

Wireless Liquid Hand Soap Sensor/ Wireless Water Leak Sensor R720F Series Data Sheet

Wireless Sensor Network Based on LoRa Technology



R720FLO



R720FLD



R720FU



R720FW

R720F Series (subject to the actual object)

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Wireless Liquid Hand Soap Sensor / Wireless Water Leak Sensor

Introduction

R720F series is a wireless communication device that can detect the existence of hand sanitizer / water leakage. This device is connected with two electrode rods which can be used to detect the state of the insufficient amount of hand sanitizer in the hand sanitizer box or whether there is the water leakage in the detection area. The detected data is transmitted to other devices through the wireless network for display. It adopts SX1276 wireless communication module.

The shape and orientation of electrode rod can be selected according to the needs (R720FLO,R720FLD,R720FU). The electrode rod can be trimmed to the required length by self according to the demand.

The function of water leakage detection can choose R720FW.

Main Characteristic

- Apply SX1276 wireless communication module
- 2 ER14505 batteries AA SIZE (3.6V / cell) in parallel
- Protection class IP65
- Electrode rod detection
- LoRaWAN™ Class A compatible
- Frequency Hopping Spread Spectrum (FHSS)
- The third-Party online wireless sensor monitoring and notification system to configure sensors, view data and set alerts via SMS text and email (optional)
- Applicable to the third-party platform: Actility/ ThingPark, TTN, MyDevices/Cayenne
- Low consumption and long battery life
- Battery Life*2:

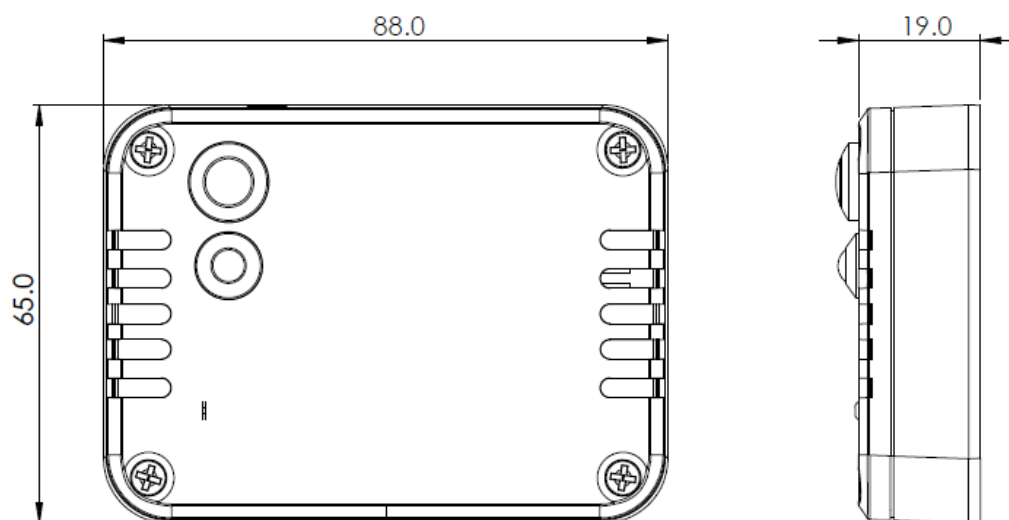
Please refer to web: http://www.netvox.com.tw/electric/electric_calc.html .At this website, users can find battery lifetime for various models at different configurations.

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Application

- Hand sanitizer remaining amount detection for house, hotel, office, shopping mall etc.
- Water leakage detection

Dimension



Electric

Power Supply	2 sections of ER14505 lithium batteries (3.6V, 2400mAh/ section) in parallel
Battery Lifetime	Battery lifetime 5 years (Condition: Ambient temperature 25 °C, report once every 15min, txpower = 20dBm, LoRa spreading factor SF = 10)
Standby Current	24uA
Wake Up Current	7.12mA (typical value) Wake up current range 0.8mA - 20mA * When no transmitting /receiving LoRa data)
Low Voltage Threshold	3.2V

