使用说明书

Dear Customer:

Thank you for your trust and support for our products! We will wholeheartedly provide you with comprehensive and thoughtful service and technical support.

This manual will introduce to you the specific usage method of the reader independently developed and designed by our company. For your safe and effective use of this Writer, give full play to the various functions of this reader and provide you with the most complete service, please read this instruction manual carefully before installation and use And the detailed information in the matching CD, so that you can better and more comprehensively experience the convenience and efficiency brought to you by our products.

You are welcome to give us feedback on your opinions and suggestions on our products during the use of this product at any time, and we will serve you warmly!

directory

1 Introduction to reader

This product has multi-protocol compatibility, small size, fast reading speed, multi-label reading, circularly polarized antenna has no direction limit for labels, and is waterproof It can be widely used in various RFID systems. Typical applications include: ÿ Logistics and warehousing management: item flow and warehousing management, as well as flow management of mail, parcels, and transport luggage; ÿ Intelligent parking lot Management: parking lot management and charging automation; ÿ Production line management: identification of fixed points in the production process; ÿ Product anti-counterfeiting detection: use the write protection function of the memory in the label to identify the authenticity of the product; other fields: club management, library, Systems such as student registration, consumption management, attendance management, dining management, and swimming pool management have been widely used.

1. Reader usage

It can be used for item identification and data collection. With its good characteristics, it can be widely used in the following fields: 1) Transportation management: road, railway transportation management and container transportation management, etc.; 2) Motor vehicle management: public security, traffic, etc. The department monitors and manages various motor vehicles; 3) Road and bridge toll collection: Since this product has the ability to read label data at a long distance and at high speed, road and bridge toll collection can be carried out without stopping; 4) Customs clearance management: Customs clearance and customs transit materials 5) Warehousing and logistics management: commodity flow and warehousing management, as well as flow management of mail, parcels, air luggage, etc.; 6) Parking lot management: realize management and charging automation; 7) Access control management: including the entry and exit of vehicles and personnel Management; 8) Process production process: monitor parts during the entire production process;

2. Main functions of the reader

1) Wake up tag: Only the tag that is woken up can communicate with the reader to prevent the interference of other tags outside the system and ensure the reliability and accuracy of the information exchange between the reader and the system tag.

2) Read tag data: not only can read the ID number of the tag, but also read the data in the specified tag storage area; not only can read a single Tag data, and can read the data of multiple tags within the antenna wave range at the same time. 3) Write tag data: data can be written to the specified tag storage area. 4) It can be directly connected to the control equipment with standard Wiegand W26 and W34 interfaces, no development is required, and it is easy to use. 5) Connect with controller or PC through standard communication interface for data communication and exchange; provide SDK development kit for users to further develop send applications.

3. Reader technical parameters 1)

Working frequency: national standard (920~925MHz), American standard (902~928MHz) or customized other frequency band frequency hopping or fixed frequency work; 2) Support protocol: ISO18000-6B, ISO18000-6C (EPC GEN2) 3) Frequency hopping mode: wide-spectrum frequency hopping (FHSS) or fixed frequency, which can be set by software 4) Working mode: timing automatic card reading, external trigger control card reading or software command card reading, card reading mode can be set 5) RF power: 0~30dBm, software adjustable 6) Card reading distance: Recognition distance adjustment range: 1~12 meters; 7) Card reading sensitivity: dual polarized card reading; 8) Card reading time: single tag 64 Bit ID reading time <6mS;

9) Antenna parameters: Built-in polarized antenna, gain 12dBi 10) Support interfaces: RS485, RS232, Wiegand26, Wiegand34, RJ45 11) Working voltage: DC+12V; 12) Card reading prompt: buzzer 13) Power consumption: The maximum power Greater than 4W 14) Working temperature: -20°C ~ +80°C; 15) Storage temperature: -40°C ~ +125°C; 16) Working humidity: 20% ~ 95% (no condensation) 17) Dimensions: 227mm×227mm ×60mm or 450mm×450mm×120mm

The interface pins are shown in the table:

serial number	name	Thread Color	Function Description
1	DC+12V	Red	+9Vÿ15V Positive pole of power supply
2	GND		black power negative
3	TXD		Brown RS232 signal output (PIN2)
4	RXD		Yellow RS232 signal input (PIN3)
5	GND		Blue RS232 Ground (PIN5)
6	Trigger	gray	trigger pin
7	DATA1/485A+	White	Wiegand data 1 or 485 interface positive terminal
8	DATA0/485B-	Green	Wiegand data 0 or 485 interface negative terminal

2. Reader configuration and demonstration program

The company provides the DEMO program, which is used to configure the working parameters of the reader and test the performance of the reader. Specific application reference Check "915Mz DEMO Software Instructions".

