



SMART
LIGHTING
DIRECT

Wireless Smart Lighting System

HTT-SLC-ZIG4017/4527

HTT-DC-WIFI/ZIG4017/4527

LMS Software

Smart Lighting Direct

Go Green

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1. Overview

HTT-ZIG Wireless Smart Lighting System is designed for roadway and area lighting applications. With its three components, Wireless Smart Lighting Controller (WSLC), Wireless Data Concentrator (WDC) and LMS software, the system provides robust, efficient and flexible ways of managing your lighting applications.

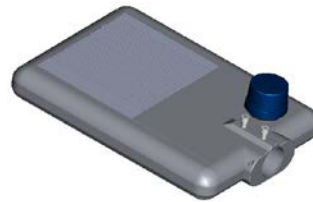
WSLC and WDC comply with ZigBee/IEEE 802.15.4 standards and ZigBee PRO protocol, have advantages such as self-healing and self-organizing mesh networking, optimized network traffic, reduced power consumption, long communication distance, strong anti-interference capability, more flexibility, and etc.

The Cloud-based LMS software provides easy accesses to various features of the system.

The key features are:

- Cloud-based LMS software for easy programming and control of the Smart Lighting System
- Reporting capabilities
 - Occupancy reporting using advanced microwave sensing technology
 - Operational reporting including scheduled and manual operations
 - Status reporting including alarms, power failure, communication disruptions and etc.
 - Energy use reporting, with maximum 15 minutes monitoring interval
- Storing and delivering polled energy use information for one year or more
- Various control strategies
 - Time scheduling
 - Daylight harvesting (optional)
 - Occupancy/vacancy sensing
 - Task tuning
- Step dimming control at 5% step
- Zone control with flexible zone configurations
- Embedded surveillance camera monitoring interface

