Wireless Toilet Water Tank Leakage Sensor R720FLT Data Sheet

Wireless Sensor Network Based on LoRa technology

R720FLT

Wireless Toilet Water Tank Leakage Sensor

Introduction

R720FLT is a wireless communication device that can detect toilet tank leakage. The device is connected to two electrode rods, which can detect the leakage of the toilet tank. The detected data is transmitted to other devices through the wireless network for display. It adopts SX1276 wireless communication module.

Main Characteristic

- Apply SX1276 wireless communication module
- 2 ER14505 batteries AA size (3.6V / cell) in parallel
- Protection class IP65
- Detect the number and status of make-up water of toilet water tank
- 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

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

At this website, users can find battery lifetime for various models at different configurations.

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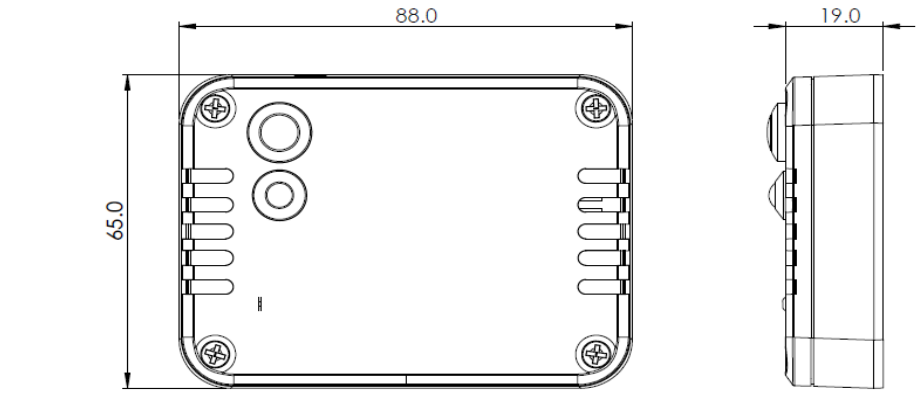
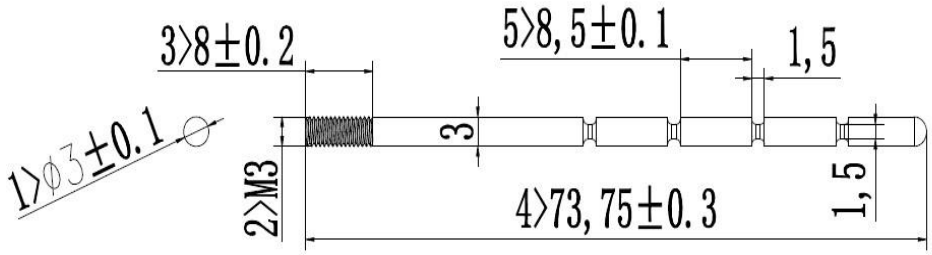
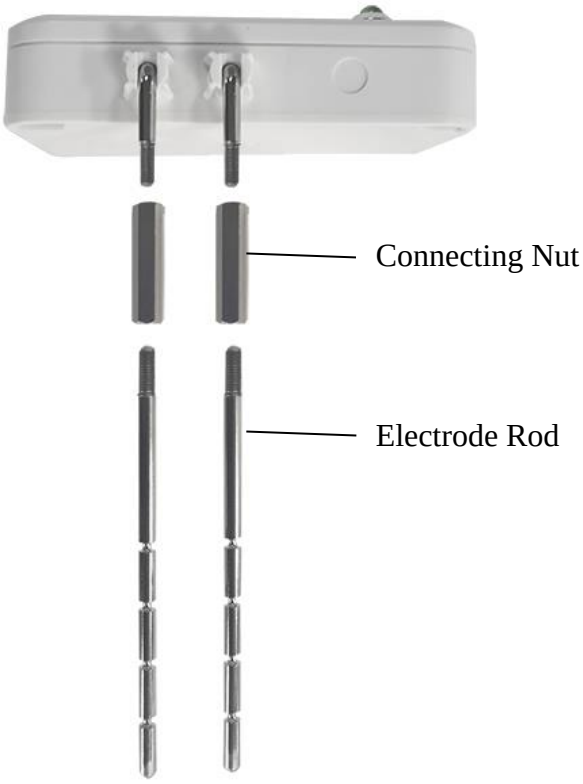
Application

- Toilet tank leak detection

Dimension







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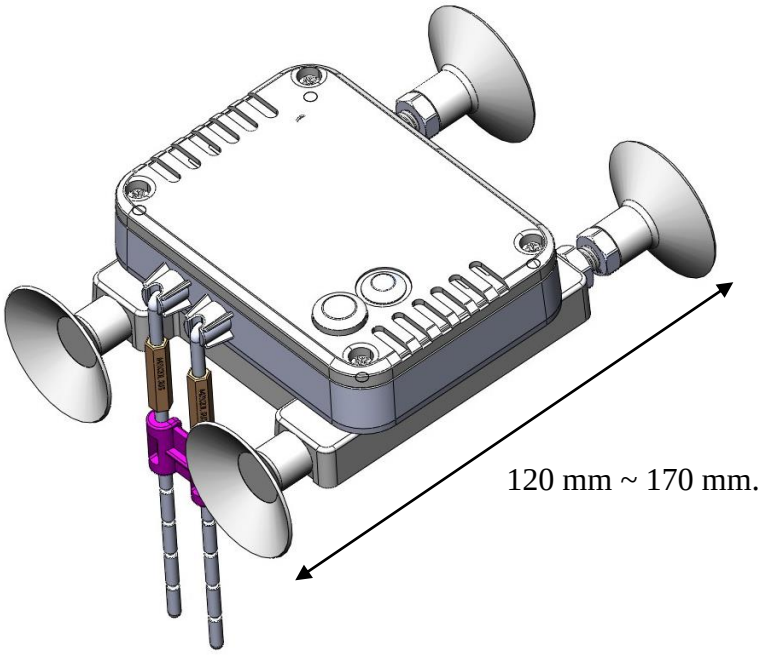

Electric

Power Supply	2 sections of ER14505 lithium batteries (3.6V, 2400mAh/ section) in parallel
Battery Lifetime	Battery lifetime 10.52 years (Condition: Ambient temperature 25 ℃, report once every 60min, 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

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

Electrode Rod

Material	Nickel-plated phosphor bronze
Length	Total length: Ø3mm * 90.2mm (Length from the bottom of the R720FLT unit to the top of the probe.) Electrode Rod : Ø3mm * 73.75mm

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, BitRate=1.2kbps)
Antenna Type	Built-in antenna
Communication Distance	10km (This is the unobstructed transmission distance, the actual transmission distance depends 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, AS923-2,AS923-3,IN865-867,CN470-510 (Note: optional, to be done in the factory configuration)

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Physical

Dimension	Host body: L 88mm* W 65mm* H 19mm
The Bracket Range of Retractable Length	120mm~170mm
Weight	Approximately 127g
Ambient Temperature Range	-20℃~55℃
Storage Temperature Range	-40℃~ 85℃
Ambient Humidity Range	<90%RH (No condensation)