RTU 5035 GSM Relay Switch

GSM Gate, Barrier, Shutter, Garage Door and Door opener

Open gate or garage door with a FREE call from your mobile phone!

Remote switching machines with a FREE call from your mobile phone!

User Manual

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This handbook has been created as a guide for the installation and operation of the GSM Gate Opener. The statements within are general guidelines only and are not intended to replace the instructions provided with other products.

We recommend seeking the advice of a qualified electrician before beginning any installation work.

Neither its employees nor distributors accept any liability for loss or damage, including consequential damage, resulting from reliance on the material in this handbook. Additionally, no liability is accepted for GSM network upgrades or SIM card updates related to the technology specifications outlined in this handbook.

1. Brief introduction

The GSM Gate Opener is a simple and effective device designed for authorized door access, gate control, remote equipment switching, and car parking systems. It can be used in any situation where you need to remotely turn systems, machines, or equipment ON/OFF using a FREE call from your mobile phone, while also protecting your assets.

By simply dialing from an authorized user's number, the GSM Gate Opener will open barriers and doors or switch machines on or off. There are no call charges involved, as the device rejects the call from the authorized number and executes the ON/OFF action.

Additionally, the device includes two digital inputs. When either input is triggered, it can activate a siren or turn on a light, while simultaneously sending an SMS alert to the owner. This makes it an ideal low-cost solution for protecting your assets.

2.Safety Directions

Safe Startup

Do not use GSM SMS IR Controller when using GSM equipment is prohibited or might bring disturbance or danger.

Interference

All wireless equipment might interfere network signals of GSM SMS IR Controller and influence its performance.

Avoid Use at Gas Station

Do not use GSM SMS IR Controller at a gas station. Power off GSM SMS IR Controller when it near fuels or chemicals.

Power it off near Blasting Places

Please follow relevant restrictive regulations. Avoid using the device in blasting places.

Reasonable Use

Please install the product at suitable places as described in the product documentation. Avoid signal shielded by covering the mainframe.

Use Qualified Maintenance Service

Maintenance can be carried out only by qualified maintainer.

3. Standard Packing List

GSM Control Unit X1, GSM ANTENNA X1, User Manual X1.

4. Physical Layout

4.1 Control Unit physical layout

Interface Instruction

Relay	When a call is made, the relay will activate, and the LED indicator will turn on. When the wired sensor is triggered, the LED indicator will also turn on; otherwise, it remains off.
GSM	When the SIM card is inserted into the slot and the device is powered on, the LED will flash red for 10 seconds. Then, the LED will remain solid red for 3 minutes. During this 3-minute period, you can send a RESET command to the device, restart the power supply, and ensure it operates properly. Once the device successfully registers with the GSM network, the LED will change to solid green. When a call is received and the relay is activated, the LED will change to red.
Power	This LED lights up to indicate the device is receiving external 12V DC power.
O1+	Output Relay 1+, the relay rating is 3A/240VAC; connect to the switch of the electric lock or device. For a gate motor, connect a wire from this port to the trigger port.
O1 -	Output Relay 1-, the relay rating is 3A/240VAC; connect to the switch of the electric lock or device. For a gate motor, connect a wire from this port to a com port on your motor.
O2+ (Siren)	Siren connector, connect to the Siren Positive.
O2- (NA)	If need the siren start when the sensor triggered,must connect this connector with 12VDC connector. If not use the siren, then need not connect it.
12VDC	Connect to your positive power source. For a gate motor it is advised to connect to the 12V positive port on the controller.
⏚	Connect to your negative power source or com port

IN1+	Digital input 1+, connect to one wire of the first wired sensor.
IN2+	Digital input 2+, connect to one wire of the second wired sensor.

5. Features

1. No call charges. The GSM Gate Opener rejects the call from an authorized number and then performs the ON/OFF action on the first ring.
2. Open your gate using your phone.
3. Supports multiple applications, including gates, bollards, barriers, garage doors, shutters, access doors, and machines.
4. Secure – Utilizes caller ID for identification, ensuring unknown callers are ignored.
5. It can be operated from anywhere with no distance limitations.
6. Add or remove users via SMS text command
7. No need to provide remote controls for different users.
8. Supports up to 999 authorized phone numbers.
9. Equipped with two digital inputs for door sensors, motion sensors, or other sensors to protect doors and windows. If any sensor is triggered, an SMS alert will be sent, and the siren will activate immediately.
10. Includes one output with a relay rated at 6A/240VAC for connecting to door switches or machines.
11. The relay action will send an SMS confirmation to the owner, with this feature being customizable by the user.
12. Operates on a GSM network, making it suitable for various applications.

