MANUAL

3G KEYPAD OPENER

SS1401D2-M

Please read these instructions completely before use it

TABLE OF CONTENTS

Thank you for purchasing 3G Keypad Opener. Please read this manual carefully before using. Be sure to keep this manual for future reference in case of any problems happen.

1. SAFTY PRECAUTIONS

1. Unplug the power adapter before cleaning. Do not use liquid cleaners or aerosol Cleaners. Use a damp cloth for cleaning.
2. Do not use this product near water.
3. Do not use this product near an area where there is a potential of gas leaks or near any fumes that can be explosive.
4. Do not place this equipment near or over a radiator or any other heat source.
5. Do not overload the wall outlet or power cord where the power adapter is installed. This can result in fire or electric shock.
6. Avoid spilling liquid on this equipment and do not insert any objects through the Ventilation slots.
7. Avoid using the equipment during an electrical storm. There is a remote risk of electrical shock from lighting.

2. BRIEF INTRODUCITON

SS1401D2-M 3G Keypad Opener is a 3G relay switch remote control system which can activate automatic gates with a free call from your mobile phone or enter PIN code to gain access by using keypad. The users' phone numbers or PIN code are programmed into the device by SMS or call. The device recognizes incoming Caller ID and drop the call before switching. With this system you can authorize up to 1150 phone numbers and 384 PIN code to open the gate or door at no cost

This 3G based keypad entry system is an affordable and simple way to provide specific access to your property at the site of your electric gate and garage doors for residential, apartment and commercial buildings.It's a robust and durable unit made from vandal resistant stainless steel with backlit digital keypad.

3. Product Features:

1. Up to 384 user PIN codes
2. User selectable 1-14 digit PIN codes
3. UP to 1150 user phone numbers
4. Blue backlit digital keypad for easy night time operation.
5. Stainless steel vandal resistant design
6. Surface or flush mount styles
7. Installation and set-up are simple (SMS)
8. The buttons are very easy to depress
9. Using either a magnetic lock or electric strike
10. To trigger / hold/ release relay by using PIN code or SMS
11. Check log via SMS/ Email
12. Available with 12V – 24V AC/DC input
13. Weather-proof

4. STANDARD PACKING LIST

Item	Description	Q'ty	Included	Optional
1	3G keypad opener	1	◎	
2	adapter	1	◎	
3	external antenna - 3 meter length	1		◎
4	manual	1	◎	

5. INSTALLATION：

This 3G Keypad Opener is suitable for both flush and surface mounting.

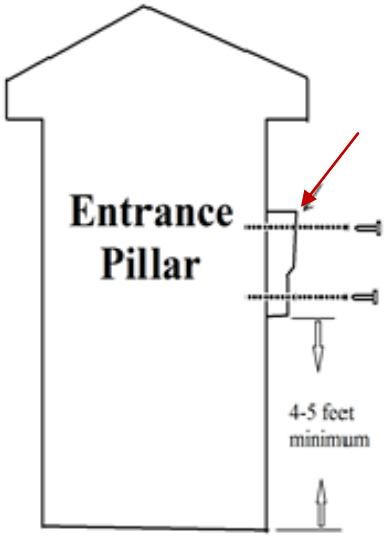
Main Unit Introduction

(Front View)

(Rear View)

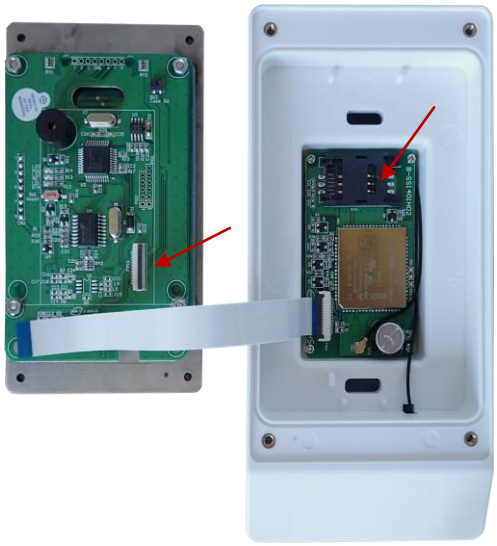
(Side View)

(Surface Mounting Enclosure)



(1)

(2)



(3)

(4)

(5)

(6)

