

DF702 Waste Bin Detector 4G

Data sheet



Version:V1.1

Date:2020-9-10

Change Notes

V1.1 Add parameters of 8meters version; Modify the battery informaiton.

V1.0 Initial version.

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Cautions

- The battery in the device is Non-Chargeable.
- Please Do Not recharge it.
- If it is Out of Power please order new battery from CNDingtek.
- The battery can not Work more then +85°C Degree Temperature.



Disclaimer

CNDingtek ® keep own his best the solved manual should be accurate and very close to the configuration, protocol and installation process. The CNDingtek reserved all the rights to modify the hard ware software and specification, color, guide and package and other all about the devices of CNDingtek products.

Due to the manually photos of the products and printing reasons the photos in this documents maybe different from the real released products. Please use the released product as final reference.

1 Overview

The DF702 sensor is designed for waste bin (Trash Bin) status detection of waste Bin outside or inside used. It detects the following status for the customer of using place for the user

- Full
- Empty
- Flame risk
- Inclined (fall)

1.1 Build-in Structure(4G)

DF702 waste Bin detector is build through the 4G module. It works for quad band frequency, .So it works worldwide. And the 4g module transmit the status 4G networks to base station to networks server and application server. User can monitor the status remotely.

2 Features

Following the features of DF702 Waste Bin 4G detector are given.

- Long lifetime, As it is with algorithm of low power consumption, battery can work for more than 1 years at 4 times report per 24hours.
- Easy to install, suitable for covered or uncovered trash cans.
- IP66 protection level, it can still work in the case of rain and other weather conditions

3 Application

With the application software user can assign the collector resource work plan and route plan. Analyze task performance and find out solution to improve the system. Finally the objective of high efficiency , good environment, and low cost are achieved.

It is easy to install the device on different styles of trash cans. For example, for a trash can with a lid, the device can be mounted on the top, and for a trash can without a lid, the device can be mounted on the side wall.

Of course, this sensor can also be used in other environments, such as measuring liquid level. We can also customize the software version if you have other needs.



4 Specification

The specification of the Device DF702 Waste bin Sensor is given with all details.

| | | |
|-----------------|------------|--|
| Overview | Dimension | 2m version: 115*115*50mm 8m version: 115*115*80mm |
| | Net Weight | 150g |

| | | |
|--------------------|-------------------------|--|
| | Color | Black |
| | Shell Material | ABS |
| Detector | Principle | 2m version:112Khz 8m version: 40khz |
| | Detection Range | 2m version:15~ 200cm(vertical) 8m version: 28~ 800cm (vertical) |
| | Blind area | 2m version:0~ 15cm 8m version: 0~ 28cm |
| | Accuracy of height | 3mm |
| | Accuracy of temperature | 2°C |
| | Accuracy of angel | 2° (optional) |
| Controller | MCU | STM32, 32bit ARM® core controller |
| Wireless | 4G | SIM7600 |
| | Frequency | B1,B2,B3,B4,B5,B8.B20,B28 and so on |
| Power | Internal Battery | Non-recharged Lithium Battery 8000mAh @ 3.6V |
| | Lifetime for one charge | More than 1 years at 4 times report per day |
| Environment | Operating Temperature | -20 ~ +70°C |
| | Storage Temperature | -40 ~ +85°C |
| | Protection Level | IP66 |

5 Mechanical Size



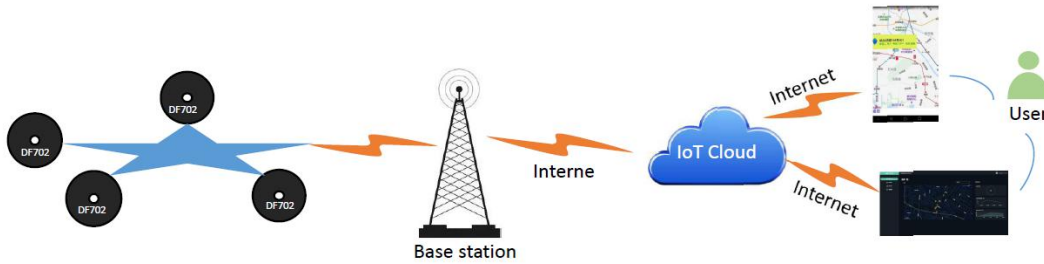
2meters version:115mm*115mm*50mm

8meters version:115mm*115mm*50mm

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

6 Software Platform

6.1 Network Diagram



DF702 waste Bin detector is build through the 4G module. The 4G module transmit the status 4G networks to base station to networks server and application server. User can monitor the status remotely.

