S9 LoRaWAN Door/Window Contact Specification

Product Description

The S9 LoRaWAN Door/Window Status Sensor is a wireless data transmission terminal based on LoRa modulation and spread spectrum technology. It utilizes the LoRaWAN network to wirelessly transmit the open/close status of doors and windows.

The S9 Door/Window Status Sensor adopts a high-performance industrial-grade LoRaWAN solution and supports communication via the LoRaWAN 1.0.3 standard protocol.

The S9 Door/Window Status Sensor is based on the STM32 ultra-low-power SoC chip. The core uses the STM32L4xx series from STMicroelectronics, and the RF section adopts the SX1262 long-range, low-power wireless transceiver chip from Semtech, making it suitable for various IoT application scenarios.

Product Description

- Long Battery Life: Powered by a disposable lithium-manganese battery, 1000mAh, capable of sending 80,000 data packets.
- Automatic Status Upload: Immediately uploads status data when the door/window status changes.
- Status Heartbeat Packet: Supports heartbeat packet upload at intervals from 10 seconds to 24 hours. The heartbeat packet includes door/window status and battery level.
- Long Range: Utilizes LoRa spread spectrum modulation technology, achieving a communication distance of 1km to 5km.
- Anti-interference: 135dB RSSI dynamic range.

- Stability: STM32L series ultra-low-power secure main control chip.
- Low Power Consumption: 5uA in sleep mode, low receiving current.
- LoRa Configuration: Supports setting all LoRaWAN parameters, supports OTAA and ABP network join methods.
- Standard Protocol: Supports LoRaWAN 1.0.3 standard protocol, supports Class A and C.
- Standardization: Supports EU433, CN470, EU868, AS923, AU915, KR920 LoRaWAN global frequency plans, supports user-defined frequencies.
- High Receive Sensitivity: -135dBm@SF12 BW125kHz.
- High Detection Sensitivity: Can trigger magnetic status switch within 10mm.
- Flexible Configuration: Supports Bluetooth wireless parameter configuration, downlink command configuration, and serial port configuration.

Basic Parameters

Parameter	Description
Power Supply	DC3V, 1 x CR123A battery
Battery Capacity	1000mAh
Transmit Current	≤105mA@22dBm
Receive Current	≤9mA
Sleep Current	≤5uA
Battery Life	80,000 data transmissions

