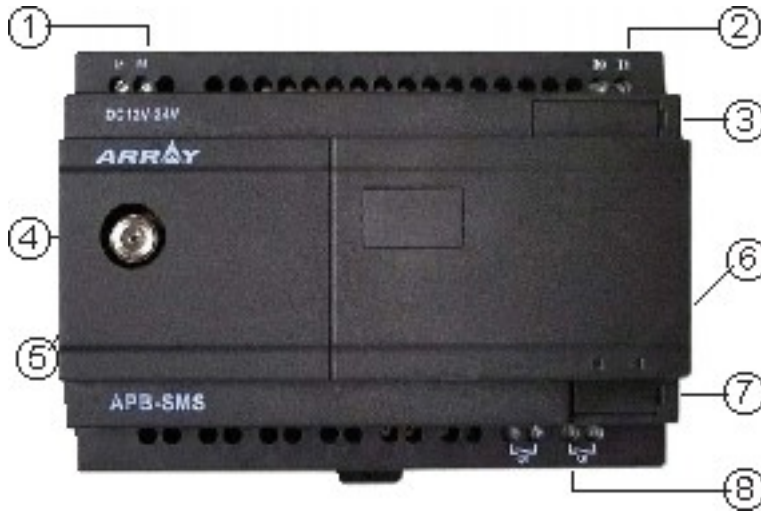


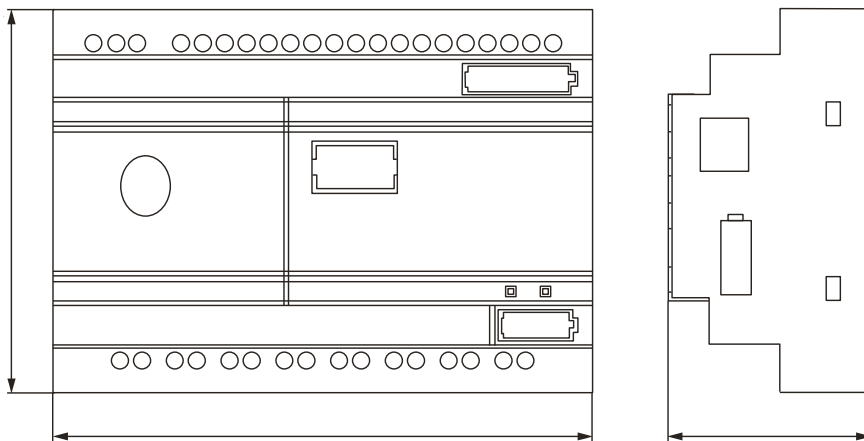
APB-SMS Module

1. Structure of APB-SMS Module



1. Input of power Supply
2. Input wiring terminal
3. Mode knob switch
4. Antenna
5. Communication interface
6. Red and green indicator
7. Software download interface
8. Output wiring terminal

2. Installation Dimensions



3. The Specifications of APB-SMS

APB-SMS	Quad Band: GSM 850/EGSM 900/DCS 1800/PCS 1900
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4. Work mode

The work mode can be switched by the knob in SMS module.

Mode 0:

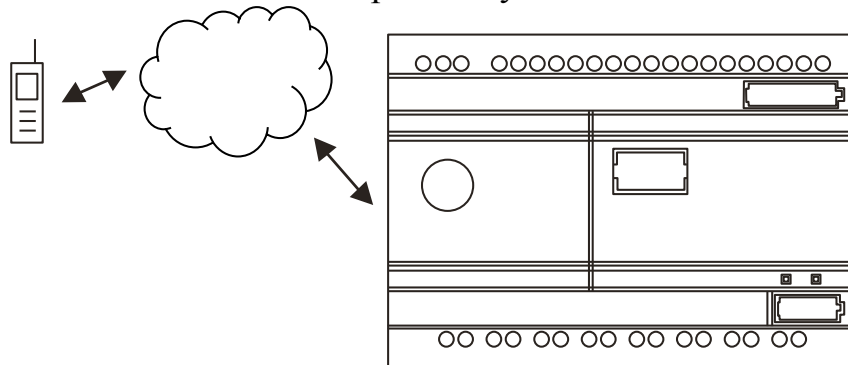
Short message alarming function, mode indicator light is off, when GSM network has not been detected the red indicator flickers quickly and the flicker cycle is 200ms when GSM network has been detected the flicker cycle is 2~4S. the green indicator is used to indicate the communication status,when it communicates with APB PLC normally the flicker cycle is 2S if no communication between APB-SMS and APB PLC the flicker cycle is 200MS.

