

DC500 People Counter_User's Manual

_LoRaWAN Version



V1.0

Date: 2020-07-16

Changed

V1.0 Initial version

Index

1 Overview.....	4
2 DC500 Parameters.....	4
3 DC500 Sensor Function Description.....	5
3.1 People counter.....	5
3.2 Reporting rule.....	5
4 DC500 Hardware interface.....	5
5 Connect to Power.....	6
6 Reboot Sensor by Magnet.....	7
7 Installation.....	7
8 Protocol.....	8
9 FAQ.....	8

1 Overview

These documents are helpful to understand the DC500 People Counter's following:

- DC500 sensor parameter setting by default
- DC500 sensor function description
- Hardware Interface
- Connect power
- Reboot DC500 sensor by magnet
- Protocol
- FAQ

2 DC500 Parameters

2.1 DC500 Default Parameters

Parameters	Default configuration	Description
Heartbeat interval	24hours	Sensor will report at the 24 hour interval, and report the reading of the moment.
People count alarm threshold	500	When the number of people exceeds the set threshold, data will be reported. For example, we set the threshold to 500 people, when counting = 500, then it will report this data, then When counting =1000, then report the data again.
Battery alarm threshold	20%	When the percentage of the battery is less than 20%, the battery is considered to be battery lower.

2.1 LoRaWAN Band

The main LoRaWAN band are used given below CN470, EU868, US915, AU915, AS923. The default frequency settings are as follows:

Band	The default uplink frequency	RXWIN1	RXWIN2
CN470 (470-510MHz)	470.3,470.5,470.7,470.9, 471.1,471.3,471.5,471.7,	500.3,500.5,500.7,500.95 01.1,501.3,501.5,501.7	505.3
EU868 (863-870MHz)	868.1,868.3,868.5	868.1,868.3,868.5	869.525
US915 (902-928MHz)	902.3,902.5,902.7,902.9, 903.1,903.3,903.5,903.7	923.3,923.9,924.5,925.1 925.7,926.3,926.9,927.5	923.3
AU915 (915-928MHz)	915.2,915.4,915.6,915.8 916.0,916.2,916.4,916.6	923.3,923.9,924.5,925.1 925.7,926.3,926.9,927.5	923.3
AS923 (915-928MHz)	923.2,923.4	923.2,923.4	923.2

3 DC500 Sensor Function Description

3.1 People counter

DC500 people counter can count the number of passing people, and report the alarm status when it reaches the limited number of people.

3.2 Reporting rule

1) People counting limit alarm

User can set one people limit threshold. When the number of people exceeds the set threshold, data will be reported.

For example, we set the threshold to 500 people, when counting = 500, then it will report this data, then When counting =1000, then report the data again.

2) Heartbeat data

Report current data at specific intervals, such as 24hours.

4 DC500 Hardware interface

The detailed of power interface , device parameter configuration interface are given here, as shown in figure4.1.