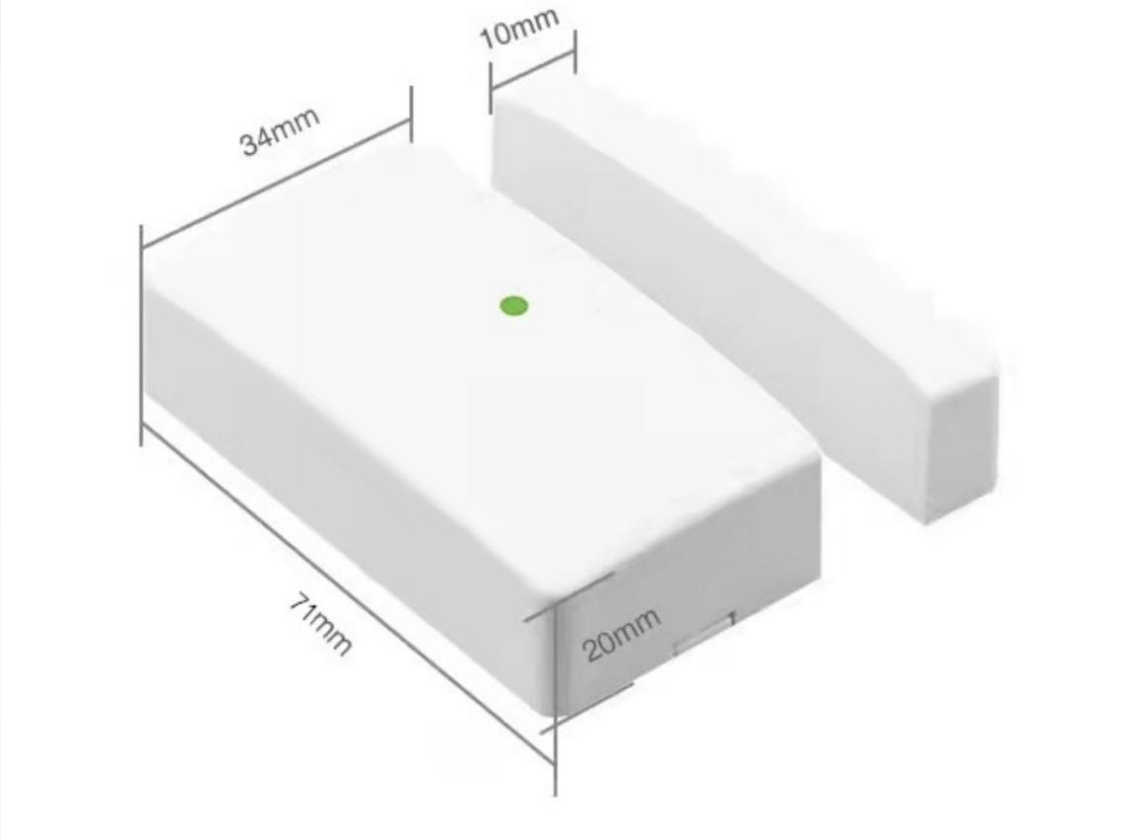
RF Parameters

Parameter	Description
Output Power	-1~22dBm
Input Power	＜10dBm
Bandwidth	7.8~500kHz
Spreading Factor	SF7~SF12
Receive Sensitivity	-135dBm@SF12 BW125kHz
Harmonics	＜-40dB@1GHz
Frequency Range	EU433, CN470, EU868, AS923, AU915, KR920 LoRaWAN global frequency plans
Channel	Modifiable

Physical Characteristics

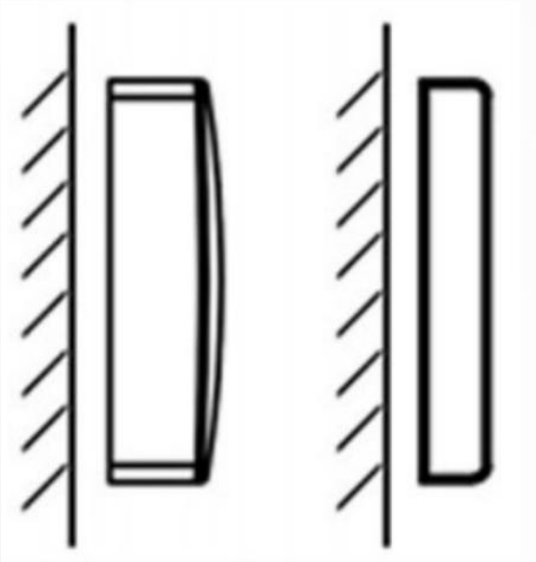
Characteristic	Description
Dimensions	Main unit: 71 x 34 x 20mm, Magnet unit: 71 x 12 x 20mm
Installation Method	Double-sided adhesive tape
Temperature	-10~55℃ (Operating)
Humidity	0~95%RH (Non-condensing)

Product Dimensions

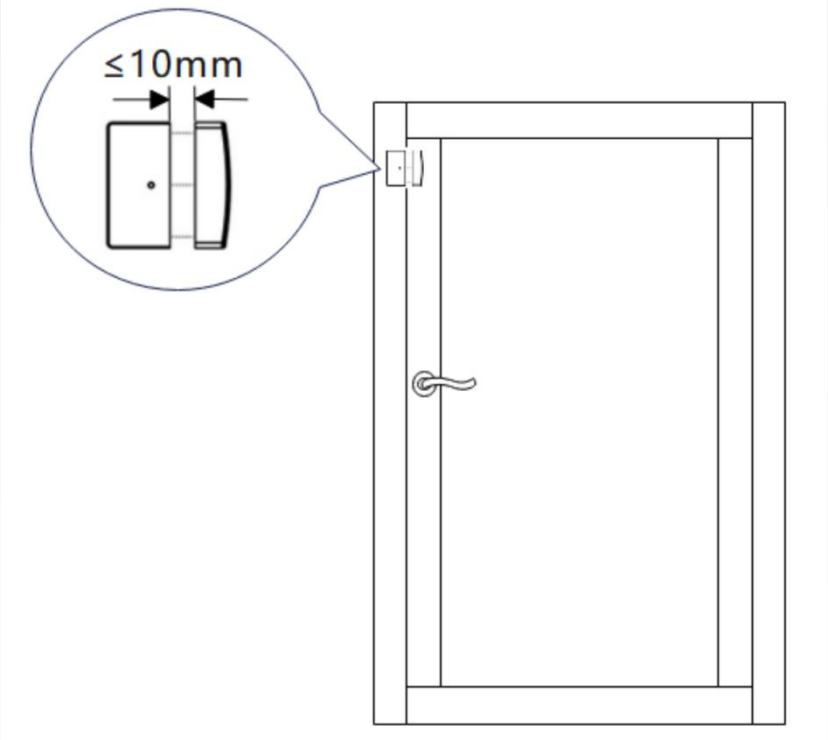


Installation Method

1.Use the provided double-sided adhesive tape to install the main unit and the magnet unit of the door/window contact on both sides of the gap of the door, window, etc.



2.≤10mmThe gap distance between the main unit and the magnet unit should be ≤10



3.Door/Window Contact Status Test: Open and close the door/window to observe the green LED status on the main unit. When the green LED lights up, it indicates a change in the door/window contact status. Simultaneously, check the data uploaded by the door/window contact on the LoRaWAN server.

Revision History

Version	Revision Date	Description of Changes
V1.0.0	20200711	Initial draft
V1.0.1	20200928	Corrected some description errors
V1.1.0	20241219	Added support for LoRaWAN 1.0.3 protocol
V1.1.1	20250418	Corrected description errors
V1.1.2	20260130	Added Bluetooth configuration functionality