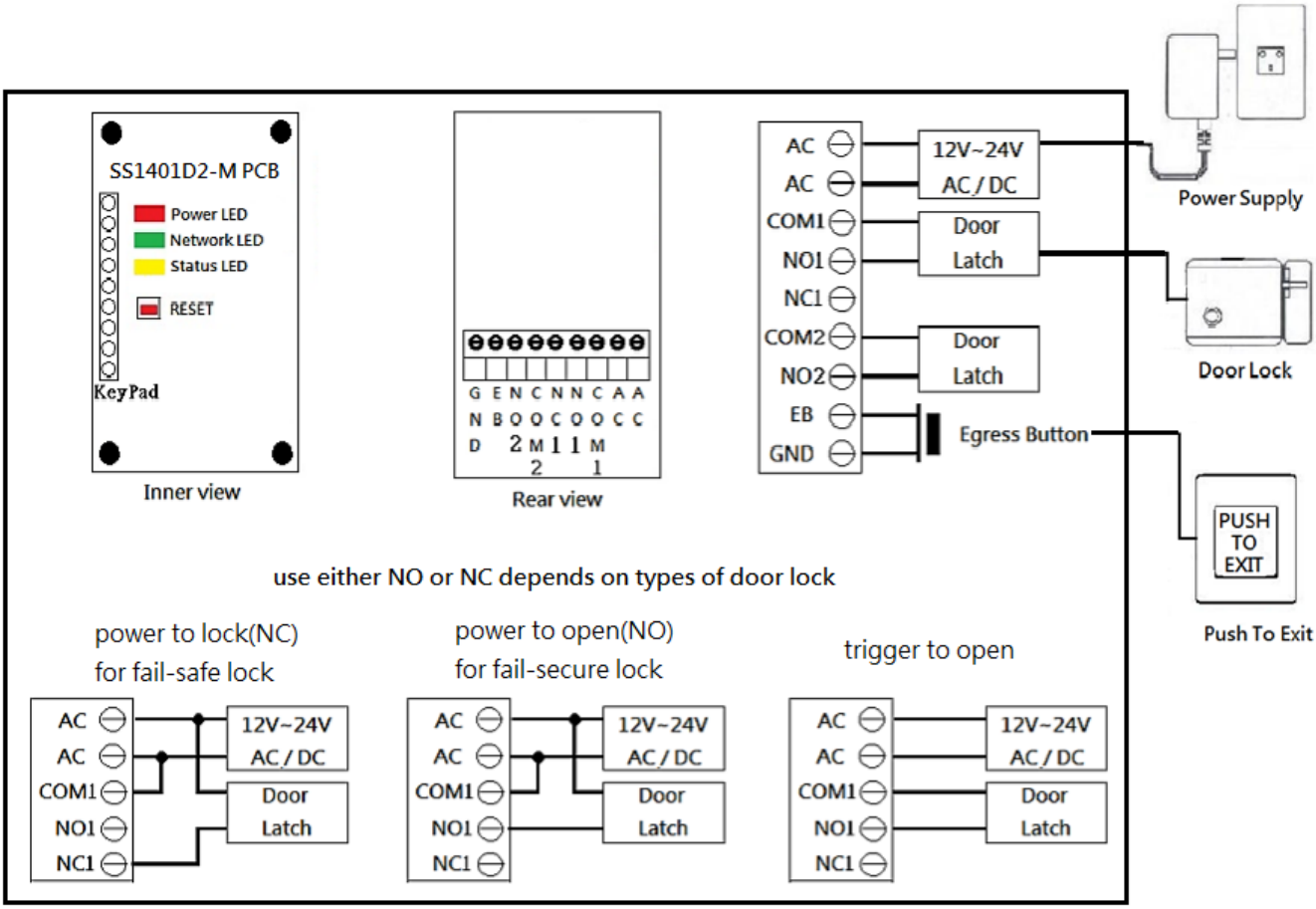
Ensure that there is good network reception at the location where it will be installed

Follow the instructions step by step for installation:

1. Install the surface mounting enclosure by using appropriate fixings on the entrance pillar at high 4~5 feet minimum.
2. Remove screws and open the panel by pulling the sucker release tab.
3. Remove the flat cable from the panel and insert the SIM card. (please check remarks on SIM card before using)
4. Put the main 3G keypad opener unit into the enclosure and tighten the screws on the enclosure
5. Connect the flat cable (**BLUE** side face up) back to the panel
6. Tighten the screws on the front panel.

Wiring Diagram

Please carefully follow the wiring instructions.



1. SIM card
   Register your SIM card with the network, and check it works in a mobile phone
   You MUST remove the PIN request from the SIM before inserting it in the unit of SS1104-M.
   Ensure the power is OFF before inserting the SIM card. Carefully slide the SIM holder in the OPEN direction, insert the SIM, and slide in the CLOSED direction to lock it in place.