2. WSLC

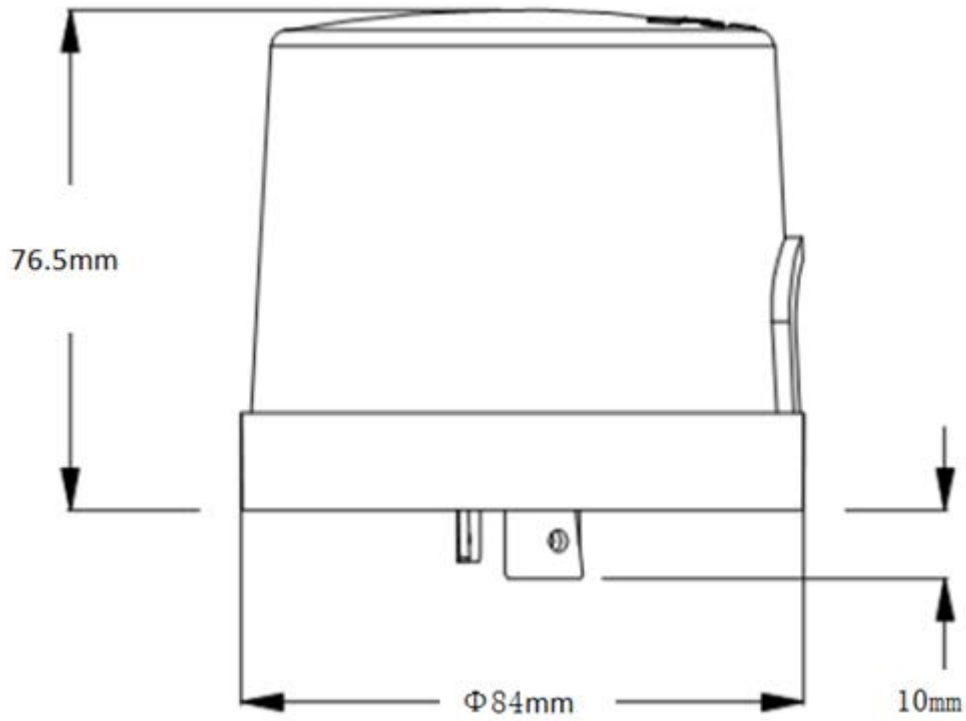


2.1. Technical Parameters

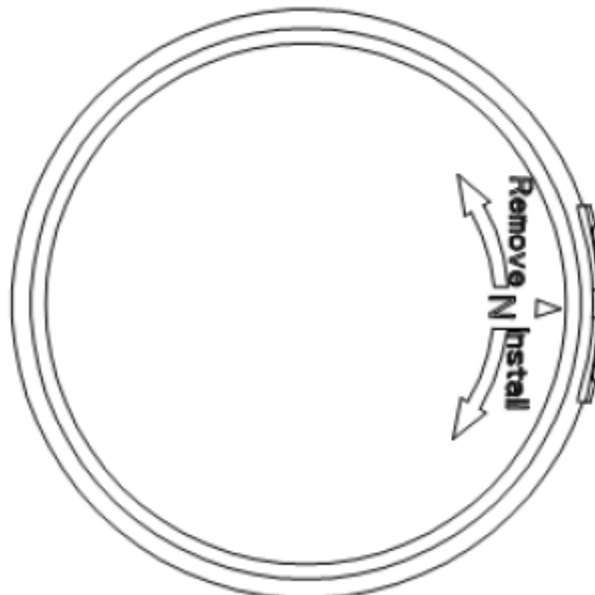
Item	Parameters	
	ZIG4017	ZIG4527
Power		
Input Voltage	85 ~ 265VAC 50/60Hz	
Output Voltage	85 ~ 265VAC 50/60Hz	
Output Current	5A @ 250VAC (Resistive loads)	
ZigBee		
Radio Frequency	2400 ~ 2483.5 MHz	
Number of Channels	16	
Max Data Rate	250kbps	
Transmit Power	-20 ~ 7dBm	-9 ~ 23dBm
Receive Sensitivity	-99dBm	-102dBm
No Obstacle Comm. Distance	200m	2000m
Measurement Range		
Voltage	0 ~ 400VAC	
Current	0 ~ 5AAC	
Active Power	0 ~ 2000W	
Operation Duration	0 ~ 2 ³² seconds	
Energy	0 ~ 2 ³² Wh	
Temperature	-55°C ~ +125°C	

Ambient Light Sensing (Optional)	0 ~ 1000 lux
Pole Tilt (Optional) Detection Angle	> 30°
Features	
Dimming Output	0 ~ 10V
Brightness Adjustment	ON(5 ~ 100%) / OFF
Dimming Gradient	1%
Photo Sensor (Optional) Response Range	390 ~ 700nm
Others	
Operation Temperature	-40°C ~ +70°C
Storage Temperature	-40°C ~ +85°C
IP Rating	IP65
Dimensions	Φ84 x 76.5mm

