GSM-AUTO

INSTALLATION MANUAL
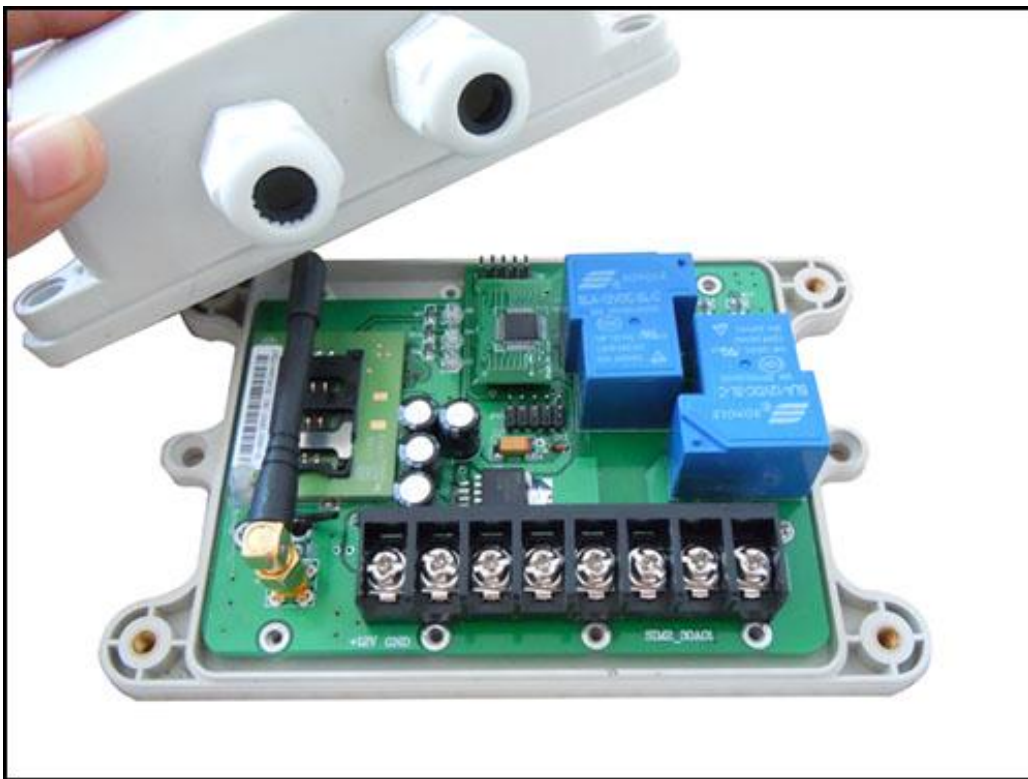
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GSM-AUTO VERSION 1.0-1207

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GSM-AUTO
REMOTE CONTROL
Installation and Operation Instructions

IMPORTANT! – This instruction manual should be read thoroughly and understood BEFORE installation and operation of this equipment. Failure to do so may result in serious bodily injury!

IMPORTANT! – The electronic components contained within the GSM-AUTO housing are sensitive to Electrostatic Discharge (ESD). It is important to make sure that you employ proper handling procedures that will minimize the possibility of ESD damaging the circuit board.

If you are unsure how to install your GSM-AUTO or insert your network SIM card please refer these tasks to a Qualified Person.

GSM-AUTO Description:

The GSM-AUTO is a wireless remote On/Off switch that can be controlled through a connection to the GSM cell phone network. The connection to the GSM cell network is accomplished by purchasing a SIM card and Pay-As-You-Go (PAYG) plan from your local wireless provider. Once the SIM card is installed in the SIM card holder on the top of the GSM module of your GSM-AUTO will have its own unique telephone number.

The unit is activated by an incoming call to its cell phone number. The unit cannot answer a voice call but in sensing the call its logic will activate one or both of the output relays in a pre-programmed sequence. Because the unit doesn't answer the call, the activation of the relays does not incur any call charges to the PAYG plan or to the caller.

Alternately, the individual relays can be activated by sending SMS text messages to the unit's phone number. Similarly, the unit is programmed by sending specific SMS text commands.

The GSM-AUTO unit controls 2 independent switches. You can therefore control 2 separate devices from one unit. An example would be in a aircraft hangar where the battery charger and engine pre-heater are turned on in sequence to prepare an aircraft for a flight.