2. Door Lock
   Connect an electric door lock to terminals marked “door latch”.

3. Antenna
   Ensure that there is good network reception at the location where it wil be installled.If you use an external 3 meters antenna install it as high as possible on the top of the pillar for best possilbe reception.

4. Power Supply
   This device is designed to work with power supplies 12V~24V AC/DC. Connect a 12 V DC power supply to terminals marked “AC, AC”.The power supply should be capable of supplying a constant current of no less than 1amp.

5. After a final check of wiring, switch on the power

6. Allow 20~30 seconds for the unit to boot up and detect the network.

6. LED INDICATORS

LED	Definition	LED indication		
		Solid	Off	Flash
Red	Power	Power ON	Power OFF	X
Green	3G Network	X	Module OFF	1.Flashes once per 3 sec (standby) 2. 0.5 sec ON / 0.5 sec OFF (No SIM or can't register to network) 3.0.1 sec ON/0.9 sec OFF (in use, line is busy)
Yellow	Device status	Standby	Power OFF	Flashes once per sec (no SIM inserted)
				Flashes twice per sec (not network registered)

7. OPERATION

Programming of the telephone numbers in and whenever the unit receives a call will recognize an authorized telephone number calling it and will then reject the call without answering and open the gate or door. Users can also enter selectable 1-14 digit PIN codes to gain access, if the wrong PIN code is entered 3 times in a row, the device will produce a continuous long beep sound for warning.

This device can allow user to gain access by 4 different methods:

1. Caller ID recognition

Ring in to open the door for authorized telephone number.

2. Access control password by call

Dial the SIM card telephone number. The unit will answer the call and you will hear a bleep tone. The door can be opened after enter correct password code. (Same as SMS commands)

3. Send SMS commands

*71*5678#：Trigger relay 1

*72*5678#：Hold relay 1

*73*5678#：Release relay 1

*74*5678#：Trigger relay 2

*75*5678#：Hold relay 2

*76*5678#：Release relay 2

4. Enter PIN code by using keypad

Enter valid 1~14 digit PIN code

8.PROGRAMMING

Programming can be carried out either by text message or by dialing into the 3G Keypad Opener.

8.1 Progrmming by dialing in

Dial the SIM card telephone number. The unit will answer the call and you will hear a bleep tone.

Enter Programming Mode by Pressing…..
*12*1234# (1234 is default password)
A successful pass code will produce a single long beep. A failed attempt will produce 3 short bleeps.

Example: start to program the phone number for dialing in to open the door.

Use the following commands to program the unit

* Insert international country code (1~3 digits): **71[country code] #**
* Add a number (up to 1150 numbers):**72[relay][phone number] #**
* Delete a number: **73[phone number] #**
* Delete all numbers: **73*#**

Note:

*programming dialing in can't be used from telephones which are already programmed to open the door when they dial the 3G Keypad Opener.

* If the number is programmed to open the door but you still would like to use the same number to dial in for programming, then you can **disable Caller ID display (withhold the number)** on the mobile.

8.2 Programming by text message

Programming by text message is the simplest way to customize the settings of the 3G Keypad Opener and add or delete telephone numbers. Simply send texts in the format to the telephone number of the SIM within the 3G Keypad Opener.

Note:

1. A Single SMS text messages is limited to 140 characters.
2. You can program many different user command codes in a single text message with SMS command format. *12*1234 # [command Code1] # [command Code 2] # [command Code3] #.....
3. Each SMS must start with the pass code , default 1234 in the following format *12*1234 # Followed immediately by a command.

Program access control by phone example:

*12*1234#71[country code]#72[relay][phone number]#72[relay][phone number]#72[relay][phone number]#.....

Relay= 1 or 2

The passcode *12*1234 only needs to be put at the beginning of each new message.

Ireland Country code: 353 (UK: 44 / USA: 1 / Do not using any leading zeros)
086 5683624 (mobile number 1)
086 5682554 (mobile number 2)
086 2235644 (mobile number 3)

SMS format:
*12*1234#713353#7210865683624#7220865682554#7210862235644#

To delete phone numbers of dialing in to open

SMS format: (to delete phone number 1 and 2)
*12*1234#730865683624#730865682554#

SMS format: (to delete all numbers)
*12*1234#73*#

Program PIN code access control by keypad example:

*12*1234#899[N]#87[relay][PIN code]#
N= 1~14 (PIN code digit), default: 14 digit

Relay=1~4
1: trigger relay 1
2: relay1 hold/ release
3: trigger relay 2
4: relay 2 hold/ release

SMS format:
*12*1234#8995#87172543#87220785#87348964#87457212#

After the numbers are programmed you can also send the text message to check the stored numbers or PIN code.

