Wireless Activity Timer

Wireless Sensor Network Based on LoRa Technology

R718MBC

Data Sheet

Wireless Activity Timer

Introduction

The device detects the duration of the movement or vibration (timekeeping) and sends the duration or timing information of the movement or vibration to the gateway for processing. The duration of the movement or vibration can be up to 1000 hours (theoretical value). SX1276 wireless communication module.

Main Characteristic

- Improved interference immunity
- Encrypt-RF™ Security (Diffie-Hellman Key Exchange + AES-128 CBC for sensor data messages)
- Compatible with LoRaWAN™ Class A
- Frequency hopping spread spectrum (FHSS)
- The base is attached with a magnet that can be attached to a ferromagnetic material object
- Configuration parameters can be configured through third-party software platforms, data can be read and alarms can be set via SMS text and email (optional)
- Applicable to the third-party platforms: Actility/ThingPark, TTN, MyDevices/Cayenne
- Low power consumption and long battery life

Note:

Battery life is determined by the sensor reporting frequency and other variables, please refer to http://www.netvox.com.tw/electric/electric_calc.html

On this website, users can find battery life of various models in different configurations.

Application

- Smart home
- Industrial and commercial
- Objects to be detected movements or vibrations
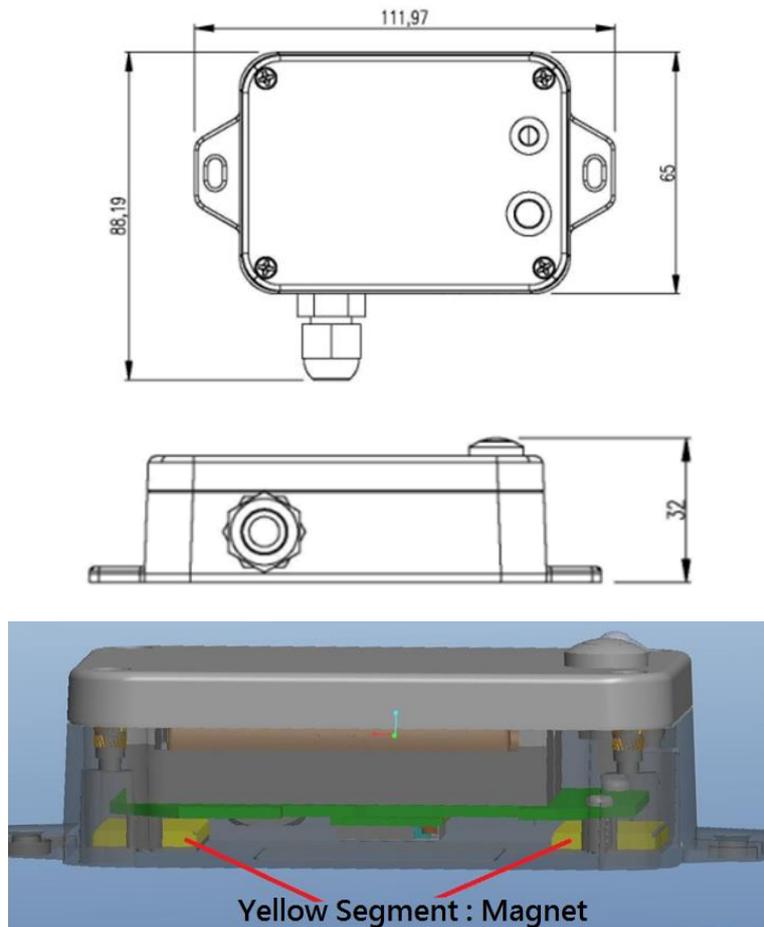
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Dimension

Figure 2 Dimensions of main engine shell

Electric

Input Power	2 x 3.6V ER14505 AA lithium batteries (3.6V 2400mah/ section)
Standby Current	76uA
Wakeup Current	6.3mA/ 3.3V
Receiving Current (max)	11mA/ 3.3V
Transmitting Current (max)	120mA/ 3.3V
Battery Measurement Accuracy	± 0.1V
Low Voltage Threshold	3.2V

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

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Frequency

Frequency Range	863MHz-928MHz 470MHz-510MHz
TX Power	US915 20dbm; AS923 16dbm; AU915 20dbm; CN470 19.15dbm; EU868 16dbm; KR920 14dbm; IN865 20dbm;
Receiving Sensitivity	-136 dBm (LoRa, Spreading Factor=12, Bit Rate = 293bps) -121 dBm (FSK, Frequency deviation=5kHz, Bit Rate=1.2kbps)
Antenna Type	Build-in antenna
Communication Distance	10 km (Visible linear obstacle-free transmission distance, actual transmission distance depending on the environment.)
Data Transfer Rate	0.3kbps ~ 50kbps
Modulation	LoRa / FSK (Note: choose one of them)
Supportable LoRaWAN Frequency	EU863-870, US902-928, AU915-928, KR920-923, AS923, CN470-510 (Note: The frequency band is optional and needs to be configured before shipment.)

Physical

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