

Datasheet

Version 0.1

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History

Version	Date	Note
0.1	2017-12-08	Initial Release

Notes:

Hardware version V2.1

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Fig.1 RA02A Appearance

Introduction

RA02A is a smart home, high reliability wireless control alarm device that detects the concentration of smoke in the air and sends a warning tone. It is a wireless communication method and complies with the LoRa protocol standard.

Application

- Home ,office,school and hotel applications.

Wireless Smoke Detector (Photoelectric)

Main features

- Compatible with LoRa protocol
- 2 x1.5V AAA alkaline batteries

Electric

Input power	2 x1.5V AAA alkaline batteries
Life time	3 years (25°C, heart beat: 60 mins , txpower=20dBm, LoRa SF=10)
Standby current	12uA @3VDC
Working current while alarming	580mA/3VDC
Alarming dBm	85dBm @3m
Alarming concentration	0.65~15.5%FT

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	US915 AU915 AS923 EU868 KR920 CN470Configured before shipment

Physical

Dimension	D:92mm H:50mm
Working Temp	-20°C ~ 55°C
Storage Temp	-40°C ~ 85°C
Humidity Detecting Range	<90% RH (No condensation)