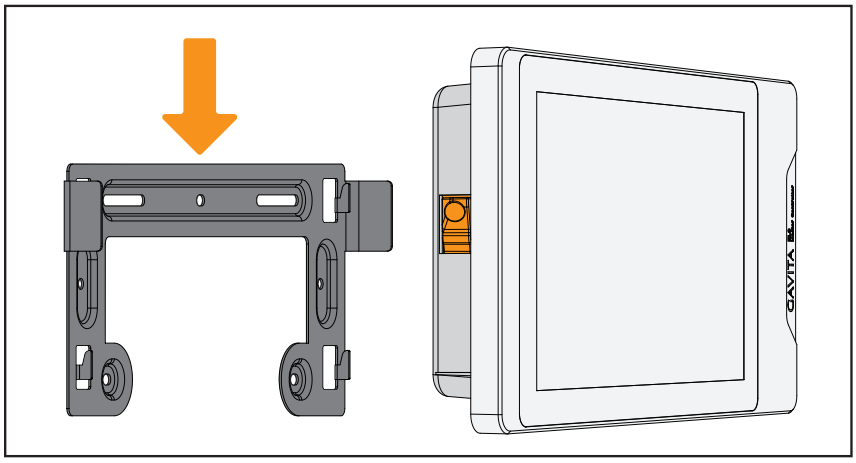
9.5 Connect the power adapter and temperature probe.

The display will light up, and you can continue setting up the controller.



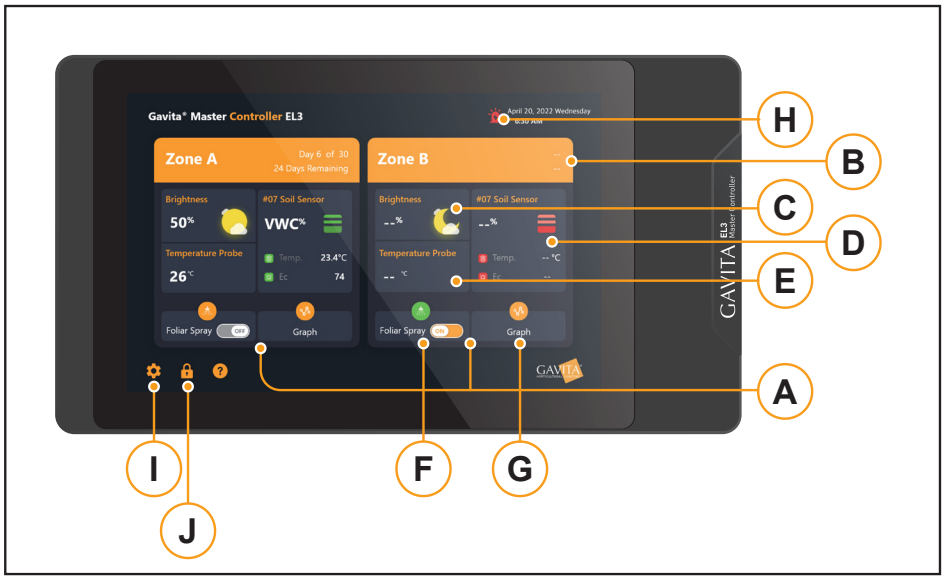
9.6 Once all primary connections have been made, reconnect the controller to the wall mount bracket.

(If using accessory output/inputs, i.e., Alarm, Sens or, External Control, or Contactors, make these connections prior to connecting controller to bracket.)



10 EL3 Controller Main Interface

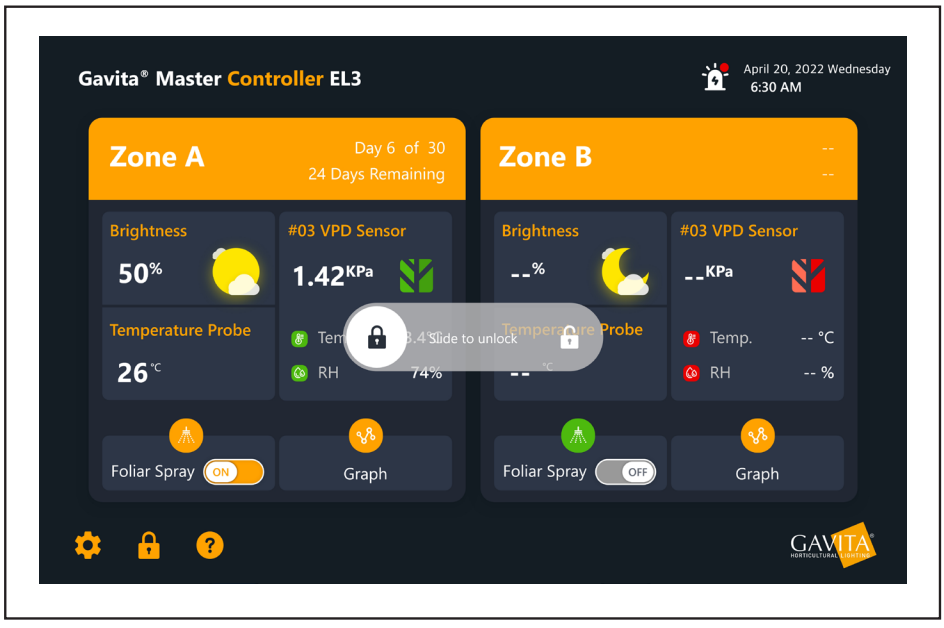
When the EL3 controller is powered on, the display will appear similar to the image below. At this point, you will see Zone A and Zone B, the current time, the Gavita logo, and the Settings button.



A. Regional overview of Zone A and Zone B
B. Zone name and lighting schedule status
C. Current zone lighting status
D. VPD or soil sensor (sold separately) data
E. Temperature probe readings
F. Foliar spray toggle switch - when turned on, if the current setting is higher, the fixtures will dim to 50%
G. Historical Data button
H. Alarm Event button
I. Device Settings button

