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**Wireless Surface-Mounted Parking Sensor**

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# **Wireless Surface-Mounted Parking Sensor R719A Data Sheet**

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Wireless Sensor Network Based on LoRa Technology



**R719A**

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## Wirelessly Surface-Mounted Parking Sensor

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### General Description

R719A is a smart parking vehicle detection sensor. It can be used to detect the presence or absence of parking vehicles in the parking space. It uses the SX1276 wireless communication module and adds vehicle status information to the gateway and displays the collected data in the gateway.

### Working Principle

R719A uses a geomagnetic sensor and a radar sensor for simultaneous detection. When the car is placed near the geomagnetic sensor, the geomagnetic sensor can measure the change of the geomagnetic intensity to judge the existence of the vehicle, and the radar sensor is used to sense whether there is a car parked above.

### Main Characteristics

- Apply SX1276 wireless communication module
- The magnet approach to the top cover to turn on/off
- 2 ER18505 battery (3.6V / section) in parallel power supply
- Geomagnetic and radar sensor detection
- IP rating: IP67
- Compatible with LoRaWAN™ Class A
- Frequency hopping spread spectrum
- Configuration parameters can be configured via a third-party software platform, data can be read and alerts can be set via SMS text and email (optional)
- Applicable to third-party platforms: 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](http://www.netvox.com.tw/electric/electric_calc.html)

-At this website, users can find battery life time for variety models at different configurations.

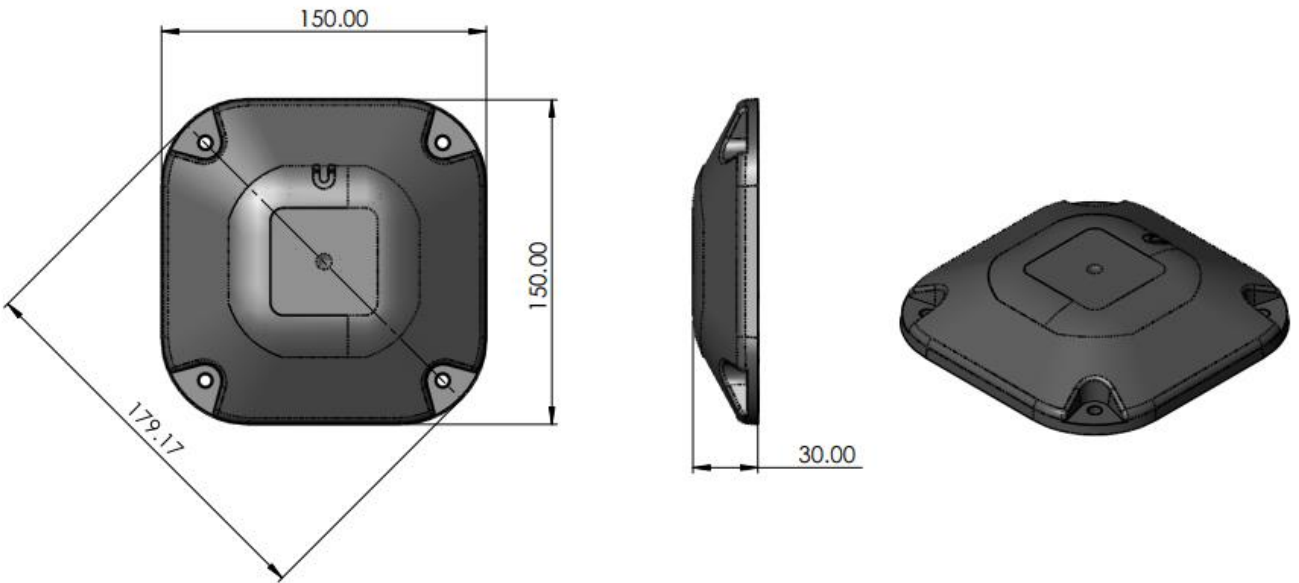
1. Actual range may vary depending on environment.
2. Battery life is determined by sensor reporting frequency and other variables.

**Wirelessly Surface-Mounted Parking Sensor**

**Example Applications**

- Intelligent parking detection
- Other

**Technical Specifications (Main Part)**



(Uni. mm)

**Electric**

Input Power	2 x 3.6V ER18505 (3.6V 4000mAh/section) in parallel
Battery Life Time	5 years (condition: ambient temperature 25 °C, report every 60 minutes, txpower = 20 dBm, LoRa spreading factor SF = 10)
Sleeping Mode	80 uA
Wake up Mode	6.3mA@3.3V
Receiving Current (max)	11mA @3.3V
Transmitting Current (max)	120mA/3.3V
Battery Voltage Measurement Accuracy	±0.1V

## Wirelessly Surface-Mounted Parking Sensor

### Frequency

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 10 km, 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

### Geomagnetic Sensor

Supply Voltage range	1.71VDC-3.6VDC
Geomagnetic Sensor Model	LIS2MDL
Communication Method	I2C communication
Geomagnetic Sensor Magnetic Field Detection Range	± 50 gauss
Geomagnetic Sensor Package	LGA-12

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**Radar Sensor**

Supply voltage range	1.71VDC-1.89VDC
Radar sensor model	Acconeer PCR Radar Sensor A111
Working frequency	60GHZ
A111 sensor detection range	6cm-2m
A111 radar sensor size	5.5 x 5.2 x 0.88 mm, fcCSP-50 package

**Physical**

Dimension	150*150*30mm
Environment Temperature Range	-20°C ~ 55°C
Environment Humidity Range	<90% RH (No condensation)