0-10V Lighting Controller

USER MANUAL

NANOLUX
www.nccstech.com
www.nanoluxtech.com

1. Product description

The Lighting Controller is designed to control two lighting groups in a greenhouse. You can control up to 60 lights per group. The controller uses 0-10V adjustable DC voltage to control ballast output power and switch on/off the ballast. The controller operates on a 24-hour time cycle. The controller also has the ability to simulate sunrise and sunset cycle from 10-60 minutes. Each of the two-lighting group channels has a room overheat protection function that can be set as needed. You can use the LCD touchscreen to easily view and modify the current settings for each channel. The screen will automatically turn off after 45 seconds of no use to protect plants from interruption of the light cycle. Moreover, the Lighting Controller is portable, easily operated and installed.

2. Technical specifications

Controller dimensions	107.0*73.6*30.5mm
Weight	0.5KG
Input	5VDC(120mA Min.)
Maximum control voltage	11.5V
Maximum cable length per group	180m
Maximum number of ballasts per group	60pcs
Total number of ballasts per controller	120pcs

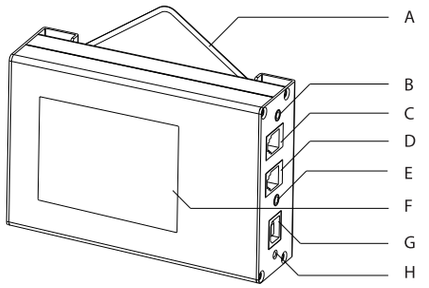
3. Environment

Temperature range	70°F-120°F
Operating humidity	<90%

4. Components

A. Lighting Controller
B. Temperature sensor with cable(5m x2)
C. Data cable
D. Telephone wire(3m x2)
E. 5VDC(120mA Min.)
F. 2 Countersunk Screws
2 Plugs

5. Connections



A. Hanger
B. 2.5 mm jack - group1 temperature sensor(group1 T1)
C. RJ11(4P4C) - group1 port for controlling up to 60 ballasts
D. RJ11(4P4C) - group2 port for controlling up to 60 ballasts
E. 2.5 mm jack - group2 temperature sensor(group1 T2)
F. LCD Display
G. 5V DC Input
H. Power Indicator

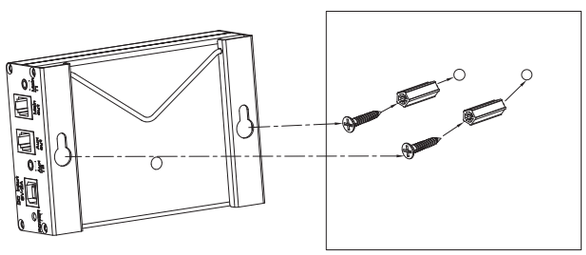
6. Placing the controller

Method 1: fixed mounting installation

Only mount the product on a solid surface. Measure the holes for mounting. Use the φ6 bit to drill two holes on the wall; then put a screw expansion tube(M4) into installation holes. Next, screw the two screws (M4*20) with a screwdriver and screws need to be away from the wall about 16-18mm. Slide the controller down over the two screws.

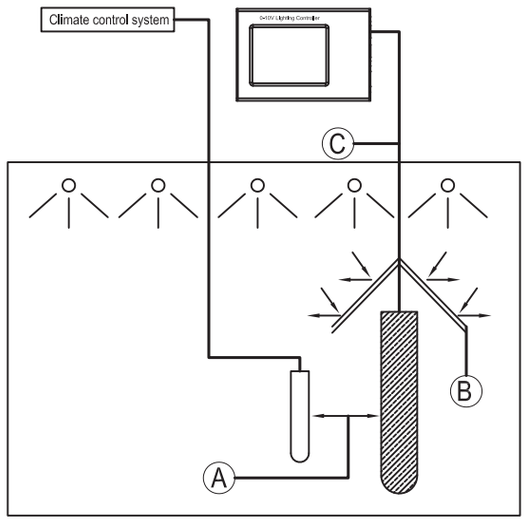
Method 2: wall-mounted installation

Ensure all wires of are secure. Install a nail/screw and then insert the mounting hook of the controller over the nail/screw.



