DF400 Toilet Paper Detector Datasheet

_NB-IoT Version

Version：V1.0

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Changes

V1.0 Initial version.

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Cautions

●The battery is non-rechargeable. Please do not charge it.

●If the battery is out of power, please replace it with a battery of the same specification obtained from CNDingtek

●The battery can not work when temperatures is above 85 ° C.

1 Overview

DF400 is a Toilet Paper detector, which can be used to detect the toilet paper remaining; when empty alarm occurs, the data will be immediately transmitted to the cloud server through the built-in NB-IoT module. Users can observe status information remotely. The device uses a built-in battery to transmit data through the NB-IoT method, with high real-time performance and low power consumption.

Due to the low power consumption algorithm, the internal battery can work for about 1 year (report 3 times a day).

2 Features

■Easy to install and small in size

■Accurate and timely , real-time monitoring, alarm immediately when empty alarm occurs

■Low power consumption.

■Multiple application environments

3 Appliation

Widely used for toilet paper boxes in public toilets. Such Hotels, shoppingmalls, restaurants, schools, hospitals, train, public places,etc.,.

4 Specification

Detector Specification	Dimension	68x64x18mm
	Net weight	40g
	Color	Host: Black
	Shell material	ABS
Detector	Theory	Laser Ranging
	Measuring range	3~200cm
	Blind area	3cm
	Accuracy of height	3mm
Wireless	Wireless	NB-IoT
	Frequency	B1,B3,B5,B8,B20,B28 and so on
Power	Inner Battery	2 AA battery*2 , (Battery is not included by default, please purchase if necessary)
	Battery Life	1 year, three times report per day
Environment	Working Temperature	-20 ~ +70℃
	Storage Temperature	-40 ~ +85℃

Toilet paper box (Optional)	Color	Transparent Black
	Size	270x126x280mm
	Weight	460g
	Material	ABS flame retardant new material

5 Mechanical Dimensions

68x64x18mm

270x126x280mm

(Note: For reference only, actual product updates are frequent without notice)

6 System network diagram

Through the built-in NB-IoT wireless module, it transmits data to the NB-IoT network station , Then the Internet transmits the data to the cloud server and application server. Finally, the user can monitor the status of the door magnetic switch in real time according to the Web or APP, and online monitoring and management.

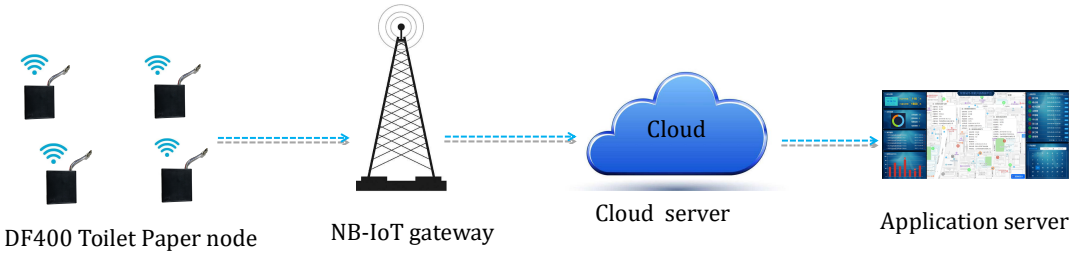

Figure 6.1 Network diagram

7 Protocol and API interface

The terminal communication protocol and API interface files are confidential documents and are only available to customers who purchased the device and signed NDA (non-disclosure agreement) documents with CNDingtek and his own company. If you want to integrate with your own system by using a protocol / API interface, please contact our sales team at service@dingtek.com.

8 Package

Accessories name	Specification	Quantity	Note
Device	DF400 Toilet Paper Detector	1	
TTL	Serial tools	1	Serial tools (at least one per batch of equipment)
3M glue		3	For installation
Manual		1	