Smart Single Lighting Controller

I. INTRODUCE

CH-SLC910 Smart Single Lighting Controller is an important part of Intelligent Lighting Management system,by adopting PWM/0-10V dimming technology, it mainly realizes the switch On/Off of lamps and dimming 0%~100%.

It adopts the latest LORA Communication Technology and Self-Organizing Network Communication Technology, which has advantages of Free Wiring, Low Power Consumption, Long Transmission Distance and other advantages to work with our Two-Way Communication CC(Centralized Controller) which is independently developed by our company, which can remote On/Off, 0%~100% Dimming, Electric Energy/Data acquisition, Fault Detect,etc.

II. FUNCTION INTRODUCE

1. Control Function

1.1: SCL(Smart Lighting Controller) will control the Power Supply Circuit On&Off and the Illumination Changing of the lamp through LoRa Wireless Communication Channel under the management of the Intelligent CC(Centralized Controller) and other Management Devices, with range of 0%~100%.

1.2: Automatically control the Power Supply Circuit On&Off and the Illumination Changing of the lamp according to the Schedule(Timetable), with range of 0% to 100%.

2. Communication Function

2.1. Uplink **LoRa** Communication, Communication Distance between **LoRa** Single Lighting Controller and Intelligent Lighting Centralized Controller is 500m to 800m, Mesh Networking

3. Fault Alarm Function

The Single Lamp Smart Controller(SLC) can Automatically report the Fault Information to the Centralized Controller(CC) and other Management Equipment;the Intelligent Lighting CC and other Management Equipment will continuously inquire the status of the Smart Single Lighting Controller.

4. Illuminance Sensing Function

The Smart SLC can calculate the average illuminance of the surrounding environment, can be intelligently switching On&Off the Lamps when disconnected from the Managements System.

5. Power Acquisition Function

Electric Energy Parameter Collection, can record the lamp's Electricity Consumption.

6. The Enclosure

Follow the International Standard NEMA Interface Housing, Compact and Easy to Install.

III. Parameters

1. Electrical Parameters

No.		Parameters
Input Voltage		AC 90V-264V
Working frequency		50Hz/60Hz
Power Consumption		< 1W
Relay capacity		8A/250V
Relay Life		Mechanical Life > 5,000,000 times; Electrical Life (Resistant Load): 100,000 times
Relay Impulse Current		>750A
Insulation withstand Voltage	L/N-PE	1.5KV
	L/N-485/DIM	3.5KV
（L-N L-PE N-PE）		±4KV
Static Electricity		±8KV
Measuring accuracy		±5%
Dimming End Capability		20mA
Dimming Method		1-10V
The Power of Lamp		<400W(2A、220V) or 200W(1A、110V)

2. Environmental Parameters

| No.	Parameters
Normal Operating Temperature Range	-25℃～+60℃
Limit Operating Temperature Range	-40℃~+80℃
Storage and Transportation Temperature	-45℃～+80℃
Storage Humidity	≤85%

3. Performance Parameters
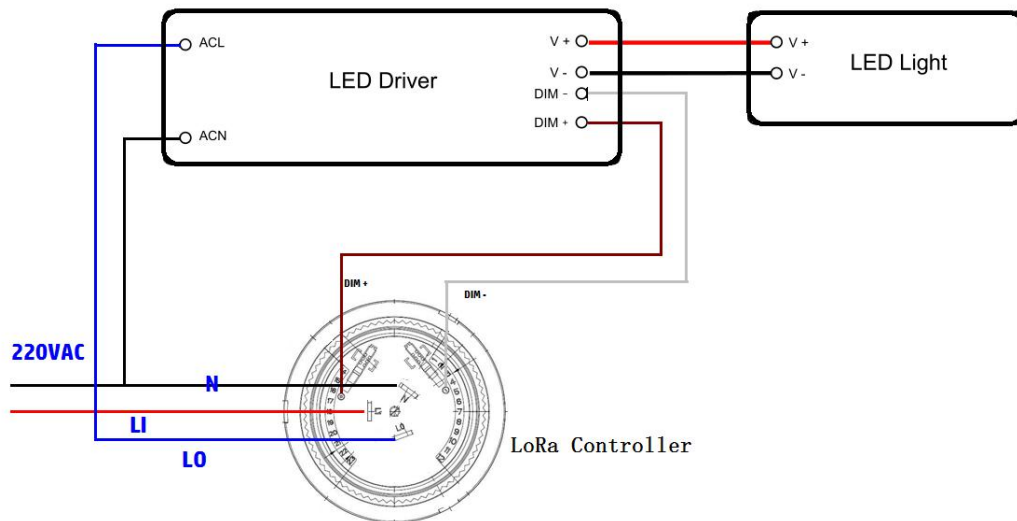
No.	Parameters
MCU	Core C251 Main Frequency 8MHz
Data Transfer Rate	Default is 9.6 KBPS, others Customized
Working Frequency	915MHz
Agreement	DL/T645
Communication Distance	500m~800m(open distance, no occlusion around)
Communication Interface	2 Communication Interfaces,

