



Vguang

QR code scanner expert

MP86 series User manual



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MP86 series 485 device

★ Wiring instruction

Connect to the 485 port according to the line diagram of the attached page, and the power supply specification is 9-15V.

★ Device configuration & test

- 1) Preparation tool: Scanner, 485 to USB tool (not included in the standard wiring)
Serial debugging tools, configuration tools.
(Configuration tool download address: <http://www.vguang.vip/mp86x1>)
- 2) Configure the scanner: Use the scan code configuration, open the configuration tool, and configure as follows.

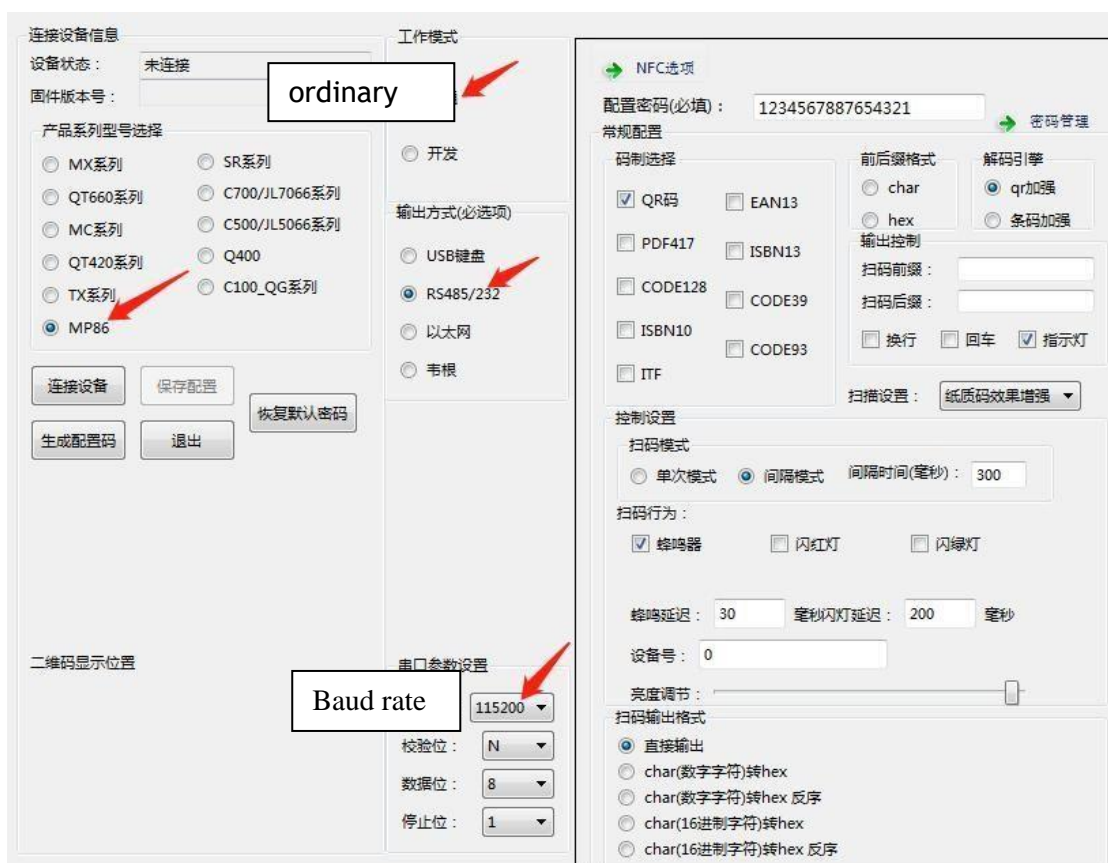


Figure 2



After selected all the options needed, click “product code”, and then scan this configuration code by using the scanner, when heard “di” sound, power off and restart the scanner, configuration process completed.

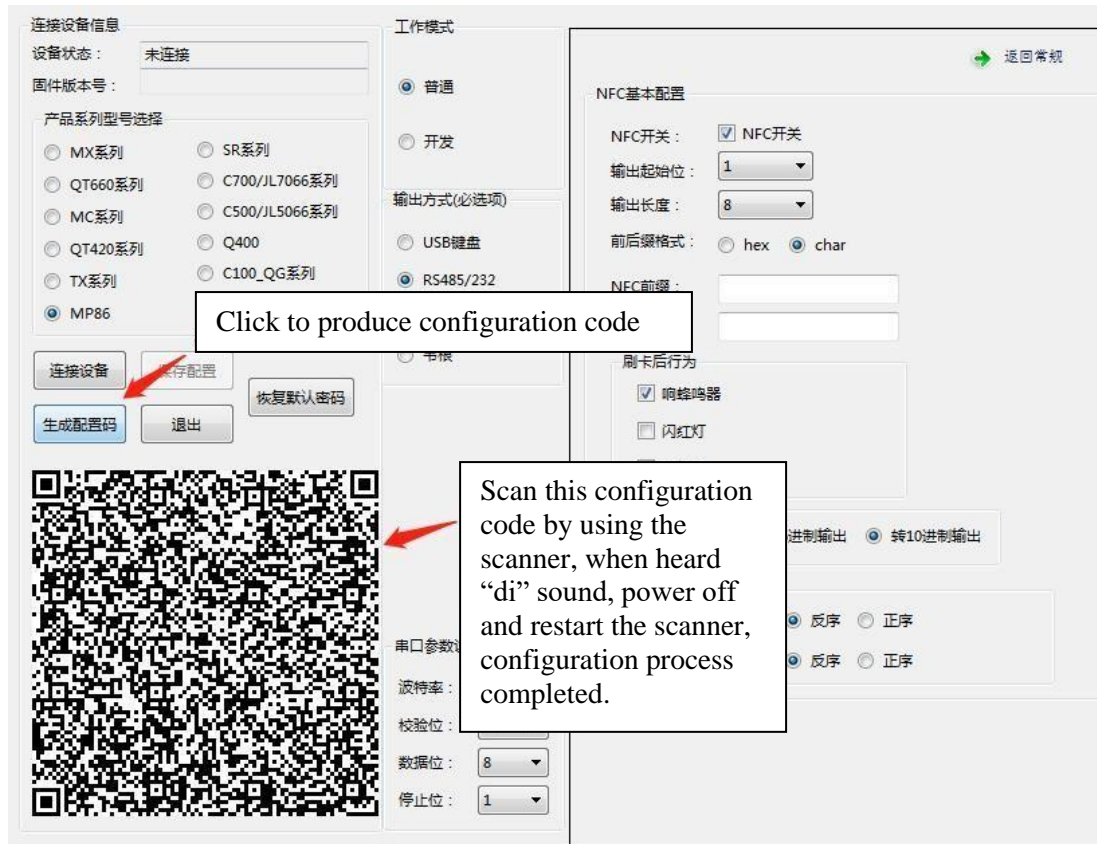


Figure 4

- 2) Open the serial debugging tool, select the corresponding serial port parameters, and scan other code (non-configuration code), you will see the data upload

★ FAQ

- 1) **If scan code has a response, but no output, you can check the reasons from the following aspects :**

A Whether the product model is MP86 series 485 device

B Whether the baud rate in the serial port debugging tool consistent with the scanner

C Whether the signal wiring of the 485 to USB module reversed, you can try to exchange the two wiring.

