G-2025

4G receiver with relay output for opening sliding, swing gates, doors or switching devices

Features

- Up to 999 users
- 4G network compatible
- Built-in battery back-up
- Setup with easy to use PC software
- Switches relay with free call from mobile phone
- Digital inputs for sensors or switches
- SMS confirmation of relay switching
- Secure password protected
- Only authorized numbers can operate the G-2025
- Operates from anywhere if 4G network is available. Unlimited range!
- 12 Volts DC power pack included

Application

- Open / close gates, doors, shutters, garage doors with a free call!
- Security alarm, On/Off lights, pumps and machines.

Description

The G-2025 can have up to 999 authorized users and uses the 4G Telstra and Vodafone network for communication (Not compatible with Optus). All you need is to insert a valid SIM card and program phone numbers of all users using the PC software or through simple SMS text commands. When an authorized user makes a call to the receiver, it rejects the call and activates a relay. Since the call is rejected the user is not charged for the call.

There are 2 digital inputs available. These 2 inputs can be wired to motion sensor (PIR), smoke detectors, reed switch, windows, or any other type of voltage free contact. The GSM Receiver can be programmed to send different SMS messages for each input.

A 12 Volt output is also available on the GSM Receiver which can activate a 12 VDC siren or warning light when either of the input is activated. (Refer to the wiring diagram)

The G-2025 works on 4G network therefore the receiver can be activated from anywhere in the country where 4G mobile network is available. For example, you can open your gate or switch on your kitchen lights in Sydney from Melbourne by making a call from your mobile phone.

12 Volts DC Power Pack Included

Technical Data

Power Source	9-24 Volts DC
4G Frequency Bands	B1/B3/B4/B5/B7/B8/B28 @ FDD-LTE, B40@TDD-LTE (Compatible with Telstra and Vodafone)
Output	Common (C) and Normally Open (NO) relay outputs rated at 3A, 240VAC.
Shipping Weight	500 grams
Dimensions	95 x 95 x 35 mm.

Safety Instruction

Safe startup

Do not use in places where phone equipment is prohibited.

Interference

Wireless equipment might interfere with the 4G network signals of the G-2025 and influence its performance.

Avoid using at Petrol / Gas Stations

Do not use G-2025 at a petrol / gas station. Power off the GSM Receiver when near fuels or chemicals

Avoid using near blasting areas

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

Reasonable Use

Please install the product at a suitable place as described in this manual. Avoid signal shielding by covering the mainframe.

Maintenance

All wiring and maintenance should be carried out only by qualified maintenance personnel.

Setup and Programming Instructions

1. Caller ID must be enabled on all authorized users phone so that the GSM Receiver knows who's calling.

2. Open the back cover of the GSM receiver and insert the SIM card.

3. Connect the power supply and switch the GSM Receiver ON. The ON switch is located near the SIM card holder

4. Connect The GSM receiver to the computer using the USB cable included.

5. On desktop, right click "My computer" >>> "Property" >>> "Hardware" >> "Device Manager".

6. Find "Ports (COM & LPT)", check the port number of "Silicon Labs CP210xUSB to UART Bridge", for example: COM3.

7. If this driver is not visible, install the driver from the USB flash drive included.

8. Run the configuration software, type in the COM Port number, for example:COM3 (without a space). Click "Open", if the "COM Port" status at the bottom turns "Green", connection is successful.

9. Enter the password and Click "Log in", **default password is 1234**. Enter the new password if you had previously changed it.