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GSM-AUTO Features

- ✓ Quad band - will work anywhere in the world
- ✓ Secure caller ID allows controlled access of up to 99 authorized users, the users telephone numbers are added to the white list, only the numbers in the white list are able to activate the GSM-AUTO, users can be added and deleted as required using text messages
- ✓ There are no call costs incurred when calling the unit, it will recognise an authorized telephone number calling it and reject the call without answering
- ✓ The GSM-AUTO has two independent relays with normally open and normally closed contacts, these can be programmed to switch on for between 1 second and 18 hours, in addition a delay time between relay 1 and 2 switching can be set, programming is achieved by sending text messages to the GSM-AUTO, once programmed you simply call the unit to activate the relay operations already programmed
- ✓ The programmed operation can be temporarily overridden and the relays switched on for up to 18 hours by sending the unit a text message command, a confirmation text will be returned when the relay(s) is switched on and another when it is switched off
- ✓ The relays can be permanently switched on or off by sending the GSM-AUTO
- ✓ a text message, again a confirmation text will be returned
- ✓ An on board clock and 24 hour timer with 8 time segments for each relay enables the relays to be switched on and off for a set time, for example relay1 switches on at 0600 (6am) and off at 1900 (7pm), once set the timer function repeats every day until reset. The caller ID and override functions are disabled when the 24 hour timer is active.

GSM-AUTO Requirements

The GSM-AUTO cellular switch requires the purchase of a mobile phone SIM card and a Pay-as-You-Go card with enough credit to cover the cost of the SMS messages required to program the unit.

We strongly recommend that if you are using a PAYG card that you choose to automatically "Top-Up" the card. Alternatively, there are cards with carriers such as AT&T in the U.S. and Rogers in Canada that are good for a year. Ensure that when you purchase the SIM and PAYG cards that there is no need for activation by phone, that voice mail is deactivated and that the PIN request is disabled from the SIM card before inserting it in the GSM-AUTO. You may have to check for these choices when you register on the   company's web site.

If the PIN request mode is not disabled the GSM-AUTO will not work and after the unit is switched on more than three times you will have to contact the service provider to reset the PIN using PUK Code. To date, there have been no problems with SIM chips obtained through AT&T and Rogers. They have gone into the unit and worked right away

The SIM card should now be ready to insert into the SIM Card Carrier located behind the GSM-AUTO circuit board.

GSM-AUTO Installation of the SIM card

1. Remove your GSM-AUTO unit from the packaging and make sure that there has been no shipping damage.
2. Ensure that the unit is NOT plugged into any power source.
3. Remove the 4 screws from the cover and set them aside.
4. Read the safety warning stickers on the sides of the box before slitting them along the joint where the lid meets the body of the box. Remove the box lid and set aside.
5. Check that all of the components in the box are secure and have not loosened as a result of rough handling during shipping.
6. Before touching the circuit board it is best to place some sort of ground strap between yourself and the ground to dissipate any static electricity. Better yet, ground yourself to the board as well.
7. Look along the top left hand edge of the circuit board for a yellow button. This button will be under the green circuit board. Next to that button is the black SIM card carrier. Pushing the yellow button will release the SIM card carrier. Carefully remove the carrier from the channels mounted to the back of the board.
8. Remove the SIM chip from the plastic frame it comes in and fit it into the carrier with the gold contacts facing outwards.
9. Carefully slide the carrier back into the tracks mounted to the underside of the board. Make sure that it is pushed all of the way down. There is no "click" when it is fully seated but it should be flush with the edge of the circuit board. You have successfully installed the SIM card.
10. Put the lid back on the box and tighten it back down with the 4 screws.

Placement of the GSM-AUTO

1. Consideration must be given before mounting your GSM-AUTO as to where the best cellular signal strength is going be. Metal buildings are very good at blocking cellular signals. The unit is supplied with 2 different antennae for this purpose. This may take some trial and error using the "CSQ" command. The optimum situation has the remote antenna located high on an outside wall where it has the best chance of receiving a good signal.
2. The GSM-AUTO housing has mounting flanges on the top and bottom so that it can be conveniently secured with 4 screws to a number of surfaces. The unit can be mounted in any orientation.
3. Install your chosen antenna to the gold colored coaxial input on the side of the box and orientate the antenna for best signal strength.

