G30E & G30EA

GSM POWER FACILITY ALARM SYSTEM

USER MANUAL

Ver 0701 2007-08-01

Dear users,

Thank you for purchasing our products. Please read through this manual before using this product so as to operate the product properly.

The GSM alarm system adopts GSM network and Digital Signal Processing technology, and is widely used in security field. This system is mainly applied to the security of power transformer, electric transmitting line and street lamp line etc. With the advantages of good waterproofness, practicability, good quality and stability& credibility etc, the GSM power alarm can be used in various environment of outdoor. With SMS data transmission and voice platform of GSM network, it is really realizes wireless alarm control and remote managements and solves the limitation of wired data transmission in telephone and wired network.

Perfect structure, convenient installation, easy operation are designed for the idea of people-oriented, which will make you feel easy and comfortable while use this system.

"*People is center, technology is first*" is our company's action rule. Customer Satisfaction is our consistent pursuit. With professional research, excellent management and perfect service, we can offer you advanced and high quality security products. We believe that we can be your faithful friends and reliable partner forever.

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Ⅰ. Instruction

GSM power facility alarm system adopts SMS and voice data transmission platform of GSM network to send control command and receive alarm remotely, which mainly applied to the security of power transformer, electric transmitting line and street lamp line etc. With the advantages of good waterproofness, practicability, good quality and stability& credibility etc, the GSM power alarm can be applied to various environment of outdoor. The system can be used independently as well as with the alarm center. The main functions and features are as follows:

1. With 8 routes of wired input alarm.

2. Monitor 3 phase loss voltage and single phase failure of the electric distribution network.

3. Can connect line-cut/movement/vibration sensors etc. It will alarm when power transformer is damaged or moved.

4. Send SMS to 6 preset mobile phone numbers automatically while alarming.

5. Auto-dial 2 preset phone numbers and monitor the alarm site while alarming.

6. Can program the alarm host and inquiry its status by SMS demand

7. Can report the communication status of alarm host in fixed time everyday.

8. Can set fixed-time arm/disarm.

9. Completely sealed aluminum outer shell: waterproof, anti-corrosion, fireproof, strike preventing which are suitable for outdoor installation.

10. Resist electromagnetic interference, lighting and thunder

11. The system has power-off protection function. When the external power supply is damaged or the power is off, the system can continue to work with a backup battery.

12. Can install the solar battery that can supply the power for alarm host and charge the backup battery.

13. External power failure alarm: when the system checks out that there is something wrong with the external power or the external power is off for more than 2 seconds, it will alarm immediately

14. Can connect with the alarm center through GSM network.

Specification

◆GSM frequency: GSM 900/1800MHz or GSM850/1900MHz

◆Alarm mode: GSM SMS and auto-dial

◆Alarm response time: ≤ 8s（GSM is in normality）

◆Siren volume: ≥110 db

◆Electric power network: connect mode: Y

  Phase-Neutral rated work voltage: AC220V

Phase-Neutral lowest work voltage: AC110V

Phase-Neutral highest work voltage: AC270V

◆ Biggest capacity of insurance tube: 3A

◆Standby battery: DC12V/1.2AH（Lead Acid battery）

or DC12V/1AH（Ni-MH battery）

◆Anti- electromagnetic interference: IEC55022

◆Insulation level: grade B

◆Protection level: IP55

◆Temperature: －10℃～＋55℃

Humidity: ≤95% (non-condensation)