7. Installing and connecting the temperature sensor

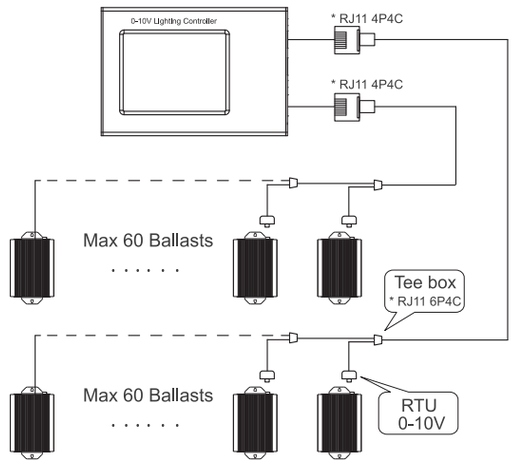
- The controller has two temperature sensors and uses these sensors to monitor the temperature in the grow room. In order to keep safe, the controller will automatically dim or shut down the lights if the climate room temperature becomes too high.
- Keep the sensor out of direct light so the measured temperature is accurate.
- Insert the plug of temperature sensor for group 1 into T1 or group 2 into T2.
- The temperature measured by the sensor will be displayed on the LCD.
- connecting the controller to the ballasts.



- Place the temperature sensor as close as possible to the sensor of the existing climate control system, so both sensors will measure the same temperature (A).
- Keep the sensor out of direct light in order to avoid disrupting the temperature measurement; if necessary, please use a hood (B)
- A template for a hood is included on the last page.
- Insert the plug of the temperature sensor into the T1 or T2 port (C).

8. Connecting the controller to the ballasts

1. Plug RJ11 4p4c end of one of the controller cable into the RJ11 4P4C one of two port of the controller.
2. Plug the RJ11 6P4C another end of the controller cable into the 1st port of Tee Box.
3. Plug 0-10V RTU into the 2nd port of Tee Box. Connecting another Tee Box with the telephone line that is terminated with RJ11 6P4C plug on both end.

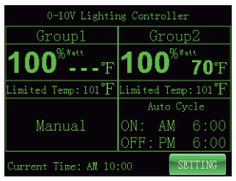


9. Operating instructions for Lighting Controller display interface

Note: Touch Screen

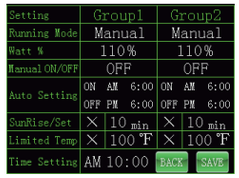
Lighting Controller matching NEW touch screen allows you for using finger and stylus to select the function.

1. Booting :
Wait for 2 seconds or touch the screen and the monitoring interface will turn on.



2. Monitoring :
Only for monitoring and parameters cannot be set.

A. Lighting Controller
B. Group 1 and Group 2
C. The current output watts (0 or 50~115%)
Display will show real-time temperature (in ° F), updated every 2 seconds/.
When the sensor is pulled out, it will display "--- ° F ".
D. The Limited Temp (can be set)
E. Manual/Auto Cycle with time setting
F. Current Time
G. The button for settings – SETTING

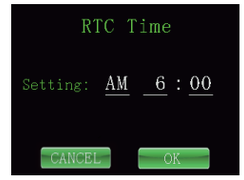


3. Setting :
If in setting mode and there is no screen use for 60 seconds the display will automatically return to the monitoring mode.