10. Set the time & date by entering the sim cards number, this must be done first.

11. Click "Read Settings". Configure the parameters as per your application.

12. Click "Save Settings"

13. **After finishing the configurations, disconnect the USB cable, restart the GSM receiver by switching the slide switch near the SIM card to OFF, wait for 5seconds and switch it back to ON.**
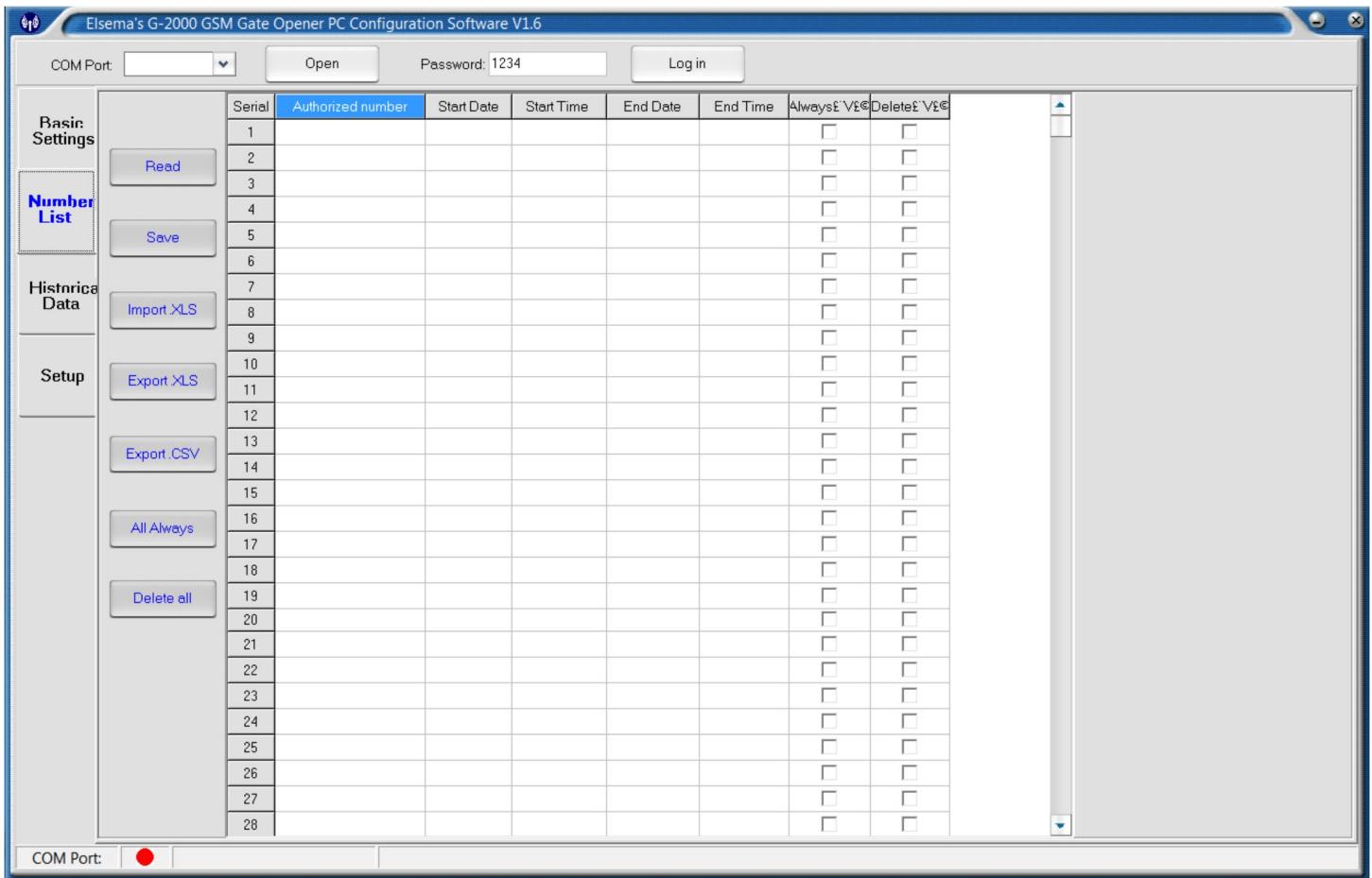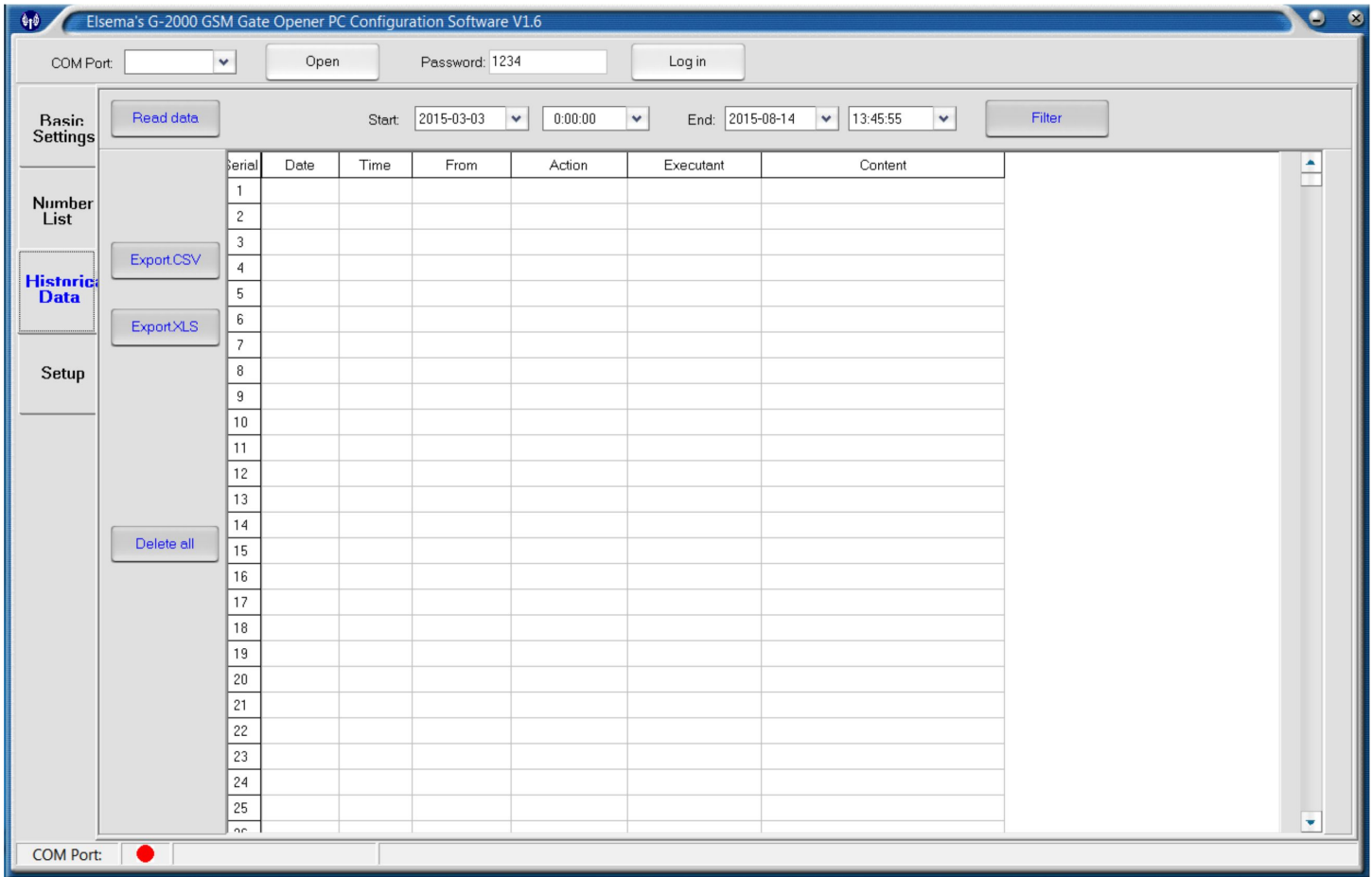
PC Configuration Software

