

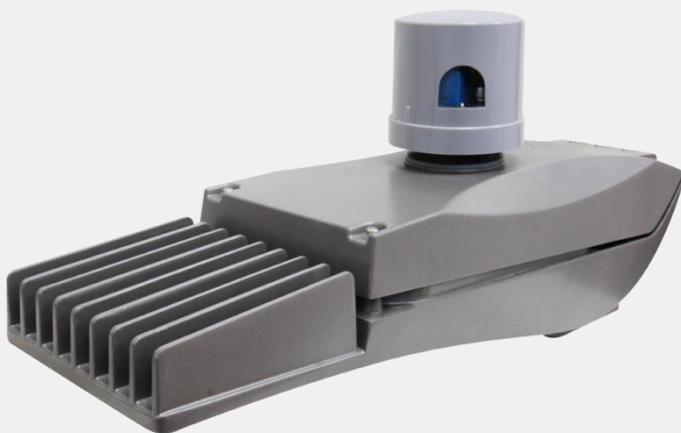


Smart Lighting Controller ZigBee Slave Series

Feature

Lighting system, corresponding with LWAN technology
Lighting Slave utilized ZigBee communication protocol

- Designed and optimized by Low Power Wild Area Network (LPWAN) with LoRa network technology
- NEMA socket connected (ANSI C136.41)
- Smart Control function (ON/OFF/Dimming)
- Smart power saving mode
- Electrical parameters monitoring
- Fault detection
- Intelligent operation based on predestinate schedule
- Wild operating temp range -30°C to $+70^{\circ}\text{C}$
- Platform connection - supporting MQTT and CoAP transfer protocol
- Content management system (CMS)
- Supporting integrated ambient light sensor and accelerometer



Introduction

ORing's smart lighting series managed wireless transporting is designed for street lamp. OLS-Z series stands as cell controller in the smart street lamp application. It is proposed to connect on the top of LED lamp device with standard NEMA socket (ANSI C136.41), which is compliant with DALI (Digital Addressable Lighting Interface) dimming control function, is according to international standard design. The advantage of digital dimming is that fixtures are addressable. You can also have many more different levels of light output when using digital dimming. The benefits of DALI dimming control are lower energy cost to user, higher level of maintenance to the facility manager, and more flexible sensor controlled dimming and switching. On the other hand, OLS-Z series is also compliant with traditional 0-10V dimming control function. It is based on analogue signal percentage increased or decreased as the voltage on the analog signal increases or decreases.

In addition, OLS-Z series supports **electrical parameters monitoring - Vrms(V), Irms(I), Power Factor(PF), Frequency(Hz), Power(W)**. According to above monitored parameters, it also provides fault detection information – **Over/under voltage, Over/under current, Lamp/Driver fault, Device failure**. Furthermore, it is the autonomous sensing device, which is **dimming with sunrise time, smart dimming procedure through analyzing data**, and so on.

OLS-Z series is designed by the whole intelligent system, including smart power saving mode, fault detection, intelligent operating based on predestinate schedule, dimming control, turn-on, turn-off, and so on. Moreover, each lighting controller is easily managed through content management system (CMS). For the reason that ORing Industrial Networking Corp. also provides users to apply to the intelligent products easily, proposing **ORing IIoT MagiCity**, which is based on MQTT and CoAP architecture implementation and is going to realize economic data more clearly. Let users operate each device reliably in the whole world, only get the certification from **ORing IIoT MagiCity**.

NEMA Socket Exterior



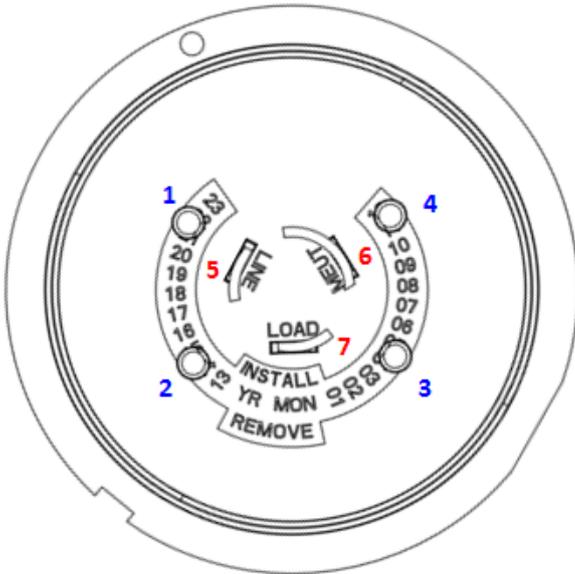
BOTTOM VIEW



TOP VIEW

Pin Define

- Dimensional requirements following ANSI C136.41 Dimming Receptacle
- 7 position: 3 power contacts + 4 dimming/signal contacts