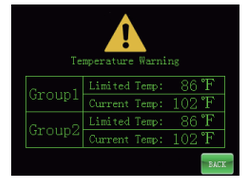
A. Setting: Group 1 and Group 2
B. Running Mode: Auto or Manual
Auto: Turn on or off（Auto on、Auto off）
Manual: Manual switch（ON/OFF）
C. Watt %: 50%~115%
D. Set Manual switch (ON/OFF): Only select the manual mode that will be in accordance with this setting
Set Auto switch (Auto ON/OFF) , turn to Group1 Timing Time Set or Group 2 Timing Time Set.
E. Sunrise/set: '×' Disable or '√' enable; Time setting 10~60min
F. Limited Temp: Temperature protection '×' Disable or '√' enable; Protection temperature setting 70~120°F（21~49℃）
G. Time Setting: Current time setting, turn to RTC time setting interface
H. Back: Cancel the parameter settings and turn back to the Monitoring interface
I. Save: Save the set parameters and turn back to the Monitoring interface

4. Group1 Time setting:

5. Group2 Time setting:



6. RTC Time setting:



7. Temperature warning:

If the actual temperature reaches one of the groups set temperature protection values, the temperature protection is enabled and will turn to the alarm interface. Press the BACK button to return to the monitoring interface, stay in the monitoring interface for 10 seconds, and then automatically switch to the alarm interface until the temperature alarm releases.

10. Maintance

- ⚠ Please do not open the controller, because there is no serviceable parts in it. If you open the controller, it will be void the warranty.
- ⚠ Do not use detergents, acids or solvents to clean the controller screen.
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- ⚠ If your controller stops working, please contact your store where you purchased the product.

11. Disposal

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12. Warranty

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For service return the product to your store where you purchase the product with the original sales receipt.

Designed by NANOLUX in California
Made in China

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C

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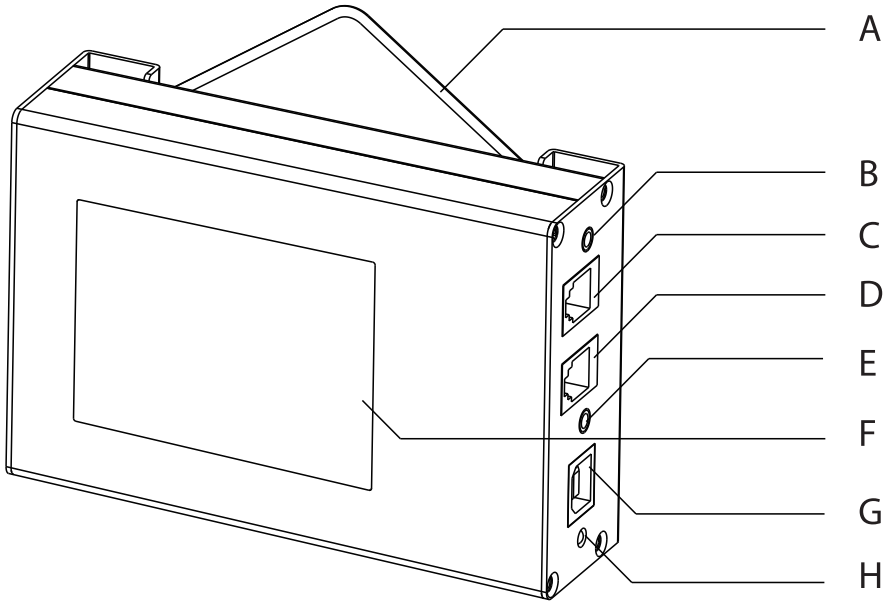