GSM-AUTO Specifications:

Power supply	AC/DC 9- 24V
Power consumption	Maximum during communication 500mA, typically 50mA
Relay contacts	2 x 230V @ 30 Amp, Normally Open and Normally Closed contacts (Form C), switching capacity 2.5Kw
GSM Bands	GSM 850/900/1800/1900 MHz
Operating temperature	-20°C to 60°C
Physical size	130 x 100 x 50 mm, 5 x 4 x 2 inches
Weight	250 grams
Protection	IP 65
Approvals	CE

GSM-AUTO WORKING MODE Reference

GSM-AUTO can work at three mode:

DIAL WORKING MODE:

We can use the phone call to control the output easily

RLY WORKING MODE:

We can use the RLY to toggle the relay output to working or use the RLOP to switch the relay output
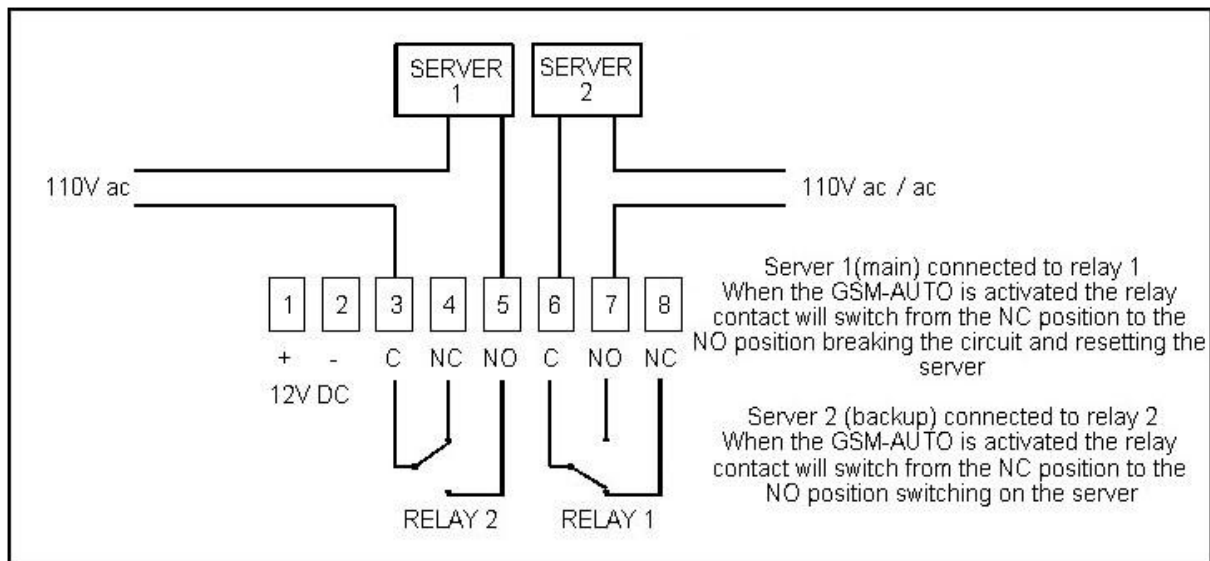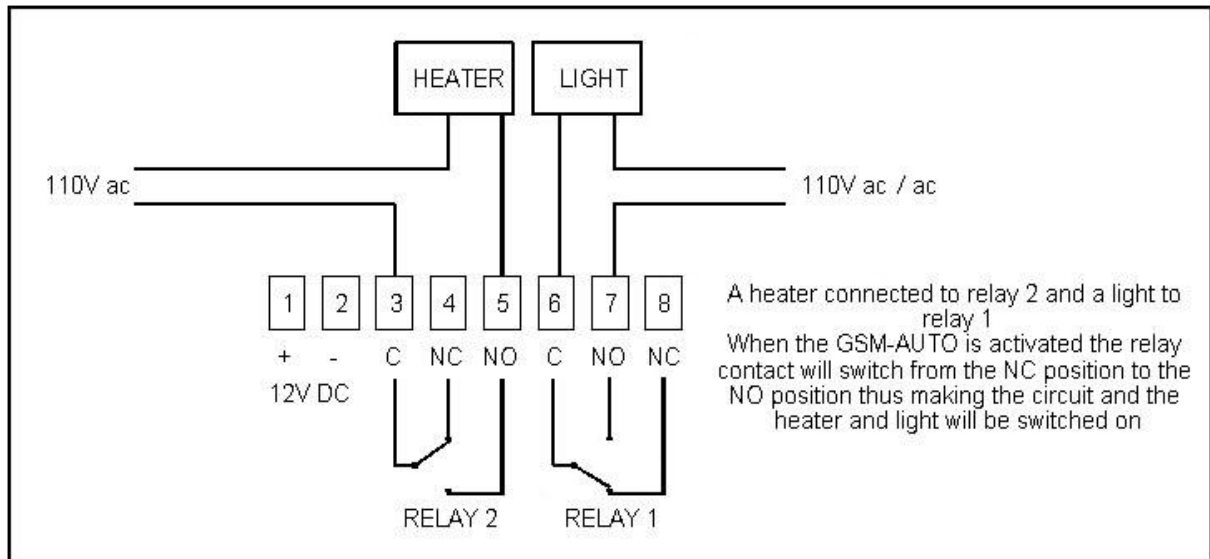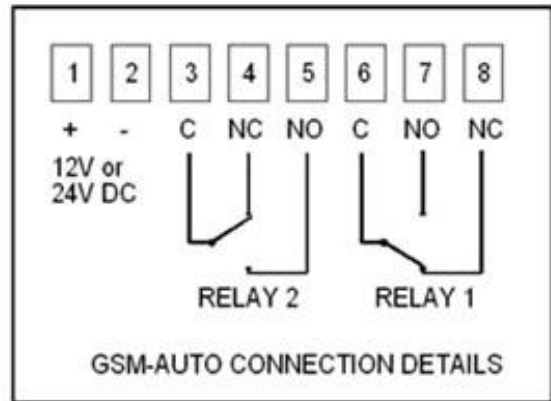
SMW WORKING MODE:

We can use the SMW to arrange the relay working at scheduled time period

When SMW mode is working,then RLY and DIAL would be inhibited

When RLY mode is working ,then DIAL mode would be inhibited

GSM-AUTO Hardware and connection details:

1	2	3	4	5	6	7	8
+	-	C	NC	NO	C	NO	NC
12V or 24V DC			RELAY 2			RELAY 1	

GSM-AUTO CONNECTION DETAILS

HEATER LIGHT

110V ac   110V ac / ac

1	2	3	4	5	6	7	8
+	-	C	NC	NO	C	NO	NC
12V DC			RELAY 2			RELAY 1	

A heater connected to relay 2 and a light to relay 1
When the GSM-AUTO is activated the relay contact will switch from the NC position to the NO position thus making the circuit and the heater and light will be switched on

SERVER 1 SERVER 2

110V ac   110V ac / ac

1	2	3	4	5	6	7	8
+	-	C	NC	NO	C	NO	NC
12V DC			RELAY 2			RELAY 1	

Server 1(main) connected to relay 1
When the GSM-AUTO is activated the relay contact will switch from the NC position to the NO position breaking the circuit and resetting the server

Server 2 (backup) connected to relay 2
When the GSM-AUTO is activated the relay contact will switch from the NC position to the NO position switching on the server

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GSM-AUTO Instructions List:

Default settings

The default settings are, open access mode (Any call to the GSM-AUTO will activate it), when activated relay 1 on for 2 seconds, wait time of 2 seconds, relay 2 on for 2 seconds, the default password is 123456.

Programming the GSM-AUTO

The GSM-Auto is programmed by sending it SMS text commands from a mobile phone, these are sent to the telephone number of the SIM card installed in the GSM-AUTO. The password command must pre-fix all SMS text commands it is recommended the default password be changed.
You also can use the PC program adapter to program the device.
*Remember that all SMS text commands must always be sent in **CAPITAL LETTERS DO NOT** add spaces or any other characters*

GSM-AUTO Programming commands list :
If your are familiar with the commands a quick reference can be found on page 7

#PWD Password
This command must always pre-fix any SMS text commands to the unit using the 6 digits as a password.
The unit comes from the factory with the default password set as 123456 and the following must pre-fix all commands to the unit **#PWD123456**

#CAP Changing the Password
To changing the password of the unit you would use the #CAP Command and to change the password to 121212 you Would send the following SMS text message to the unit.