Mode 1:

Receiving and sending short message by configuring software. indicator light is on. When APB-SMS works in mode 1 the red indicator is normally on.

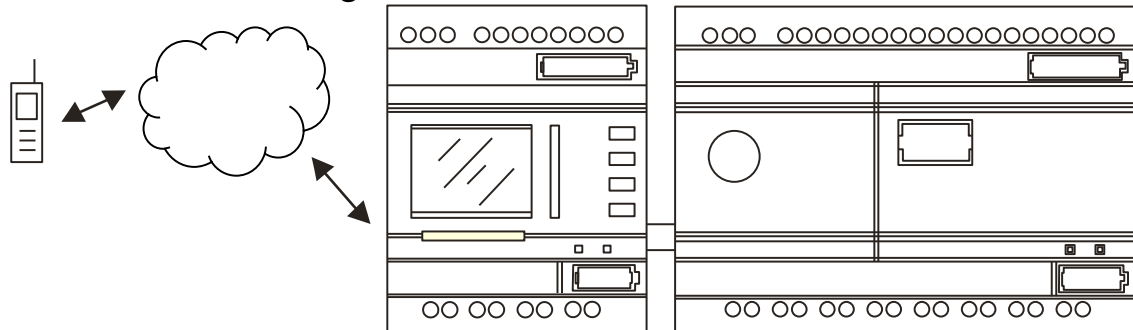
5. Functions of APB-SMS

*APB-SMS is used independently



When SMS works in mode 0. Input signal SI1 has message alarming function. When the high level is triggered, the message "I1ON" will be sent to the target number to alarm. The input and output state can be inquired and SQ1 can be set by sending the mobile phone instruction. Input signal SI0 controls the output SQ0 directly. The SQ0 delay ON OFF time can be set by GSMMODULE software. When SMS works in mode 1. the short message can be sent and received by GSMMODULE software.

*APB-SMS connecting with APB PLC




When SMS works in mode 0 APB PLC input state can be inquired and output state. time and count parameter. Analog parameter can be inquired and set by sending the mobile phone instruction. The alarm message can be sent to user mobile phone by programming SMS function block in APB software. When SMS works in mode 1. the short message can be sent and received by GSMMODULE software.

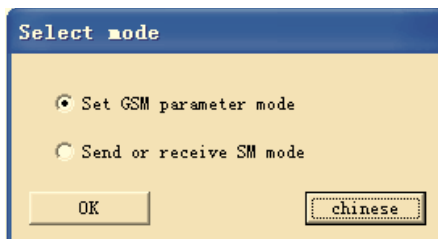
6. Technical parameters

- * Operation power: 12~24VDC
- * Operation temperature: -10~55°C
- * Operation humidity: 0~90%RH
- * Interface rate: 9600Bps
- * Interface standard: RS232
- * Overall dimensions: 126mm x 90mm x 47.5mm
- * Weight: 450g

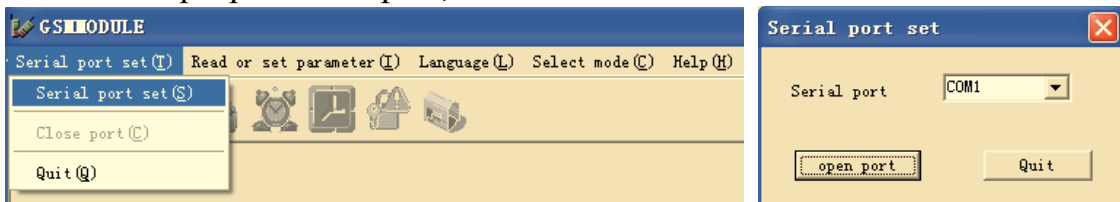
7. Parameter settings

Knob in SMS rotates to mode0.SMS work under the mode of short message alarming. Open the SMS parameter configuring software GSMMODULE .exe and configure the parameter.