Three reader installation methods and precautions

This set of products includes one AR integrated reader, one RS232 serial communication line, one +12V power adapter and antenna support

Stand one. Please open the packing box to confirm whether the accessories are complete. If you have any questions, please contact the dealer or the after-sales service department of our company directly.

reader

reader

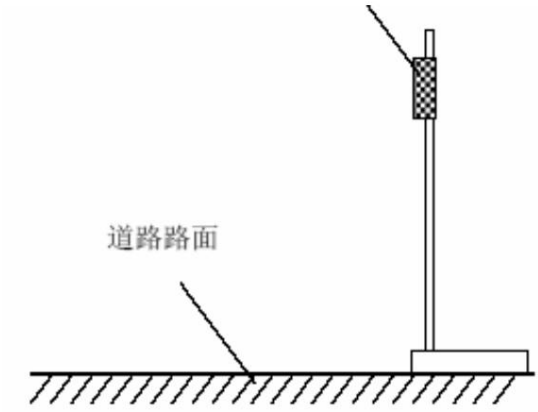
Reader Accessories

1 How to install the reader

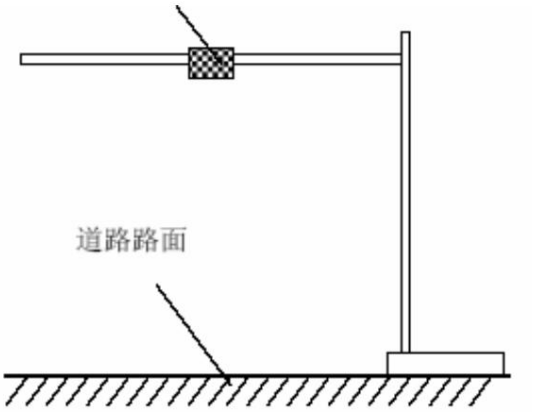
There are two ways to install the reader stand: "side 1-shaped installation" and "L-stand installation" as shown in the figure below: according to the application requirements

Choose the installation method according to the actual situation on site. Generally, the reading and writing distance of the side installation is closer, but the installation is simple; the reading and writing distance of the top installation is longer.

But the installation is complicated.



1 Font installation on the side of the reader



Reader L stand type installation

2 Fixing and height adjustment of the reader

When the 1-shaped stand is side-mounted, it is required to install the reader with a diameter of 50-60mm and a length of 2.2m. It is best to use a wall thickness greater than 1.2mm.

stainless steel material. Use the fasteners provided in the reader box to fix the reader on the top of the pole. According to the type of vehicle (mainly refers to large

Cars and small cars) Adjust the height from the center of the reader to the horizontal plane of the lane, generally about 2.0m (1.8-2.2m).

When the L-shaped stand is installed on the top, it is required to install the L-shaped stand pole (or gantry-shaped) with a diameter of 60-80mm and a cross-bar diameter of 50-60mm.

Use stainless steel with a wall thickness greater than 1.2 to 2.0mm. Also use the fasteners provided in the box to fix the reader on the crossbar near the middle of the lane

position. The height of the cross bar from the ground needs to be adjusted between 3.5m and 4.0m according to the height of the vehicle.