D Whether scan code output format is correct, If you are not sure, you can try it one by one.

F Whether the card output format is correct, uncertain situations can be tried one by one.

2) If scan code or swipe card has no response, you can check the reasons from the following aspects :

A The scanner is in development mode and needs to be configured in normal mode.

B If it is still not available. Please check whether the configuration tool code selection is configured correctly.

C Whether the NFC switch is open 3)

Swipe card or scan code output data is wrong

A If scan code output data is incorrect. Check if the scanner output format is correct.

B Swipe card output data is incorrect, Check the swipe card output format and whether the swipe card positive and inverted sequence output is correct.

If the above steps are invalid, you can contact the after-sales to confirm the problem.

Description of other configuration items:

A Password management: used to change the configuration password to prevent the device from being maliciously configured

B Prefix and suffix: Add some characters before or after the output of the QR code content. The output format can be char and hex.

C “New line” and “enter” are added to new line after outputting the QR code content. The indicator light is the blue indicator light of the scanner.

D Single mode: the same two-dimensional code, can not be swept twice. Interval mode: The time interval between two scans of the same code.

E Scan code behavior: refers to the action that the scanner will produce when scanning the code. There are buzzer, flashing blue light, flashing red light, flashing green light.

F The buzzer delay and flash delay are configured separately for the buzzer sound and flash time.

G The device number is used to configure the ID of the scanner. It can be used as a distinction. Generally, it is not used.

H Brightness adjustment is used to configure the brightness of the backlight.

I Scanning settings: if qr code needed select “qr up”, if bar code needed then select “bar code up”

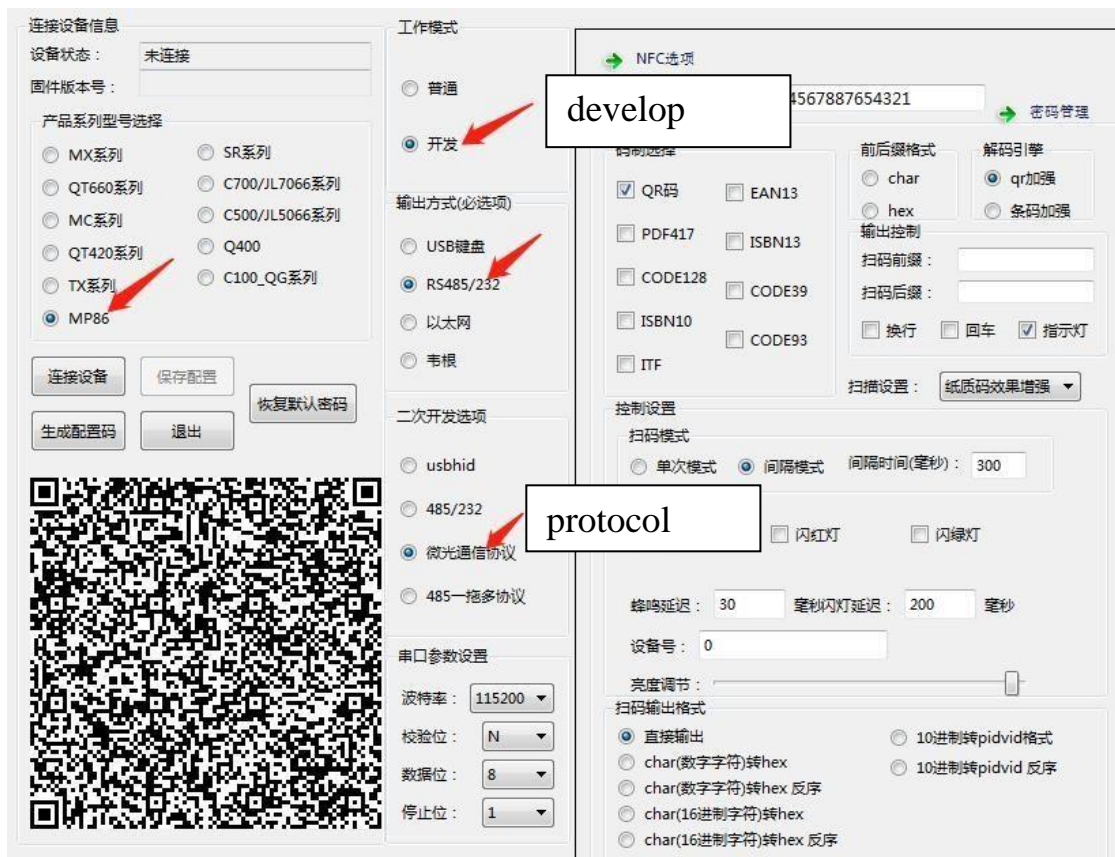
J The swipe card output format is used to configure the serial card number output format after swiping.

K Card swiping behavior are similar to scan code behavior (see E)

L Swiping card positive and inverted sequence output was also a kind of card’s serial number output format.

★ Configure the development mode

Configure the development mode are similar to configure the ordinary mode, only need to select “develop”, and then select secondary development options.



When the 485 device doing secondary development, the secondary development options are recommended to use “Vguang protocol”, which can download from the official website (<http://www.vguang.vip/mp86x1>) (Protocol File tab under this page)
(FAQ for secondary development, see the end of the document)
Note: if one-connected-more function is needed, you need to change “Vguang protocol” into “485 one drag” and then configure the scanner according to the protocol we provide.
(<http://www.vguang.vip/mp86x1>)