2.2. Dimension

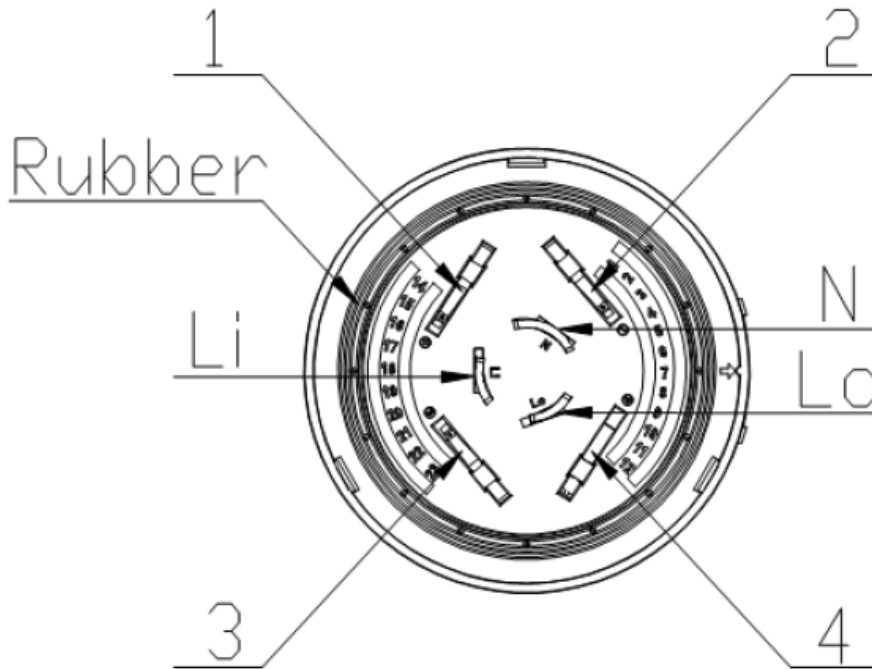


Top View



Bottom View

2.3. Interfaces

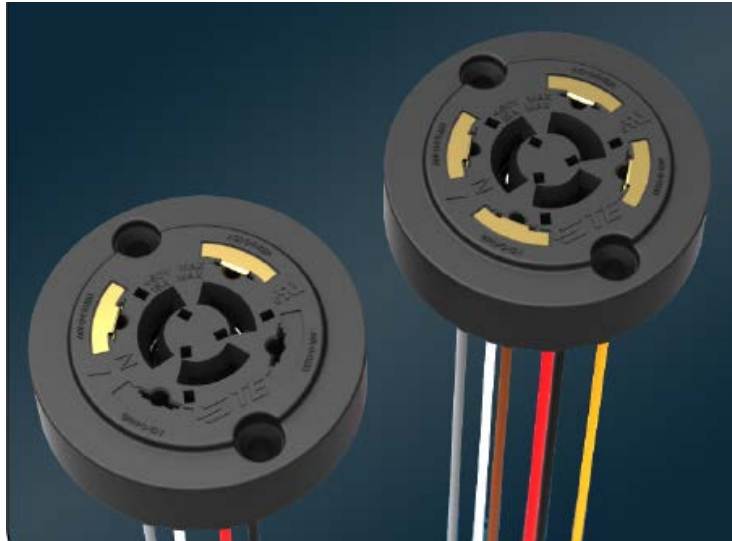


Pin Description:

- Li: Line In
- Lo: Line Out
- N: Neutral
- 1: 0-10V Dimming Output +
- 2: 0-10V Dimming Output -
- 3: Not Used
- 4: Not Used