*22*1234# (check stored number)
*23*1234# (check stored PIN code)

9. ADMINISTRATOR NUMBER

Once the administrator number is stored, the unit will only accept programming from this number and only via SMS programming.

Example:
Program a mobile number as an administrator number via SMS
Mobile number: 0865682554
Command to use *12*1234#74 [Admin number]#

SMS format *12*1234#740865682554#

To delete the Admin number *12*1234#74*#

10. CHCK SIGNAL STRENGTH (0~31 levels)

When a request for signal strength SMS is sent to the 3G Video Intercom it will reply with a signal strength code, service provider name and current network (GSM or WCDMA).The signal strength code will be between 0~31 means the signal level is from poor to best. When the unit detects the WCDMA network signal is poor will automatically switch to GSM to get better signal.

Example:
SMS format *21*1234#
SMS reply: Vodafone , WCDMA, Signal Level = 31 【Signal is very strong】

11. CHECK RELAY STATUS

You can send SMS command code to check relay status.

SMS format *24*1234#

SMS Reply Relay1 [status], Relay2 [status]

(status = Hold / release / trigger)

12. HOW TO RESET THE UNIT WHEN YOU FORGET THE PASSWORD

1. To keep the red button pressed on the PCB
2. Then power up and wait for 5 sec
3. When you have heard bleep sounds then release the red button.
4. Hardware reset it’s done.

13. CHECK A LOG OF DIAL IN NUMBERS VIA E-MAIL OR SMS

This system allows you to check dial in numbers and PIN code log and will then automatically send the record via e-mail or SMS as your request.

There is a list of commands you need and examples to guide you on the settings for this feature.
Please setup following required parameters and commands before you can use it.

NOTE: G-mail doesn't support this feature.

No.	Function	SMS command codes
1	Auto sending a log of dial in numbers	*12*1234#83[N]# N= 0 (sending when it reaches 100 numbers)- default N=1 (sending when it reaches 200 numbers, Max)
Sending record when it reaches 200 numbers. / command code example: *12*1234#831#		
2	Way of sending a log of dial in numbers via e-mail or SMS	*12*1234#84[N]# N=0 (no saving /sending record) N=1 (via SMS, 4 numbers limited /SMS) N=2 (via E-mail)
Sending record via email / command code example: *12*1234#842#		
3	GPRS parameters setting	*40*1234#APN, auth_type,user name,password# auth_type: 0= none / 1= PAP / 2= CHAP
Command code Example:		*40*1234#internet,0,,# (auth_type = 0 (no need for user name and password)) pass code APN auth_type =0 (none)
4	E-mail parameters setting	*41*1234#SMTP server,port,user name, password, e-mail address, e-mail sender name#
Command code Example :		*41*1234#gainwise.com,25,gainwise,5826,gainwise@gainwise.com,gainwise# pass code SMTP server Port user name PD email address sender name
5	Recipient & Carbon copy settings	*42*1234# recipient e-mail address, recipient name, carbon copy e-mail address, carbon copy name#
Commande code example: *42*1234#michael@gainwise.com,MICHAEL,ivy@gainwise.com,IVY# (complete setting) pass code recipient email address recipient name carbon copy email address carbon copy name *42*1234#michael@gainwise.com,,ivy@gainwise.com,# (recipient/carbon copy name can be omitted) pass code recipient email address carbon copy email address *42*1234#michael@gainwise.com,MICHAEL,,# (carbon copy can be omitted) pass code recipient email address recipient name		

No.	Function	SMS command codes
6	E-mail subject setting	*43*1234# e-mail subject#
Command code Example: *43*1234# dial in numbers record# pass code email subject		
7	To immediately send current dial in numbers log via email or SMS	*44*1234# SMS reply: successful or failed
8	Check parameters setting	*4[N]*1234# N=0 (reply GPRS parameters) N=1 (reply e-mail parameters) N=2 (reply recipient & carbon copy) N=3 (reply e-mail subject)
Check GPRS parameters setting / Command code example: *40*1234#		
9	Mobile number for receiving a log of dial in numbers via SMS	*12*1234#85[mobile number]#
10	Delete mobile number for receiving a log of dial in numbers via SMS	*12*1234#85*#
11	SIM phone number used in opener for Clock date and time correction	*12*1234#86[SIM phone number used in opener]#
12	To delete SIM phone number used in opener for Clock date and time correction	*12*1234#86*#
Remark: **why you need to setup the number for system time clock date and time correction?** This device has a time clock and supports automatically updating their date and time via NITZ information from network. In case some of the networks are not available for NITZ information, we strongly suggest to setup this clock date and time correction. When the device detects NITZ information is not available from the network will automatically send a command to itself via the SIM card used in the opener for time correction which will keep your " **dial in numbers log** " with correct date and time.		