MP86 series Ethernet device

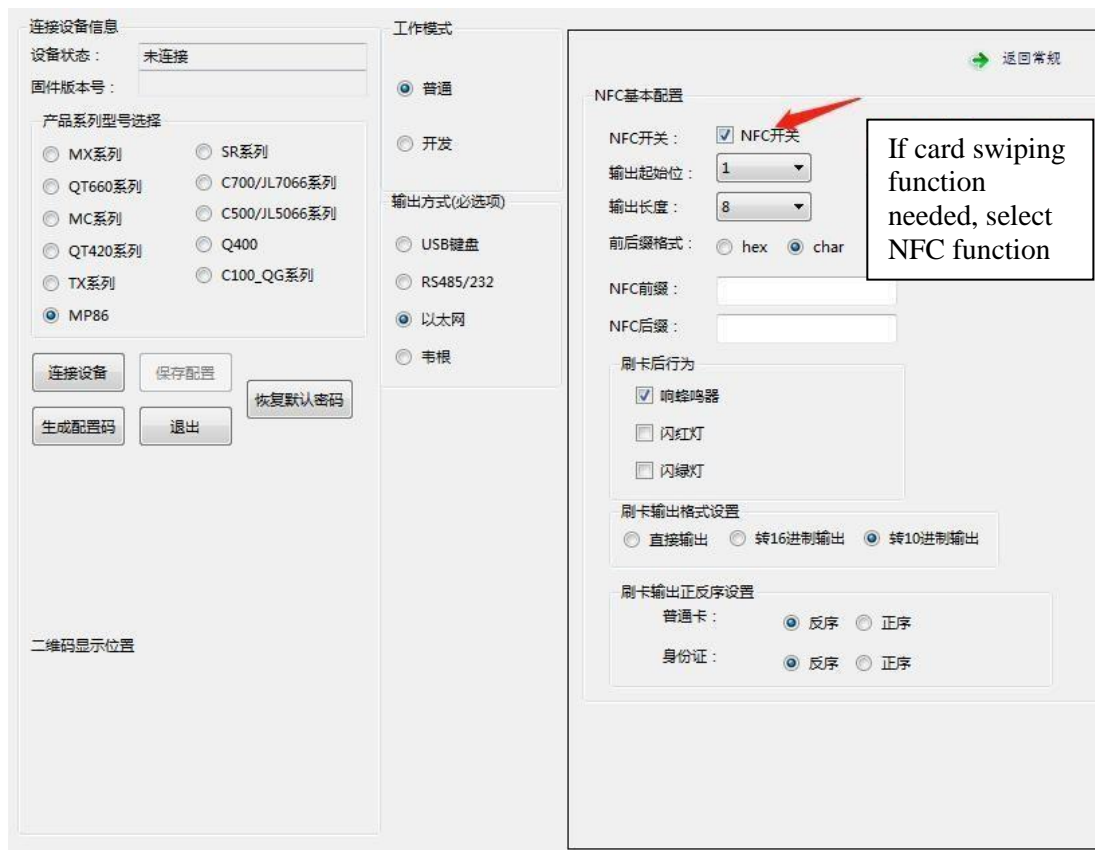
★ Wiring instruction

Connect the network interface according to the product line diagram of the attached page, and supply power to the scanner.

Specifications: 9-15V, POE power supply is not supported.

★ Configure the device

1. Preparation tools: Scanner, local server test tool (such as TCP/UDP debug tool, CDSpace).
(Configuration tool download address: <http://www.vguang.vip/mp86xl>)
2. Test procedure :
 - A. Open the configuration tool and use the scan code configuration



连接设备信息

设备状态：未连接

固件版本号：

产品系列型号选择

MX系列 SR系列
 QT660系列 C700/JL7066系列
 MC系列 C500/JL5066系列
 QT420系列 Q400
 TX系列 C100_QG系列
 MP86

连接设备 保存配置 恢复默认密码
 生成配置码 退出

二维码显示位置

工作模式

普通
 开发

输出方式(必选项)

USB键盘
 RS485/232
 以太网
 韦根

Select network transmission behavior
Select wired output option

有线输出方式

TCP
 TCP协议
 HTTP
 HTTP协议
 UDP

网络传输行为

成功行为：

响蜂鸣器 响蜂鸣器
 闪红灯 闪红灯
 闪绿灯 闪绿灯

失败行为：

继电器控制

When need to control door lock, select relay control function

心跳包内容：www.vguang.cn

心跳包IP：静默IP

IP地址：

子网掩码：

网关：

网络配置

TCP/UDP:服务器地址：

TCP端口号：

TCP接收超时(秒)：2

HTTP: 服务器地址：

HTTP接收超时(秒)：2

Fill in the sever address, according to the protocol norm

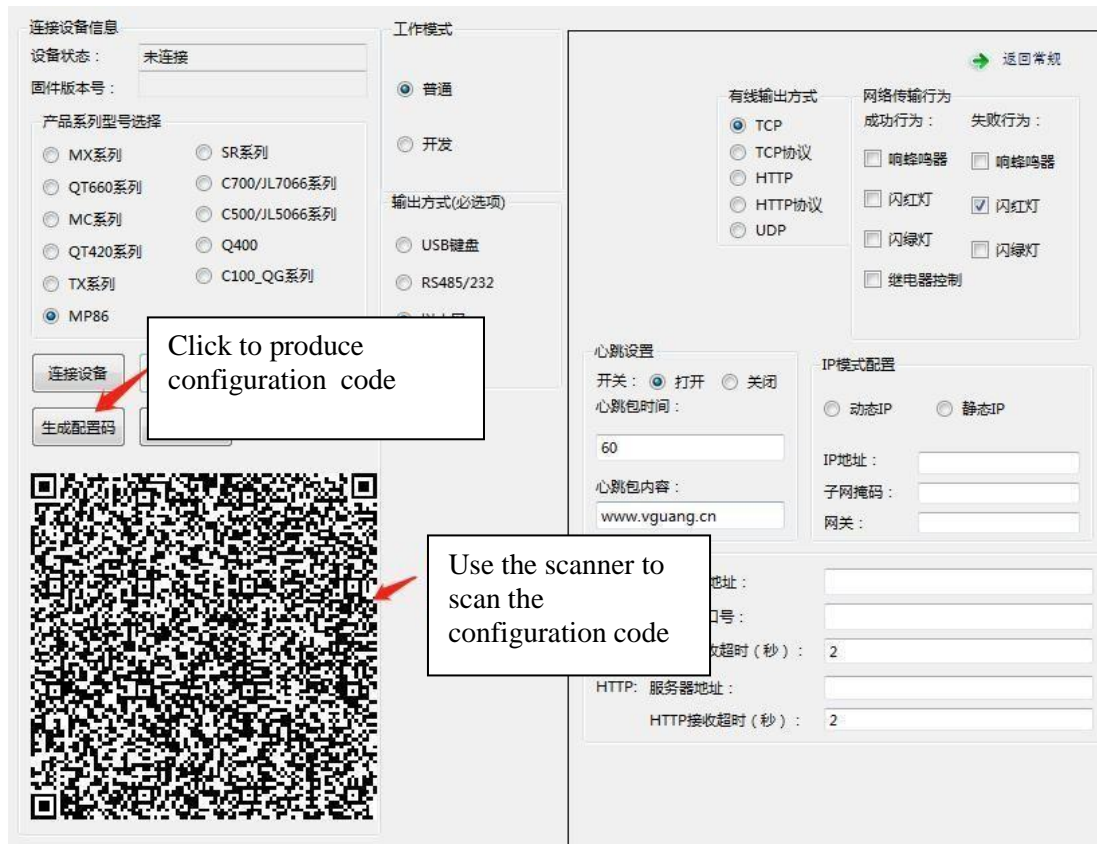


图 5

A. After scanning the configuration code, the scanner can be configured successfully after power off and restart.

B. When set up the local server, and the data will be uploaded after the scanner scans the code.

Ethernet tab filling notes :

(1) The wired output mode supports TCP, TCP, HTTP, and HTTP protocols. For details, see the following FAQs.