◆Dimension: 220×150×105（mm）

Ⅱ. System installation

2.1 Alarm host's section figure

| Panel | Main Board | Power Board |
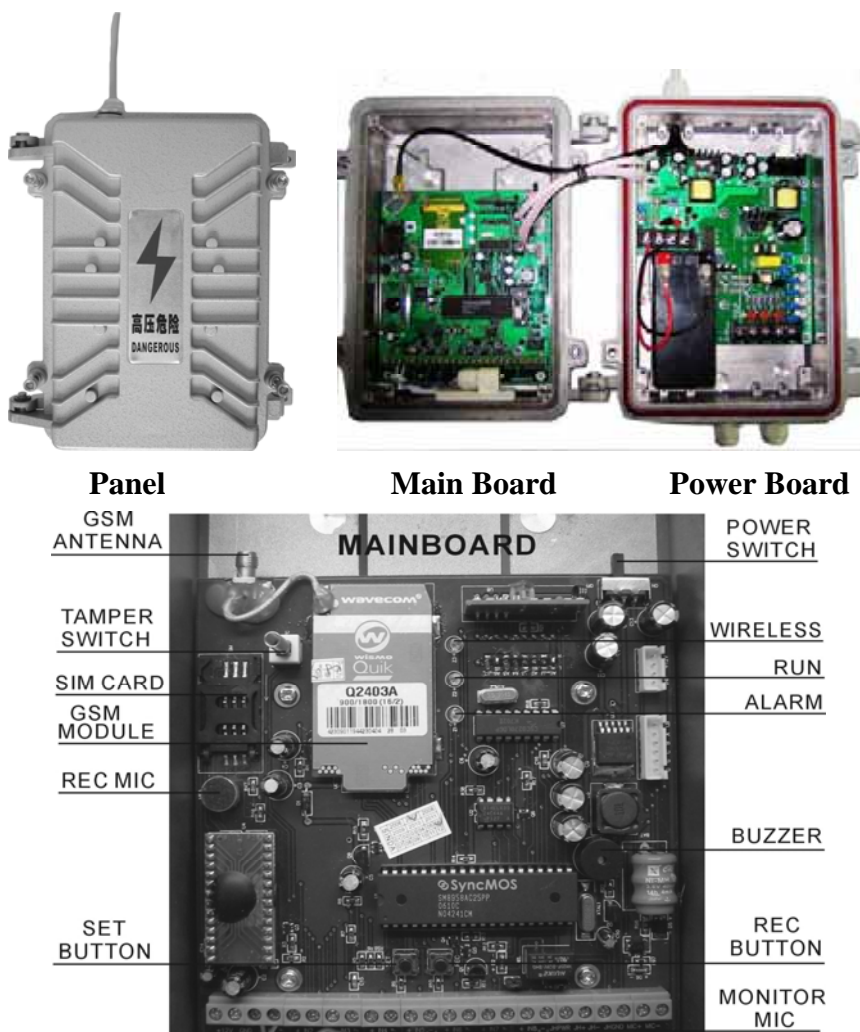
Connection terminal definition as follows

Professional designer and manufacturer of GSM Alarm Systems

+12V：anode of output power supply

GND：cathode of output power supply

IN1: hardwire guarding zone 1 (alarm host vibration alarm)

