Wireless Light Sensor R718G
Data Sheet

Wireless Sensor Network Based on LoRa Technology

R718G

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Wireless Light Sensor

General Description

The device has a built-in light sensor that can be used for ambient light intensity detection. It uses the SX1276 wireless communication module. The R718G detects the ambient light intensity value and adds it to the gateway. The collected data is displayed in other devices.

Main Characteristics

- Apply SX1276 wireless communication module
- 2 ER14505 batteries AA SIZE (3.6V / section) parallel power supply
- IP Rating :IP65/IP67 (option)
- The base is attached with a magnet that can be attached to a ferromagnetic material object

Example Applications

- Illuminance detection
- Others

Features of NETVOX Sensors

- LoRaWAN^{TM} Class A compatible
- Frequency Hopping Spread Spectrum (FHSS)
- Third-Party online wireless sensor monitoring and notification system to configure sensors, view data and set alerts via SMS text and email (optional)
- Available third-party platform: Actility/ThingPark, TTN, MyDevices/Cayenne
- Improved power management for longer battery life
- Battery Life:
    - Please refer to web: http://www.netvox.com.tw/electric/electric_calc.html
    - At this website, users can find battery life time for varier models at different configurations.
        1. Actual range may vary depending on environment.
        2. Battery life is determined by sensor reporting frequency and other variables

Wireless Light Sensor

Technical Specifications (Main Part)
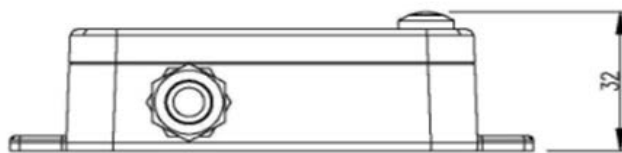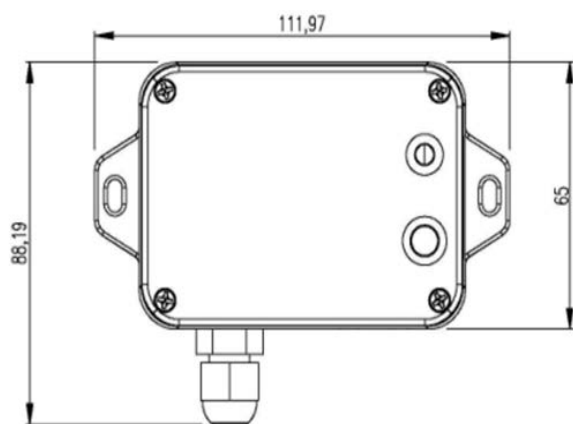
(Uni. mm)

Electric

R718G

Input Power	2 x 3.6V ER14505 AA lithium batteries (3.6V 2400mah/section）
Operating Voltage	DC 3.1V～3.65V
Battery Life	5 years (Conditions: ambient temperature 25 °C, 15 min report once, txpower = 20dBm, LoRa spreading factor SF = 10)
Standby Current	18uA
Wakeup Current	7.5mA (Typical value) Wakeup current range 0.8mA-20 mA * When not transmitting /receiving LoRa data)
Low Battery Voltage Threshold	3.2V
Battery Measurement Accuracy	±0.1V

Module-R100H

Wake-up Current	0.8mA - 8mA@3.3V
RF Receiving Current (max)	11mA/3.3V
RF Transmitting Current (max)	120mA/3.3V

* Specific electrical characteristics may vary depending on the power supply voltage.

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Light Sensor

Supply Voltage Range	2.3VDC-3.3VDC
Light Sensor Model	TSL45315
Illuminance Range	3 Lux - 220K Lux
Illuminance Accuracy	<15%
Communication Method	I2C communication

Frequency

Frequency Range	863MHz-928MHz 470MHz-510MHz
TX Power	US915 20dbm； AS923 16dbm； AU915 20dbm； CN470 19.15dbm； EU868 16dbm； KR920 14dbm； IN865 20dbm；
Rx Sensitivity	-136dBm (LoRa，Spreading Factor=12, Bit Rate=293bps) -121dBm (FSK,Frequency deviation=5kHz, Bit Rate=1.2kbps)
Antenna Type	Build-in antenna
Communication Range	Up to 10km, the actual transmission distance depends on the environment.
Data Transfer Rate	0.3kbps～50kbps
Spread Technique	LoRa/FSK
Available Frequency	EU863-870, US902-928, AU915-928, KR920-923, AS923, CN470-510 Configured before shipment

Wireless Light Sensor

Physical

Dimension	Main Part: L: 112mm*W: 65mm*H: 32mm
Weight	150g
Environment Temperature Range	-20℃ ～ 55℃
Environment Humidity Range	<90% RH (No condensation)