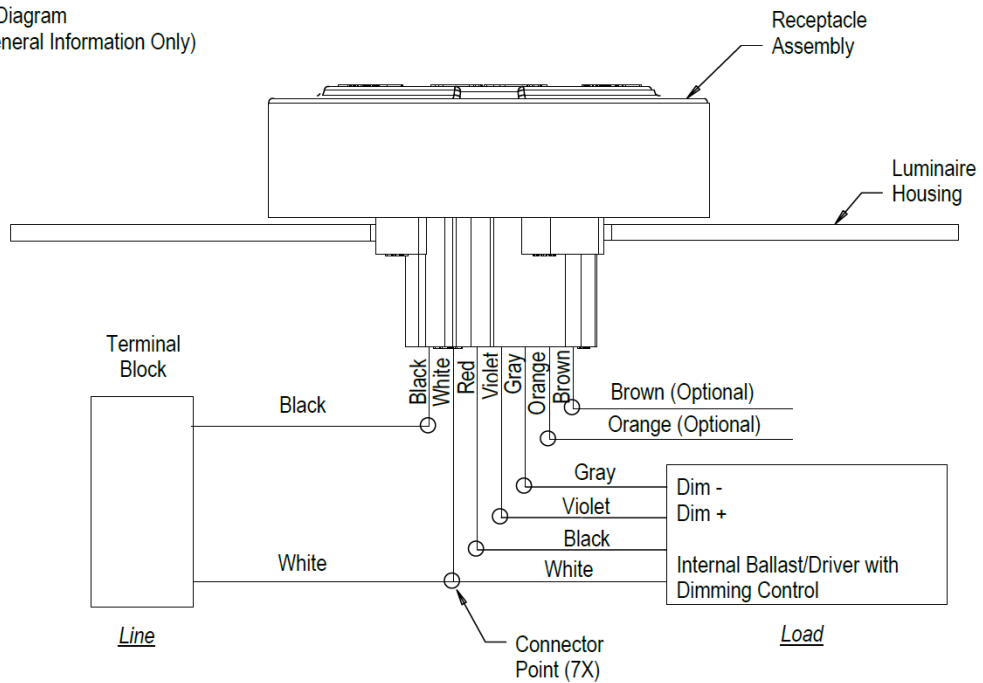
2.4. Base

Provided upon request



2.5. Wiring Diagram

Wiring Diagram
(For General Information Only)

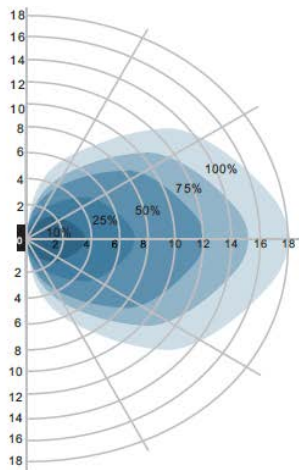


WSLC Wiring

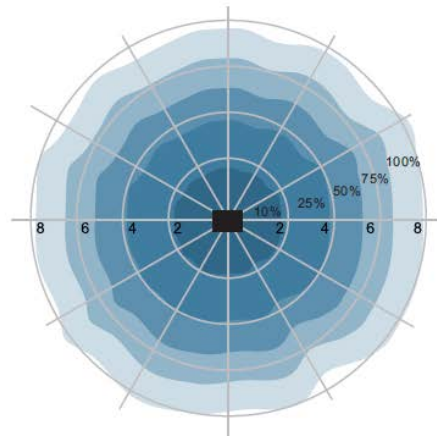
2.6. Occupancy Reporting



Aurora Street Light with Motion Sensor



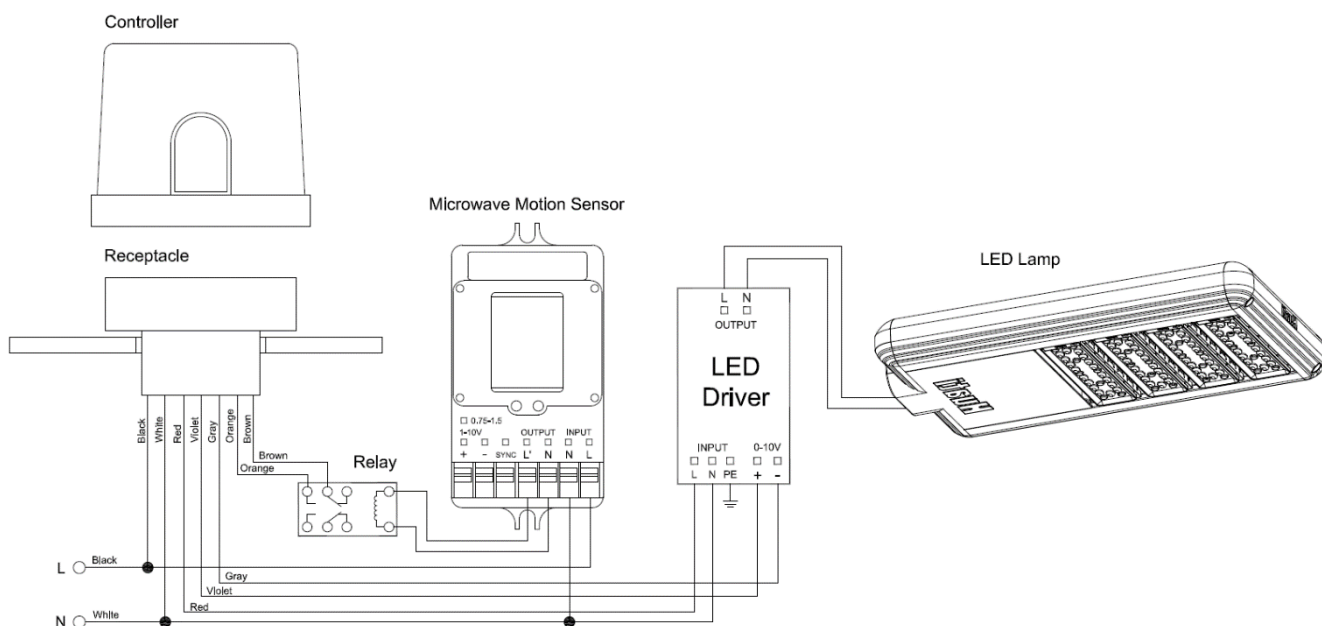
Wall mounting pattern (Unit: m)
Suggested installation height: 1-1.8m