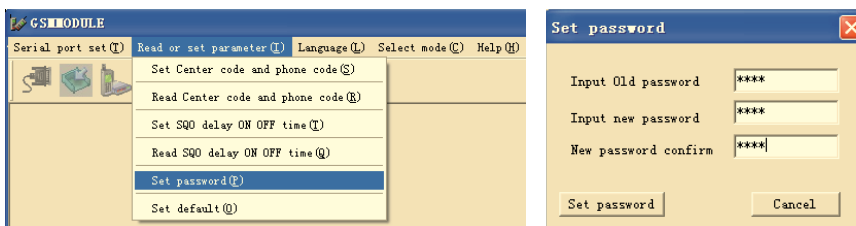
- * Double click  to open SMS setting tool.



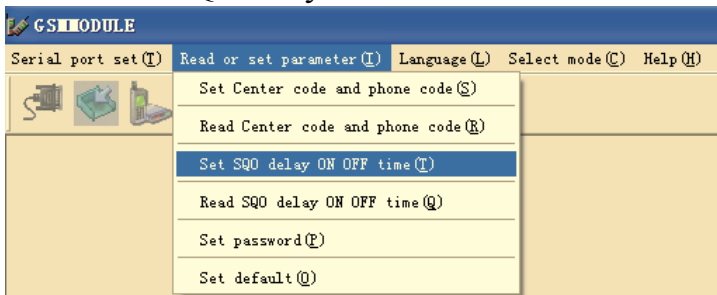
- * Choose the proper COM port, and click **Open Port**



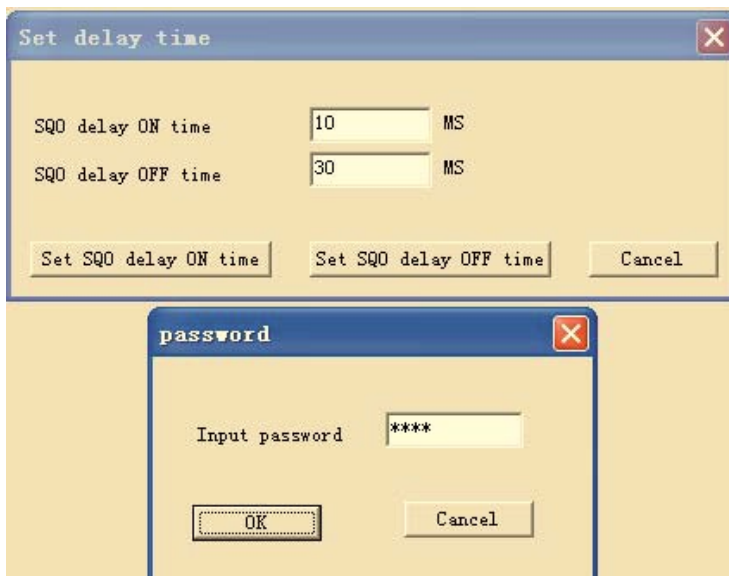
- * Input old password first and then input new password when the password is set the password has 8bits at most. If the password is forgotten, please use “Restore factory settings” to clear all parameters. Click **Set Password** to download new password to SMS module.



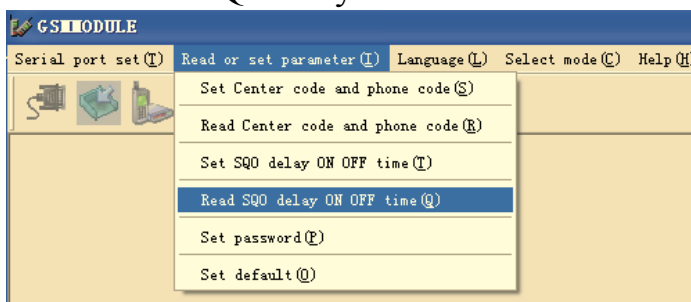
- * Click “Set SQ0 delay ON OFF time



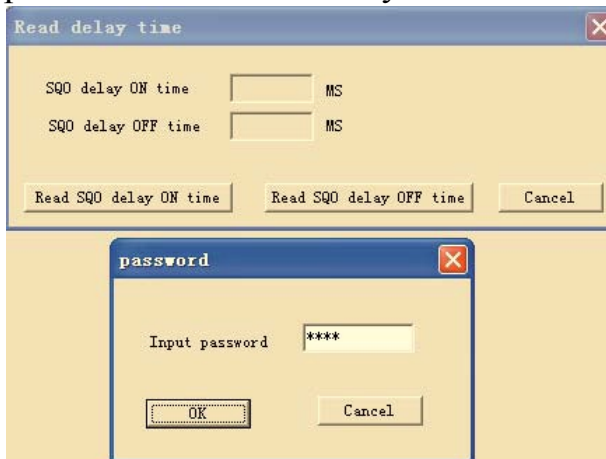
Input SQ0 Delay ON time Click **Set Delay ON time** and download Delay ON time to SMS module. Input SQ0 Delay OFF time Click **Set Delay OFF time** and input correct password download Delay ON time to SMS module.



