

# INTELLIGENT CONTROL SYSTEM

## Plant Field Intelligent Control System and Specifications

**Overview:** The Plant Field control system is simple plant lighting control technology based on RS485 bus communication protocol for plant factories. The system is composed of a main controller and a RS485 transfer board. It is equipped with a device our company developed to detect the parameters of the environment such as illumination, temperature, and humidity and provides data support throughout the plant growth process. The switch and dimming control are monitored by the RS485 transfer board. The system also has a built-in Bluetooth function that supports short-distance wireless control.



## SPECIFICATION

|                       |                               |  |   |
|-----------------------|-------------------------------|--|---|
| ELECTRICAL PARAMETERS | POWERED BY                    | DC 5V-12V ≤ 0.5A @ DC 12V                                      |   |
|                       | WORKING CURRENT               | ISM frequency band 2.4-2.5GHz                                  |   |
|                       | WIRELESS FREQUENCY            | ISM frequency band 2.4-2.5GHz                                  |   |
|                       | INDOOR COMMUNICATION DISTANCE | 164ft (50m)  |   |
|                       | WIRELESS TRANSMIT POWER       | +4dBm (Maximum)  |   |
|                       | RECEIVING SENSITIVITY         | -93dBm @ 1Mbps   |   |
|                       | NETWORK TOPOLOGY              | Rs485 bus protocol to achieve networking                       |   |
| INTERFACE DEFINITION  | POWER                         | DC-005 power socket  | Power DC inet   |
|                       | PJ-313*2                      | Audio port   | For connection of thermometer                         |
|                       | RJ11*2                        | Rs485 communication interface                                  | Hygrometer 485 connection for controller              |
| STRUCTURAL PARAMETERS | KF141*2                       | Spring type terminal   | For controller and adapter board for external control |
|                       | SIZE                          | L8.1 Inches X W5.3 Inches X H1.7 Inches (205mm X 135mm X 45mm) |   |
| OTHER                 | STORAGE TEMP.                 | -13 °F-158 °F (-25 °C-70 °C)                                   |   |
|                       | RELATIVE HUMIDITY             | < 95 % (No condensation)                                       |   |
|                       | OPERATING TEMP.               | -40 °F-185 °F (-40 °C-85 °C)                                   |   |

All specifications are subject to change. All spec values are typical.

## MODEL ORDERING GUIDE

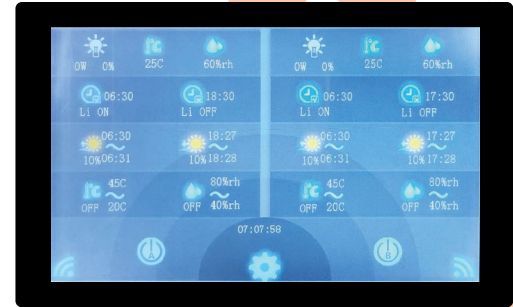
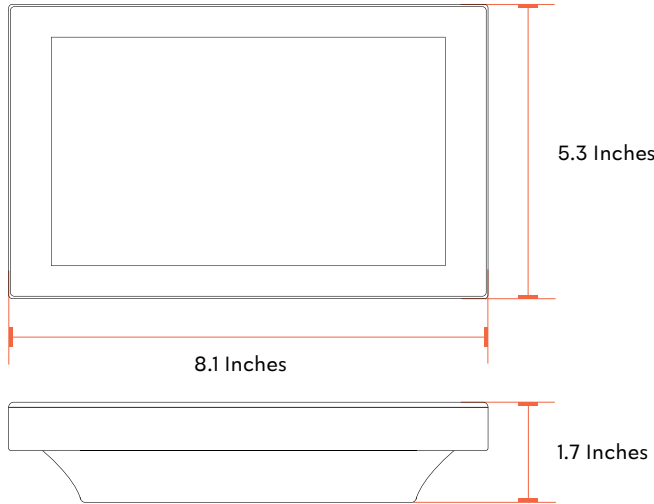
| SERIES CODE                                     | DUAL OUTPUT |
|---|-------------|
| <b>CHF07=</b><br>Grow<br>Light Control<br>Panel | 0-10V/1-10V |

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### DIMENSIONS



### THERMOMETER

The thermometer and hygrometer use standard audio line interfaces for power supply and data output. They provide real-time temperature and humidity data for the main controller of the environment.

### WARNING

1. The installation should be performed by qualified electricians or technicians.
2. Before conducting any installation, maintenance, or removal, the luminaires should be powered off and cooled down.
3. Do not touch the fixture while it is turned on.
4. If there are any issues with the fixture, do not power off and attempt to repair it unless you are a qualified technician, electrician, or customer service member.

### WARRANTY

INTELLIGENT CONTROL SYSTEM product is covered by a **5 year** limited warranty. CALIVE grow light warrants to the original purchaser that this product is free from defects in materials and workmanship for the period of 5 years from date of purchase. To obtain warranty service please contact your local distributor or sales rep for further instruction.

CALIVE LLC reserves the right to update all product data sheets at any time. Consult CALIVE marketing specialists for publication updates at [hello@calivellc.com](mailto:hello@calivellc.com)

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|                       |                   |  |   |
|-----------------------|-------------------|--|---|
| ELECTRICAL PARAMETERS | POWERED SUPPLY    | DC 3.3V±0.2V   |   |
|                       | WORKING CURRENT   | ≤ 10 mA  |   |
| INTERFACE DEFINITION  | PJ-313            | Temperature and humidity power input<br>temperature and humidity data output | DC 3.3V input<br>temperature and humidity data output |
| STRUCTURAL PARAMETERS | SIZE              | 0.2 Inches X 0.4 Inches X 0.2 Inches<br>(5mm X 9mm X 4mm)                    | Output  |
| OTHER                 | OPERATING TEMP.   | -13 °F–158 °F<br>(-25 °C–70 °C)  |   |
|                       | STORAGE TEMP.     | -40 °F–185 °F<br>(-40 °C–85 °C)  |   |
|                       | RELATIVE HUMIDITY | <95%<br>(no condensation)  |   |