#PWD123456#CAP121212#CAP121212
the #CAP121212 is repeated twice as confirmation of the new password.
You will receive the following confirmation from the unit   **PWD SETUP OK**

#WHL White List
This is the command that you will use for adding the authorized telephone numbers that can access the system.
The system comes in the open access mode which allows any telephone number to access the system and once the system has been installed and the white list programmed you would secure the system using the **#ACM** command.
To add a number to the white list, you would send the following SMS text message to the unit assuming the number would be 04759309384.
#PWD123456#WHL001=04759309384
You will receive the following confirmation from the unit

#WHL001 SET TO 04759309384 OK

This is the first number in the white list and number 2 is sent as #WHL002=and so on up to a maximum of 100 numbers, number 100 would be **WHL100=**

- **Checking the number is the white list**

To check the number in a position on the white list, for example position 01 you would send the following SMS text message to the unit

#PWD123456#WHL01?

You will receive the following confirmation from the unit

WHL01 IS 7827829595 OK

- **Erasing a number is the white list**

To erase a number in the white list you would send the following S.M.S text message to the unit.

#PWD121212#WHL02=0000

You will receive the following confirmation from the unit

WHL02 SET TO 0000 OK

- **Erasing all the number in the White list**

To erase all the numbers in the white list you would send the following S.M.S text message to the unit

#PWD121212#WHLDALL

You will receive the following confirmation from the unit:

DELETE ALL OK

#ACM Security Access Mode

- **#PWD123456#ACM=ON**

This command enables access security mode so only the numbers programmed into the white list can access the system and you would send the following SMS text message to the unit, You will receive the confirmation from the unit to confirm the security access mode is on.

ACM SET TO ON

- **#PWD123456#ACM=OFF**   **(The 0 is zero not the letter O)**

This command is used to turn off the security access mode you would send the following SMS text message to the unit, You will receive the following confirmation from the unit

ACM SET TO OFF

confirming the security access mode is switched off and open access mode is activated

- **Check the ACM Status**

This command is used to check the ACM Status, you will receive the following confirmation from the unit

ACM IS OFF   or   **ACM IS ON**

#RERN Enables the administrator to receive the alert SMS

This is the command that allows you to enable, disable and check the status of the administrator list, these are the number that will receive system alerts SMS. In the first 8 numbers of the WHL numbers list ,from WHL01 to WHL08, that is administrator numbers, To allow the first 4 administrators in the Administrator List to receive system alerts SMS

only ,you would send the follow SMS text command to the unit.

#PWD123456#RERN=11110000:PWA=ON,REYA=ON,SAWA=ON

Where 1 is a number enabled for the first 4 positions in the administrator list ,and 0 is a number disabled for the last 4 positions in the list.

You will receive the following confirmation from the unit

RERN IS SETUP TO 11110000:PWA=ON,REYA=ON,SAWA=ON

and the first four administrator numbers in the list the receive SMS text alerts

PWA=ON : When power is on again will send the alert message

REYA=ON : When use the RLY to change the relay status,would send the alert message

SAWA=ON : SMW relay status change would send the alert message

To check the status of the RERN list you would send the following S.M.S text message to the unit

#PWD121212#RERN?

You will receive the following similar confirmation from the unit

RERN:11110000:PWA=ON,REYA=ON,SAWA=ON

#GOT Relay ON time

This is the command that allows you to reset the default ON time of relays.

To change the default value, you can send the following text command by SMS text message specifying the number of seconds the relay should stay on when it is called.

It is possible to latch each relay for up to a maximum of 65,535 seconds.

To set relay 1 to switch on for 15 minutes each time the unit is called, the following SMS text message is sent to the unit.

#PWD123456#GOT1=00900

Where 1 indicates relay number 1 and 00900 is the relay on time in seconds, this should be entered in 5 digit format as Show. You will receive the following similar confirmation from the unit

GOT1 DELAY TIME SET TO 0900S

To set relay 2 to switch on for 10 minutes each time the unit is called, the following SMS command is sent to the unit.