10.1 Lock Screen

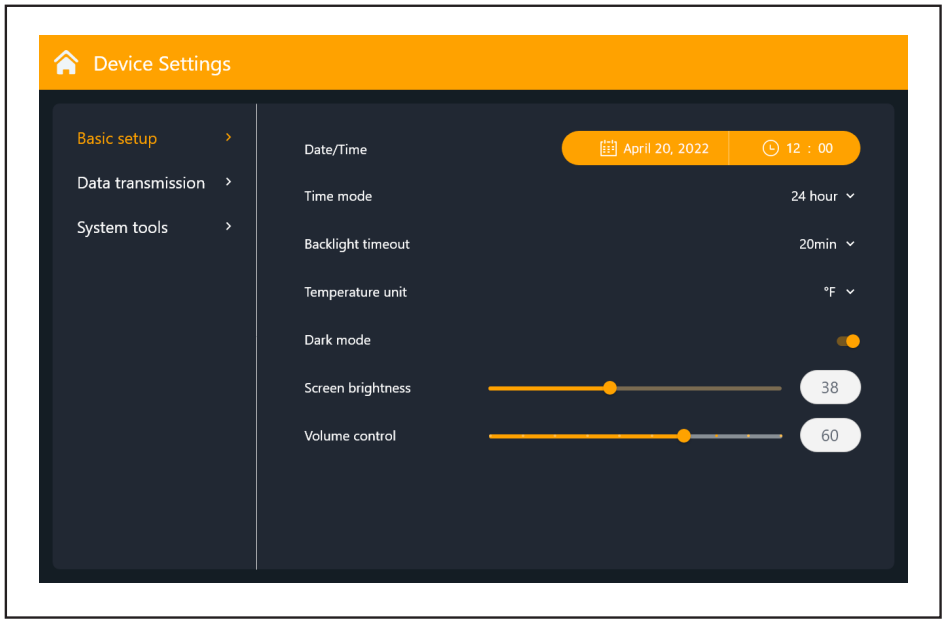
A long press on the lock button will launch the lock screen - the user cannot perform other operations once locked. Swipe to unlock the screen.



10.2 Device Settings Page

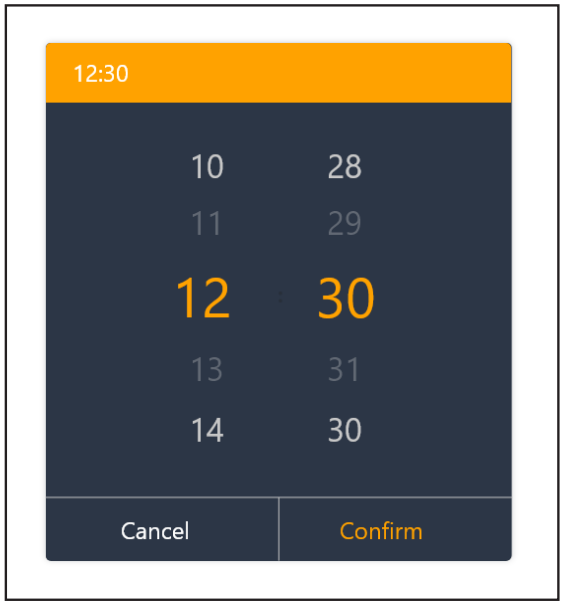
Click the “Device Settings” button in the bottom right corner to enter the setup page. The settings page contains three sub-pages: Basic Settings, Data Transfer, and System Tools.

10.3 Basic Settings



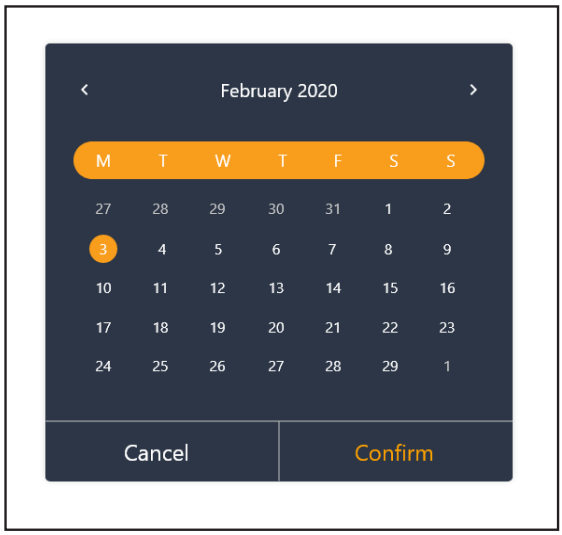
10.4 Time Setting

Time Setting: Click the time and scroll up and down in the pop-up box to select the current time. Click the “Confirm” button to save the time, or click “Cancel.”



10.5 Date Setting

Date Setting: Select the current date in the calendar pop-up box. Click the "Confirm" button to save the date, or click "Cancel."



10.6 Time Format Setting

The default time format is 12 hours; click the slider to switch to 24 hours.

10.7 Screen Hibernation

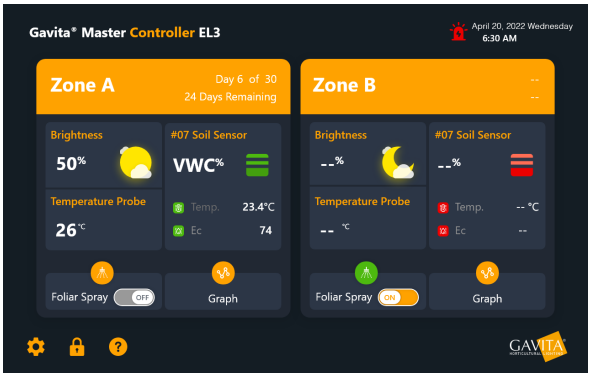
Adjust the screen's sleep time to your desired setting. Once set, the screen will switch to a low-light state when there is no user interaction within the user-determined timeframe. When tapped again, it will return to the original screen brightness.

10.8 Temperature Format Setting

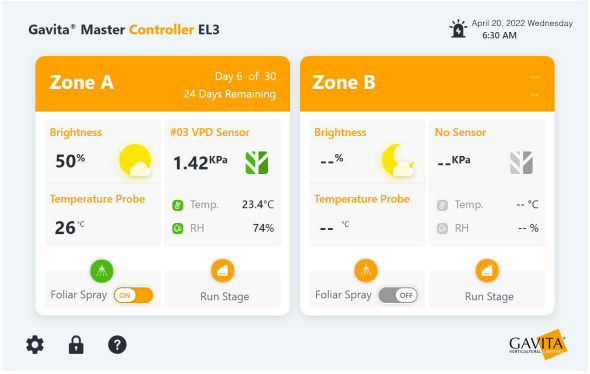
The default mode is Fahrenheit. The EL3 can display temperatures in Fahrenheit or Celsius.

10.9 Dark Mode

The default mode is dark mode. Switch between light and dark mode by sliding the button.