Ceiling mounting pattern (Unit: m)
Suggested installation height: 2.5-10m

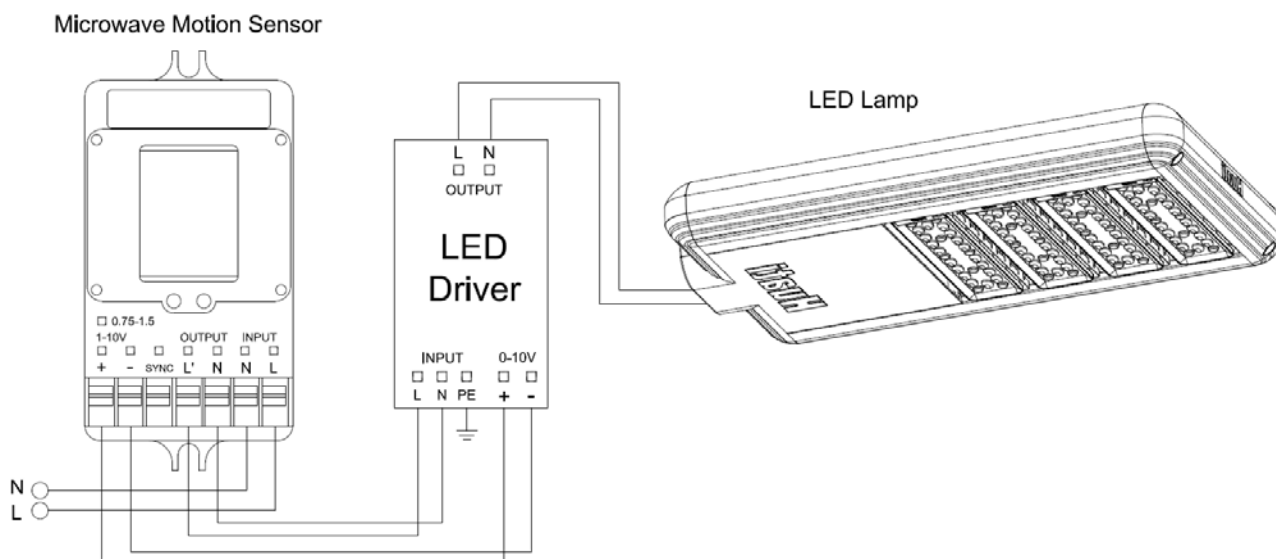
Motion Sensor Detection Ranges

WDC can work with motion sensor and WDC to provide centralized occupancy reporting and lighting on demand capabilities.



WSLC with Motion Sensor Wiring Diagram

Motion sensor can also with work LED driver directly without WSLC or WDC, to provide a simple localized light on demand control strategy. To do so, simply wire the motion sensor as following, while some simple local setup and programming to the motion sensor and LED driver may be needed.