Log example:

001@09/07/15,13:16:31-I0982384664
002@09/07/15,13:20:50-I1937256839
003@09/07/15,13:45:25-I0912645712
004@09/07/15,13:55:07-P2153
005@09/07/15,15:10:20-P5687
006@09/07/15,16:16:33-P9576
007@09/07/15,16:40:03-P6451
008@09/07/15,18:50:55-P3177

1 2 3

1. Date
2. Time
3. Dial in number / PIN code

I: Dial in number
P: PIN code

14. CHECK A LOG OF DIAL IN NUMBERS VIA SMS

There are 3 programming codes you will need to make this feature work

1	Way of sending a log of dial in numbers via e-mail or SMS	*12*1234#84[N]# N=0 (no saving /sending record) N=1 (via SMS, 4 numbers limited /SMS) N=2 (via E-mail)
2	Mobile number for receiving a log of dial in numbers via SMS	*12*1234#85[mobile Number]#
3	SIM phone number used in opener for Clock date and time correction	*12*1234#86[SIM phone number used in opener]#

You can program many different user command codes in a single text message with SMS command format. *12*1234 # [command Code1] # [command Code 2] # [command Code3] #.....

Example:

Mobile number for receiving a log 0907967223
SIM phone number used in opener 0948778458

*12*1234#841#850907967223#860948778458#

Send *25*1234# to check log

Replied log information via SMS example:

001@09/07/15,13:16:31-I0982384664
002@09/07/15,13:20:50-I1937256839
003@09/07/15,13:45:25-I0912645712
004@09/07/15,13:55:07-P2153
005@09/07/15,15:10:20-P5687 N/E

I: Dial IN numbers
P: PIN code
N: Next text massage
E: End text message

15. USER COMMANDS

You can program many different user command codes in a single text message with SMS command format. *12*1234 # [command Code1] # [command Code 2] # [command Code3] #.....

No.	Command	Description	settings	Default
1	01 [new password]#	Change password of Programming Mode	password:4 ~6digits	1234
2	02[new password]#	Change password of Access control Mode	password:4 ~6digits	5678
3	11[Time]#	Door open confirming time	Time = 0~99 seconds	0 sec no delay
4	12[Time]#	Relay 1 activation time	Time = 1~9999 seconds	1
5	13[Time]#	Relay 2 activation time	Time = 1~9999 seconds	1
6	20[Egress mode]#	Set Egress mode	Mode= 1 or 2 1 = relay 1 2 = relay 2	1
7	*31*1234#[SMS content]#	Store SMS content when panel is opened.	SMS content=max 100 characters	Case open
8	71[country code]#	set country code	Country code= 1-3 digits (UK:44 / USA:1)	886
9	72[relay][phone number]#	Store phone number For ringing in to open the door (max: 1150 numbers)	Relay= 1 or 2 Phone number =3 ~14 digits	N/A
10	73 [phone number]#	Delete a ring in to open number	phone number =3 ~14 digits	N/A
11	73*#	Delete all ringing in to open numbers		
12	74[admin number] #	Add administrator phone number	admin number =3 ~14 digits (no number no restriction)	N/A
13	74*#	Delete administrator phone number		
14	75[N][phone number]#	Add mobile number of alarm contact when panel is opened	N=1~3(sequence of phone number) phone number =3 ~14 digits	N/A
15	75[N]*#	Delete mobile number of alarm contact when panel is opened	N=1~3(sequence of phone number)	N/A
16	999#	Reset		