Dark Mode



Light Mode

10.10 Screen Brightness

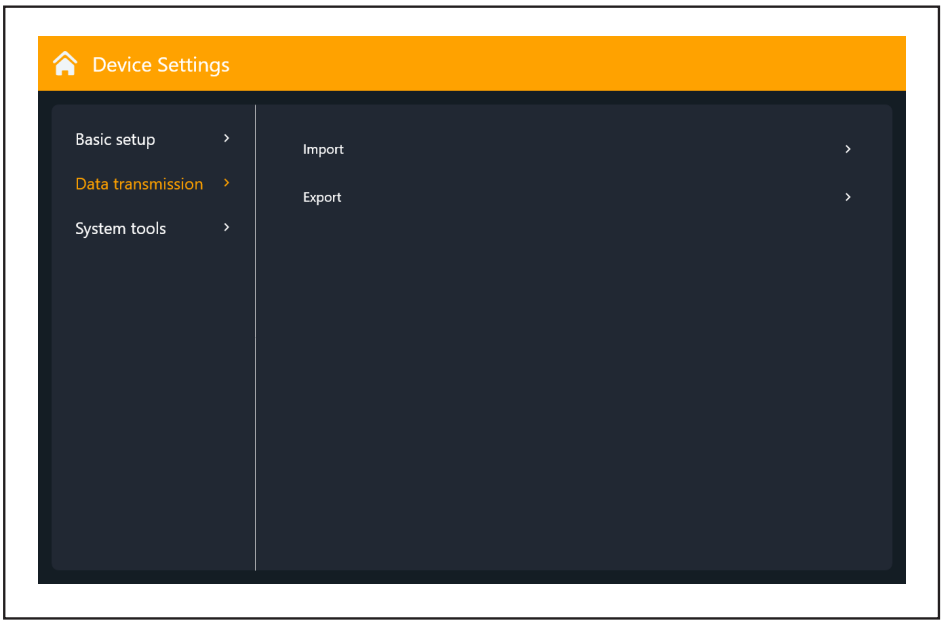
Modify the screen brightness with the slider to achieve the desired setting.

10.11 Volume Control

Modify the buzzer volume for alarm events. When positioned to the far left, the buzzer will be deactivated. Unless deactivated, the alarm will sound until the cause has been fixed.

10.12 Data Transfer

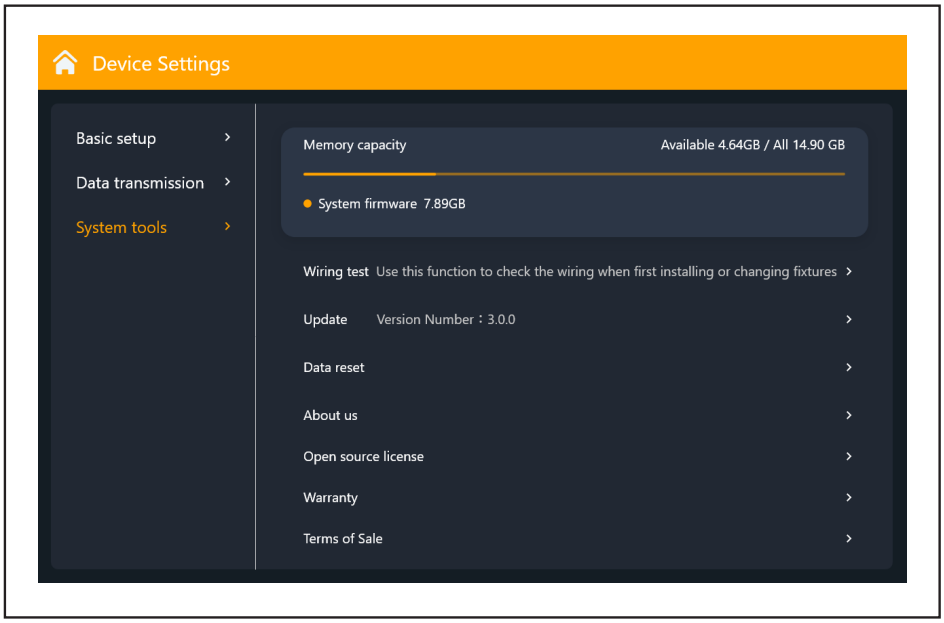
Import: Upload settings from another EL3 for quicker installation and setup when using multiple units.
Export: Plugin the USB flash drive to export zone settings and growth plans to sync with other EL3s.



11 Sytem Tools

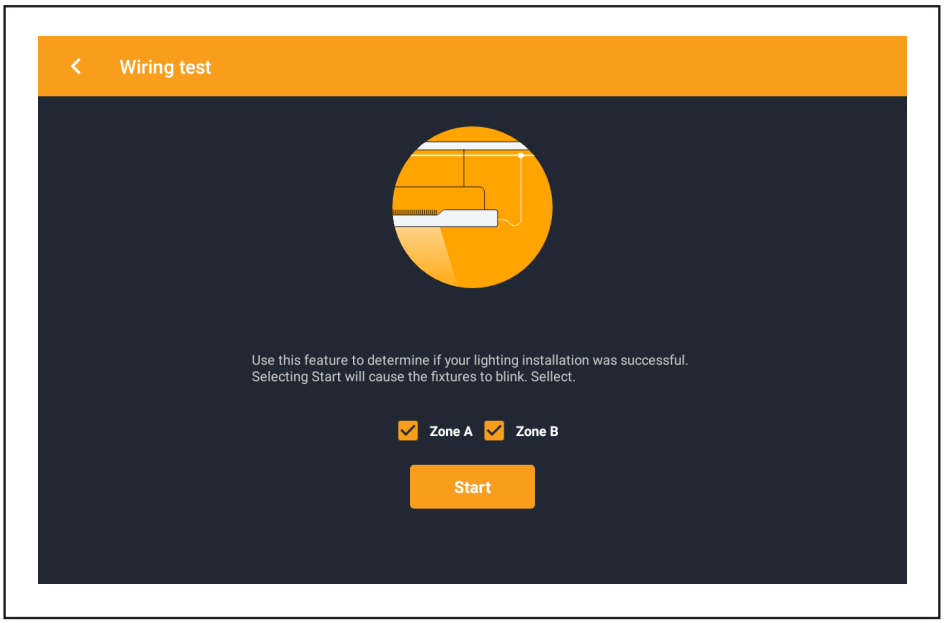
11.1 System Capacity

Displays the current total storage space and free space for the EL3.



11.2 Wiring Test

Check the status of the fixture's communication wires through the "Wiring test" function. Choose to start the test with one line or two lines at a time.

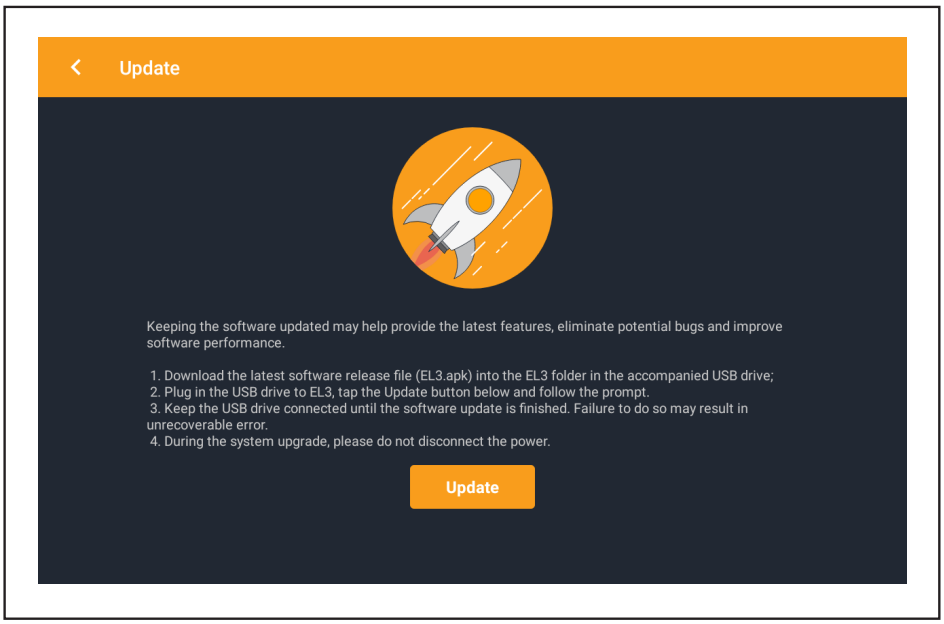


Click "Start" to begin the test. After the test starts, all the lights on the line will switch between on and off for five seconds. The user can judge whether the lights are normal or not according to the fixture behavior:

(1) The light is always on, and the front and rear lights are normal. Check the light input interface.
(2) The light is always off, and the front and rear lights are normal. Check the light input interface.
(3) The light is always off, but the light behind it is always on. Check the cable between the fixture and the previous fixture.

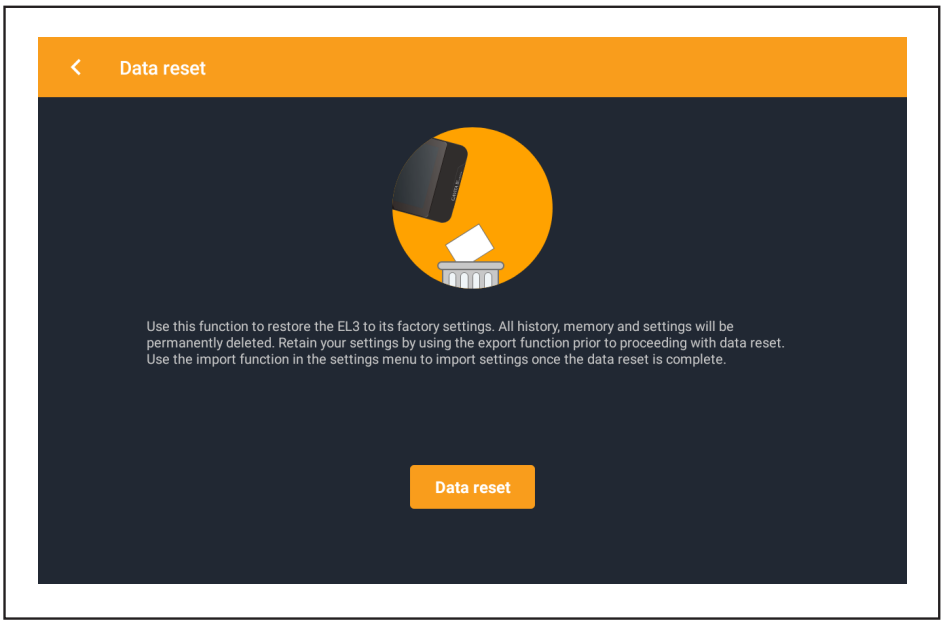
11.3 Software Updates

The user can update the EL3 to take advantage of new features and capabilities. These updates can be found on https://gavita.com/EL3. Using the included USB drive, download and place the EL3 APK of the software to be upgraded in the EL3 directory of the USB drive. Insert the USB flash drive into EL3, click "Update" to confirm the upgrade application, wait for the application to install successfully, and reboot automatically.



11.4 Data Reset

Click “Data Reset” to clear data and restore factory settings.



11.5 About Us

This screen introduces Gavita's official website and provides a QR code that leads to the EL3 landing page.

11.6 Open Source License

This screen lists the open source digital certificates used by the APK.

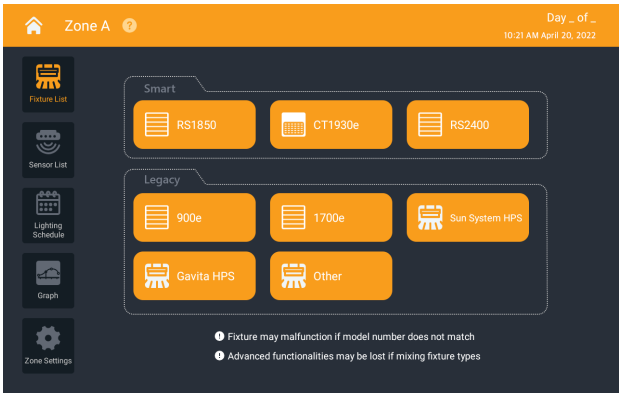
11.7 Zone Management

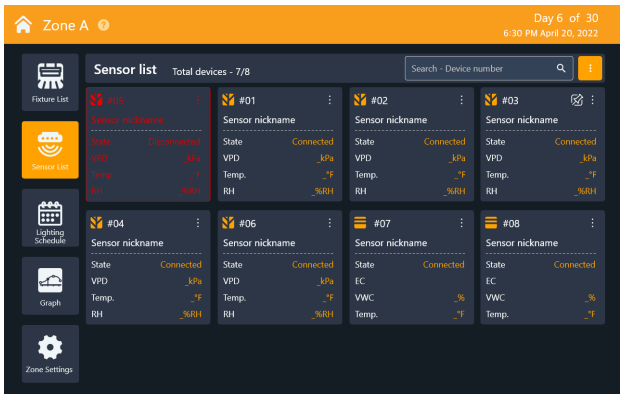
After the EL3 controller is powered on and enters the home screen, the settings and readings for Zone A and Zone B will be displayed.

Select “Zone A” or “Zone B,” and the home screen will display that zone. Fixture List, Sensor List, Growth Schedule, Historical Data, and Zone Settings are displayed on the left-hand side of the screen; the Home button at the top left will take you back to the main home screen.

11.8 Fixture List

When entering the Fixture List screen for the first time, you must select the fixture type that matches the units being used.