Module - R100H

RF Receiving Current	11mA @3.3V
RF Transmitting Current	120mA @3.3V

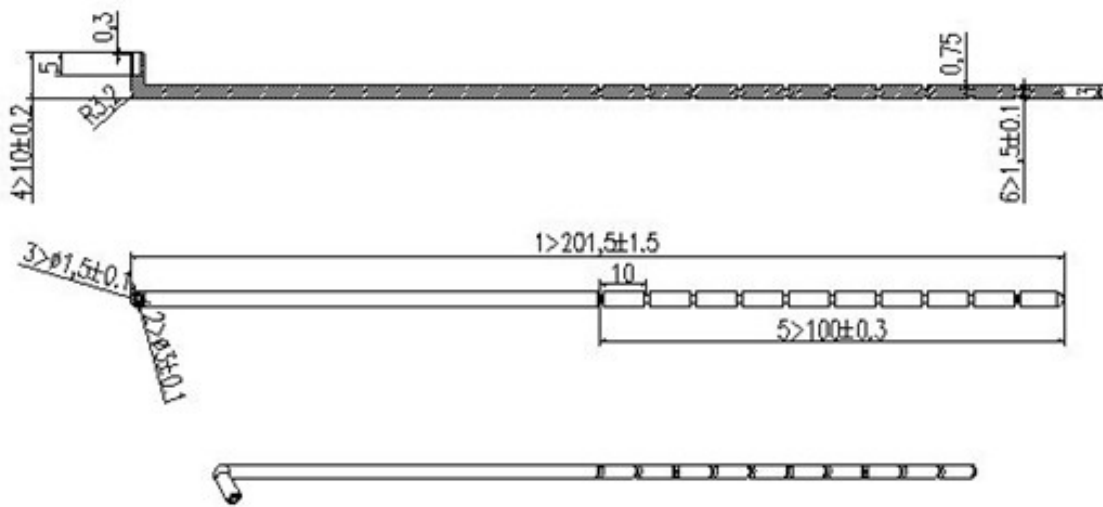
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* Specific electrical characteristics may vary depending on the power supply voltage.

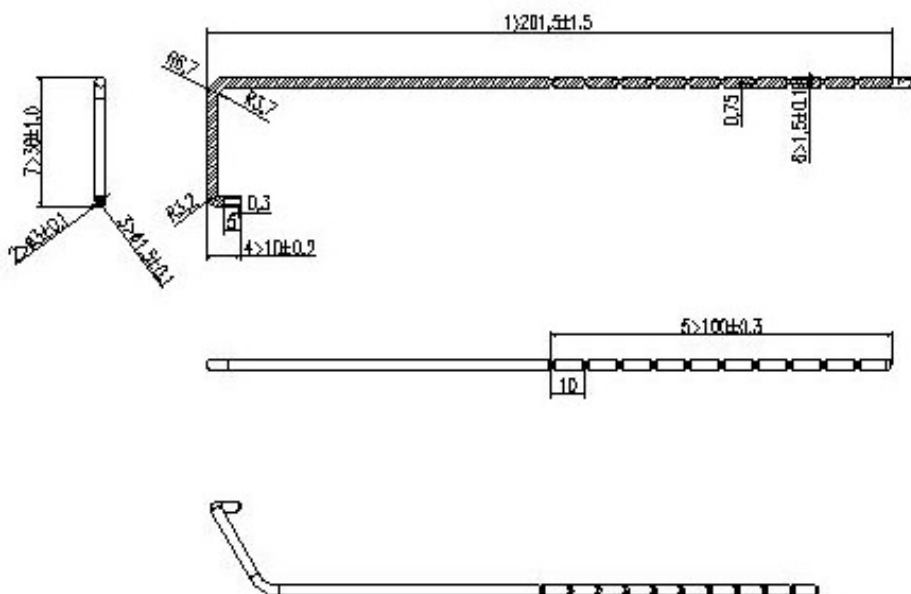
Electrode Rod

Material	Nickel-plated phosphor bronze
Length	Total length: 201.5±1.5mm 10 sections of the electrode rod have been rolled grooves for easy cutting. The length of each section is about 10mm as the figure shown.