Motion Sensor Wiring Diagram

3. WDC

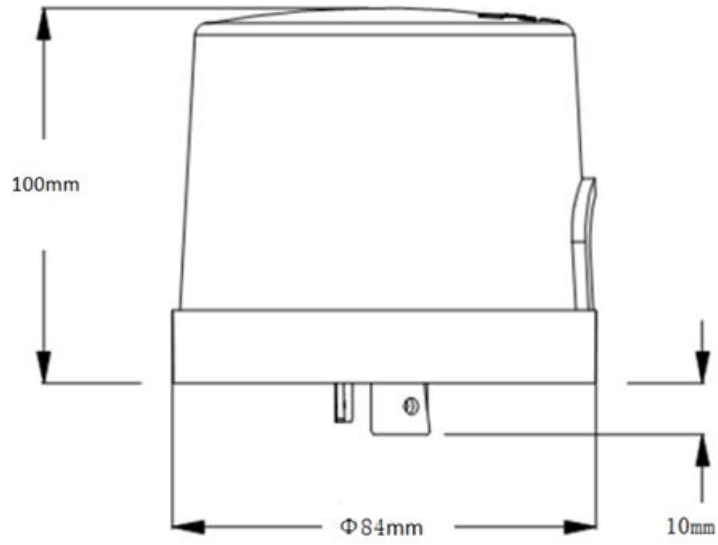


3.1. Technical Parameters

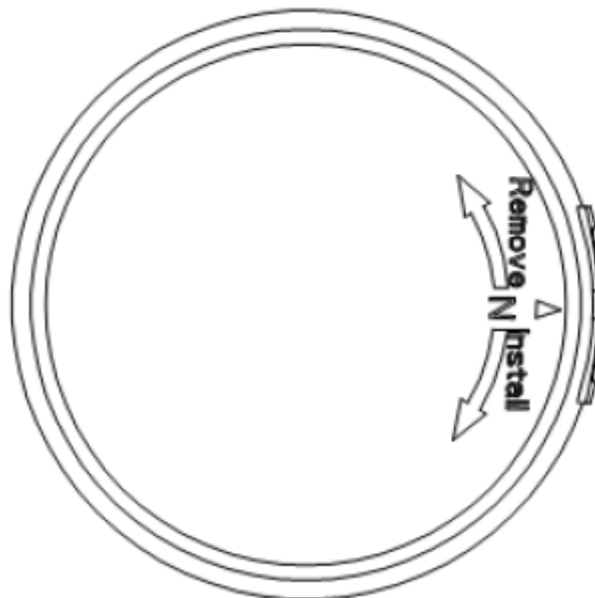
Item	Parameters	
	ZIG4017	ZIG4527
Power		
Input Voltage	85 ~ 265VAC 50/60Hz	
Input Current	0.12A @ 250VAC	
ZigBee		
Radio Frequency	2400 ~ 2483.5 MHz	
Number of Channels	16	
Max Data Rate	250kbps	
Transmit Power	-20 ~ 7dBm	-9 ~ 23dBm
Receive Sensitivity	-99dBm	-102dBm
No Obstacle Comm. Distance	200m	2000m
WIFI		
Frequency Range	2.4GHz-2.5GHz (2400M-2483.5M)	
Network Type	Station / SoftAP / SoftAP + Station	

Security Mechanisms	WPA/WPA2
Encryption	WEP/TKIP/AES
Transmit Power	15.5~17.5dBm (@72.2Mbps)
	19.5~21.5dBm (@802.11b)
Receive Sensitivity	-98dBm (@1Mbps,CCK)
	-91dBm (@11Mbps,CCK)
	-93dBm (@6Mbps,1/2BPSK)
	-75dBm (@54Mbps,3/4 64-QAM)
	-72dBm (@HT20, MCS7)
Others	
Operation Temperature	-40°C ~ +70°C
Storage Temperature	-40°C~ +85°C
IP Rating	IP65
Dimensions	Φ84 x 100mm