User commands to check system info & control relay via SMS

No.	Command	Description	SMS Reply
1	*21* 1234 #	check GSM signal strength and operator	Signal Level = 0~31 From poor to strong
2	*22*1234#	Check stored numbers	[number1]#[number2]#[number3]#..... E:Next page / N: End
3	*23*1234#	Check stored pin code numbers	[in code 1]#[pin code 2]#[pin code 3]# E:Next page / N: End
4	*24*1234#	Check relays status	Relay 1: status Relay 2: status (status= hold/ release/ trigger)
5	*25*1234#	Check log numbers	Successful / failed
6	*31*1234#	Check stored SMS content when panel is opened.	case open
7	*71*5678 #	Trigger relay 1	No reply
8	*72*5678 #	Hold relay 1	No reply
9	*73*5678#	Release relay1	No reply
10	*74*5678 #	Trigger relay 2	No reply
11	*75*5678 #	Hold relay 2	No reply
12	*76*5678#	Release relay2	No reply

User commands for keypad

You can program many different keypad command codes in one text message with SMS command format. *12*1234 # [command Code1] # [command Code 2] # [command Code3] #.....

No.	Feature	Command	Description	Default
1	Setup PIN code digit	899+X#	X=1~14	14
2	Store PIN code (Max: 384 sets)	87+ [relay][pin code]#	Relay=1~4 1: relay1 trigger 2: relay1 hold/ release 3: relay2 trigger 4: relay2 hold/ release	Empty
3	Delete PIN code	88+[relay][pin code]#	Relay=1~4	
4	Delete all PIN code	88*#		
5	PIN code failed attempt limit	890+X#	X=0~9 (times) X= 0 (means no failed attempt limit)	5
6	Time stop entering pin code after constantly failed attempt	892+X#，1~99分	X=1~ 99 (minutes)	1
7	Disable , enable bleep alarm during the time stop entering pin code	893+X#	X= 0 or 1 0: disable alarm (keypad flashing) 1: enable alarm (buzzing alert)	1
8	Disable, enable SMS reply notice	894+X#	X=0 (disable) X=1 (enable) SMS reply Relay 1 trigger, relay 2 trigger Relay 1 hold, relay 2 hold Relay 1 release, relay 2 release	0
9	Disable, enable bleep when panel is opened	896+X#	X=0 (disable) X=1 (enable)	1
10	disable, enable keypad LED light	897+X#	X=0 (enable) X=1 (disable)	0
11	Disable, enable bleep when correct pin code entered	898+X#	X=0 (disable) X=1 (enable)	1

16. QUICK PROGRAMMING VIA SMS AND OPERATION

Program access control by phone (1150 numbers)

Note: Program a phone number for dial in door release you NEED TO enter country code.

*12*1234#71[country code]#72[relay][phone number]#72[relay][phone number]#72[relay][phone number]#.....
Relay= 1 or 2

Example:
Ireland Country code: 353 (UK: 44 / USA: 1 / Do not using any leading zeroes)

086 5683624 (mobile number 1)
086 5682554 (mobile number 2)
086 2235644 (mobile number 3)

SMS format:
*12*1234#71353#7210865683624#7220865682554#7210862235644#

Program PIN code access control by keypad (384 PIN user codes)

*12*1234#899[N]#87[relay][PIN code]#
N= 1~14 (PIN code digit), default: 14 digit

Relay=1~4
1: trigger relay 1
2: relay1 hold/ release
3: trigger relay 2
4: relay 2 hold/ release

SMS format:
*12*1234#8995#87172543#87220785#87348964#87457212#

Operation

1. You can dial in or send SMS code to control relay.

*71*5678#：Trigger relay 1
*72*5678#：Hold relay1
*73*5678#：Release relay1
*74*5678#：Trigger relay 2
*75*5678#：Hold relay 2
*76*5678#：Release relay 2

*21*1234# (check reception level)
*22*1234# (check stored number)
*23*1234# (check stored PIN code)
*24*1234# (check relay status)
*25*1234# (check log)

2. Enter valid PIN code to control relay

Example:
Enter 72543 to trigger relay1
Enter 48964 to trigger relay2
Enter 20785 to hold relay 1, enter 20785 again to release relay 1
Enter 57212 to hold relay 2, enter 57212 again to release relay 2

15. SPECIFICATION:

Model	SS1401D2-M
Operating Voltage	12~24 volts AC/DC
Operating Current	Maximum 250mA, typically 55mA
GSM / WCDMA Module	Cinterion ESH6
GSM / WCDMA Frequency	GSM 850/900/1800/1900 Mhz, WCDMA 800/850/900/1900/2100 Mhz
Physical size	85 (L) x75 (W) x 165 (H) mm
Physical material	Stainless Steel and ABS
Humidity	Less than 80% RH
Operating Temperature	-20℃ to 50℃
Protection Index	IP 65
Weight	0.9 kg

Gainwise Technology Co., Ltd.