Basic Setting
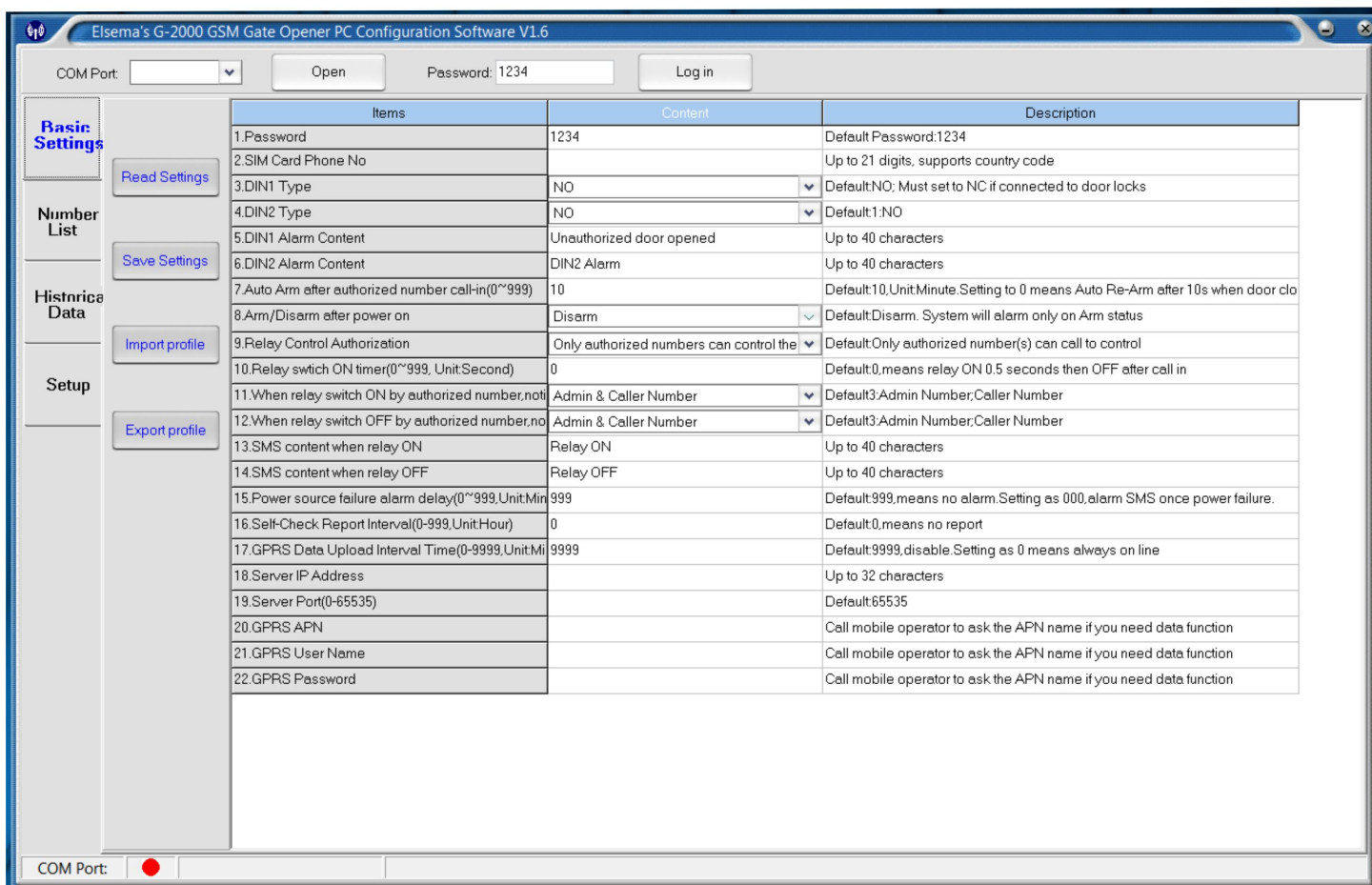
1. **Read Settings:** Reads the parameter settings from the GSM receiver to the PC software.
2. **Save Settings:** Save the basic parameter settings to the GSM receiver.
3. **Import profile:** Import .xls profile. All settings can be imported from the GSM receiver and copied to other GSM Receivers if used with the same settings.
4. **Export profile:** Saves the parameters of the GSM receiver to the computer.