IN2: hardwire guarding zone 2 (transformer vibration alarm）

IN3: hardwire guarding zone 3 (transformer movement alarm）

IN4: hardwire guarding zone 4（detector alarm）

IN5:（Reserve） IN6:（Reserve）

IN7:（Reserve） IN8:（Reserve）

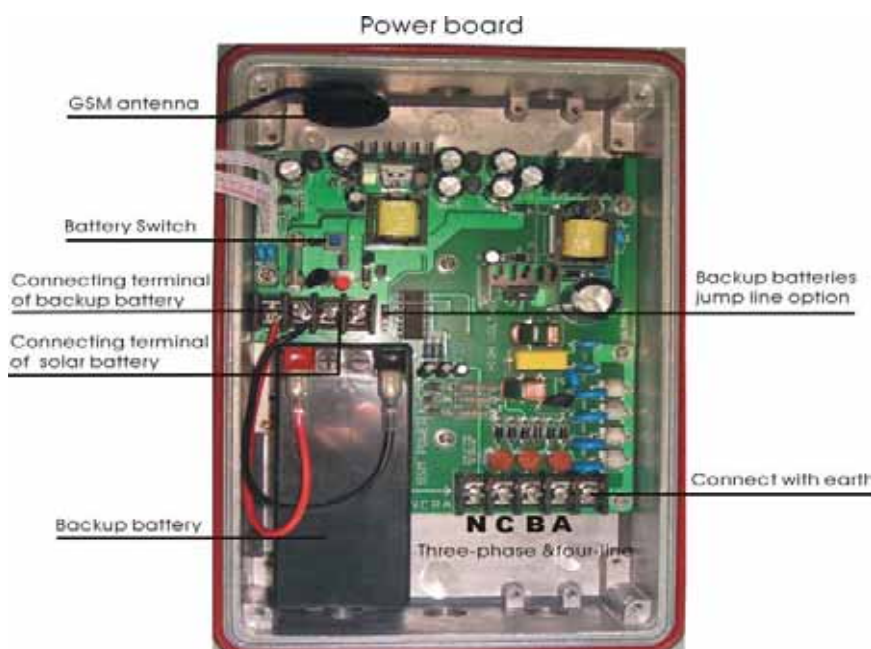JHPWR: anode of siren power input

JHGND: cathode of siren power input

JH+: anode of siren JH-: cathode of siren

 MIC+: monitor MIC+ MIC-: monitor MIC-

2.2 Installation

Due to outdoor installation, the alarm host must be fixed firmly.

Following are the detail pictures.

2.3 Connecting diagram

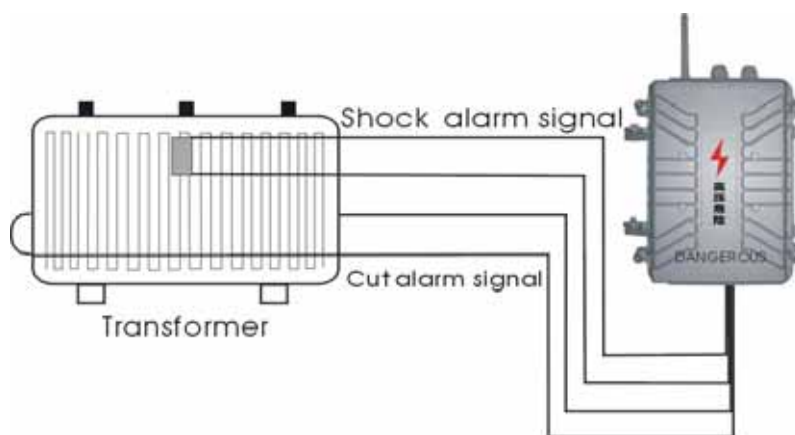CONNECTION OF THREE-PHASE&FOUR-LINE (Y)
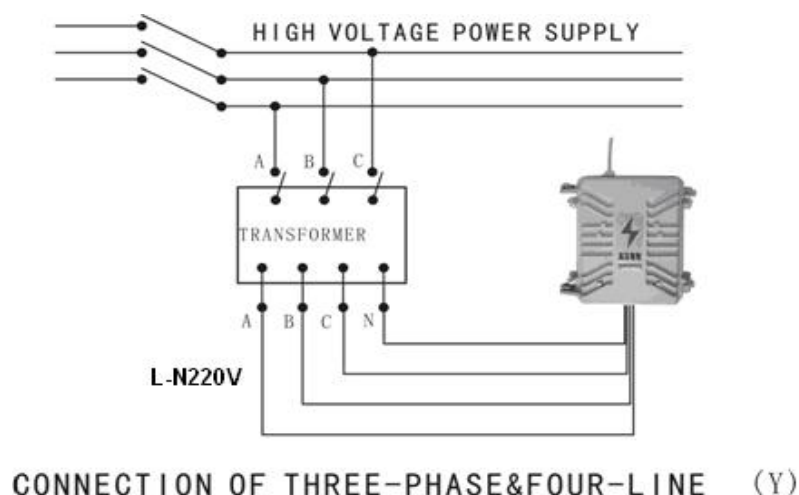
Shock and cut-line alarm wiring diagram

Due to the alarm host must be connected with three phase & four line which has strong voltage，the connection of its L-N AC 220V must be assisted by professional electrician，must follow the order of **ABCN**.

Note：Neutral wire and phase line must be connected correctly. The L-N rated voltage should correspond with power network.

Vibration detector must be firmly fixed on the outer shell of the alarm host to prevent false alarm. The sense wire must be firmly twined around transformer so that when robbers damage or move the transformer, they have to break the wire line, then the host will alarm immediately.

Ⅲ. Operation steps

3.1 Install GSM antenna before turning on the alarm host.

3.2 Insert a SIM card into alarm host before installing it.

User should choose local SIM card with good network signal.