3 Reader azimuth adjustment

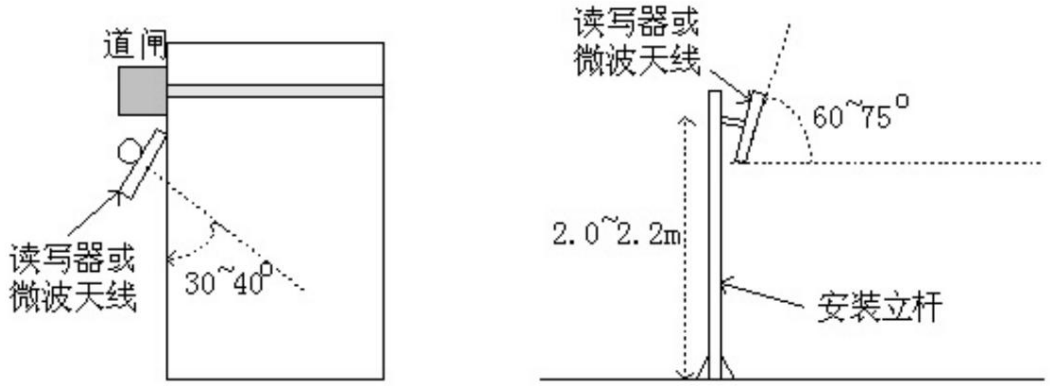


Figure 14 Schematic diagram of reader azimuth adjustment

Antenna depression angle: refers to the angle between the antenna tilting to the ground and the horizontal line, about 60~75°

Antenna azimuth: refers to the offset angle of the antenna in the direction of the lane, about 30~40°

4 Installation Example - Vehicle Parking Management

The principles for selecting the installation location of the reader system are:

(1) The linear distance between the reader and the gate should not exceed 1 meter

(2) There is no obstruction between the location of the reader and the tag card

(3) The distance between the reader and the control device (or PC) should be as close as possible, and it is required to use shielded communication cables

The specific on-site installation and implementation are generally determined according to the on-site conditions, which are explained below.

1) On-site installation method 1:

There is no safety island isolated in the middle of the road, and road control equipment (barrier gates) are installed on both sides of the road, and the vehicle travels at a speed of less than 30 km/h

Pass through the card reading area.

In this case: It is required that the reader (antenna) should be close to the barrier gate equipment, and at the same time make it read the effective range of the tag (the farthest straight-line distance

0.5m to 10m) can cover the entrance ground induction coil or the exit ground induction coil of the entrance and exit, as shown in the figure below.

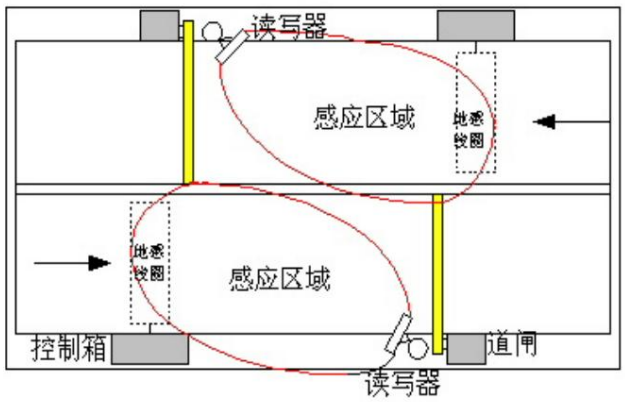


Figure 15 Schematic diagram of on-site installation of the reader

2) On-site installation method 2: The road

has a safety island isolated in the middle, and the control equipment (gate) is installed on the safety island isolated in the middle, and the vehicle speed is less than 10 km/h

Hours pass through the card reading area.

In this case: the reader is required to be close to the barrier gate equipment, and at the same time make it read the effective range of the tag (the farthest straight-line distance is 0.5 meters to

10 meters) can cover the entrance ground induction coil or the exit ground induction coil of the entrance and exit, as shown in the figure below.

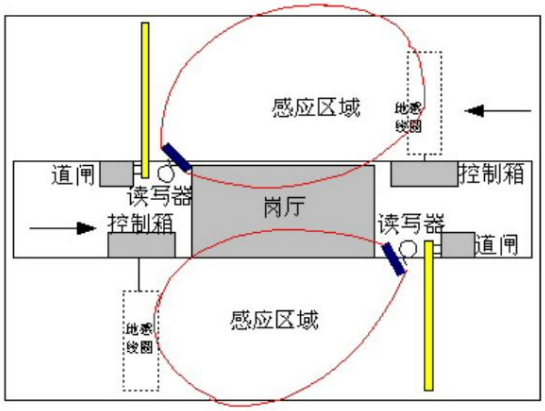


Figure 16 Schematic diagram of on-site installation of the reader

3) The installation position of the electronic label card:

Paste the numbered card on the corresponding vehicle or install it on the card holder.

