DO200 Ultrasonic + Magnetic Parking Occupation Sensor Datasheet

Sigfox Version

Version:V1.1

Date:2020-3-13

Change Notes

V1.1 Modify specifications
V1.0 Initial version.

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Disclaimer

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Due to the photoing and printing reasons, the photos in this document maybe different from the real released product, please use the released product as the final reference.

Cautions

The battery in this device is non-recharged type.
Please DO NOT recharge it.
If out of power, please replace with new battery from CNDingtek®.
The battery can not work for more than +85°C.

1 Overview

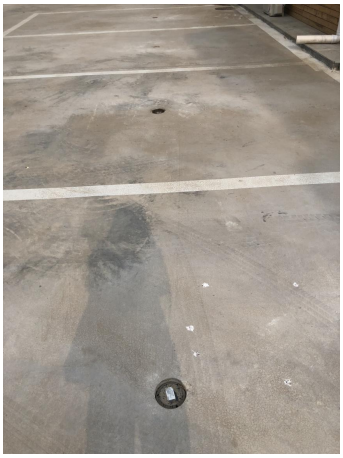
The DO200 parking occupation detector is sensor which combining ultrasonic and magnetic technology. With the redundant technology of sensor, it achieves accuracy of 99%. The error is only happened while extreme environment, like flood and thunder at the same time. From the performance it overwhelms the lonely magnetic products.
Through the built-in Sigfox module, the level data is sent to the network server through the Sigfox gateway. Generally we divide the frequency band into RCZ1, RCZ2, RCZ3, RCZ4 and so on.
As it is with algorithm of low power consumption, the internal battery work for more than 4years. The IP65 level ensure the endurable working outdoor.

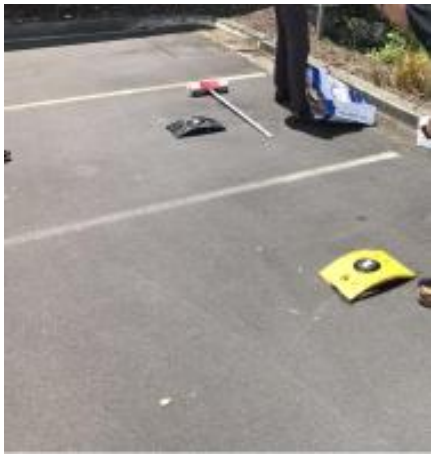
2 Features

- Low power Sigfox technology;
- Combination of ultrasonic and magnetic;
- 99% accuracy, overwhelm lonely magnetic products;
- IP65, water proof;

3 Application

- Roadside parking space;
- Outdoor parking space for commercial buildings;
- Indoor parking space for commercial buildings;





4 Specification

	Dimension	115*115*50mm

Overview	Net Weight	150g
	Color	Black
	Shell Material	ABS
Detector	Principle	Ultrasonic + Magnetic
	Accuracy	99%
	Ultrasonic precision	3mm
	Range	10-50cm
Controller	MCU	STM32, 32bit ARM® core controller
Wireless	Wireless	Sigfox
	Sensitivity	137dbm@292bps (RX), 5~20dbm(Tx)
	Frequency	RCZ1,RCZ2,RCZ3,RCZ4
Battery	Internal battery	Non-recharged Lithium battery ER26500 8000mah@3.7VDC
	Lifetime	4 years at 2 times report per day
Environment	Operating Temperature	-20 ~+70℃
	Storage Temperature	-40 ~ +85℃
	Protection Level	IP65

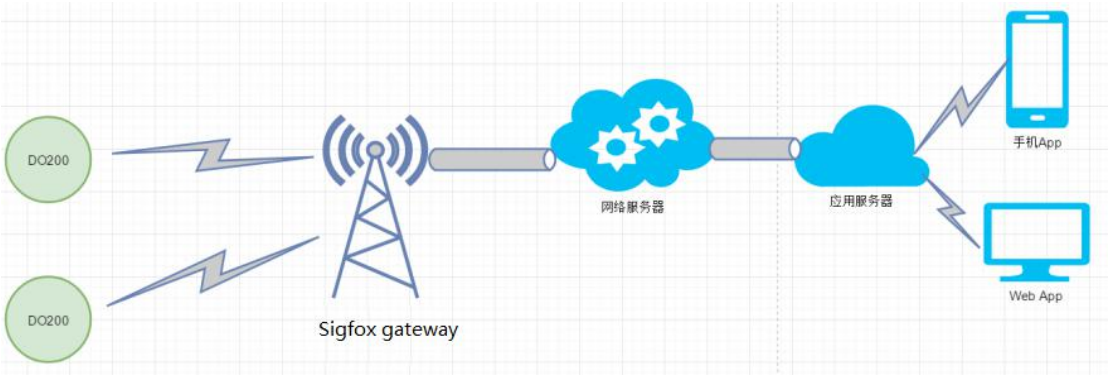
5 Mechanical Size

115mm*115mm*50mm

(Notes: only for reference, real product update frequently without notification.)

6 Software Platform

6.1 Network Diagram



The data about user of device will be collect from the D0200 parking occupation sensors will be received to the gateway then the gateway send the data to Sigfox network server through internet. After that the data from usage sensor of Sigfox network will be transferred through the internet to the application server. So the user can monitor the parking status through web or mobile app.

6.2 Application Software

Users can monitor vehicle status in real time through the Sigfox platform. And you can also modify the sensitivity of the device online through the platform to meet the needs of your actual environment.

7 Protocol and API Interface

The communication protocol(API Interface) is confidential is only open for customer who has purchase the device and sign the NDA(non-disclosure agreement) file with CNDingtek and his own Company. Please contact our sales team service@dingtek.com if you want to integrate the protocol/API with your own system.

8 Installation & Test

8.1 Boot sensor

The device is not connected to the power supply by default. Open the case and connect the power before use, then start the test according to the instructions.

8.2 Installation

Embedded installation method:
Make one hole on ground which can put the sensor into. No need to be much bigger,it is enough if the top cover of sensor can be at same level as the ground.

Install the sensor on the ground:

9 Package

Following items will be packed in the order Package when you will open it.

Part List

NO.	Item	Quantity	Remark
1	Parking occupation sensor	1	
2	Screw	3	Fasten on ground
3	Manual	1	
4	Magnet	1	Test tool

25*21*8cm