6.2 Application Software

With the application software user can assign the collector resource work plan and route plan. Analyze task performance and find out solution to improve the system. Finally the objective of high efficiency , good environment, and low cost are achieved.

If you use a server for yourself, skip this item.



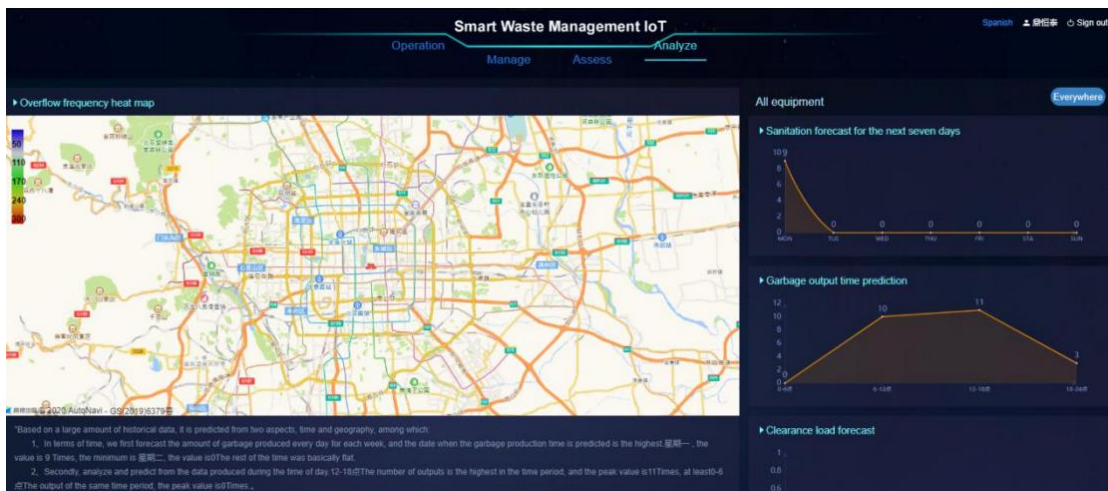
Operation



Manager



Assess



Analyze

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 and the simcard is not installed by default. Please open the shell and install SIMCARD according to the manual before firstly, then configure the APN, and check the data on application.

8.2 Installation

Use the screws provided to mount the unit on the top or side wall of the trash can. Need to be punched and installed.

For trash bin with top cover, please fix the sensor with screw to the top cover.The sensor will be downward (transducer face downward).



If trash bin is not with cover or not applicable to install at cover. Please try to install at side. Below is photo for side installation. (The stainless steel frame is

not include in the standard package, it is additionally designed item to prevent the side wall transform of the trash bin.)



During the mounting, tool is necessary to drill hole and fasten the screw. Make sure the sensor is as vertical as possible.

If the space for installation it too small, please try to remove the top cover from the trash bin body and fasten it again. Then restore the top cover with the trash bin body.



9 Package

| No. | Item | Quantity | Remarks |
|-----|---------------------------------------|----------|-------------------------------------|
| 1 | Smart Trash Bin Full Detection Sensor | 1 | Complete Box |
| 2 | Screw | 3 | Fasten on |
| 3 | Magnetic Part | 1 | For Restart Sensor |
| 4 | Manual | 1 | Customer Guide |
| 5 | TTL | 1 | At least one per batch of equipment |



18.7*18.7*10cm, 1pcs

10 Video Link

DF702 Test Video <https://youtu.be/86XVM0thJMY>