(2) Heartbeat packet is only for TCP output mode

(3) HTTP filling method, server address + port number + save path, for example `http://192.168.0.176:80/test`

★ FAQ

1 Save failed when click Save Configuration

Check whether the HTTP server address is filled in correctly and is filled in according to the specified format.

2 After setting up the server, scan code has no data upload, and the request is not visible in the background.

(1) In the http/ http protocol mode, whether the server address is filled in correctly.

(2) Whether the scanner submit data to the server in POST mode?

(3) Check if the request was intercepted by another program

(4) The scanner transmits data to the server as character stream

(5) Restart the router or switch

3 Differences between TCP, TCP protocol, HTTP, and HTTP protocol

Both TCP and HTTP upload data in “pass-through” form

The TCP protocol and the HTTP protocol upload data in the form of field.

You can download the "wifi interface specification"

(<http://www.vguang.cn/mp86xl>) from the official website for reference.

★ **Configure the development mode**

Configure the development mode are similar to configure the ordinary mode, only need to select “develop” mode, and then select secondary development options. After configuring the development mode, the scanner must be powered off and restarted. So it can be used normally.

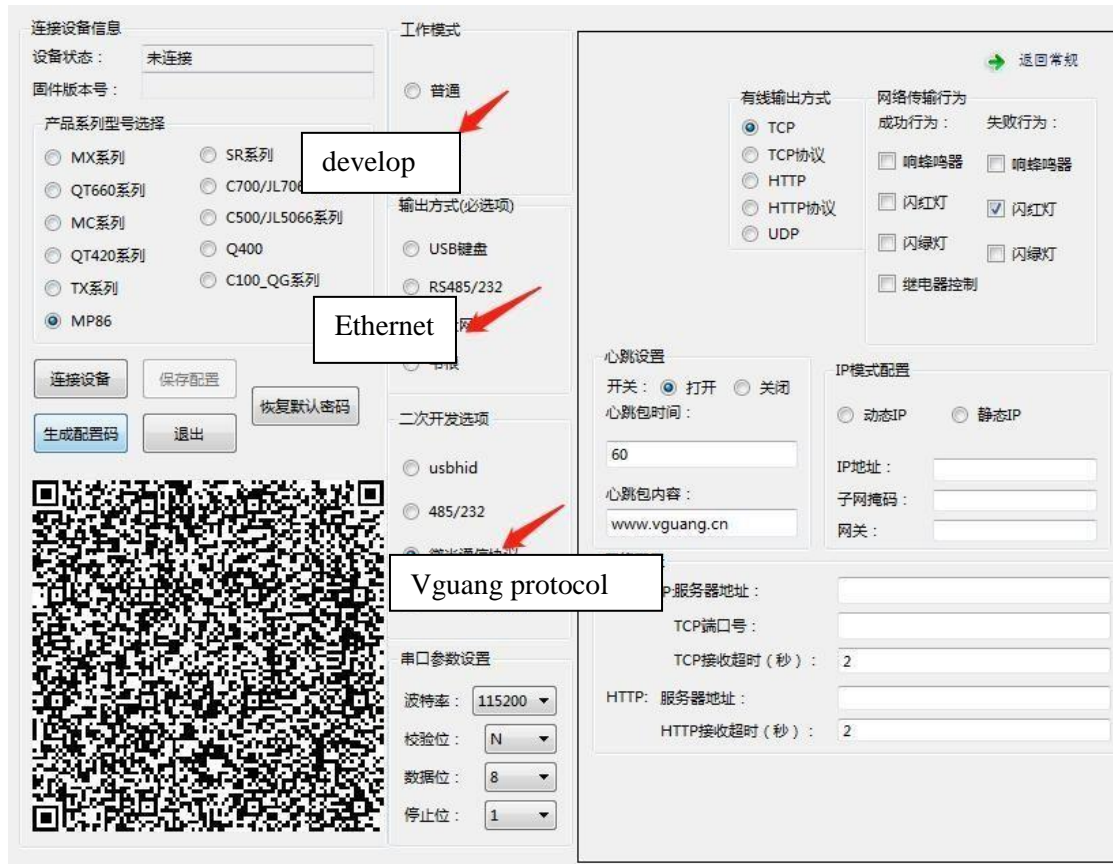


Figure 6

After configuring development mode, you need to use the "vguang Communication Protocol" for development. The http server does not support secondary development.

(download address : <http://www.vguang.cn/mp86x1>)

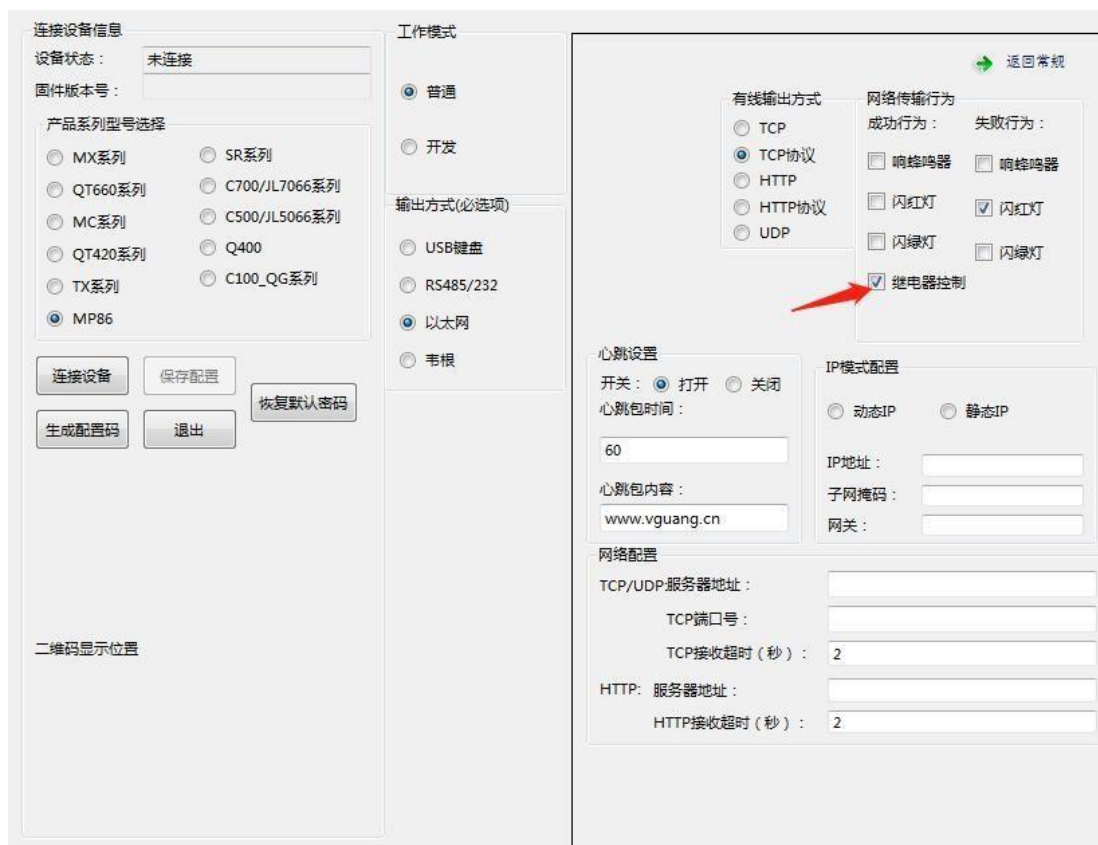
★ Network equipment access control solution