#PWD123456#GOT2=00600

Where 2 indicates relay number 2 and 00600 is the relay on time in seconds, this should be entered in 5 digit format as shown .You will receive the following similar confirmation from the unit

GOT2 DELAY TIME SET TO 0600S

#GOTS

This is the command that allows you to set the delay time between Relay 1 switching off and Relay 2 switching on. To set the delay time between relay 1 switching on and 2 switching on by 5 seconds, you send the following command by SMS text message to the unit.

#PWD123456#GOTS=00005

Where 00005 is the delay time in seconds and should be entered in 5 digit format as shown, You will receive the following similar confirmation from the unit

GOTS DELAY TIME SET TO 05S

#GOT?

To check the relay on and delay times you would send the following S.M.S text message to the unit

#PWD121212#GOT?

You will receive the following similar confirmation from the unit.

GOT1=0900,GOT2=0600,GOTS=05

#RLY Temporary latching of output relays

This command allows the temporarily switch on the Relays for up to 65,000 seconds and receive confirmation SMS text alerts when the Relays switch on and off

This command does not affect the #GOT1 or #GOT2 settings

- To activate relay 1 for 60 seconds you would send the following SMS text message to the unit

#PWD123456#RLY1=0005

Where 1 indicates the relay number and 0005 is the time in seconds and should be entered in a 5 digit format as shown

The administrator number will receive the following confirmation text message from the unit

#RLY1-ON: 05

when the relay 1 switches on, the administrator number will receiver the following message when the relay switches off

#RLY-OFF

- To switch on relay 2 for 360 seconds and the administrator number would send the following SMS text message to the unit

#PWD121212#RLY2=00360

Where 2 indicates relay 2 and 03600 is the on time in seconds, this should be entered in a 5 digit format as shown

The administrator number will receive the following confirmation from the unit

#RLY2-ON: 00360

when relay 2 switches on, the administrator number will receiver the following confirmation when the relay switches off

#RLY-OFF

#RLOP Switching Relay 1 and Relay 2 permanently on and off

It is possible to switch both relays either on or off using the **#RLOP** commands

To switch Relay 1 permanently on you would send the following SMS text message to the unit.

#PWD123456#RLOP1=ON or OFF   (RLOP2 is the same command)

You will receive the following confirmation from the unit

RLOP1 ON OK   when the relay switches on

RLOP1 OFF OK   When the relay switches off

The confirmation SMS text messages are only sent to the administrators who are active in the #RERN list

#RELAY? Checking the status of the relays
To check the status of the relays you would send the following SMS text message to the unit
#PWD123456#RELAY?
You will receive the following similar confirmation from the unit
RLY1=OFF,RLY2=OFF

#SMW Schedule Relay working with 24 hour timers
This is the command that allows you to program the relays to operate at certain times over a 24 hour period.
Note: The time must be entered in 24-Hour format. You can program up to time sections for each relay.
#SMW=SS,MM,HH,TTTTT,F,R
SS is a 2 digits value in seconds
MM is a 2 digits value in minutes
HH is a 2 digits value in hours
TTTTT is a 5 digits value in seconds, this is the amount of time the relays switch on for
F is the time Section number **1-8**
R is the Relay number 1 or 2
To program relay 1 to switch on for 30minutes at 9.00 pm you would send the following SMS text message to the unit
#PWD123456#SMW=00,00,21,01800,1,1
You will receive the following confirmation from the unit
SMW=00,00,21,01800,1,1
To program the output relay 2 to turn on for 1 hour at 6 am, you would send the following SMS text message to the unit
#PWD123456#SMW=00,00,06,03600,1,2
You will receive the following confirmation from the unit
SMW=00,00,06,03600,1,2

#PWD123456#SMW=ON Start the SMW working mode
#PWD123456#SMW=ON:OTP
If the TEST is already setted,then will receive the confirmation SMS message
SMW=START:TIMER= SS,MM,HH-SS,MM,HH
Then the SMS will work only on time with the near timer, and later would need to On it again when need to work
If the TEST still not setted,then will receive the confirmation SMS message:
PLEASE SETUP THE TIMER FIRSTLY

#PWD123456#SMW=ON:REPEAT
If the TEST is already setted,then will receive the confirmation SMS message
SMW=START:TIMER=SS,MM,HH:REPEAT
Then the SMW will work automatically when with the SMW timer section inside the device. And the dial to work , RLY and RLOP all would be stoped

If the TEST still not setted,then will receive the confirmation SMS message:

PLEASE SETUP THE TIMER FIRSTLY

#PWD123456#SMW=OFF

Will stop the SMW and relay working immediately

then will receive the confirmation SMS message:

SMW=OFF OKAY

Note: Once this function has activated, the relays will operate automatically according to the programmed time sections. Activation of relays via Caller ID or SMS will be ignored.