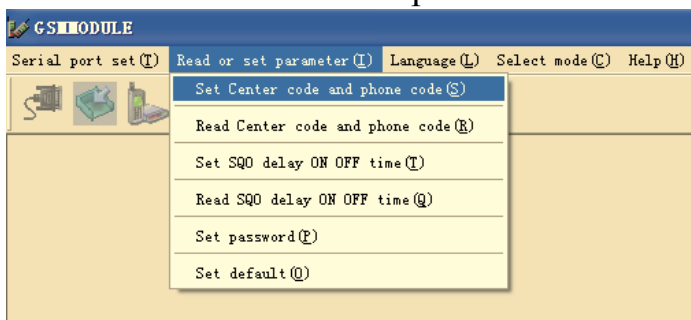
* Click “Read SQO delay ON OFF time”



Input SQO Delay ON time Click **Read SQO delay ON time** and download Delay ON time to SMS module. Input SQO Delay OFF time Click **Read SQO delay OFF time** and input correct password download Delay ON time to SMS module.



* Click “Set center code and phone code”



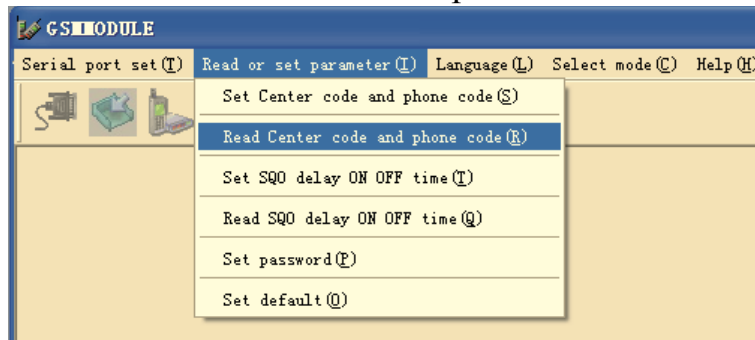
Input SMS center number and SMS mobile number. SMS center number is 20bits at most. It is the operating agencies message service center number of SIM card in SMS module, e.g.: 861380025500. “SMS mobile number”: 20 bits at most. If it is not set, no any message will be sent when there is the alarm.

Click **Set Center Code**, input correct password and download the SMS center number to SMS module.

Click **Set Phone Code**, input correct password and download mobile number to SMS module.

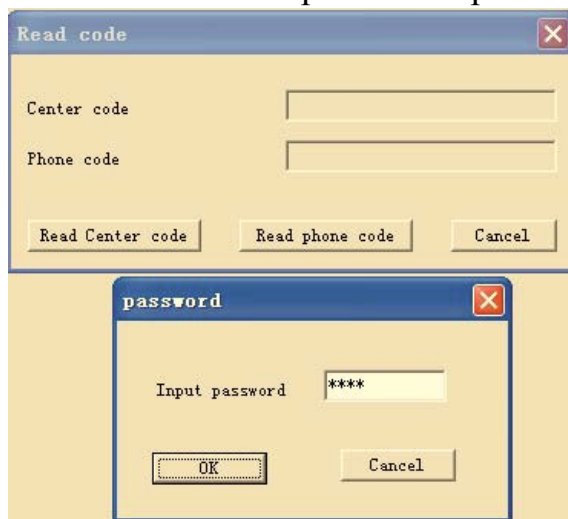


Click “ Read center code and phone code”



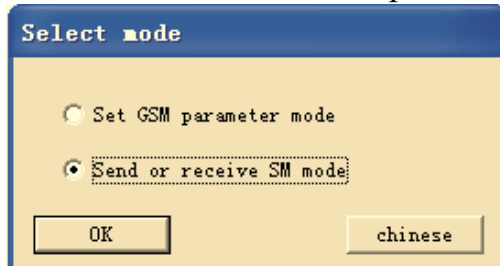
Click **Read Center Code** input correct password to read SMS center number from SMS module.

Click **Read Phone Code** input correct password to read mobile number from SMS module.