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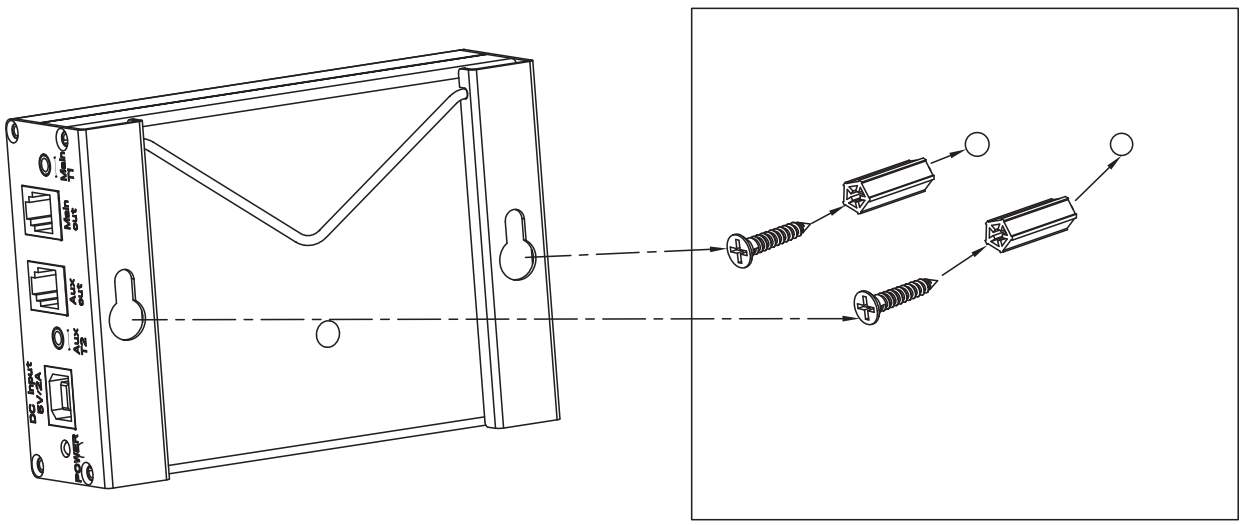

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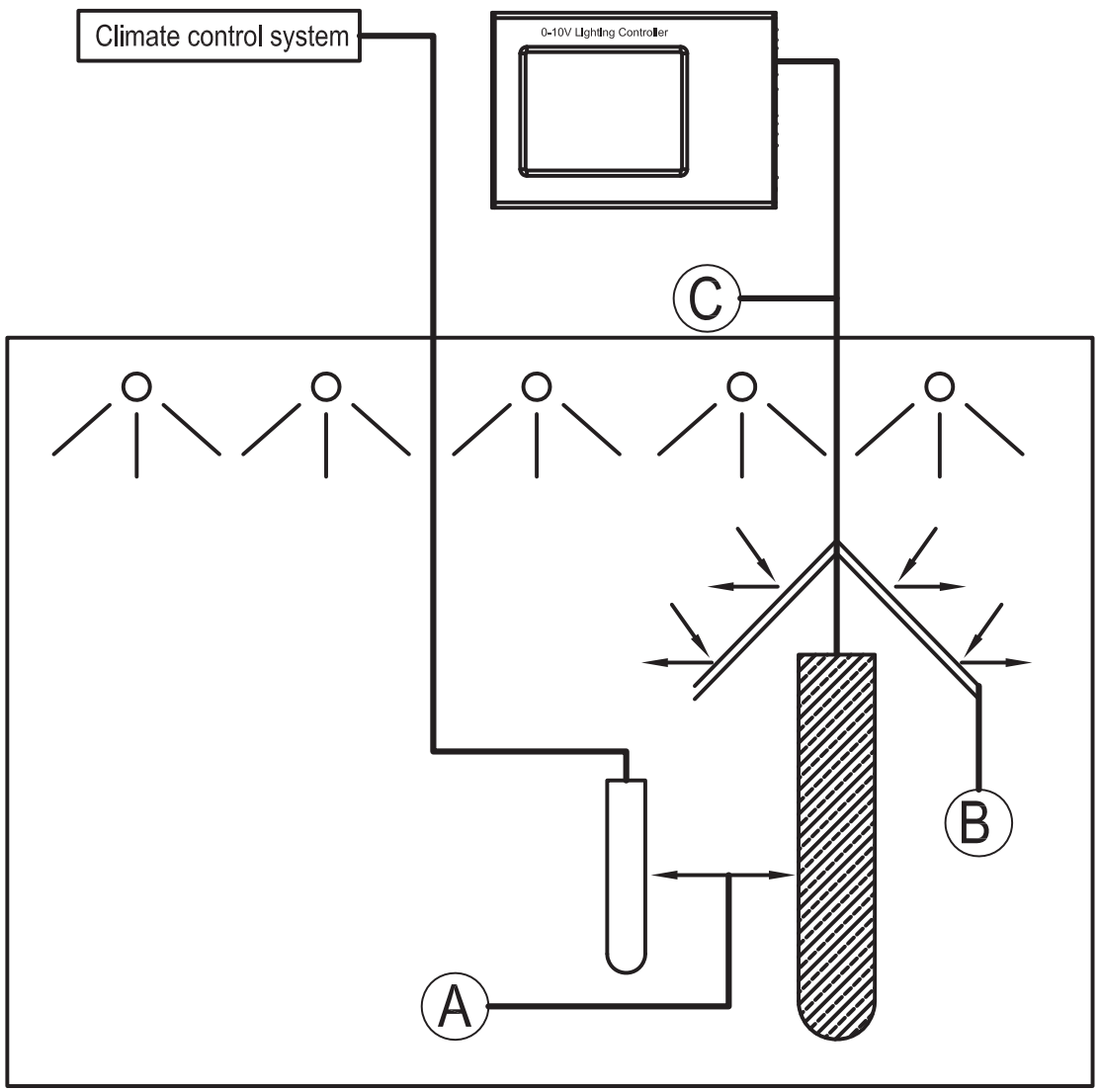