3.2. Dimension

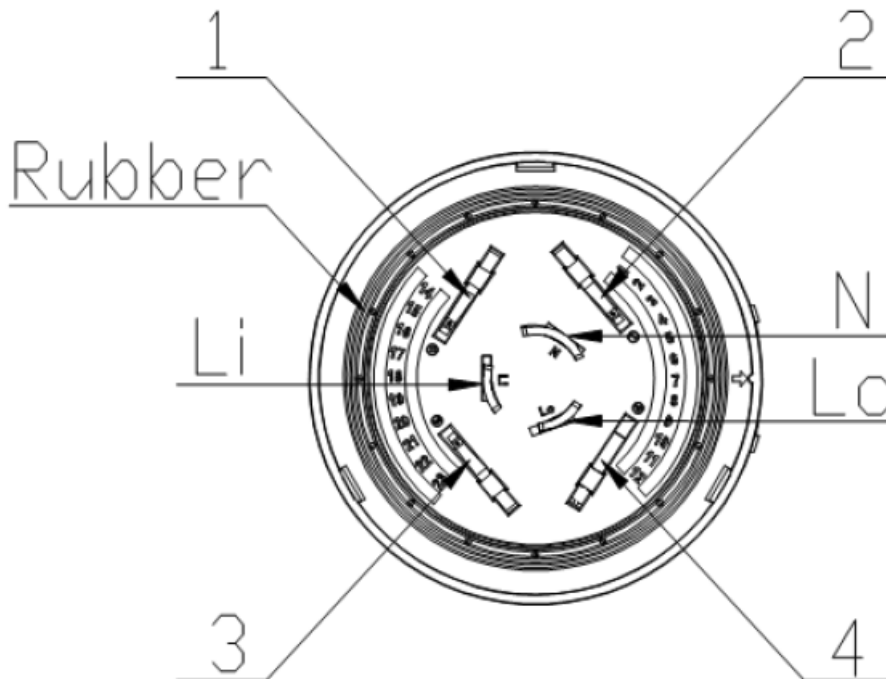


Top View



Bottom View

3.3. Interfaces



Pin Description:

Li: Line In

Lo: Not Used

N: Neutral

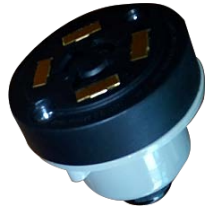
1: Not Used

2: Not Used

3: Not Used

4: Not Used

3.4. Base



Base



Base with Mounting Bracket

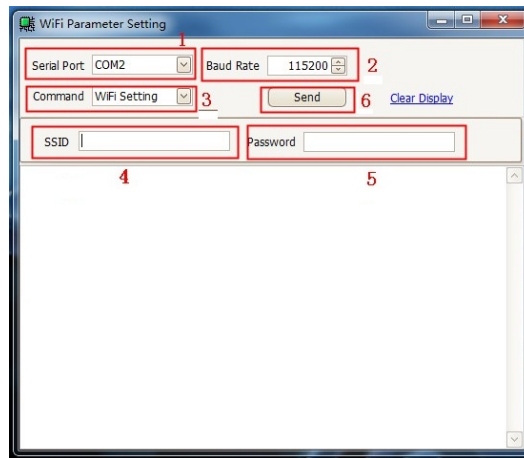
3.5. Connect WDC to Wi-Fi network

Please follow the following steps to configure the WDC to connect to the Wi-Fi network

1. Mount the WDC to the base with RS232 cable showing as the following picture, twist the WDC to lock to the position

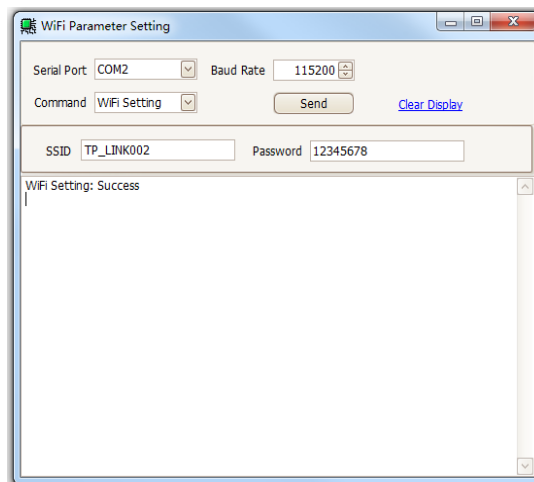


2. Connect the power cord to the power outlet and connect the RS232 cable to computer
3. Launch the Wi-Fi Util software and following the steps as indicated in the following picture