The scanner access control solution is mainly for the door lock controlled by the relay signal.

Wiring: There are three lines of powder (NO), gray (NC) and yellow (COM) in the scanner lead wire. According to actual needs, connect the normally open (NO) or normally closed (NC) and COM terminals to the door lock to complete the wiring process.

The scanner needs to be configured in TCP protocol or HTTP protocol mode, and the turn on relay control function , as shown below:

Figure 7



When the server receives the QR code data uploaded by the scanner, it returns a character string of "code=0000" to the scanner within the timeout period. Then, The scanner will think that the transmission is successful, it will show "network transmission success behavior", and will output a relay signal to control the switch of the door lock.

MP86 series Wiegand device

★ Wiring instruction

Connect the Wiegand interface according to the product line diagram of the attached page. The power supply specification is 9-15V.

★ Usage methods

1. Configure the scanner, use the scan code configuration, first open the configuration tool, select as shown below

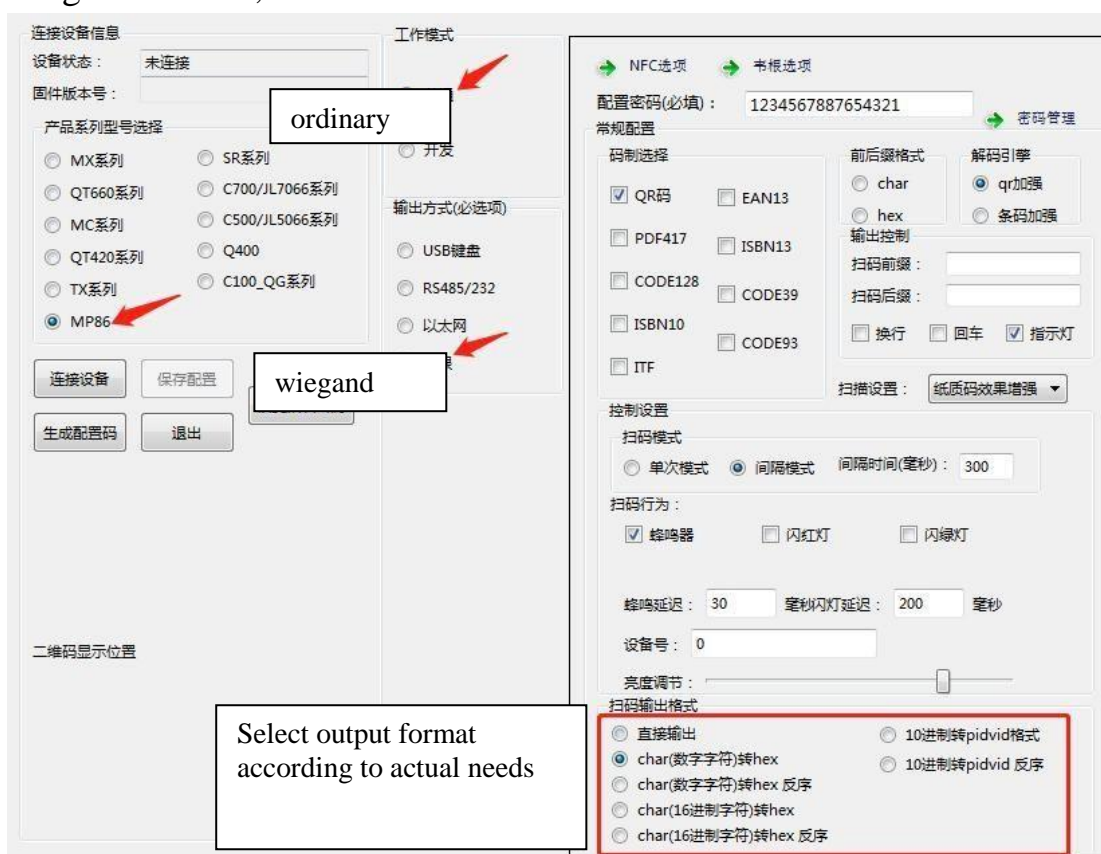


Figure 2

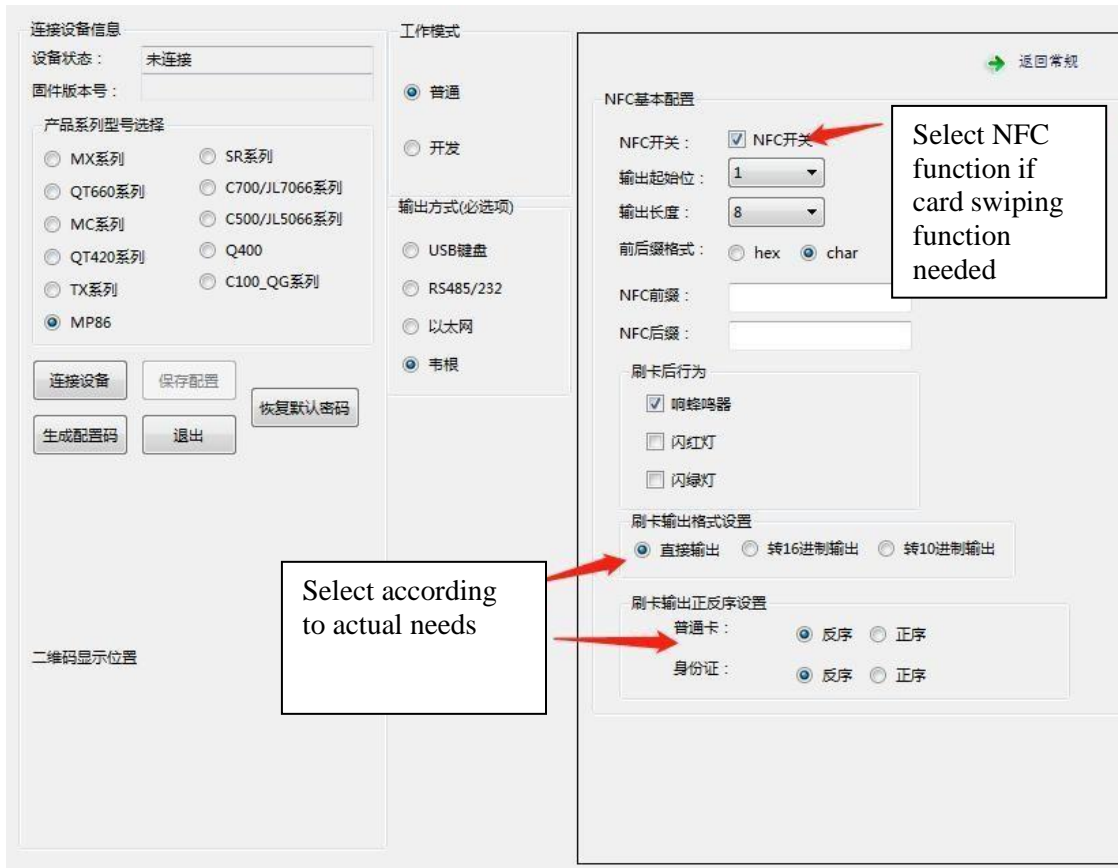
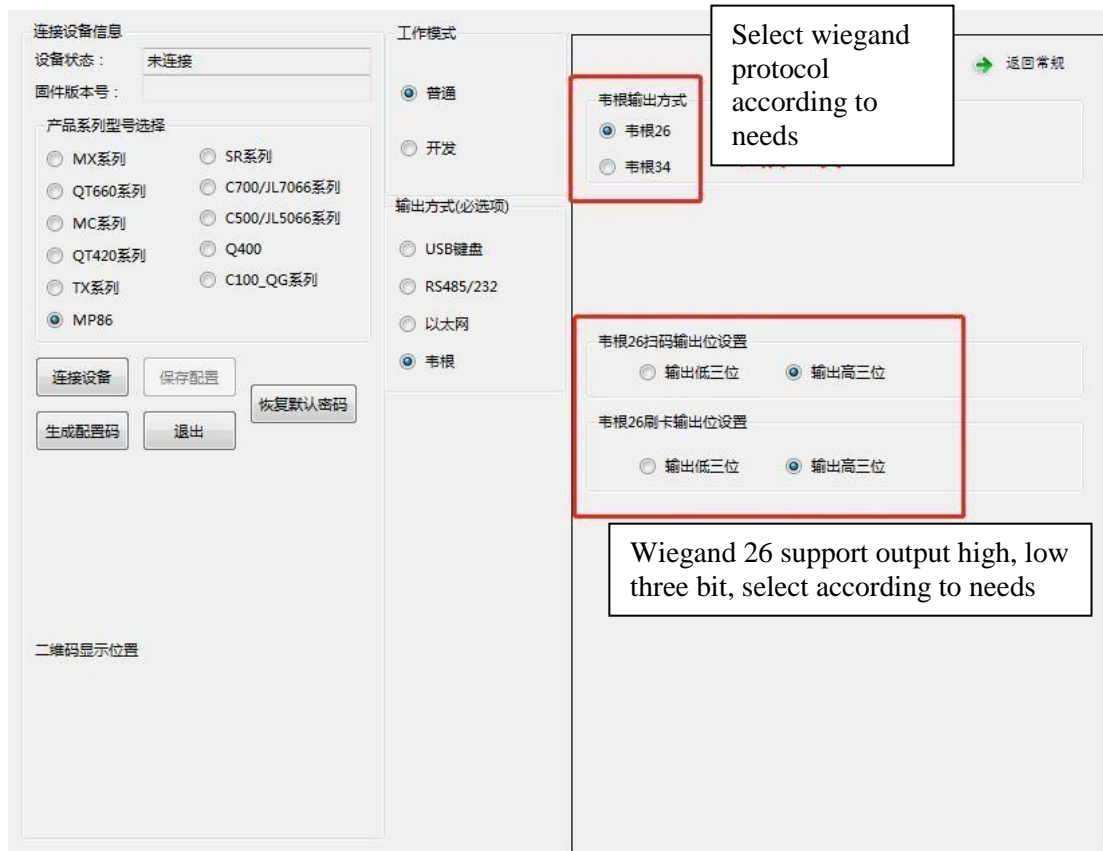
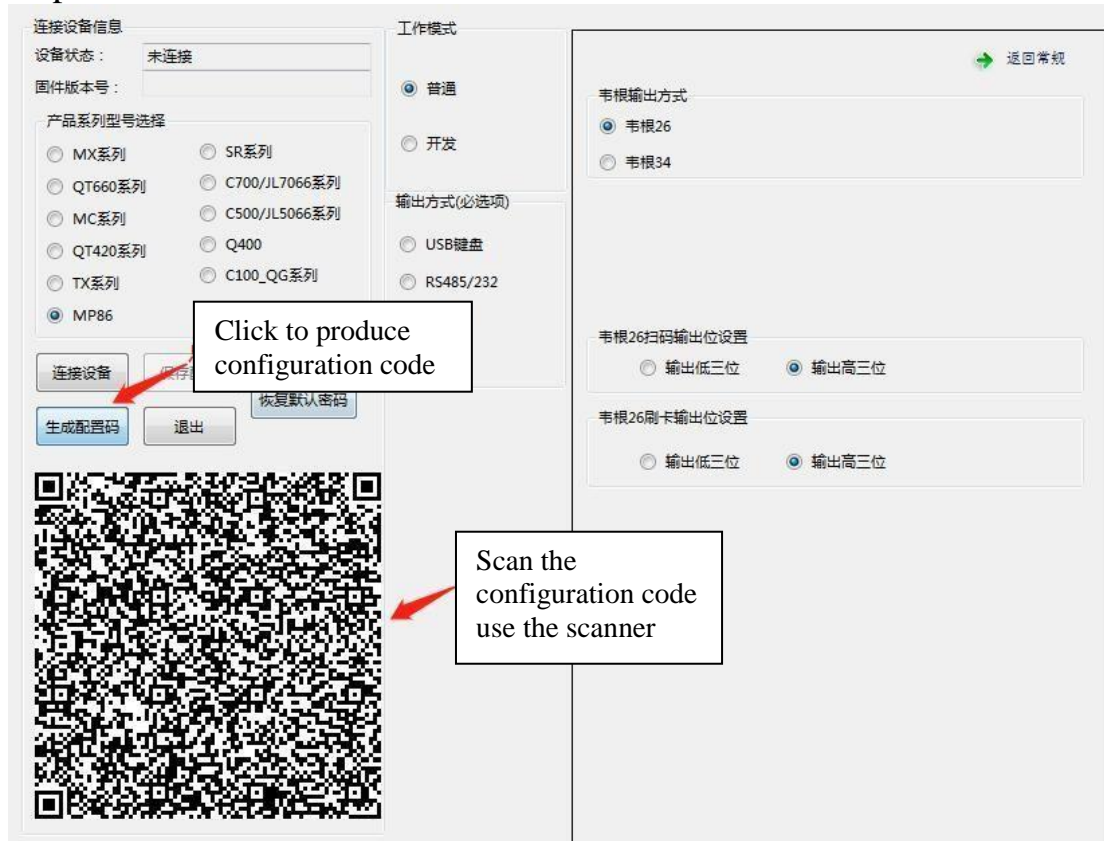