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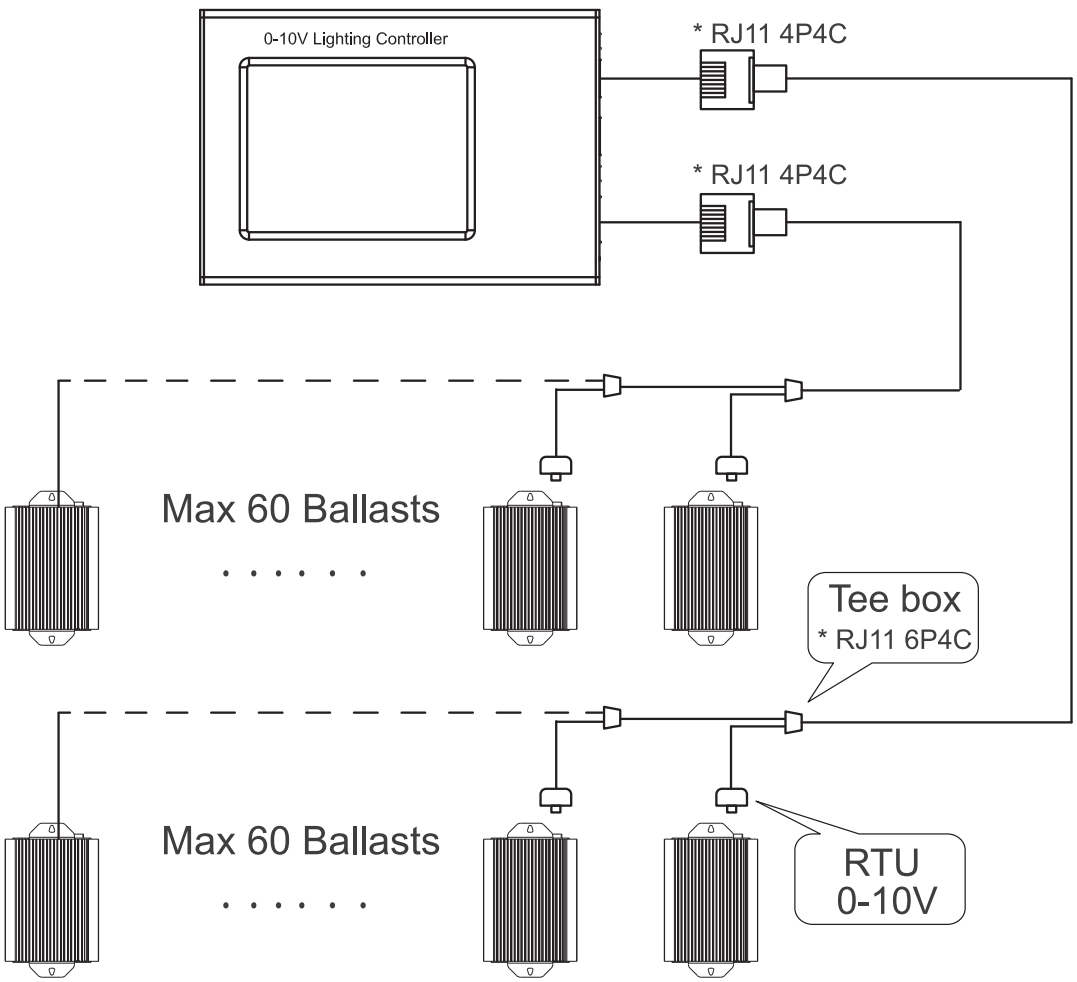