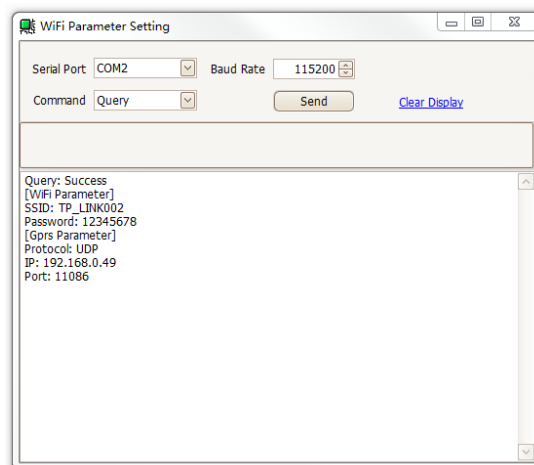


- 1) Set the serial port
- 2) Set the Baud Rate to 115200
- 3) Set the Command to Wi-Fi setting
- 4) Type in the SSID of the router to be connected
- 5) Type in the password of the router to be connected
- 6) Click Send button

If successful, you will see the success message as shown on the following picture. If not, please check your wire connection and serial port setting and try again.



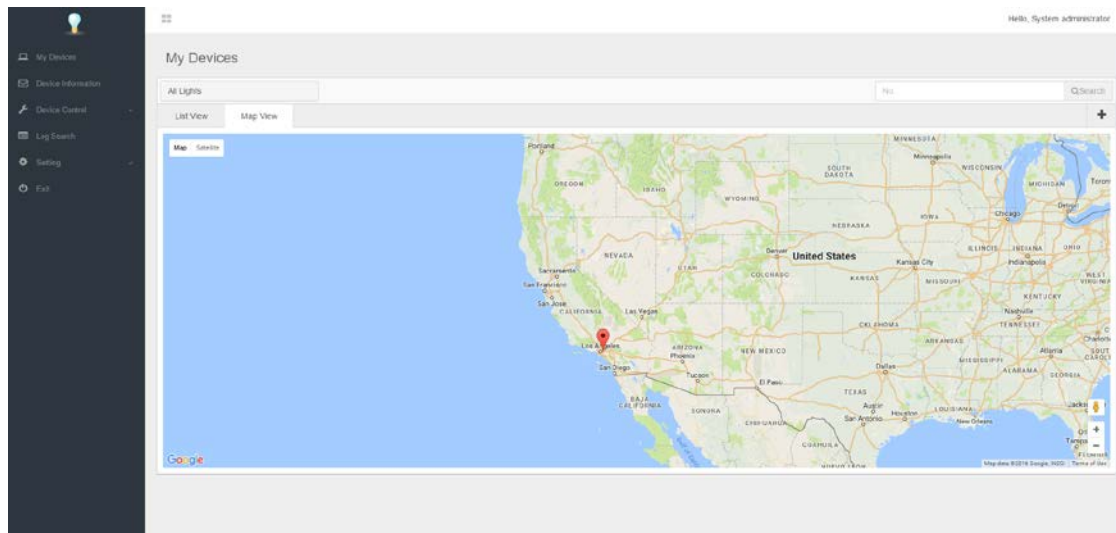
To read the settings out of the WDC, change the Command to Query and click on Send, and you will see the message as shown on the following picture.



4. After done configuring, please mount the WDC to regular base as shown below



4. LMS software



The Cloud-based LMS software provides easy accesses to the system configurations, and various control and monitoring features. LMS also provides embedded surveillance camera interfaces for convenient site monitoring.

Please refer to *LMS software user guide* video clip for the details on using the LMS software.