

# **Wireless 3-Gang Water Leak Detector with 1 x Digital Output**

---

Wireless Sensor Network Based on LoRa Technology



## **R900A17CO1 Data Sheet**

---

**Wireless 3-Gang Water Leak Detector with 1 x Digital Output**

---

**Copyright©Netvox Technology Co., Ltd.**

This document contains proprietary technical information which is the property of NETVOX Technology and is issued in strict confidential and shall not be disclosed to other parties in whole or in parts without written permission of NETVOX Technology. The specifications are subjected to change without prior notice.

## Wireless 3-Gang Water Leak Detector with 1 x Digital Output

---

### Introduction

R900A17CO1 is a wireless communication device featuring three channels of point-type water leakage detection and one DO output.

With up to 7 flexible installation options, R900A17CO1 integrates easily into various environments. In addition, with support for Netvox NFC app, users can easily configure settings, update firmware, and access data simply by tapping their smart phone to the device.

### Features

- Powered by 2\* 3.6V ER18505 batteries (also support ER14505 batteries with battery converter case)
- Main unit: IP65
- Three point-type water leakage detection
- Built-in vibration sensor for tamper alarm
- Up to 7 installation methods for different kinds of scenarios
- Support NFC. Configure and upgrade firmware on Netvox NFC app
- Store up to 10000 data
- Offline data retransmission function
- LoRaWAN™ Class A compatible
- Frequency hopping spread spectrum
- 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 longer battery life

Note: Battery life is determined by the sensor reporting frequency and other variables, please visit

[http://www.netvox.com.tw/electric/electric\\_calc.html](http://www.netvox.com.tw/electric/electric_calc.html) for battery life and calculation.

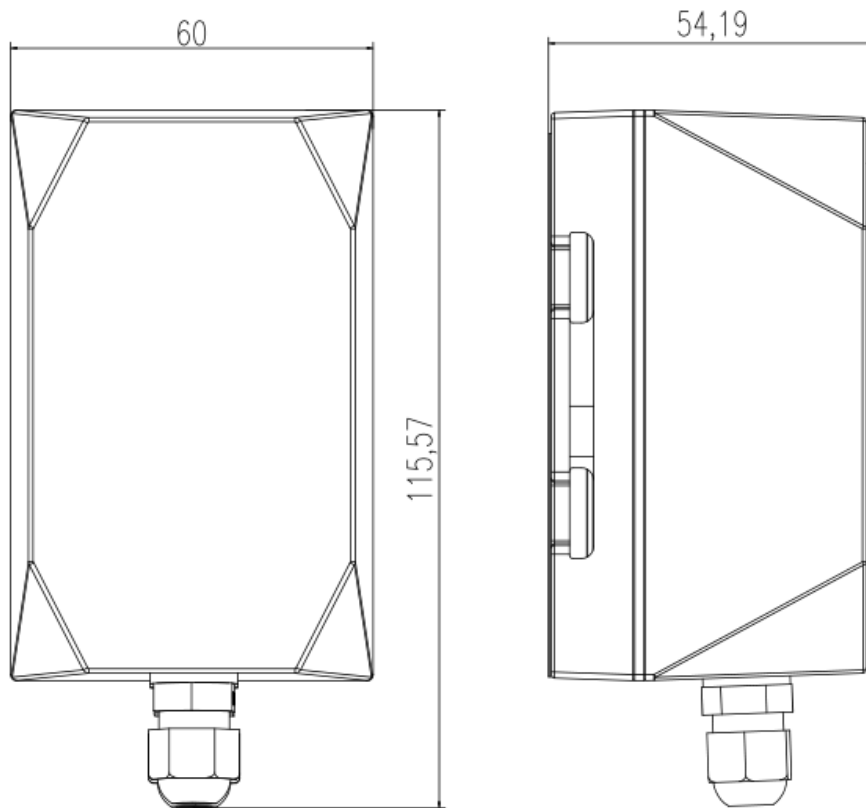
### Applications

- Server rooms
- Warehouses
- Smart homes
- Archives
- Air conditioning systems
- Semiconductor factories

**Wireless 3-Gang Water Leak Detector with 1 x Digital Output****Dimensions**

R900 (main unit)

L:115.57mm x W:60mm x H: 54.19mm



**Wireless 3-Gang Water Leak Detector with 1 x Digital Output****Electrical Specifications**

Power Supply	2* ER18505 3.6V 4000mAh lithium batteries in parallel (or 2* ER14505 3.6V 2400mAh lithium batteries with battery converter case)
Battery Lifespan	5.69 years  (when powered by 2* ER18505 batteries, the temperature = 25°C, report interval = 15 minutes, TX power = 20dBm, and LoRa SF = 10)  Battery life may vary depending on the report interval, TX power, and spreading factor (SF). It can be calculated and updated according to the following website: <a href="http://elecalc.netvoxcloud.com:8080/electric_calc/electric_calc.html?lang=cn">http://elecalc.netvoxcloud.com:8080/electric_calc/electric_calc.html?lang=cn</a>
Standby Current	38uA
Wake-up Current	7mA
RF Receiving Current	12mA @3.3V
RF Transmitting Current	138mA @3.3V, TX power = 22dB
Low voltage alarm	3.2V
Battery Measurement Error	±0.1V

Note: The electrical specifications may vary due to the voltage of the power supply.

## Wireless 3-Gang Water Leak Detector with 1 x Digital Output

### Frequency

Frequency Range	863MHz-928MHz 470MHz-510MHz
TX Power	US915 22dBm AS923 16dBm AU915 22dBm CN470 19.15dBm EU868 16dBm KR920 14dBm IN865 20dBm
RX Sensitivity	-123 dBm for 2-FSK (at 1.2 Kbit/s), -148 dBm for LoRa® (at 10.4 kHz, SF= 12)
Antenna Type	Built-in antenna
Communication Range	10km (line of sight) Note: The actual transmission distance depends on the environment.
Data Transfer Rate	FSK: 0.6 – 300Kbit/s Lora: 0.018 – 62.5Kbit/s
Modulation	LoRa / FSK Note: One modulation is required.
Available LoRaWan Band	EU863-870, US902-928, AU915-928, KR920-923, AS923-1, AS923-2, AS923-3, IN865-867, CN470-510 Note: configured before shipment

## Wireless 3-Gang Water Leak Detector with 1 x Digital Output

### Physical Properties

#### Adapter Cable Characteristics

Cable specification	UL2547 / 24 AWG
Maximum outer diameter	3.5 mm
Cable length	1000 mm ( $\pm 10$ mm)
Flame rating	VW-1
Maximum cable length	300 m (theoretical value)

#### Main Unit

Dimensions	L: 115.57mm x W:60mm x H: 54.19mm
Ambient Operating Temperature	-20°C to +55°C
Ambient Storage Temperature	-40°C to +85°C
Ambient Humidity	<90%RH (no condensation)
Installation	Standard: <sup>(1)</sup> screws + bracket <sup>(2)</sup> screws <sup>(3)</sup> double-sided tape Optional: <sup>(1)</sup> magnet <sup>(2)</sup> DIN rail buckle <sup>(3)</sup> swivel bracket Prepared by customers: <sup>(1)</sup> cable tie

#### Digital Output

Cable Length	1m
--------------	----