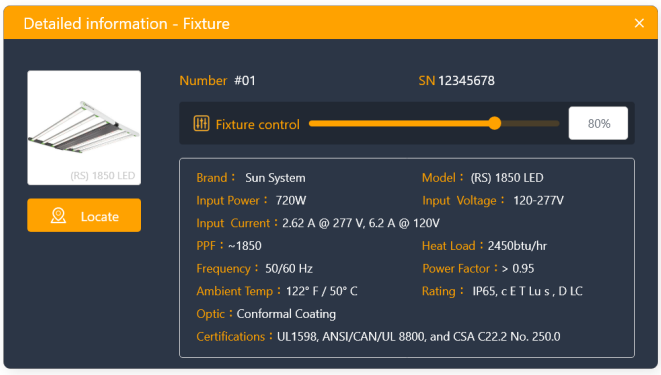


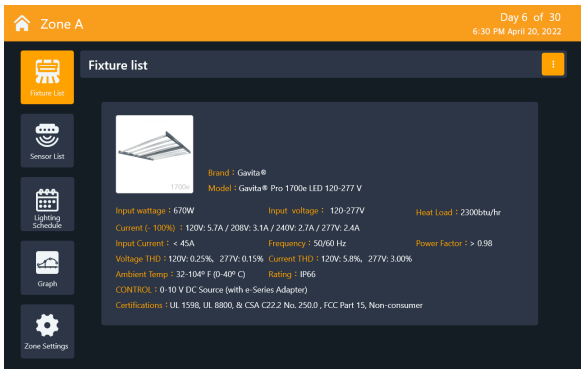


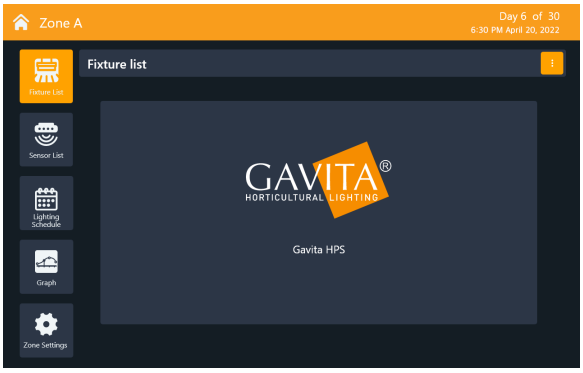
Fixture types are divided into two categories: Intelligent Fixtures: Sun System RS1850, Gavita CT1930e, Gavita 2400e Legacy Fixtures: Gavita 900e, Gavita 1700e, Sun System HPS, Gavita HPS, and other (A user-defined option for fixtures that are not Gavita or Sun System branded. Use at own risk.)

11.9 Fixture Search

This feature is for Intelligent Fixtures only. Click on the fixture to find it, this will clear the current device list, will be cleared and all fixtures in the current area will be automatically searched and displayed in the current list.





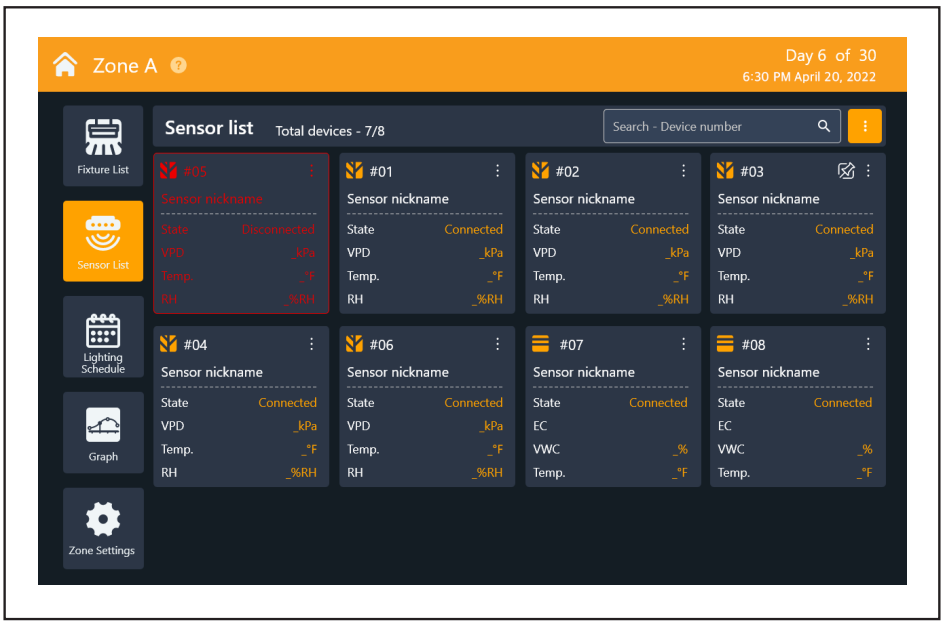


12 Sensor List

Daisy-chain up to sixteen Titan Conrtols sensors (sold separately) from the sensor port. Sensors are assigned to Zone A by default but can be set to Zone B.

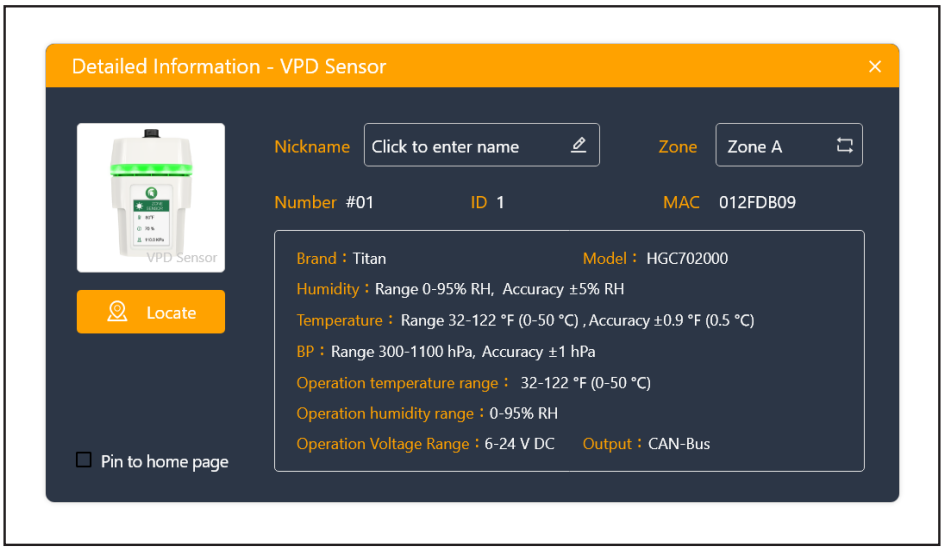
Standard data displayed by the Substrate Sensor: EC, VWC, and substrate temperature