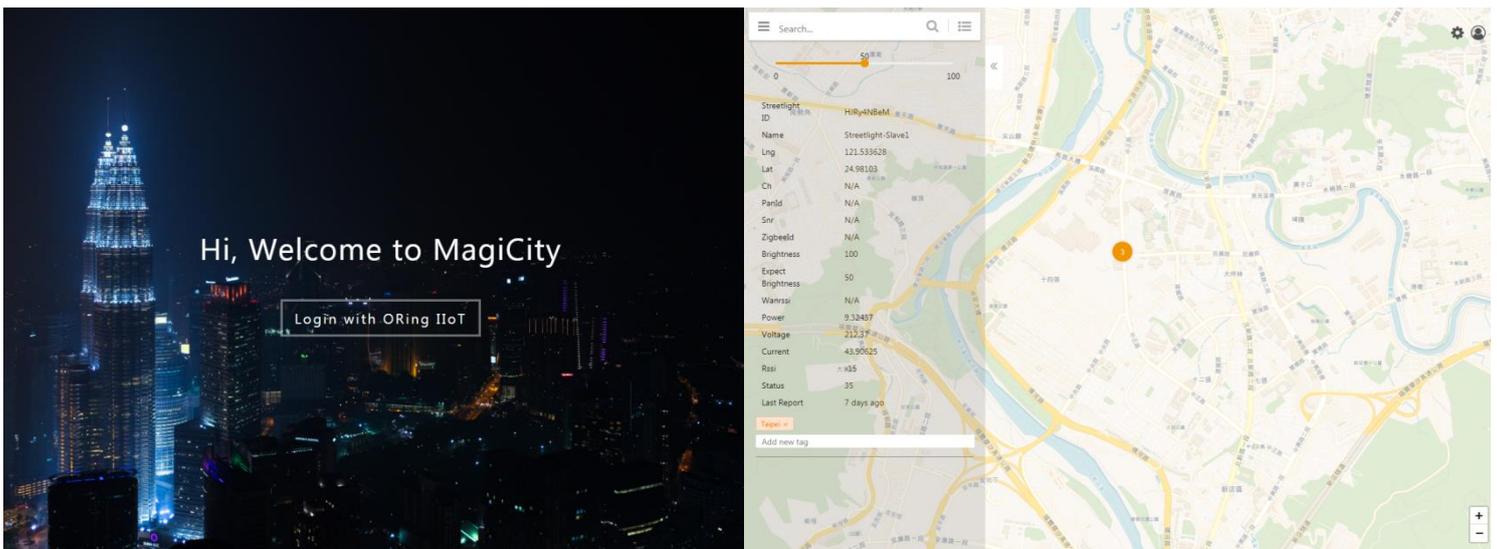
PIN NO.	DESCRIPTION
1	DALI+ / 0-10V DIMMING CONTACT
2	N/A
3	N/A
4	DALI- / GND DIMMING CONTACT
5	POWER CONTACT - LINE
6	POWER CONTACT - NEUT
7	POWER CONTACT - LOAD

Specification

ORing Lighting Model		OLS-Z SERIES	
NEMA Socket connected			
Pin Define		7pin NEMA socket (Follow ANSI C136.41 Receptacle)	
Controller Feature			
Dimmable Function Feature		DALI	AO(0-10Vdc)
Electrical parameters monitor		Vrms(V) 、 Irms(I) 、 Power Factor(PF) 、 Frequency(Hz) 、 Power(W)	
Lighting Control	ON	•	
	OFF	•	
Network Interface			
Working Mode		ZigBee(IEEE802.15.4)	
Frequency Bandwidth		2.4GHz	
ZigBee Technology(IEEE802.15.4)			
Transmission Distance		Up tp 200m (open space)	
Data Rate		250Kbps(TYP.)	
TX Power Gain Range		Typ. : 7dBm ; Max. : 21dBm	

RX Sensitivity	-99dBm	
Security	128-bit AES encryption algorithms	
Electrical Specification		
AC Input Voltage	90-264Vac	
Output Load Current	Max. 2A	
Power Consumption	Max. 1.35W	
Supply Current	DALI	10mA
	AO(0-10Vdc)	1mA
Protection		
Inrush Current Protection	5A@10ms pulse	
Surge Protection	1kV	
Physical Characteristic		
Enclosure	IP54	
Dimensions	Φ90 x 87mm	
Weight(g)	190g	
Environmental		
Storage Temperature	-40°C to +80°C	
Operating Temperature	-30°C to +70°C	
Operating Humidity	0 to 95%	

MagiCity Open View



Ordering Information

OLS-Z AANB-CC

Code Definition	RF Band	Dimming Control Type	-Sensor Support*
Option Feature	01: 2.4GHz	D: DALI T: 0-10V	G: Accelerometer P: Ambient light Sensor GP: Accelerometer & Ambient light Sensor

*No Sensor Support place **-DD** empty

	Model Name	Description
Available Product	OLS-Z01ND	ORing Lighting Controller ZigBee Slave, 2.4GHz, NEMA Receptacle, DALI, OLS-Z01ND
	OLS-Z01ND-G	ORing Lighting Controller ZigBee Slave, 2.4GHz,NEMA, DALI,with G-Sensor,OLS-Z01ND-G
	OLS-Z01ND-P	ORing Lighting Controller ZigBee Slave, 2.4GHz,NEMA, DALI,with Photo-Sensor,OLS-Z01ND-P
	OLS-Z01ND-GP	ORing Lighting Controller ZigBee Slave, 2.4GHz,NEMA, DALI,with GP-sensor,OLS-Z01ND-GP
	OLS-Z01NT	ORing Lighting Controller ZigBee Slave, 2.4GHz, NEMA Receptacle, 0-10V, OLS-Z01NT
	OLS-Z01NT-G	ORing Lighting Controller ZigBee Slave, 2.4GHz,NEMA, 0-10V,with G-Sensor,OLS-Z01NT-G
	OLS-Z01NT-P	ORing Lighting Controller ZigBee Slave, 2.4GHz,NEMA, 0-10V,with Photo-Sensor,OLS-Z01NT-P
	OLS-Z01NT-GP	ORing Lighting Controller ZigBee Slave, 2.4GHz,NEMA, 0-10V,with GP-sensor,OLS-Z01NT-GP

Packing List

- OLS-Z Cell Controller x1
- 2.4GHz RF Antenna x1
- ZigBee Module x1
- 0-10V AO/DALI Dimming Control module x1
- ANSI C136.41 Standard NEMA Socket & Cover x1