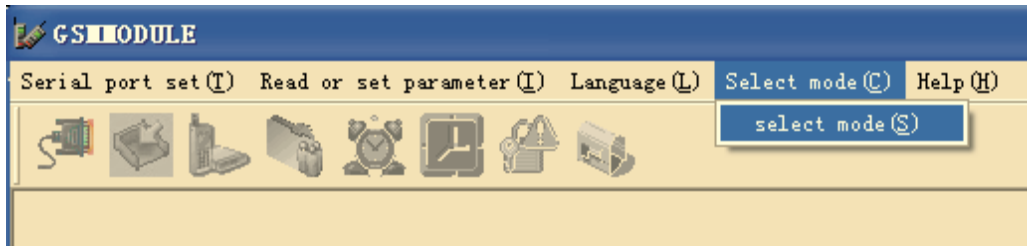


- * Knob in SMS rotates to mode1. SMS work under the mode of receiving and sending short message. Open the SMS parameter configuring software and configure the parameter

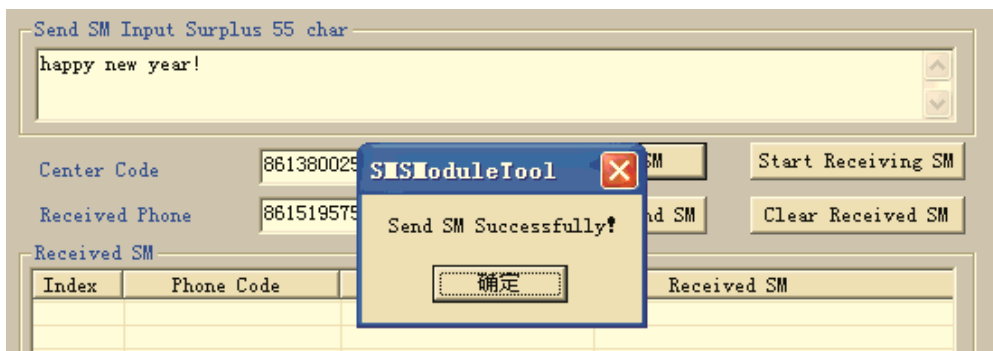
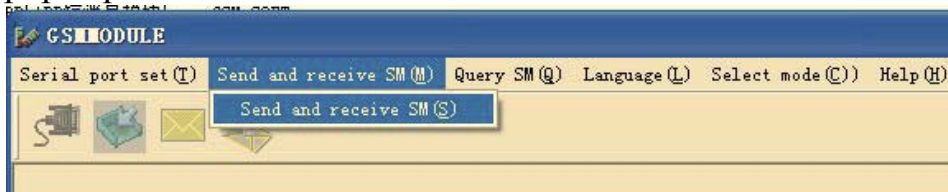
Dbclick  GSMODULE.exe open SMS configure tool, select mode