#TSET Setting the time

To set the time, you send the following SMS command to the unit. And the time must enter in 24 Hour format.

Text Command to be sent would be

#TSET=SS,MM,HH

SS is a 2 digits value: Seconds

MM is a 2 digits value: Minutes

HH is a 2 digits value: hours

To program the time 8.00 am, you would send the following SMS text message to the unit

#PWD123456#TSET=00,00,08

You will receive the following confirmation from the unit

TSET=00,00,08

To check the time:

To check the time you would send the following S.M.S text message to the unit

#PWD1233456#TSET?

You will receive the following similar confirmation from the unit

TSET=00,00,08

Note: The Time has to be set to use the #SMW command

GSM-AUTO-RESET Resetting the unit

To reset the unit you would send the following S.M.S text message to the unit

GSM-AUTO-RESET

You will receive the following similar confirmation from the unit

GSM-AUTO-RESET OKAY

Then the following parameters would be reset to:

ACM=OFF,RELAY1=MODE0:0005,RELAY2=MODE0:0005,GOTS:0005,SMW=OFF,TEST=00:00:00

Also the password is reseted to 123456

Config the RELAY Status when power on again

#PWD123456#POWER-RESET=11 (1 means ON ,0 means OFF when power on)

#PWD123456#POWER-SAVE

#CSQ Check GSM signal strength

This command is useful to see what the GSM network signal strength is at the location of the unit. To check the signal strength of the location of the unit you would send the following SMS text message to the unit

#PWD123456#CSQ?

You will receive the following similar confirmation from the unit

CSQ IS 19

with signal quality in range 0 to 31, minimum signal strength of 5 is required, if it is below 5 then a change of network or fitting an external antenna is advised.

SMS TEXT COMMANDS Quick Reference Guide

Password #PWDXXXXXX (6 digits) This command must always pre-fix any SMS text commands sent to the unit.

Only use the LAST 8 digits of the telephone numbers to be entered

FUNCTION	COMMAND	FORMAT
Changing te Password	**#CAP**	**#PWD123456#CAP121212#CAP121212** Current password > new password twice
White List	**#WHL**	**#PWD123456#WHL001=564556678** Position > telephone number (last 8 digits)
Security Access Mode	**#ACM**	**#PWD123456#ACM=ON** **#PWD123456#ACM=OFF**
Check signal strength	**#CSQ**	**#PWD123456#CSQ?**
Relay ON time	**#GOT**	**#PWD123456#GOT1=00900** **#PWD123456#GOT2=00900**
Delay time between Relay 1 switching off and Relay 2 switching on	**#GOTS**	**#PWD123456#GOTS=00005**
Temporary latching of output relays	**#RLY**	**#PWD123456#RLY1=00060**
Switching Relay 1 and Relay 2 permanently on and off	**#RLOP**	**#PWD123456#RLOP1=ON** **#PWD123456#RLOP1=OFF** **#PWD123456#RLOP2=ON** **#PWD123456#RLOP2=OFF**
Setting the time	**#TSET**	**#TSET=SS,MM,HH** SS=Seconds, MM=Minutes, HH=Hours all 2 digit values
Relay 24 hour timers	**#SMW**	**#SMW=SS,MM,HH,TTTTT,F,R;** SS=Seconds, MM=Minutes, HH=Hours, TTTTT=Relay on time in seconds (5 digits), F= time Section number 1 – 8, R= Relay number 1 or 2
Resetting the unit	**GSM-AUTO-RESET**	**#REST#121212** Reset to factory default settings including password

This brochure provides an overview of the products and services of WEIFU GSM Modules, For further information and queries kindly contact:

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