

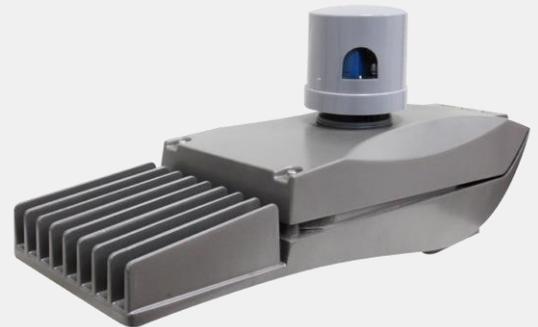


Smart Lighting Controller

NB IoT Series

Lighting system, corresponding with LPWAN technology
Lighting Controller utilized NB IoT communication protocol

- Designed and optimized by Low Power Wide Area Network (LPWAN) with NB IoT 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
- Wide operating temp range -20°C to $+70^{\circ}\text{C}$
- Platform connection - supporting MQTT and CoAP transfer protocol
- Supporting 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. Through NB IoT communication technology (LPWAN), it is achieved to use licensed wireless frequencies and communicate devices more economic, more energy saving, and safer appliance.

OL-NB series provides electrical parameters monitoring function- $V_{rms}(V)$, $I_{rms}(I)$, Power Factor(PF), Frequency(Hz), Power(W) to do instant monitoring and controls its cell controller operating. According to above monitored parameters calculation, it also obtains fault detection information – Over/under voltage, Over/under current, Lamp/Driver fault, Device failure to help users get on proper debug procedure.

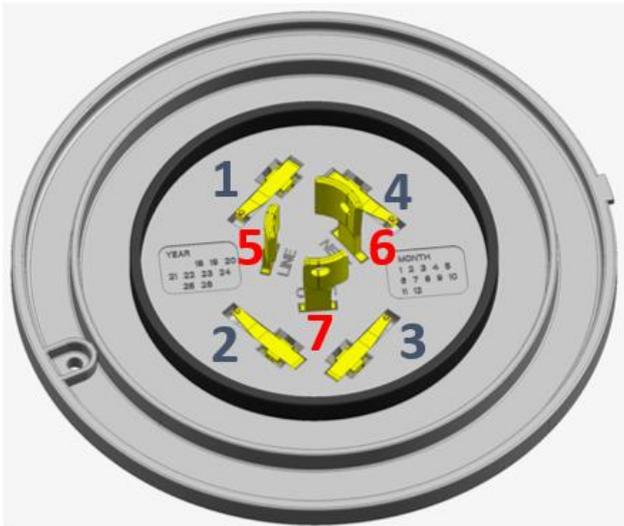
OL-NB series also include the G-Sensor to do the tilt detection, can send the alarm in any damage.

Furthermore, it is designed as the autonomous sensing device, which controls dimming with sunrise time, smart dimming procedure through analyzing data, and so on.

NEMA Socket Exterior and Pin Define

Dimensional requirements following ANSI C136.41 Dimming Receptacle

7 position: 3 power contacts + 4 dimming/signal contacts



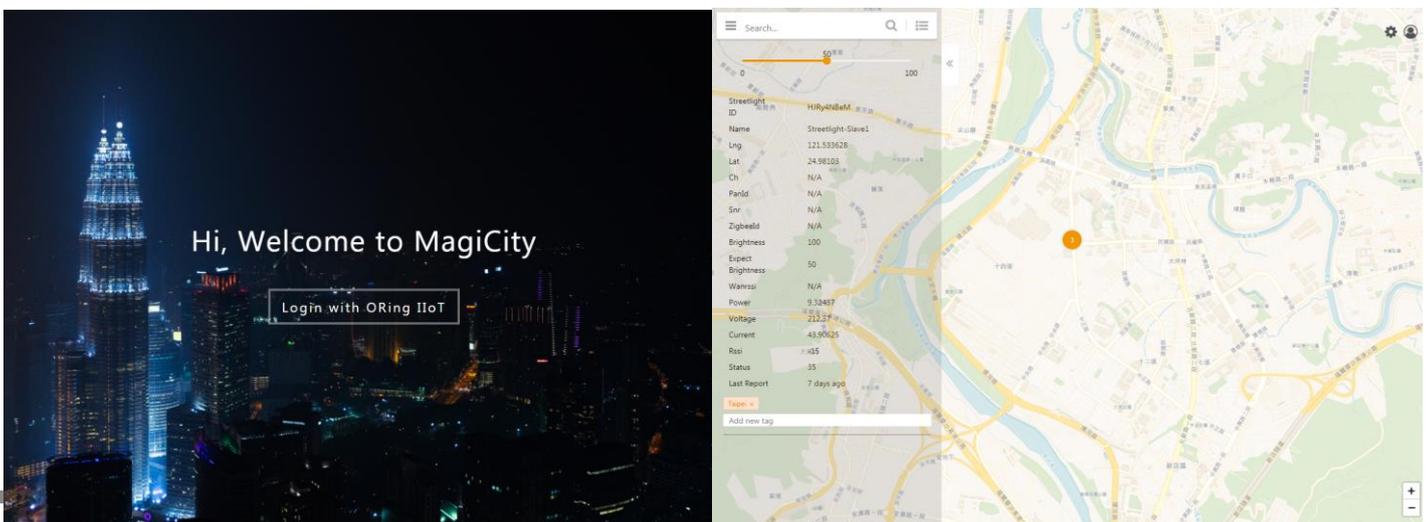
Pin NO.	Description
1	DALI+ or 0~10V Dimming Contact
2	N/A
3	N/A
4	DALI- or 0~10V Dimming Contact
5	Power Contact – LINE
6	Power Contact – NEUT
7	Power Contact – LOAD

Specification

ORing Lighting Model	OL-NB 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	●
Up-Link Feature		
Working Mode	NB-IoT	
SIM Card Type	Micro SIM Card	
	Chip SIM Card	
Wireless		
NB-IOT	Frequency Band: B1/B2/B3/B4/B5/B8/B12/B13/B20/B28	
	AT Command: 3GPP Rel-13 and enhanced AT commands	
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		IP65
Dimensions		Φ90 x 87mm
Weight(g)		190g
Environmental		
Storage Temperature		-40°C to +80°C
Operating Temperature		-20°C to +70°C
Operating Humidity		0 to 95%
Additional Sensor Support Feature		
Ambient light sensor		Peak Wave Length $\lambda_p=560\text{nm}$
Accelerometer		Measurement Range(g) : $\pm 2, \pm 4, \pm 8, \pm 16$
GNSS / GPS		GNSS Frequency band: GPS / GLONASS Tracking sensitivity: -158 dBm Cold-start sensitivity: -146 dBm Accuracy (Open Sky): 2.5m TTFF (Open Sky) : Hot start <1s, Cold start<35s
Warranty		5 Year

MagiCity Open View



Ordering Information

Model Name	Description
OL-NB*02NT-GP	Lighting, NEMA, NB-IOT, 0~10V Dimming control, P sensor, G Sensor
OL-NB*02ND-GP	Lighting, NEMA, NB-IOT, Dali Dimming control, P sensor, G Sensor

*: RF Band	
NB-IoT	
AS	Band 1、3、5、8
EU	Band 3、8、20、28
NA	Band 2、4、12、13

Packing List

OL-NB Series Controller x1