Figure 3



After selecting the configuration option, click “Generate Configuration Code”, scan the configuration code with the scanner, and after the “Di” sounds, power off and restart the scanner, and the configuration process is completed.



2. Connect the scanner to the Wiegand control board. The purple line of the scanner is connected to the Wiegand board D1, the orange line is connected to the Wiegand board D0, the black line is connected to GND, and the red line is connected to VCC.

3. After the connection is completed, scan code or swipe card to test whether the card number can be uploaded normally.

★ FAQ

No card number upload or the uploaded card number is incorrect.

1. The device is not configured as a Wiegand output

2. The corresponding Wiegand output configuration is incorrect and needs to be reconfigured

Secondary development FAQ

- 1) Device is not controlled in development mode

First, make sure that it is configured as development mode, after the configuration is completed, the scanner needs to be power off and restart to take effect. Second, if the development mode has been configured, the secondary development option can be configured as "Vguang communication protocol." (USB using SDK develop need to be configured as USBHID mode, using Vguang protocol to develop)

- 2) In the second development, the logic is: turn on the device, scan the code, and turn off the device. Then the scanner often has problems. why?

Because the scanner needs time to open and close, at this time, the logic can be rewritten into open the device, add code system, scan code, clear code system, add code system, scan code... (repeating).

Appendix :

Wiring sequence diagram

Ethernet device wiring diagram:

| | | | | |
|---------------------|--------|--------------|-------|-------------|
| MP86 | Purple | Orange | Blue | Brown |
| Network cable color | Orange | Orange white | Green | Green white |

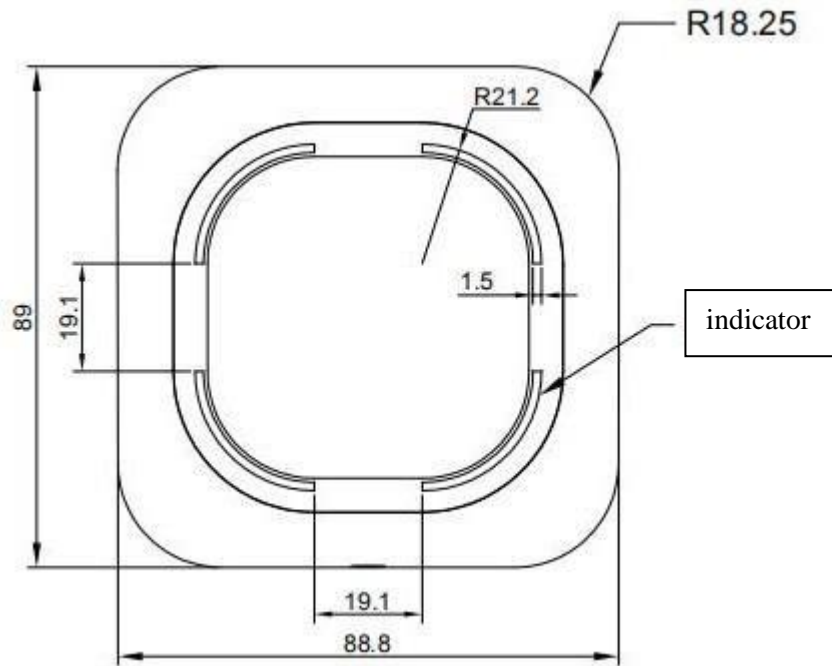
| | | | | | | |
|------------|-----------|----------|----------|--------|------|-------|
| Color | Cyan-blue | Green | White | Black | Red | Gray |
| Definition | Reserved | Reserved | Reserved | GND | +12V | NC |
| Color | Yellow | Pink | Purple | Orange | Blue | Brown |
| Definition | COM | NO | TX- | TX+ | RX- | RX+ |

485 and Wiegand device wiring diagram:

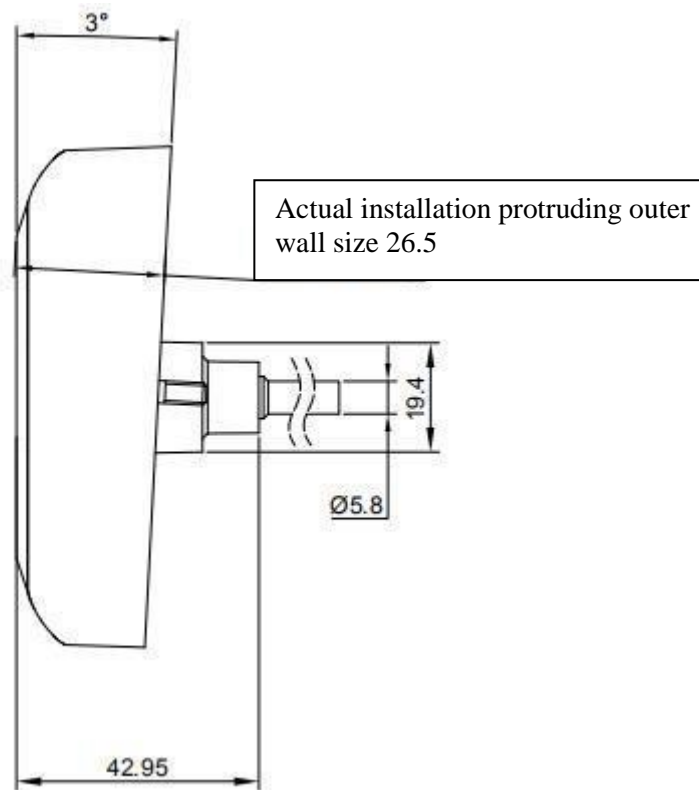
| | | | | | |
|------------|-----------|----------|----------|--------|--------|
| Color | Cyan-blue | Green | White | Black | Red |
| Definition | Reserved | Reserved | Reserved | GND | +12V |
| Color | Blue | Brown | Yellow | Orange | Purple |
| Definition | 485B | 485A | LED_IN | D0 | D1 |