Data displayed by the 3 in 1 - VPD Sensor: VPD, temperature, and humidity

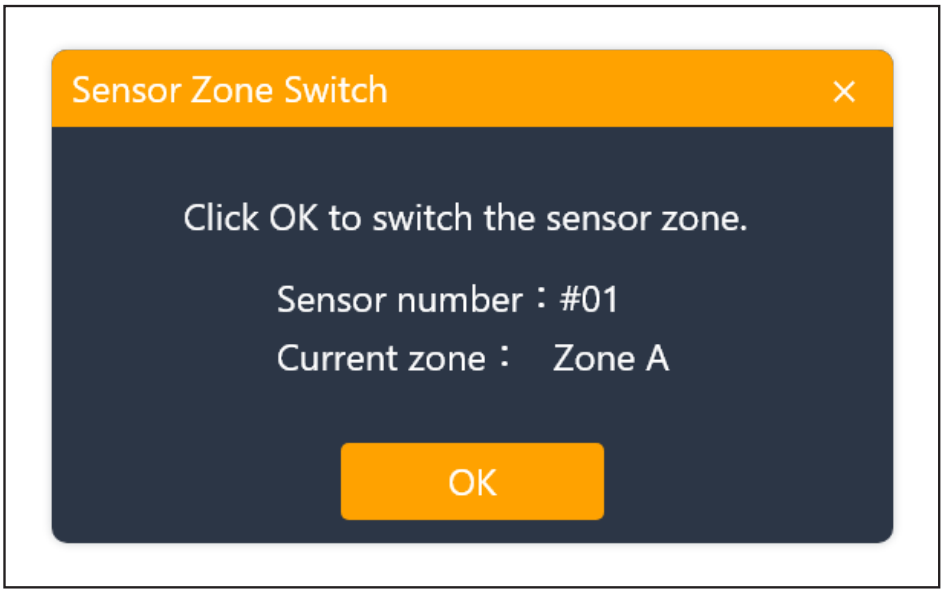


1 Click on the tab for the 3 in 1 Sensor to go to the sensor's Detailed Information page.

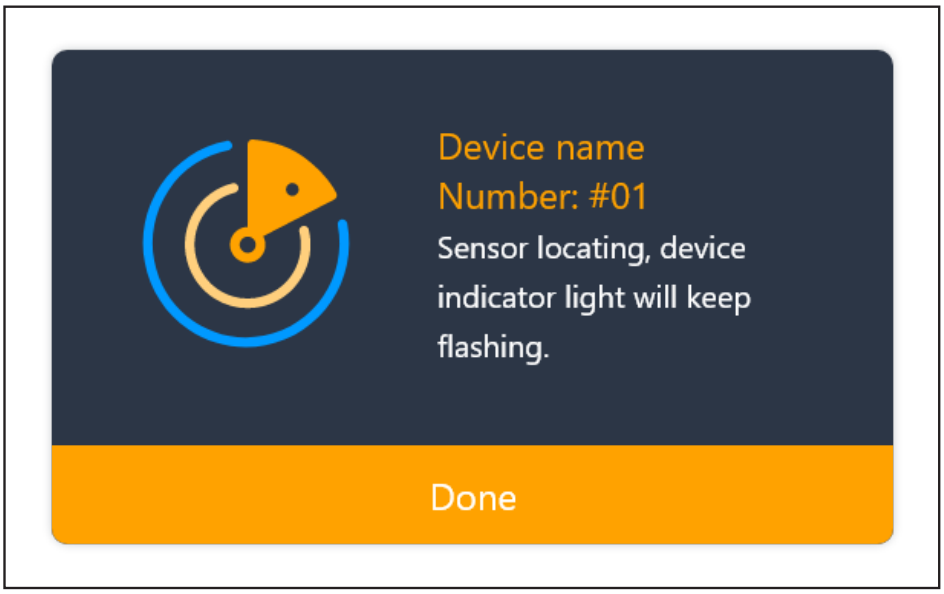
This page allows you to name the sensor, assign it to a zone, locate the sensor, and add it to the home page. Click the "Zone" button to switch the location of the sensor.



Zone Switching: When the sensor is in Zone A, click “OK,” and the sensor will switch to Zone B. When the sensor is in Zone B, click “OK,” and the sensor will switch to Zone A

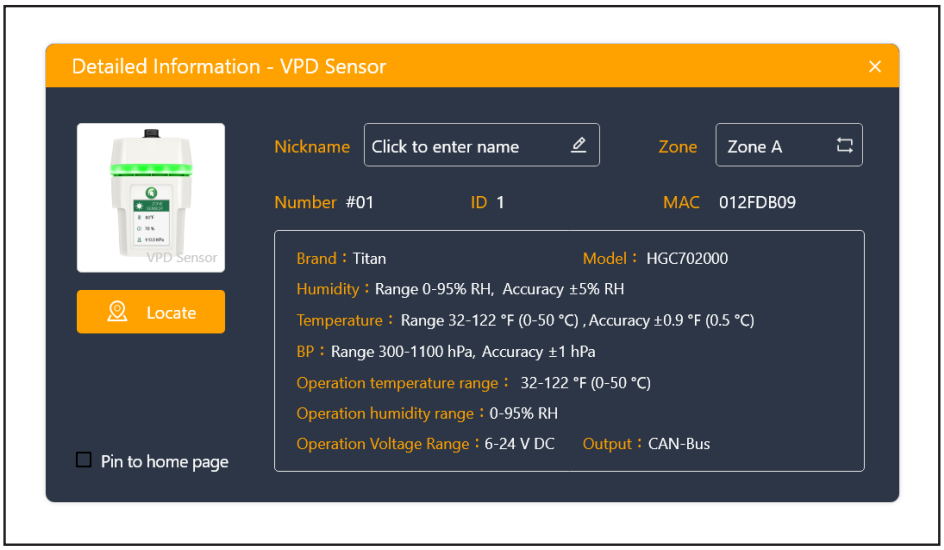


Sensor Locating: Click “OK,” and the indicator on the sensor will start flashing. Use it to confirm the physical location of the sensor.



12.1 Click on the tab for Substrate Sensors to go to the sensor details page.

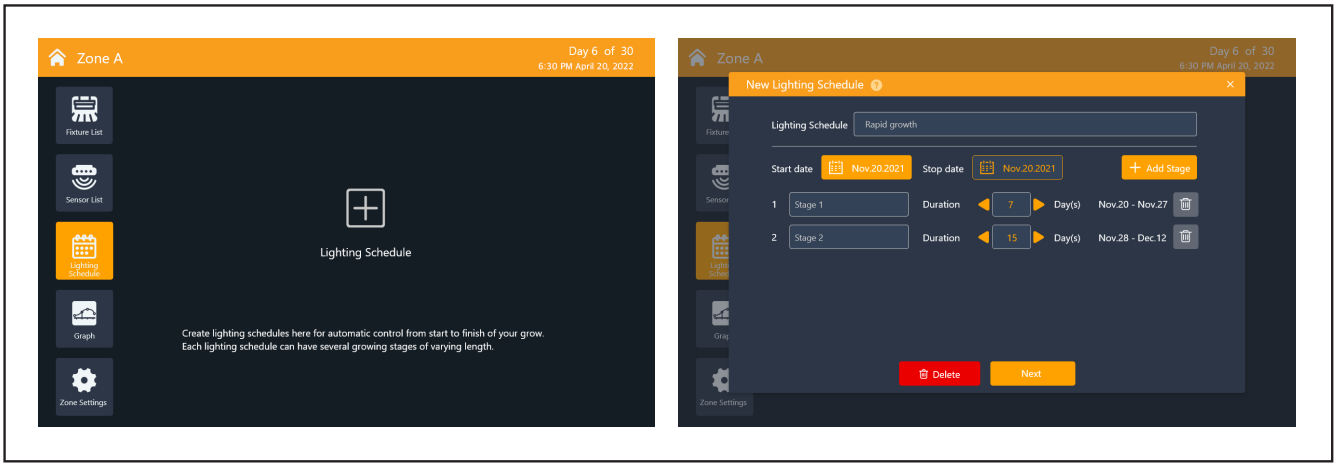
This page allows you to name the sensor, position it, locate it, switch the substrate calibration, and add it to the home page.