IV. Structure & Description

1. Installation Dimension
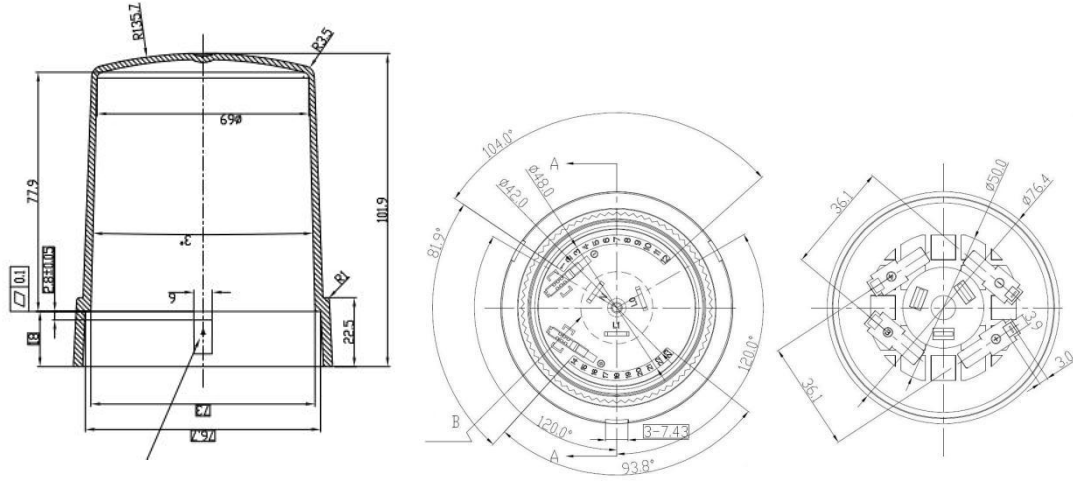
2. Wiring Diagram

V. Photo & Label

VI. Matters Needing Attention

1. It is forbidden to connect one SLC to Multiple Drivers, and the Max. power of Driver does not exceed 400W (220V) or 200W (110V). Since Multiple Drivers are connected in Parallel, the internal Capacitance is equivalent to a Large Capacitance, and the reverse Discharge of the Capacitor at the moment of Switching On/Off will affect the life of the Relay Switch.

2. The SLC should be connected correctly and firmly to avoid short-circuit and fire caused by wrong wiring or improper wiring.

3. Due to the differences in the Dimming Curve Parameters of LED Drivers among various power supply manufacturers, our company only guarantees that the Dimming Output signal of the controller is Linear, and does not guarantee that the illumination changes to linear when work with power supply. If the lamp illumination is required to be changed to linear, our company can provide Freely Testing Service and Calibration of Dimming Curve, customers are required to provide lamps and Testing environment.

4. Since most LED Drivers are not stable when 0~1V is input into the Dimming port, our Actual Dimming Output is 1~10V. When the Control Platform sends the Dimming Command from 0% ~10%, the SLC Dimming Port will Output 1V and the Relay is disconnected.