6. Settings(SMS Commands)

Notice:

1. *The default Password is **1234**.*
2. *All the settings are through SMS commands, please edit the below SMS commands in your cell phone, then send to the device Unit. The unit cannot support PIN Code Protected SIMCard.*
3. *You can program the GSM Gate Opener with SMS commands using your phone. It is safe to do so because in addition to the fact that other people may not know the number of the SIM inserted in it, we also use a Password that makes it impossible for anybody, who doesn't know it, to access the system by chance.*
4. *The relay output will change the close or open status by every call in, please note it. Means the first time call it, it will close the relay to switch on the lock, if the second call in is in the setting time, then the unit will ignore the setting time, and open the relay, to switch off the lock or*

machine.

5. *The functions of the two inputs are the same. The two digital inputs will be in armed mode after 10 minutes from the last call-in.*
6. *Remember that commands must be **CAPITAL Lock LETTERS**. It is PWD not pwd, CAP not Cap etc. Don't add spaces or any other character.*
7. *The **pwd** in the commands is means the password, when you use it, please in stand of it by the digital number; the capital letters **PWD** is the command letter, use PWD directly.*
8. *If you use this model for gate open, you only need to change the password and setup the authorized numbers.*
9. *In some GSM operators they use different SMS parameter; the units can't return the SMS confirmation is normally. It is not product problem. Also, you can try to add the country code before the number, see the below settings:*

For example:

In South Africa, the country code is +27. If the user's cell phone number is 0720721234, it should be entered as +27720721234

Problem 1: The user did not receive the SMS alert.

Solution: Ensure that the country code is included when setting up the SMS alert number. For instance, instead of using 0720721234, enter the number as +27720721234.

Problem 2: The user is able to receive SMS alerts from the alarm panel, but the alarm panel is not receiving commands from the user's number.

Solution: Make sure the country code is added to the SIM card number in the alarm panel. Commands should be sent to +27720721234 instead of 0720721234.

10. *Please write down the Authorized number list in a paper for review in further.*
11. *If you want to reset the device to factory default, then please send* `1234#RESET#` *(This is a fixed valu) to it within 3 minutes after switch on the device. The unit will reply to* `Reset ok`*, turn off the power supply and re-open it for normal use.(The GSM Led in RED status, if the GSM LED change to GREEN, then the device can not respond this command.)*
12. *If the command is incorrect, the device will return:* `Command error, please re send command` *So please check the Command, or add the country code before the telephone number or check the input is in ENGLISH INPUT METHOD and CAPS LOCK.*
13. *The SMS commands that you will certainly use in the GSM Gate Opener are the following:*

6.1 Setup New Password

pwd#PWDnewpassword#PWDnewpassword#

if successful, the unit will return: **Password modified OK**.

For example, the original password is 1234, you want change it to 6666, then you can send the command below: **1234#PWD6666#PWD6666#**

Tips: 1.The **pwd** in the commands is means the password, when you use it, please in stand of it by the digital number, the capital letters **PWD** is the command letter, use **PWD** directly.

2.Remember that commands must be **CAPITAL Lock LETTERS**. It is PWD not pwd, CAP not Cap etc. Don't add spaces or any other character. When input punctuation symbol #, must be under ENGLISH or DIGITAL input method. Not support other input method.

6.2 Setup Authorized number

pwd#TELAuthorized Number#Serial Number#

E.g.: if you want to setup 0720721234 as the first user number, and the password is 1234, then you can send **1234#TEL+27720721234#001#** to the device unit. After the device received, the +27 is country code, will return:

Tel 1: +27720721234;
Tel 2: Empty;
Tel 3: Empty;
Tel 4: Empty;
Tel 5: Empty.

Tips: 1. the authorized number means the one who can dial the device unit to open it.

2.We strongly recommend that the serial number of 001 and 002 are cellphone number, because of the alarm message only send to the first and second position numbers;

3. The Serial Number is the position to store the authorized number, from 001~999.

6.3 Inquiry the Serial Number' s Authorized number

pwd#TELSerial Number? #

E.g.: If you want to know the authorized number at position 2, and the password is 1234,then you can send **1234#TEL002?#** to check it.