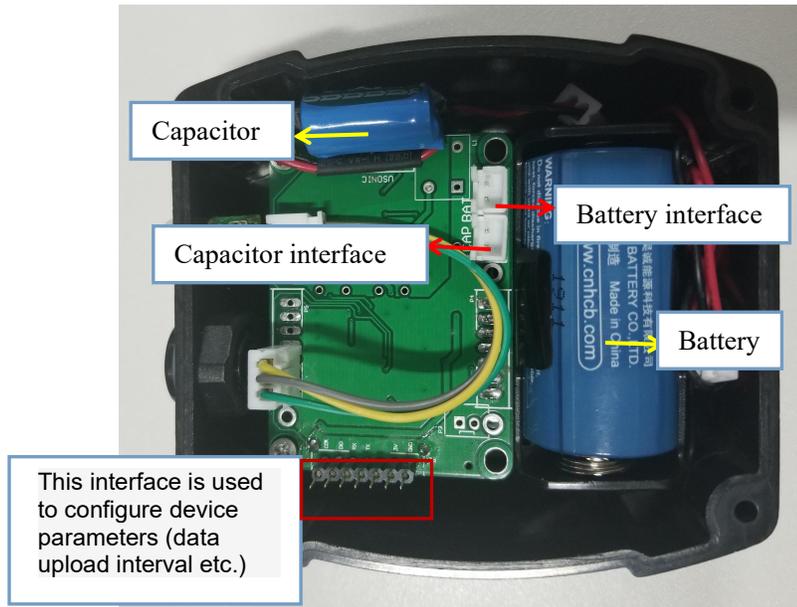


Figure 4.1 Hardware interface

5 Connect to Power

Please first connect capacitor connect, then connect the battery,as following picture:

Note:

- 1 If you connect the power, but not reporting, please try to restart sensor by magnet.
- 2 If you need to restart sensor, please use magnet. DONOT unplug/plug battery frequently.



Figure 5.1 Connect battery and capacitor

6 Reboot Sensor by Magnet

Magnet:

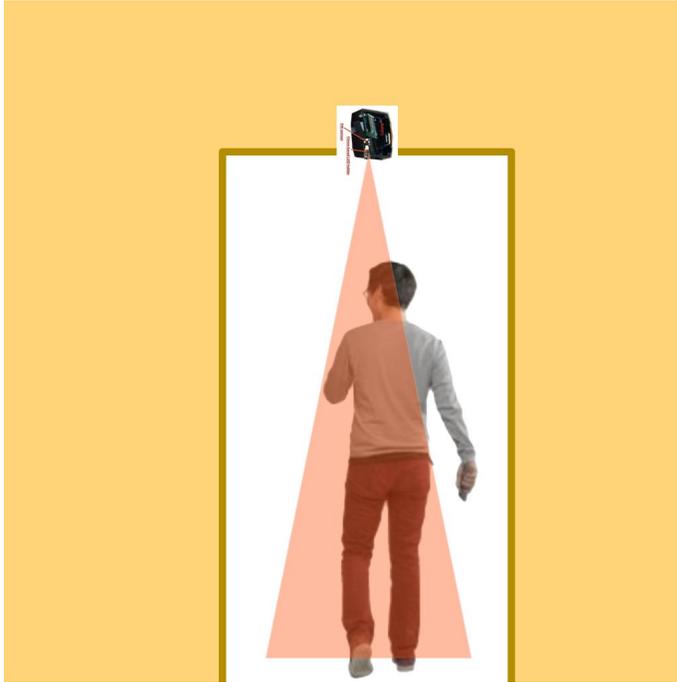


Move the magnet along the arrow on the picture, and then remove the magnet to restart the device.



7 Installation

Installed on top of the door. Use glue or other brackets to fix the device.



Note:

1 It is recommended to install on one-way doors, such as entering or leaving. If it is a two-way door, it can enter and leave, it will cause double counting. For example, if the same person enters and leaves, it will be counted twice.

2 Avoid two or more people passing at the same time.

8 Protocol

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

9 FAQ

Q1 Why can not I see the device data?

A1:no battery connected;

Considering shipping rules, some is not connected for battery. So user should open

cover and connect battery with the PCB board. For some version with magnetic part outside, please remove the magnetic part, then the battery will power on the sensor.

A2: Because frequently unplug/plug battery; Try to reboot the device with a magnet;

A3:band error;

Please confirm whether the device frequency is the same as the gateway frequency;

A4:The device is not properly registered on the Network server;

Please check the information about whether the device is properly registered on the web server, including devaddr, deveui, appeui, appkey information and frequency band;

A5: The gateway is not connected to the Network server;

Please check if the gateway is properly connected to the Network server and confirm it can work well;

A6:The device is far away from the gateway;

A7:The battery is dead;

Please check if the data shows a battery alarm, or use a voltage measurement tool to measure the battery voltage, or replace another battery for verification.