

# Wireless Asset Sensor R718MA Data Sheet

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Wireless Sensor Network Based on LoRa Technology



## R718MA

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## Wireless Asset Sensor

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### General Description

This device is a simple positioning function (which can detect the position status of the device), and periodically reports RSSI and SNR.

### Principle of Operation

The information is processed by the gateway, and the location range of the device is detected according to the reported RSSI and SNR information.

The device applies SX1276 wireless communication module. For reported RSSI, SNR information location status, the acceptance sensitivity is -136 dBm (LoRa, Spreading Factor = 12, Bit Rate = 293 bps).

### Example Applications

- Smart Home
- Industry and Commercial
- Objects to be detected location range

### Features of NETVOX Sensors

- Wireless range of 10km \*1
- LoRaWAN™ Class A compatible
- Frequency Hopping Spread Spectrum (FHSS)
- Improved interference immunity
- Improved power management for longer battery life
- Encrypt-RF™ Security (Diffie-Hellman Key Exchange + AES-128 CBC for sensor data messages)
- Battery Life\*2:

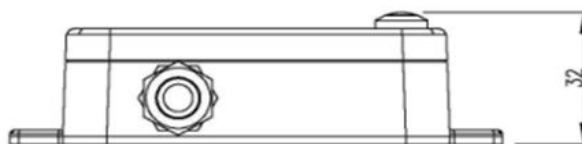
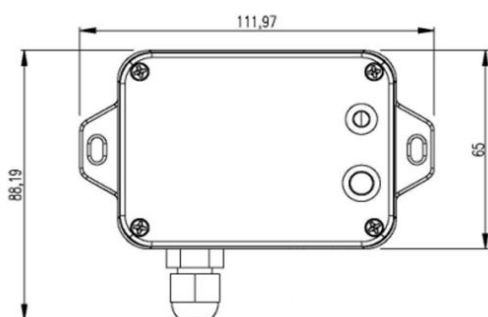
Please refer to web: [http://www.netvox.com.tw/electric/electric\\_calc.html](http://www.netvox.com.tw/electric/electric_calc.html)

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

- Over-the-air updates (future)
- 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
- R718X series carry magnets which can be attached to ferromagnetic materials and objects

\*1. Actual range may vary depending on environment.

\*2. Battery life is determined by sensor reporting frequency and other variables.

**Wireless Asset Sensor**
**Technical Specifications (Main Part)**


(Uni. mm)

**Electric**

Input Power	2 x 3.6V ER14505 AA lithium batteries (3.6V 2400mah/section)
Sleeping Mode	22 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
Low Voltage Threshold	3.2V

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

**Frequency**

TX Power	19dBm±1dBm
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	10 km (line-of-sight, 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

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**Wireless Asset Sensor**


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**Physical**

Dimension	Main Part: L: 112mm*W: 65mm*H: 32mm
Weight	141g
Environment Temperature Range	-20°C ~ 55°C
Environment Humidity Range	<90% RH (No condensation)
Storage Temperature	-40°C ~ 85°C

**Contact:**
**NETVOX TECHNOLOGY CO., LTD.**
**TEL: 886-6-2617641**
**FAX: 886-6-2656120**
**E-mail: sales@netvox.com.tw**
**WEB: www.netvox.com.tw**
**NETVOX TECHNOLOGY CO., LTD (XIAMEN)**
**TEL: 86-592-5717188**
**FAX: 86-592-5717180**
**E-mail: dyx@netvox.com.cn**
**WEB: www.netvox.com.cn**


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