L-type Electrode Rod



U-type Electrode Rod



Wireless Liquid Hand Soap Sensor / Wireless Water Leak Sensor**Frequency**

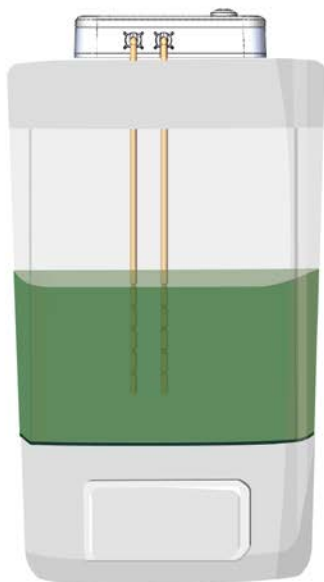
Frequency Range	863MHz-928MHz 470MHz-510MHz
TX Power	US915 20dbm; AS923 16dbm; AU915 20dbm; CN470 19.15dbm; EU868 16dbm; KR920 14dbm; IN865 20dbm;
Receive Sensitivity	-136dBm (LoRa, Spreading Factor=12, Bit Rate=293bps) -121dBm (FSK, Frequency deviation=5kHz, Bit Rate=1.2kbps)
Antenna Type	Built-in antenna
Communication Distance	10km (visible linear obstacle-free transmission distance, actual transmission distance depending on the environment)
Data Transfer Rate	0.3kbps~50kbps(LoRa) 1.2kbps~300kbps(FSK)
Modulation Method	LoRa/FSK (Note: choose one of them)
Supportable LoRaWAN Band	EU863-870,US902-928,AU915-928,KR920-923,AS923-1,A S923-2,AS923-3,IN865-867,CN470-510 (Note: The frequency band is optional and needs to be configured before shipment)

Physical

Dimension	Host body: L 88mm* W 65mm* H 19mm
Weight	approximately 127g
Ambient Temperature Range	-20°C ~ 55°C
Storage Temperature Range	-40°C ~ 85°C
Ambient Humidity Range	<90%RH (No condensation)

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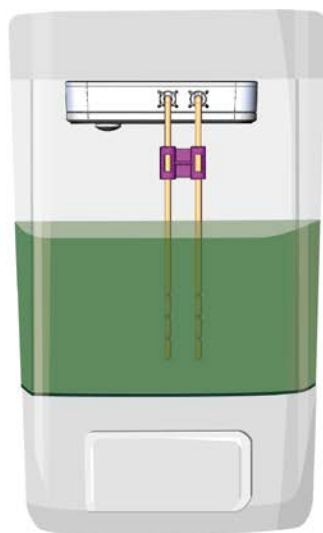
Installation Reference



R720FLD

L-type

Electrode rod downward



R720FLO

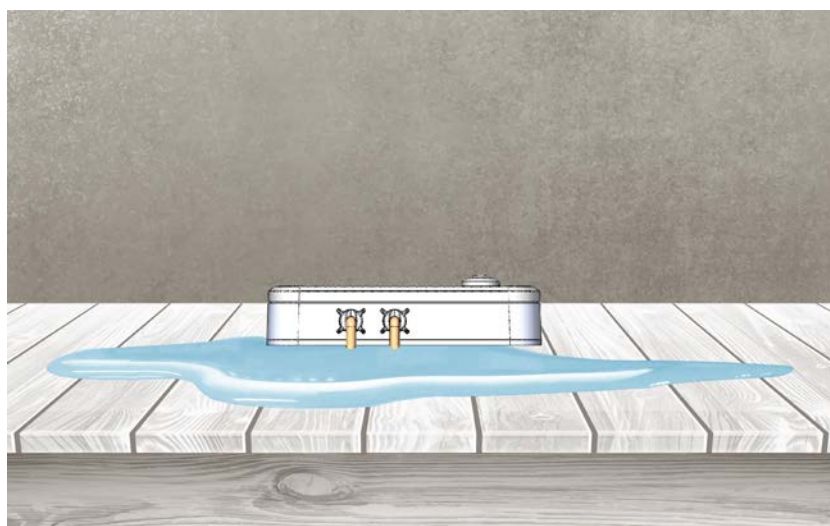
L-type

Electrode rod upward



R720FU

U-type



R720FW