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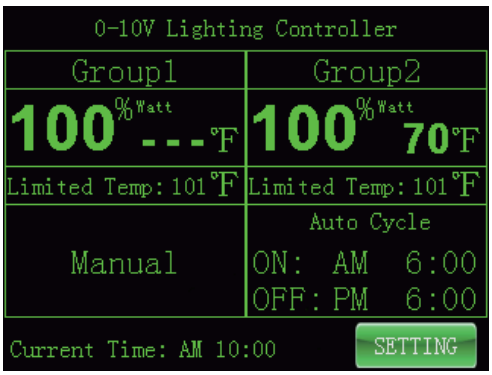

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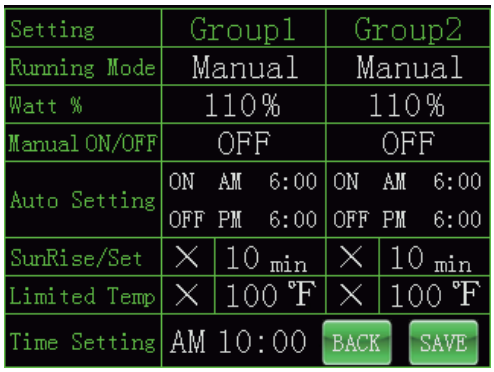

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E. Sunrise/set: '×' Disable or '√' enable; Time setting 10~60min

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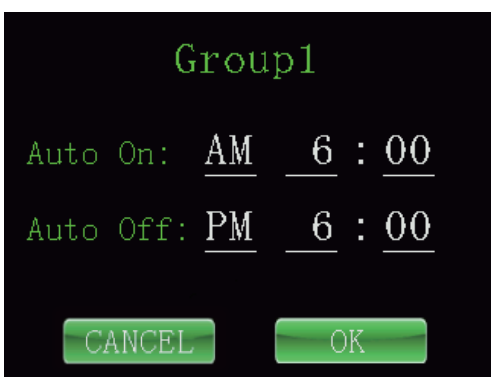
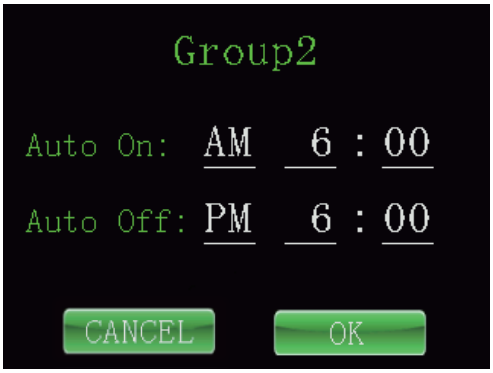
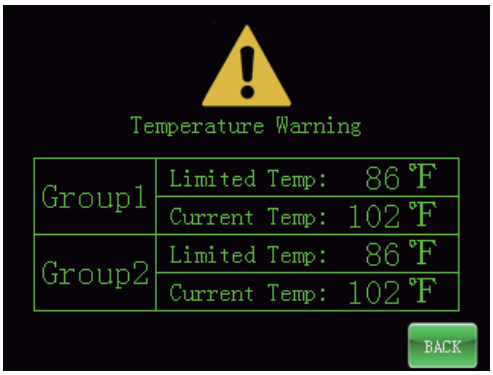


4. Group1 Time setting:



5. Group2 Time setting:

6. RTC Time setting:



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