6.4 Remove the Authorized Number

pwd#DELAuthorized Number#

(or you can overwrite with another number you wish to change it).

E.g.: if you want to remove the authorized number at position 12, and the password is 1234, then you can send 1234#DEL13500001111#

6.5 Disable the digital inputs (Default is disable)

pwd#DA#

Tips: If you want to use the digital inputs, please enable it firstly.

6.6 Enable the digital inputs

pwd#EA#

Tips: if you enable the digital inputs function, the sensors will enter Armed status after 10minutes of the latest dial-in. in the first 10minutes, when the sensor triggered, will not alarm, after 10minutes, the unit in armed mode, when any sensor triggered, will start the siren (if you connected) or switch on the light (if you connect it) and send SMS to the Position 001 and 002 authorized numbers immediately.

This function is very useful for garage or other applications. It can protect the assets for you by GSM Network.

6.7 Inquiry Alarm Setting

pwd#AL?

Reply: **Alarm Inputs Disabled** or **Alarm Inputs Enabled**

Tips: Alarm Inputs Disabled means disable the digital inputs, Alarm Inputs Enabled means Enable

digital inputs.

6.8 Setup allow all calling in numbers can access it

pwd#AA#

Tips: This command allows anybody calling the SIM number to access it.

Warning! With the above command you allow free access to anybody calling!

6.9 Setup only authorized number can access it (Default)

pwd#AU#

Tips: With the above command you allow only people that are in the authorized number list can access the device. This is the standard and recommended option.

Inquiry this setting:

pwd#AC?#

Reply: **Allow all numbers can access it** or **Allow User Numbers can access it only**

6.10 Setup the relay close time

pwd#GOTTime#

Tips: The time should be in 0~9.5seconds.

This command is useful in case you need to keep the relay closed (or button pressed) longer. The default time is 0.5 econds(500 ms). You can change it with the GOT command. The relay closed time is twice as the number you set, E.g.: if you set **pwd#GOT19#**, means the relay closed 19/2=9.5Seconds.

To check the value, you can use the command **pwd#GOT?** , the unit will reply the current value.

If you want to let the relay always closed until you call it next time, then you can set the time as 00, the format is **pwd#GOT00#**, the relay will be always closed until next time call in. in this case, only the 1st, 2nd,3rd authorized number can access it. The other authorized numbers can not access the unit. This is very useful for remote switch on or switch off the electricity appliance or equipment or device for a long time.

6.11 Modify the digital input type

pwd# KEYNC #

Modify the digital input type as NC; if the sensor you used with this unit is NC, then you should set

the unit as NC type.

Tips: when you set the digital inputs as NC, if you don’ t use the input, please connect the digital inputs by a wire to short it. Otherwise, it will alarm. E.g.: if you only use the input 2, then you should use a wire to connect the input and GND point to make it as Normal Close.

pwd# KEYNO #

Modify the digital input type as NO; if the sensor you used with this unit is NO, then you should set the unit as NO type. The default is NO.

6.12 Check GSM signal quality

pwd# CSQ?

Check GSM signal quality. This command is useful to see the GSM network signal level of your GSM Gate Opener is receiving. After you send the command, you can receive a SMS with signal quality in range 0 to32 (if it is 0 we doubt it will ever answer). You should have a signal above 12 to be sure of being able to open the gate in any condition. Better if above 16. You should add an external GSM antenna if this is not the case, or eventually even change operator with another that serves your area better.

6.13 Enable return SMS confirmation when Relay action

pwd#R#

Tips: if you enable it, when the relay action, close or open, the unit will return a SMS confirmation to you. The return SMS is: **The relay is ON** or **The relay is OFF**. You can disable it by the following command: **pwd#N#** . Default is no return SMS confirmation when relay action. This is very useful when you use the device to control the equipments remotely.
To check the settings, you can use the command: **pwd#M?** It will return: **Relay action return SMS ON** or **Relay action return SMS OFF**.

6.14 Modify the Alarm SMS message when inputs triggered

The user can modify the digital inputs alarm SMS message by the following command; the SMS Alert message should less than 30 letters. When the sensor triggered, these SMS message will send to the Position 001 and Position 002 cell phone numbers to alert the user. The default SMS Alert message is: Door Open Alarm!

pwd##TEXT1Oxxxxxxxxxxxxx #

The above command is use to modify the digital input **1** open alarm SMS text message.

pwd##TEXT1Cxxxxxxxxxxxx #

The above command is use to modify the digital input **1** close alarm SMS text message.

pwd##TEXT2Oxxxxxxxxxxxx#

The above command is use to modify the digital input **2** open alarm SMS text message.

pwd##TEXT2Cxxxxxxxxxxxx#

The above command is use to modify the digital input **2** close alarm SMS text message.