Substrate switching: Switch soil sensor to substrate being used - CocoPro or Stonewool.

12.2 Lighting Schedule

1) Set a new lighting schedule: After entering the strategy screen, click “Add Lighting Schedule.”
2) Set fixture strategy:
• Enter the name of the fixture strategy.
• Click the “Calendar” button to set the strategy start time.
• Select "Add Plan" on the right side of screen.
• Set the name of the schedule or delete the schedule; add additional phases for different growth cycles.
• Once the plan is created, click "Next" to go to the plan setup page.



3) Set schedule: From the schedule setting page, set brightness at different times to simulate sunrise and sunset. Time cycle settings can also be added or deleted. View or edit each schedule’s brightness and time cycle from the schedule setting homepage.

• Click on “Edit” to access the schedule settings.
• Click on “Edit Current Stage” to set the dimming profile of the selected stage.
• The current schedule can be turned on or off via Start Lighting Schedule or Stop Lighting Schedule.

12.3 Chart

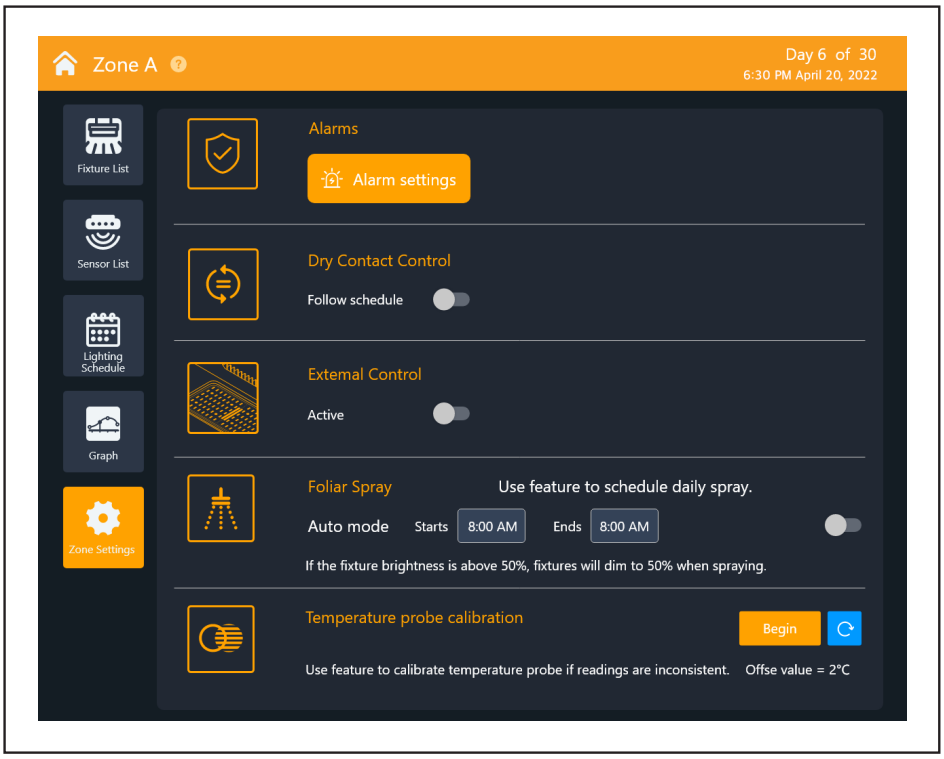
Data graphs showing current real-time date and historical data.

This page shows the device and sensor history.

- Click on the sensor list to select a temperature probe, VPD sensor, or substrate sensor. Click on the light to turn the light history display on or off.
- Browse one day, three days, or seven days of history by selecting the time above, or use the calendar to select the desired timeframe.
- Use the Export CSV function to export history to a USB flash drive. (Insert the USB flash drive to use this function.)

12.4 Zone Settings

Enter the Setting interface to view Alarm, Dry Contact Control, External Control, Foliar Spray, Temperature Sensor Calibration, and other function modules:



SETTINGS	FUNCTION		DESCRIPTION
Alarm Settings	Sensor Alarm - Temperature Probe	Low temperature alarm	Alerts when the current temperature falls below the set temperature value.
		Dimming 50%	If the temperature rises above the set temperature value, the light brightness automatically adjusts to 50% of the total power. Brightness is restored once the temperature falls 2ºC below the set value.
		Turn off lamps	If the temperature rises above the set temperature value, the light will automatically turn off and resume when the temperature falls 2°C below the set value.
		Temperature probes disconnected alarm	When this function is turned on, an alarm will be generated when the temperature sensor is disconnected.
	VDP Sensor Alarm	VPD sensor disconnect alarm	Generates an alarm when VPD sensor communication is lost.
		Low temperature	Low temperature reading from the VPD sensor generates an alarm.
		Low humidity	Low humidity reading from the VPD sensor generates an alarm.
		High temperature	Excessive temperature reading from the VPD sensor generates an alarm.
		High humidity	High humidity reading from the VPD sensor generates an alarm.
		VDP range	If the VPD value is outside the preset range, an alarm will be generated.
	Soil Sensor Alarm	Soil sensor disconnect alarm	Generates an alarm when soil sensor communication is lost.
		Low temperature	Low soil temperature reading from the soil sensor generates an alarm.
		Low VWC	Low VWC reading from the soil sensor generates an alarm.
		Low EC	Low EC reading from the soil sensor generates an alarm.
		High temperature	High soil temperature reading from the soil sensor generates an alarm.
		High VWC	High VWC reading from the soil sensor generates an alarm.
		High EC	High EC reading from the soil sensor generates an alarm.
	Lamp Alarm	Lamp disconnection alarm	Generates an alarm when lamp communication is lost.
		Lamp high temperature alarm	Enable this function, when the lamp becomes abnormal, an alarm will be automatically generated..