Authorized Number List

1. **Read:** Reads the authorized number list from GSM receiver to the PC software.
2. **Save:** Save the authorized number list to the GSM receiver.
3. **Import .xls:** Import authorized number list in .xls format from the PC to the configuration software.
4. **Export .xls:** Export the authorized number list in .xls format to the PC under the /configuration folder.
5. **Export .csv:** Export the authorized number list in .csv format to the PC under the /configuration folder.
6. **All Always:** This selects all stored numbers to control the GSM receiver anytime.
7. **Delete all:** This deletes all numbers stored in the GSM receiver. Please use caution!

Historical Data (Data Log)

1. **Read data:** Read all historical data from GSM receiver to the PC software.
2. **Filter:** Select the start and the end "Date" and "Time" of the data which you wish to view
3. **Export .xls:** Exports the historical data in .xls format to the PC under the /configuration folder.
4. **Export .csv:** Exports the historical data in .csv format to the PC under the /configuration folder.
5. **Delete all:** Clicking this button will delete all of the historical data from the GSM receiver. Please use caution!

If using SMS commands to setup the GSM receiver:

1. Type the relevant SMS commands in your phone and send it to the GSM receiver controller SIM number.

2. Commands must be in **CAPITAL LETTERS**. Do not leave any space between the letters or words. (e.g. "TEL" is correct while "tel" is incorrect)

3. If the GSM receiver is used to operate only a gate, all the user has to do is to change the default password and enter the authorized numbers.

4. Keep a list of the authorized numbers for future reference.

5. If you cannot send or receive any SMS messages from your phone to the GSM receiver try adding + in front of the phone numbers or the country code.
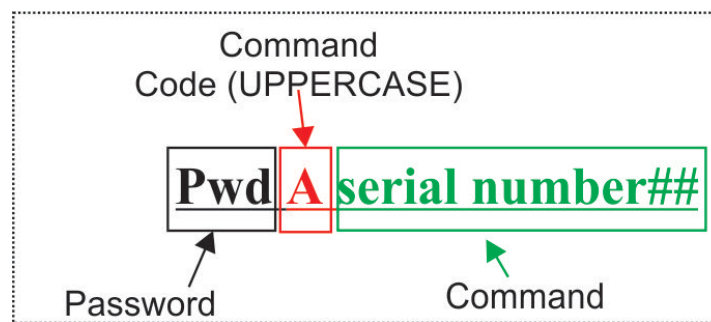
SMS command structure

SMS Commands: Below are the SMS command needed for the GSM receiver. In the examples the default password is used (1234). Please replace this with your own password if you have changed it.

- **Setup a new password**
  - **PwdPnewpassword**

E.g The default password is 1234 and it has to be changed to 8787, the SMS command needed is:

> **1234P8787**

If your password is successfully changed the GSM Receiver will send you an SMS message "Password changed to: "8787"

The below setup must be done if users are required to access the GSM receiver at certain times.

- **Setup time and date**
  - **PwdTELnumber of the SIM card#**

E.g This sets the time date for the GSM receiver. The SMS command needed is (assuming the number of the SIM card is 0460773679):

> **1234TEL0460773679#**

- **Change the time & date**
  - o **PwdTyymmddhhmm#**

1234T yy (year) mm (month) dd (day) hh (hour) mm (minute)

E.g If you want to change time & date to 14th June 9am 2018, the SMS command needed is:

1234T1806140900#

- **Setup Authorized Numbers**
  - o **PwdAserial number#authorized number#start time# end time#**

Serial number: User position 000-999.

Start time: yy (year) mm (month) dd (day) hh (hour) mm (minute)

End time: yy (year) mm (month) dd (day) hh (hour) mm (minute)

E.g The following number 0435792468 is to be setup as the second user; the following SMS command is needed:

1234A002#0435792468# : the user 0435792468 can call anytime to access the GSM receiver.

1234A004#0450755623#1505040800#1510061700#: the user 0450755623 on position 4 can only access the GSM receiver from 4th of May, 2015 8:00am to 6th of October, 2015 5:00pm.

Authorized numbers are mobile numbers of all users who will be using their phones to operate the GSM receiver.

Serial number is the position of all stored numbers (authorized users). 001-999 users

*It is strongly recommended that the first 6 numbers are mobile numbers (not landline). If inputs 1 & 2 are used and is activated, an SMS message will be sent to the first 6 stored numbers (serial numbers 001-006) and the unit will call them as well. **The calling feature cannot be disabled**. If you don't want to receive any SMS messages or calls at all, leave the first 6 spots blank.*

Power failure SMS will only be sent to the user in location 001

- **Check which mobile number is located at a particular location (Serial number)**
  - o **PwdAserial number#**

E.g If the user wants to see which number is stored on position 30 (serial number 30), the following SMS command is needed:

1234A030#

- **Check users in multiple locations**
  - o **PwdALserial number start#serial number end#**

E.g If the user wants to see which numbers is stored on position 100 to 200, the following SMS command is needed:

1234AL100#200#

- **Delete a user**
  - **PwdAserial number##**

E.g A user on position 13 (serial number 13) has to be deleted from the user list, the following SMS command is needed:

1234A013##

It is recommended to keep a list of all users and their numbers position.

If a new number is programmed on a location which already has a number stored, the old number will be deleted and the new number is stored.

- **Allow access to all numbers calling the GSM receiver**
  - **PwdALL#**

To allow access to anyone making a call to the GSM receiver, the following SMS command is needed:

Warning! This will allow anyone who makes a call to operate the GSM receiver.