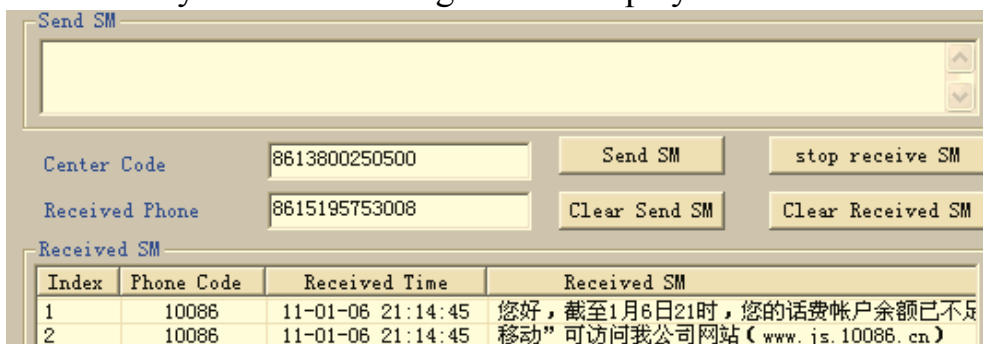
Or Click“select mode”menu



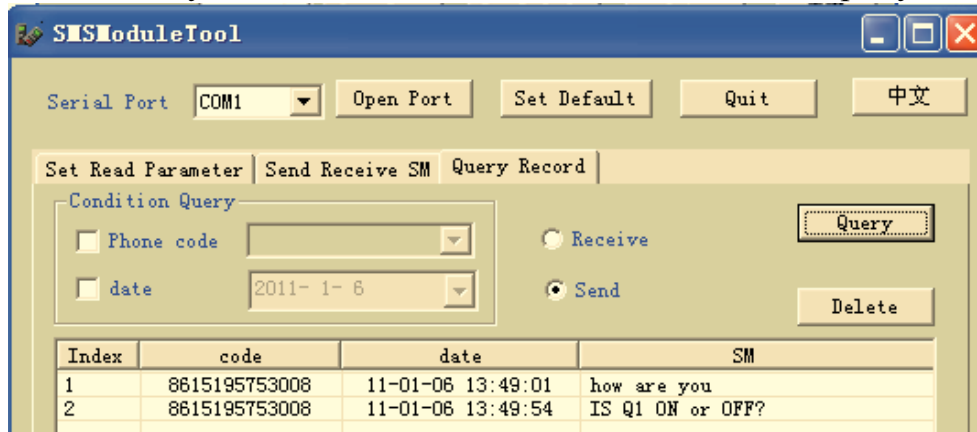
- * Click **Send and receive SM (M)**, input the receiver mobile phone number, click **Send SM** if the short message is sent successfully the prompt message send SM Successfully pops up.



- * Click **Send and receive SM (M)**, select **Start receiving SM** if the short message is received successfully the short message will be displayed in table the



- * Click “Query Record”, select “Receive” or “Send” to query history record



8. SMS module Sent/Received data format in mode 0

- * The sent data format when SMS module is used independently:

Description for SMS control instruction: * is used as separator case-insensitive; “Section1, Section2” are relevant control codes.

*	Section1	*	Section2	*
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Section1: xxxxxxxx is the password for the SMS module, which can be set through the software of host machine. The password has 8 bits at most. If there is no password, Section1 can be omitted.

Section2: instruction type; 3bits. The first bit R/W represents read or write. The last two bits represent the corresponding type.

00: Input SI0

01: Input SI1

10: Output SQ0

11: Output SQ1

*xxxxxxx*R00* Read SI0; Returned message: 0 or 1

*xxxxxxx*R01* Read SI1; Returned message: 0 or 1

*xxxxxxx*R10* Read SQ0; Returned message: 0 or 1

*xxxxxxx*R11* Read SQ1; Returned message: 0 or 1

*xxxxxxx*W11* Set SQ1 to 1; If it is set successfully, the returned message will be OK;

*xxxxxxx*W10* Set SQ1 to 0; If it is set successfully, the returned message will be OK;

- * The sent data format when SMS is connected with APB:

Description for SMS control instruction: * is used as a separator; case-insensitive; “Section1~Section4” are relevant control codes.

*	Section1	*	Section2	Section3	*	Section4	*
---	----------	---	----------	----------	---	----------	---

Section 1: the password part for APB main machine; the password has 14 bits at most. If there is no password set by main machine, Section1 can be omitted.

Section 2: instruction type: 2 bits. The first bit R/W represents read or write. The seconds represents corresponding register type.

Corresponding register type

R/WD Read/Write register DW

R/WQ Read/Write output Q

RI Read Input I

R/WM Read/Write intermediate relay M

R/WA Read/Write intermediate value (Analog) A

RB Read analog input AI

R/WC Read/Write analog output AQ

Section3: The serial number of the register; 4 bits at most

Section4: The set value; 10 bits at most; please note that the set value should stay within the valid range of the register value (used in the write instruction).

It is necessary to program SMS function block in APB software when SMS module is used with APB



Example: If I00 is ON, the SMS function block will be triggered, and GSM module will send the message of “Turn on switch 0” to mobile phone137706604**.

Example: Data format *111*RI0* indicates the password is 111; read input I0 state; If I0 is ON, 0000000001 will be returned when the I0 state has number of the returned value indicates the switch state. ON: 1; OFF: 0.

Example: Data format *111*RQ0* indicates the password is 111; read input Q0 state; If Q0 is OFF, 0000000000 will be returned when the Q0 state has been successfully read.

Example: Data format *111*WQ0*1* indicates the password is 111; write ouput Q0 state; The returned message will be OK if Q0 state has beens successfully set.

Example: Data format *111*WD0023*1234567890* indicates the password is 111; set the value of register DW23 to 1234567890. The returned message will be OK if the register value is successfully set.

Example: Data format *111*RD0023* indicates the password is 111 the value of register DW23 The corresponding value will be returned when the value has been successfully read.