Since the parking lot equipment is generally installed on the isolation island on the left side of the driveway (near the driver), the electronic tag mounting seat should be attached to the windshield

The position on the left side of the glass is shown in the figure below. For small cars (including ordinary vans), the electronic label bracket refers to the dimensions A, B, and C in the figure below

paste. If it is a large truck or bus, the electronic label should be properly pasted down, referring to the position and size of D, E, and F in the figure below, so as not to block the driver

The line of sight is the principle.

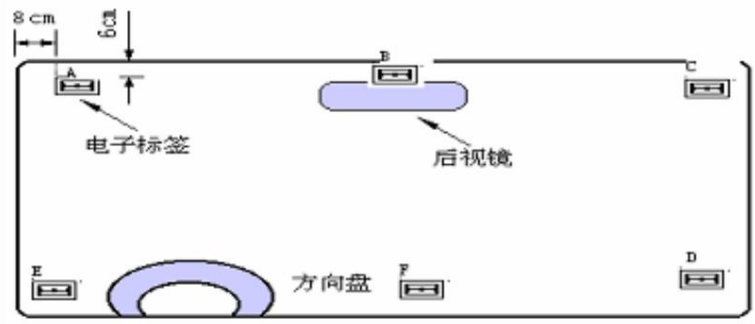


figure 2

Optimal position for electronic tags: If the antenna is installed on the right side (driver's side), then the tag should also be attached to the right side of the windshield of the car (A,

E bit). If the antenna is installed directly above the driveway, the label should be attached near the interior rearview mirror or near the center line of the windshield (B, F positions).

If the antenna is installed on the left side (the driving side), then the label should also be attached to the left side of the car windshield (C, D position).

Label installation when the front windshield of the car is equipped with a metal film:

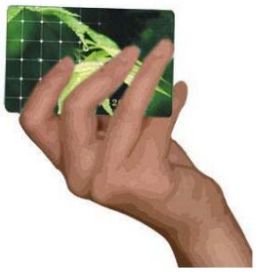
(1) Original front windshield with anti-ultraviolet film: According to European standards, the position behind the reflector on the upper part of the front windshield (position B location), the car manufacturer stipulates to reserve a bare glass window with a length of 120mm and a width of 70mm that does not contain metal ions for electronic tags. Just install the label here when installing.

(2) Front windshield with anti-ultraviolet film mounted on the back: It is required to cover the anti-ultraviolet film in relatively concealed positions (such as positions B, E, and D) during installation. The film cuts out a bare glass window with a length of 120mm and a width of 70mm for electronic labels.

(3) Use metal tags and install the tags on other places such as the license plate outside the car, the rain bracket, etc., for tamper-evident installation.

(4) The driver manually holds the card in the car and reads the card remotely, with the front facing the direction of the antenna.

The correct way to take the card



The wrong way to get the card

Four secondary development kits

Users can carry out secondary development on the application software of the reader as needed. We provide secondary development kits based on C language, which can support VC++, VB, Dephi, C++Builder and other development environments, please refer to the "Dynamic Library User Guide" for the use of the development kit, with VC++ and VB routines attached.

Five precautions and after-sales service

ÿ When the reader module is working (radiating microwave power), the installation and debugging personnel should be at least 30cm away from the antenna to meet the US FCC requirements. Requirements for human exposure to maximum permissible radio frequency (RF) radiation requirements. (This instruction is used to install and debug the device on site Execute when ready.)

ÿ Please keep away from strong magnetic fields when the reader is working.

ÿ This product is guaranteed for one year free of charge based on the product number and date of manufacture. Any mechanical collision, high voltage, improper operation, Unauthorized opening of the reader to cause damage, etc. is not within the free warranty.

You are welcome to give us feedback on any comments and suggestions in the process of using the product, and we will serve you enthusiastically. If you have any questions, please Contact company technical support.