Note：Make sure the SIM card can receive and send SMS before it is used in host; The power must be cut off before you insert SIM card; Please wait for 30 seconds to set the alarm host after you turn on it.

3.3 Run

Turn on alarm host, it will search GSM network. About 15 seconds later, RUN LED flashes, the alarm host enters into the normal running status. If RUN LED is on or off all the time, it means there is something wrong with GSM.

3.4 Reset

Press *SET* button, then turn on alarm host and don't loose the SET button. When the host makes "di, di" sounds, it means successful reset, then loose the button.

3.5 Record alarm voice message

In running status, press *REC* button, then loose it, the alarm host will make "di" sound, then it begins to record. The record time is 10s.

3.6 Set by wireless keyboard

In running status, press *SET* button, it will make "di,di" sound, meanwhile the ALARM LED is on. That means the alarm host enters into the setup status. Then you can continue to set.

Note: When setting by the wireless keyboard, every time you press the button you will hear " di " sound for confirmation. If there's no voice , you should press the button again.

To cancel the numbers that you have already input this time, please press the button "*" before pressing the button "#".

3.6.1 Set/delete six mobile phone numbers for SMS alarm.

a) Set the mobile phone number

Input: serial number +mobile phone number + #

Example: Set 13688888888 as the first mobile phone numbers for SMS alarm., input: 1 + 13688888888 + #, then you will hear "di,di" sound for confirmation.

Repeat the process to set the other five mobile phone numbers.

Note: serial number can be 1, 2, 3, 4, 5, 6 and the number "1" is the first mobile phone numbers for SMS alarm.

b) Delete mobile phone number

Input: serial number + #, then you can cancel it.

3.6.2 Set/delete two phone numbers for auto-dialing alarm.

a) Set phone number (can be mobile phone/telephone number)

Input: serial number +phone numbers + #

Example: Set 13688888888 as the first phone number for auto-dialing alarm, input: 5 + 13688888888 + #, then you will hear "di,di" sound for confirmation.

Repeat the process to set the other one.

Note: Serial number can only be 5, 6 and the number "5" is the first phone number for auto-dialing alarm.

b) Delete the phone number

Input: serial number + #, then you can cancel it.

3.6.3 Change password of the alarm host

Input: 7 + new password + #, then you will hear "di,di" sound for confirmation.

Example: set 4321 as the new password

Input: 7 + 4321 + #.

Note: The initial password is 1234 (must be four numbers)

3.6.4 Set new ID of the alarm host

Input: 0 + new ID number + #, then you will hear "di,di" sound for confirmation.

Example: set 123456 as the new ID

Input: 0 + 123456 + #.

Note: The initial ID is 000000 (must be six numbers)

3.6.5 Set time of the alarm host

Input: 8 + year/ month/ date/ hour/ minute /second（each with two numbers）+ #, then you will hear "di,di" sound for confirmation.

Example: Suppose the present time is 12:14:05 and the date is 08-01-2007 (8th Jan, 2007)

Input: 8 + 070108121405 + #.

3.6.6 Set fixed response time of alarm host for its self-check.

Input: 9 + hour/minute（each with two numbers）+ #, then you will hear "di,di" sound for confirmation.

Example： Set 14:12 as the fixed response time

Input：9 + 1412 + #

3.6.7 Exit setting status

The alarm host will exit the set status automatically in 15 seconds after completing the set, and then alarm host will send setting message to the first SMS alarm mobile phone.

Ⅳ. SMS Control Command

4.1 Set six mobile phone numbers for SMS alarm

Input SMS: 4 numbers for password + DD + serial number + mobile phone number.

Example: Set 13888888888 as the first mobile phone numbers for SMS alarm. The alarm host's password is 1234.

Send SMS: 1234DD113888888888

Note: The serial number shows alarm sequence (must be 1, 2, 3, 4, 5, 6).

4.2 Set two phone numbers for auto-dialing alarm

Input SMS: 4 numbers for password + DD + serial number + phone number (can be mobile phone or telephone number)

Example: Set 01088888888 as the first phone number for auto-dialing alarm. The password is 1234.

Send SMS: 1234DD501088888888

Note: The serial number shows alarm sequence must be 5, 6.