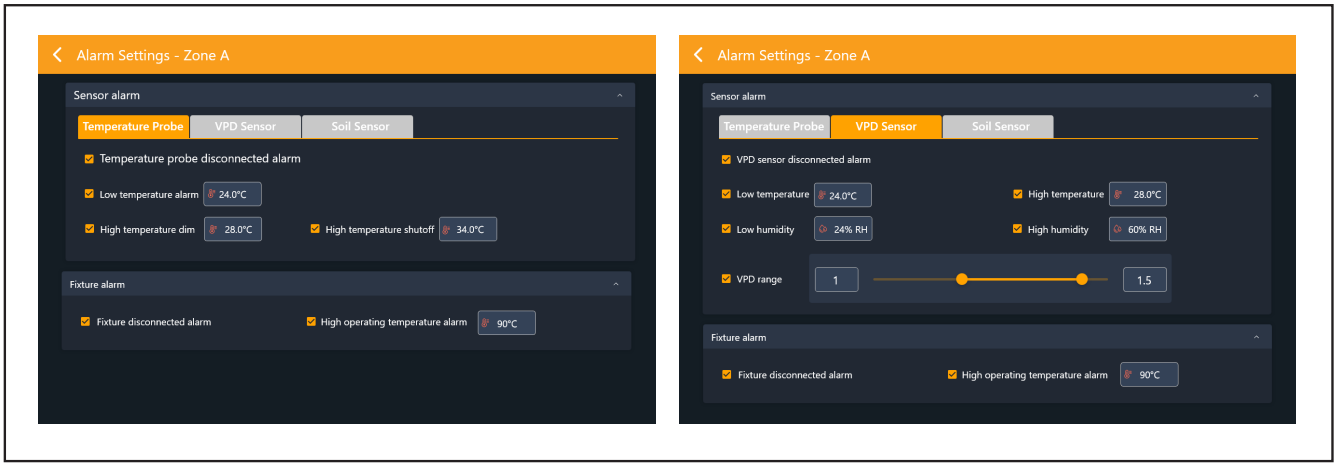
(Continue next page)

SETTINGS	FUNCTION		DESCRIPTION
Features	Dry Contact Control	Follow the lighting schedule	Positive action on the contactor in the current zone following the lighting schedule, i.e., if the lighting is on, the contactor is closed; if the lighting is off, the contactor is open.
	External Control	Activation	This depends on the external input voltage that the current contactor operates at, i.e., if the current external input voltage is >3.5V, the contactor closes, and if the current external input voltage is <3.5V, the contactor opens.
Foliar Spray	Automatic Spraying Time	Activation	Set brightness to adjust automatically during automated spray times to help protect plants from burning.
Temperature Sensor Calibration	3.5mm VPD Calibration Settings	Low temperature	Launch sensor temperature setting page.

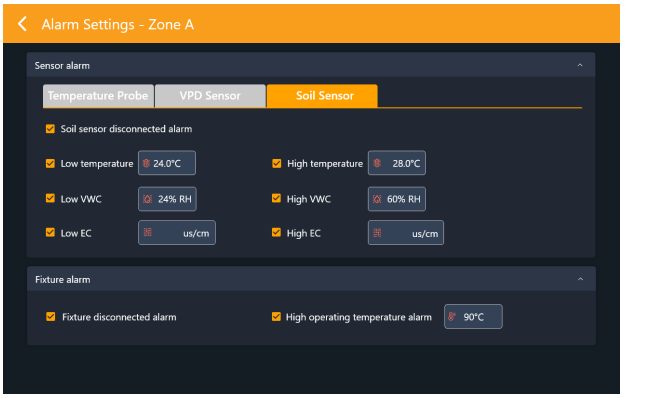
12.5 Alarm Settings Temperature Probe, Additional Detail

This page is the alarm page of EL3 and includes two sections.

1) Temperature Alarm. The temperature settings of the three temperature alarms need to follow the low temperature alarm < 50 % Brightness < Off, otherwise the setting is invalid.



Low temperature alarm: When the room temperature is lower than the value set by the user, a warning with an alert box and an alarm message will be added to the alarm log page.



• 50% Brightness: When the indoor temperature is higher than the value set by the user, it will alert the user in the form of an alert box, add the alarm information to the alarm log page, and reduce the brightness of all current lamps to 50% to allow for cooling. When the room temperature drops two degrees below the set temperature, the brightness of the lights will be restored.

• Turn off the light: When the room temperature is higher than the user-set value, it will alert the user in the form of an alert box, add the alarm information to the alarm log page, and light up all the current lights. The lights are turned on to achieve the cooling purpose. When the room temperature drops two degrees below the set temperature, the lights return to brightness.

2) Equipment Failure Alarm. Temperature sensor failure: If the sensor is inserted incorrectly or the EL3 does not detect the sensor, the user will be alerted with an alert box, and the alarm information will be added to the alarm log page.

12.6 Features

Use contactor controls to turn on one or more devices, such as alarms, fans, CO2 generators, etc.
• Follow the lighting schedule: When the lighting schedule is activated, the contactors close synchronously. In this case, an external device, such as a CO2 generator, can be turned on for photosynthetic purposes. When the strategy is switched off, the external control devices are switched off.

12.7 External Control

This section is a configuration switch for external third-party inputs. When this is turned on, the EL3 can be controlled by the external input. That is, when the third-party input voltage is in effect, the lighting schedule is disabled.

12.8 Foliar Spray

This section allows you to sync brightness reduction with foliar feeding applications. Note: This function will not control plant watering devices. When this function is turned on, there will be a status indication on the main page.

13 Maintenance Services

During the warranty period, Hawthorne will repair or replace parts at no charge to the user if the product fails to function properly due to its own quality failure. This warranty policy does not apply to products sold by Hawthorne, such as consumables, accessories, cables, etc. For specific compliance with this policy, please refer to the appropriate datasheet or contact Hawthorne.

13.1 Shelf Life

Hawthorne grants a three-year limited warranty on this product, and the warranty start date is the date of sale by default. During the warranty period, we provide free repair for product quality problems. Beyond the warranty period, or if the damage is caused by accidental factors or improper use, a repair fee will be charged.

13.2 Maintenance

Once the product is returned, Hawthorne will determine the cause of the failure. If the repair is determined to be at no charge, Hawthorne will repair the defective product within five business days after the user confirms the repair. Hawthorne will then refund the repair fee to the customer upon receipt of the repair. If the user confirms no repair, Hawthorne will return the defective product after receiving confirmation from the user.

Note: If the product has been disassembled or repaired by someone other than Hawthorne or its authorized personnel, it will not be repaired. Hawthorne is not responsible for damage to equipment caused by the purchase of third-party products without our permission

14 Troubleshooting

Q: EL3 does not start

A: 1. Please check if the power adapter is working correctly.
2. Please make sure the 110~220V AC power supply is normal.

Q: The user has set and activated the lighting schedule correctly, but the light does not turn on

A: 1. Check whether the temperature sensor in the current zone is plugged in.
2. Third-party input is enabled.

Q: The third-party input is turned on, the light does not light up

A: Check if the third-party input voltage is on and the 0-11.5V INPUT connector is plugged in.

Q: Current system time error

A: Please configure the date and time of the system through the settings when you turn on the system for the first time.

15 LIMITED WARRANTY:

When purchased from an authorized Hawthorne dealer, this product is covered by a LIMITED WARRANTY, available at hawthornegc.com/warranties. You can also obtain the Terms of Sale and Limited Warranty by calling Hawthorne toll-free at: 1-888-478-6544 or writing Hawthorne at: Hawthorne Hydroponics LLC, 3204 NW 38th Circle, Vancouver, WA 98660, Attn: Customer Service.

Manufactured for Hawthorne Hydroponics LLC,
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