E.g.: Modify the digital input1 alarm SMS Text message as Left Windows Open! If the password is 1234,then you can send **R1234##TEXT2Left Windows Alarm!#**

Tips:

1. This command includes two ##;
2. The xxxxxxx in this command is indicates the message contents;
3. The TEXT1 is part of the command; refer to the input **1** message;
4. The TEXT2 is part of the command, refer to the input **2** message.

6.15 Control the relay ON/OFF by SMS command

pwd# ON #

Return SMS: Relay turn ON.

pwd# OFF #

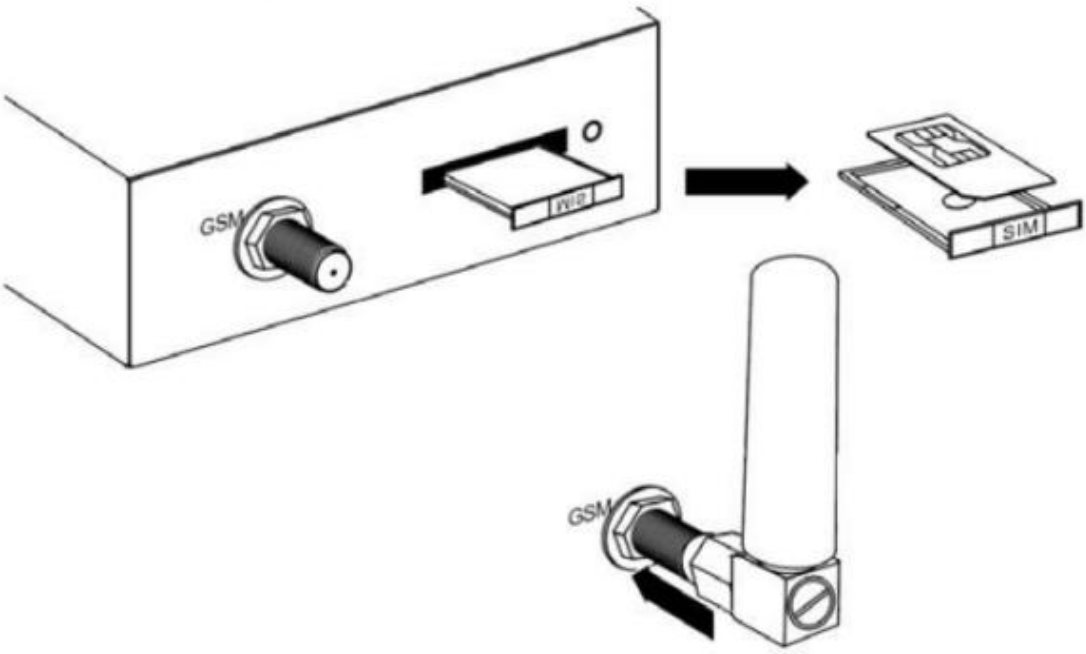
Return SMS: Relay turn OFF.

7. Installation

Before installing the control unit and sensors and sirens, please help to test the system firstly, including wired sensor, power supply, GSM signal, etc.