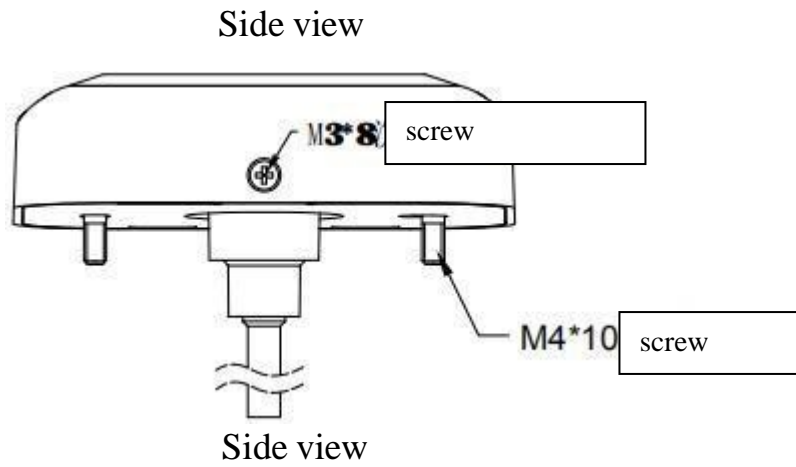
Note: The cyan-green-white reserved line are not available.

Dimensions :

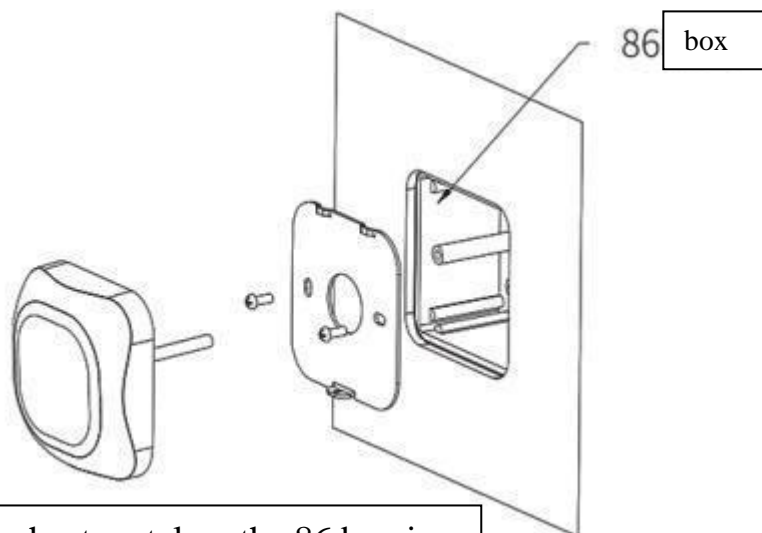


Top view

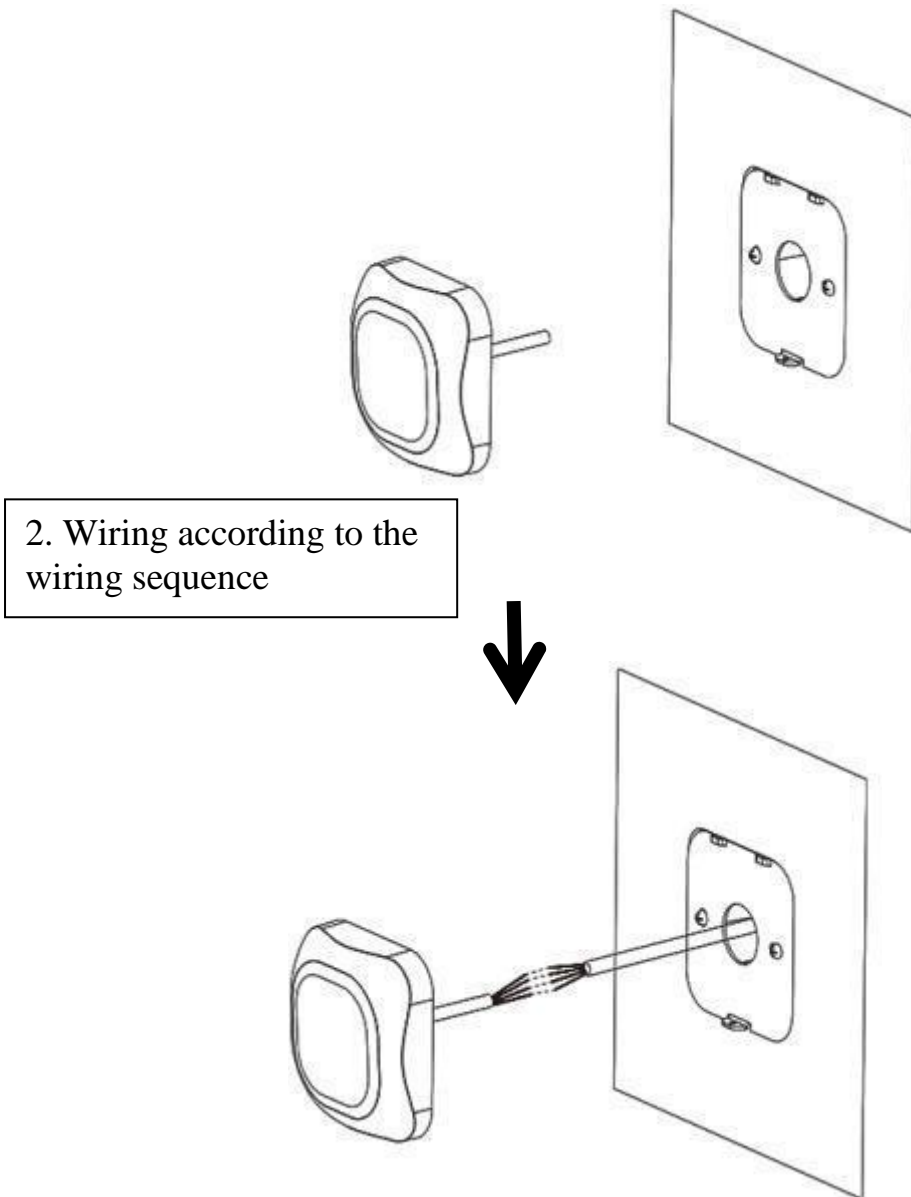




Installation icon :



1. Screw the sheet metal on the 86 box in the wall



3. Tilt installation, hung the top two hooks and press



4. Tighten the fixing screws from below



5. complete
5、完成。