1234ALL#

- **Allow access only to authorized numbers calling the GSM receiver**
  - **PwdAUT#**

To allow access to authorized numbers only, the following SMS command is needed:

1234AUT#

This allows only the numbers that are authorized to operate the GSM receiver.

This is set as factory default and is recommended for secure operation.

- **Setup Relay OFF delay**
  - **PwdGOTclose time#**

The relay OFF delay can be set from 000-999 seconds. The factory default is 0.5 seconds.

000—0.5 second

999— Latching mode. Relay will stay ON until a second call is made.

E.g. If the relay OFF delay needs to be set at 10 seconds, the following command is needed

1234GOT010#

Relay will stay ON for 10sec once activated.

- **Controlling the relay with SMS messages**
  - **PwdCC**
    - **1234CC**

Switches the relay ON (The relay stays ON for the OFF delay time set in the above command)

o **PwdDD**

       1234DD

Switches the relay OFF

- **SMS confirmation of relay switching**

This feature enables the 1st user and the person making a call to get SMS confirmation of the relay switching ON or OFF.

For relay ON you need the following command

    o **PwdGONab#content#**

For relay OFF you need the following command

    o **PwdGOFFab#content#**

Ab is the option for the 1st user and the caller to either receive or not to receive SMS confirmation of the relay switching. Have a look at the table below:

AB Option		SMS Confirmation to user	
A (First user)	B (Caller)	1st user	Caller
0	0		
0	1		√
1	0	√	
1	1	√	√

(0) means disable & (1) means enable

Content is the SMS message which the user and the caller will receive.

E.g. If only the 1st user is required to receive SMS "gate open" when the relay is ON, the following command is needed

      1234GON10#gate open#

E.g. If the 1st user and the caller both are required to receive SMS "gate closed" when the relay is OFF, the following command is needed

      1234GOFF11#gate closed#

If SMS is not required for any users when the relay is ON, the following command is needed.

    o **PwdGON##**

      1234GON##

If SMS is not required for any users when the relay is OFF the following command is needed.

    o **PwdGOFF##**

      1234GOFF##

The GSM receiver has 2 digital inputs. When these inputs are activated, it sends SMS messages and make a call to users stored in positions 1-6. **The calling feature cannot be disabled**. It also switches the Siren output ON. The siren output voltage is the same as the supply voltage.

Inputs 1 & 2 can be used to connect sensors such as PIR, smoke detectors, reed switches, etc. When activated it sends an SMS message to users stored in positions 1-6 and it will call the 1st user.

- **Arming the GSM receiver**
  - **PwdAA**

    1234AA

- **Disarming the GSM receiver**
  - **PwdBB**

    1234BB

For inputs to be active, the GSM Receiver should be armed either with SMS or the PC Software

- **Change Digital input 1 from NO to NC (Factory default is Normally Open, NO)**
  - **PwdDIN1NC#**

E.g. To change Input 1 from Normally Open (NO) to Normally Closed (NC), the following command is needed

    1234DIN1NC#

- **Change Digital input2 from NO to NC (Factory default is Normally Open, NO)**
  - **PwdDIN2NC#**

E.g. To change Input 2 from Normally Open (NO) to Normally Closed (NC), the following command is needed

    1234DIN2NC#

- **Program SMS message to be sent when input 1 or 2 is triggered.**
  - **PwdM1#sms content #** **(Input 1)**
  - **PwdM2#sms content#** **(Input 2)**

E.g If the user wishes to change the factory default message for input two to "kitchen window" the following SMS command is needed.

- **1234M2#kitchen window#**

Maximum of 32 characters

- **Checking the polarity of Input 1 & 2**
  - **PwdMQ#**

When inputs 1 & 2 are triggered, it will stay in alarmed status for 1 minute and the siren output switches ON.

The Digital inputs 1 & 2 will only trigger an alarm in the following conditions:

1. The GSM receiver is in armed mode

2. 10 minutes after the last call from an authorized user. Factory default is 10 minutes but this time can be changed. (minimum is 1 minute)

3. Digital Inputs 1 & 2 will re-arm after 30 seconds from a sensor input.

- **Changing the time after which Input 2 becomes active**
  - o **PwdDtime#**

Time: 000—999 in minutes. 000 means the GSM receiver will always be disarmed

E.g If the user wishes to change the time to 2 minutes after which input 2 becomes active, the following SMS command is needed (minimum is 1 minute).