7.1 Insert SIM card into Control unit

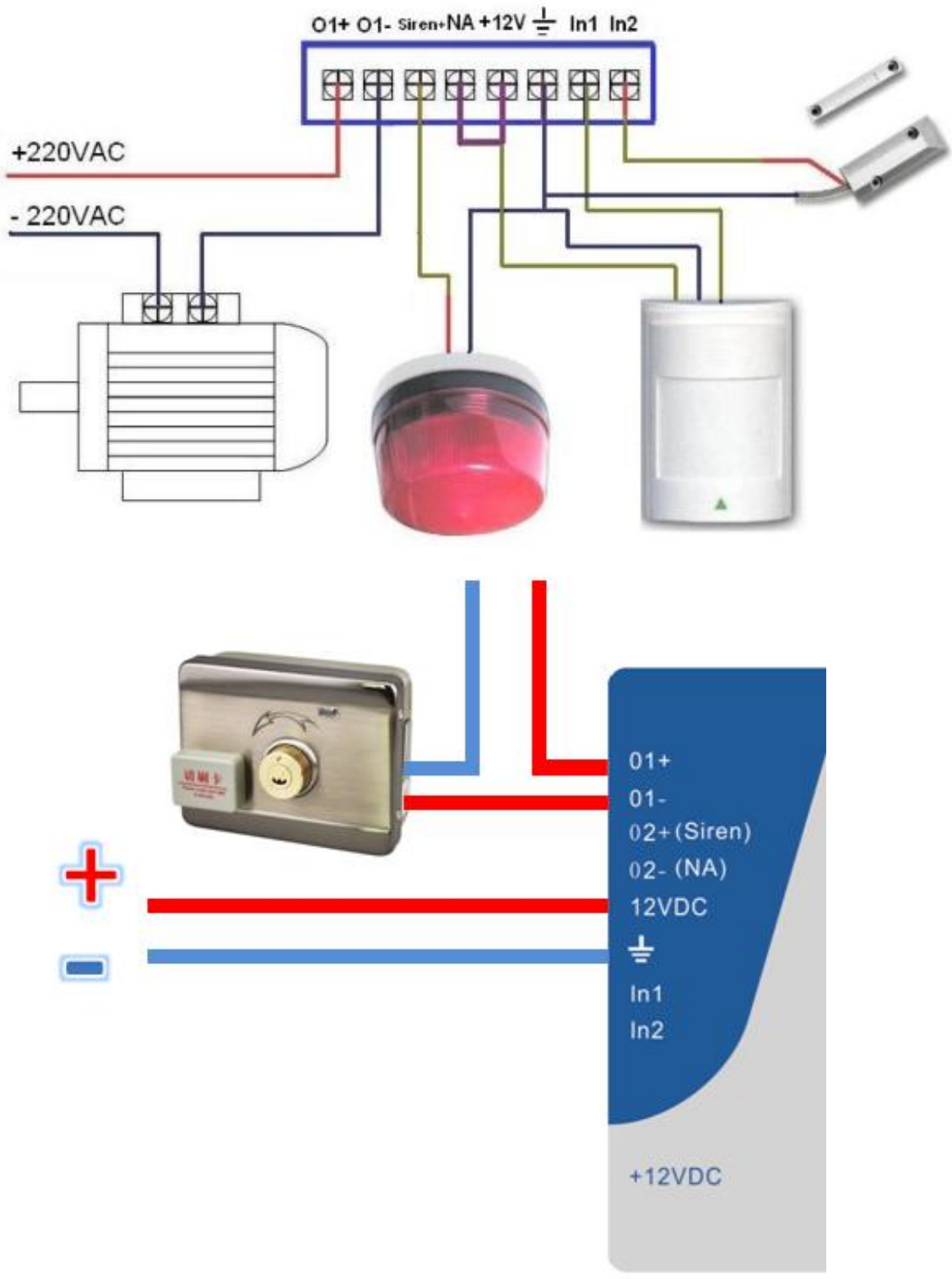
In the backside of the control please install the GSM SIM card.



7.2 Connecting the Wired Sensors

Please help to see below wiring diagram, then fixed the related wired sensors, the sensors connect to the related digital inputs, and the siren should connect to the Siren and Com connecting port.

7.3 Connecting on a gate motor example



7.4 Install the Mainframe

The mainframe should be installed in the position that person can not get it, and there with a power source as well as enough GSM signal coverage.

8. Technical specifications

Rated Voltage: 12VDC 1 A
Working temperature: -10℃ ~ +60℃
Storage temperature: -20℃ ~ +60℃
Relative humidity: 10-90%, No condensation
Work frequency: 900/1800MHz
Communication protocol: GSM PHASE 2/2+ (include data service)
Wired Zones: 2
Related Voltage of the Output Relay: 6A/240V AC
Net Weight: 0.30Kg

9. Important information

1) Please read the User Manual carefully before you install the Control Unit and set the Control Unit.
2) Install the system in a hidden place.
3) Avoid getting water into the Control Unit.
4) Have a secure connection to the main power supply.

10. Maintenance

1) In case of failure, please contact the distributor or manufacturer.
2) If the remote control works, but the Control Unit fails to send SMS texts, switch the power of Control Unit off and switch it on after one minute. Test this system after another minute, or check the settings are correct and the GSM Signals are strong enough.
3) If the Control Unit can run and sensors work, but cannot send SMS texts, please change SIM Card to check it.
4) If the problem cannot be solved, please contact the distributor or manufacturer.

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