4.3 Delete alarm phone numbers

Input SMS: 4 numbers for password + DD + serial number

Example: The password is 1234. .If you want to delete the first alarm phone number,

Send SMS: 1234DD1.

Note: The serial number shows alarm sequence (must be 1, 2, 3, 4, 5, 6),

4.4 Change password of alarm host

Input SMS: 4 numbers for password + DD + 7 + 4 numbers for new password

Example: The initial password is 1234. If you want to set 5678 as the new password

Send SMS: 1234DD75678

4.5 Arm/disarm

Arm: four numbers for password + A1

Disarm: four numbers for password + A2

Example: The password of alarm host is 1234. If you want to set the alarm host in arm mode.

Send SMS: 1234A1

4.6 Inquire arm/disarm status of alarm host

Input SMS: 4 numbers for password + W1

Reply SMS: The arm/disarm status of alarm host

4.7 Fixed-time arm/disarm

a) Fixed-time arm

Input SMS: 4 numbers for password + SS + 1 + hour/minute (each with two numbers and in 24 hour format).

Example: Set the 8: 30 a.m. as arm time, the password is 1234.

Send SMS: 1234SS10830

To cancel it, send SMS: password + SS + 1 + 9999

b) Fixed-time disarm

Input SMS: 4 numbers for password + SS + 2 + hour/minute (each with two numbers and in 24 hours format).

Example: Set 18: 25 as the disarm time, the password is 1234.

Send SMS: 1234SS21825

To cancel it, send SMS: password + SS + 2 +9999

4.8 Set fixed response time of alarm host for its self-check.

Input SMS: 4 numbers for password + SS + 3 + hour/minute (each with two numbers and in 24 hours format).

Example: Set 9: 30 as the fixed response time, the password is 1234.

Send SMS: 1234SS30930

Note: the initial response time is 0900.

To cancel it, send SMS: password + SS + 3 + 9999

4.9 Inquire the fixed time of arm/disarm and the response time for self-check.

Input SMS: 4 numbers for password + SS + 4

Reply SMS: the fixed time of arm/disarm and the fixed response time of alarm host for its self-check.

4.10 Define the installation location

Input SMS: 4 numbers for password + DM + 12 + installation location.

Example: If the alarm host is installed in Nanshan and the password is the

1234, you can define the installation location by sending SMS: 1234DM12Nanshan

Remark: The installation location should be less than 42 characters

When alarm occurs, the host will send SMS to tell you the installation location.

Ⅴ. Usage

5.1 Arm/disarm by wireless keyboard

After finishing to the installation turn on power switch, the alarm host will enter into running status automatically 25s later. Press button "1", you will hear "di" sound and the ALARM LED is twinkling. It will enter into arm status in 30s and you will hear "di,di" sound for confirmation. To disarm, press button "2", you will hear "di" sound for confirmation.

5.2 Types of alarm

（1）alarm when host is dismantled

（2）alarm when host is vibrated.

（3）alarm when single- phase/double-phase/three-phase fail.

（4）alarm when transformer is shocked.

（5）alarm when transformer is removed

（6）alarm of other detectors

5.3 Alarm and Handling

When an alarm occurs, the siren will alarm for 90 seconds to frighten the robber. At the same time, the system will auto-dial the preset phone numbers and send SMS to inform alarm information. When any phone is answered, you can hear the voice message and monitor the alarm site. If the phone line is busy or can't put through, the system will auto-dial the next phone number circularly till one of them is answered. If nobody answers the phone, the system will stop dialing after auto-dialing circularly for three times.

Ⅵ.Operation Cautions

1. **To make sure no water enter into the alarm host, please tighten all the screws up and check whether the red waterproof washer is in good condition or not. You'd better smear some waterproof glue to the connection point of GSM antenna.**

2. **Install the system in a hidden place.**

3. **Turn off the power supply before insert/take out SIM card.**

4．**Check the SIM card's status regularly (eg. network signal, adding money to it in time)**

5．**If replace the standby battery with larger capacity one, the jumping lines of storage battery must jump toward BIG when the capacity is larger than 2AH**

6. **Check the standby battery in time and change it when voltage is low. It is suggested that update it once a year**

7. **Check system's work status regularly.**

8. **Make sure the alarm host connect with earth firmly.**