- **1234D002#**

- **Power failure SMS**
  - o **PwdACtime#**

Time: 000—999 in minutes.

000 means the GSM receiver will send SMS message to the 1st user when the AC power fails.

999 means no SMS message will be sent when AC power fails.

- **Self-diagnostic SMS report to the 1st user**
  - o **PwdT#time#**

Time: 000—999 in hours.

000 means the GSM receiver will not send any message.

Self-diagnostic SMS will include the following:

> Arm / Disarm Status;
>
> Digital Input 1 & 2 status;
>
> Relay status;
>
> Mobile signal strength (31 is strong signal, lower than 14 is weak signal)
>
> AC power supply status

- **Checking the Self-diagnostic SMS report time and status**
  - o **PwdT#**

- **Check current status**

o **PwdEE**

- **Reset the Password of the GSM receiver to factory default.**

Slide the switch near the SIM card to OFF position and disconnect the power. Press and hold the reset button, connect the power and then slide the switch to "ON". After 6 seconds the Network LED will blink 5-6 times to indicate the password has been reset. Release the reset button and do a power cycle.

This will only reset the password to factory default. It will not change any other settings. All other settings can only be changed by PC software or SMS.

Block Diagram

|	
Power ON	Power ON indicator.
Alarm ON	The LED lights up when the inputs are triggered and there is alarm condition.
Relay ON	The LED lights up when the relay switches ON.
Network Signal	Flash every 1 Second: Registering to the mobile network or looking for network Flash every 2 Second: Successfully connected to the network. Normal status. OFF: Unregistered network or cannot connect to the network.
Power	9 - 24 Volts DC. 12v DC Power pack supplied
Inputs 1 & 2	Can be used to connect Reed switch, PIR, fire alarm or any other dry contact switch. Inputs can be changed to Normally Closed (NC).

Relay Output	Common (C) and Normally Open (NO) relay outputs rated at 3A, 240VAC.
Siren	DC output to connect siren or flasher lights or any other device. Siren voltage output is the supply voltage used to power the GSM receiver.

Application

GSM receiver 12/24 Volts DC application
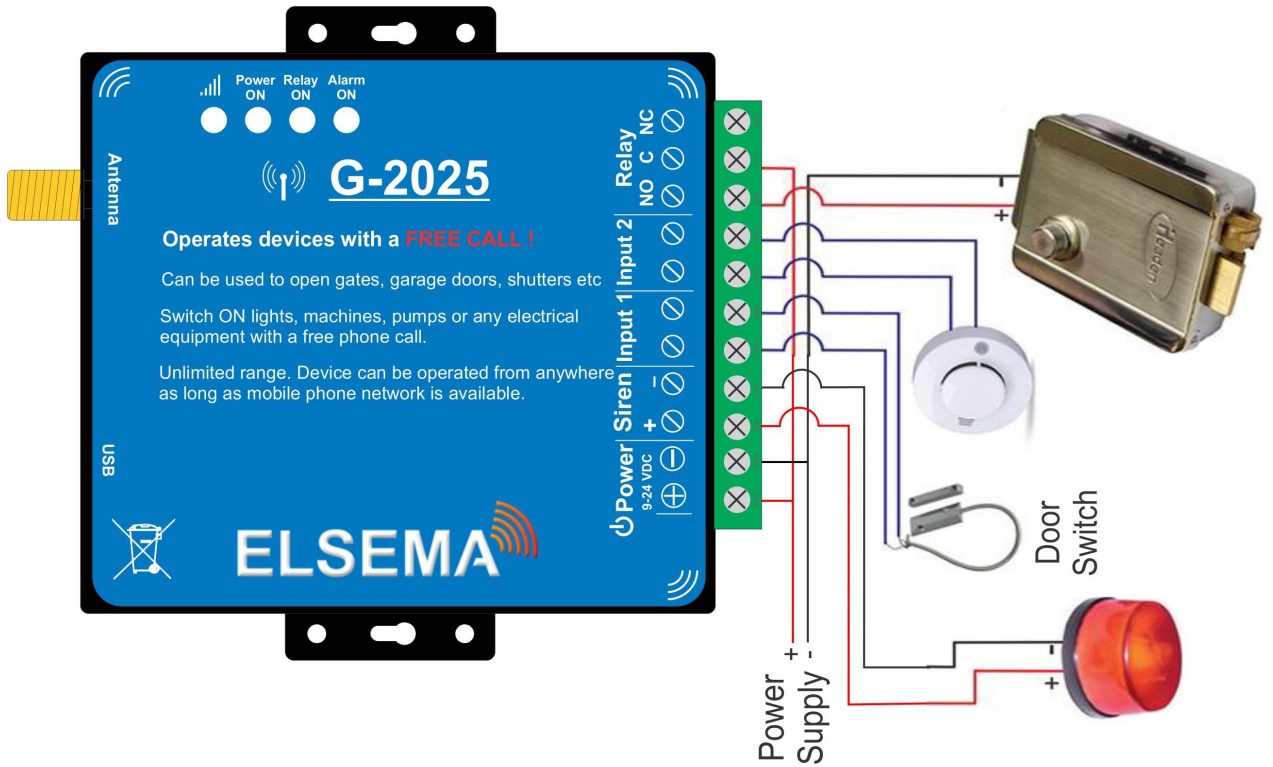
GSM
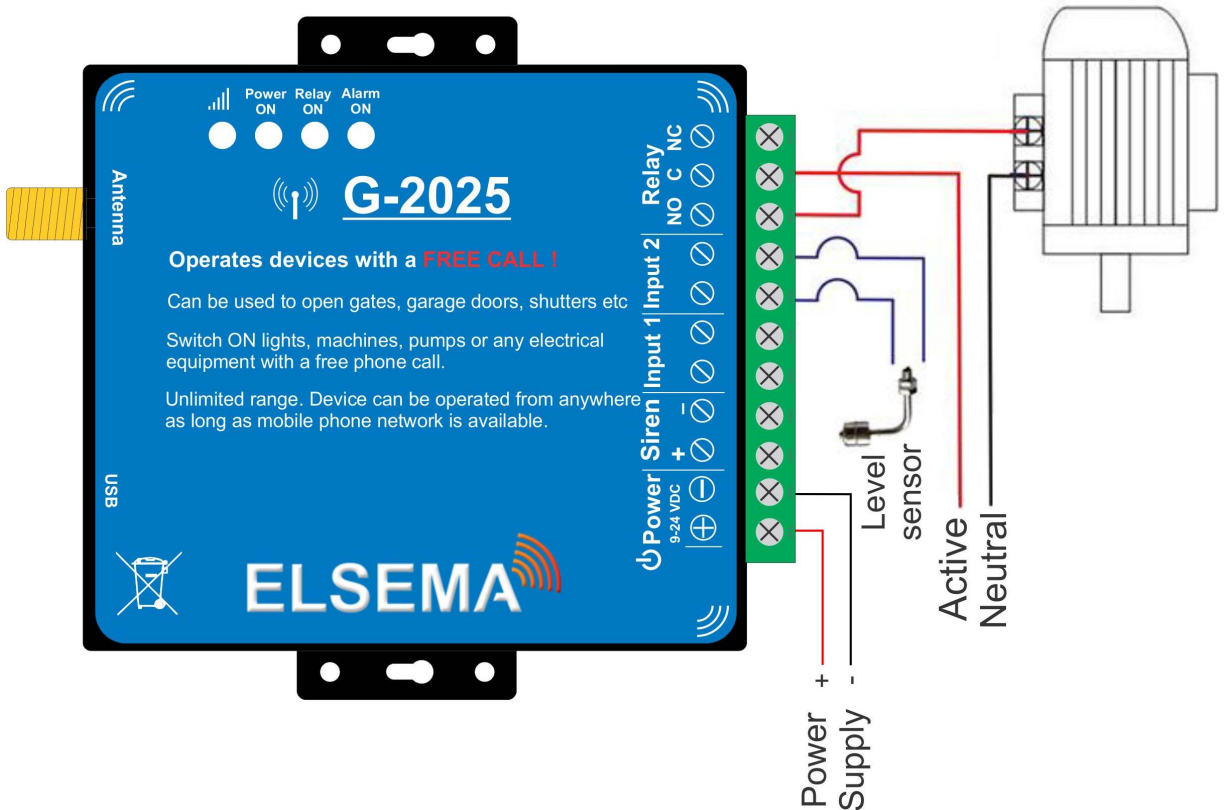
receiver 240 Volts application