GSM-AUTO CONTROLLER

IMPORTANT!

Please read through the instruction manual before you start to install and program the equipment.

If you are unsure how to connect the device you wish to control refer to a qualified person.

Description

The GSM-AUTO is a wireless remote control on/off switch that connects to the GSM cell phone network.

It is activated by calling its cell phone number, it will reject the call without answering and switch on the device connected to it

There are no call costs incurred when dialling the unit, it will recognise an authorised telephone number calling it and reject the call without answering

It has 2 independent switches, these can be programmed to switch on for a pre-determined length of time whenever the GSM-AUTO is called, alternatively the switches can be permanently switched on or off by sending the GSM-AUTO a text message.

Requirements

The GSM-AUTO requires a 12 volt DC power supply capable of providing a minimum current of 500mA, typical current consumption is 50mA

A mobile phone SIM card with sufficient credit to send confirmation text messages when programming the GSM-AUTO
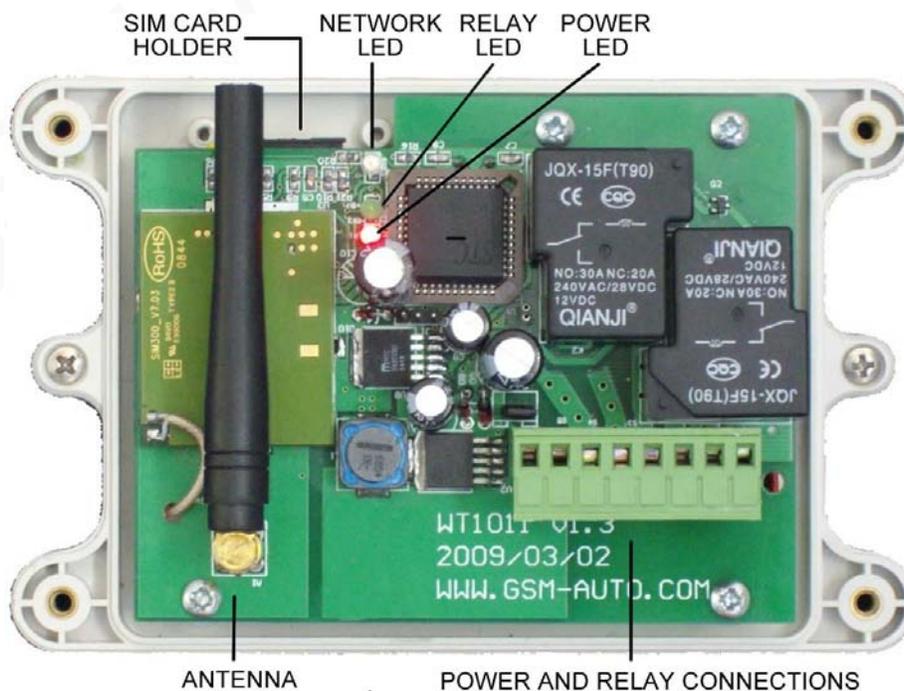

Installation

Insert the SIM card, to access the SIM card carrier gently push the button adjacent to it, insert the SIM card and carefully close the carrier, connect the antenna

Connect a 12 volt DC power supply to terminal 1 & 2 ensuring positive is connected to terminal 1, switch on the power supply, the power LED will light indicating power is present, the network LED indicator will initially flash quickly, once logged onto the network it will flash more slowly approximately every 3 to 4 seconds
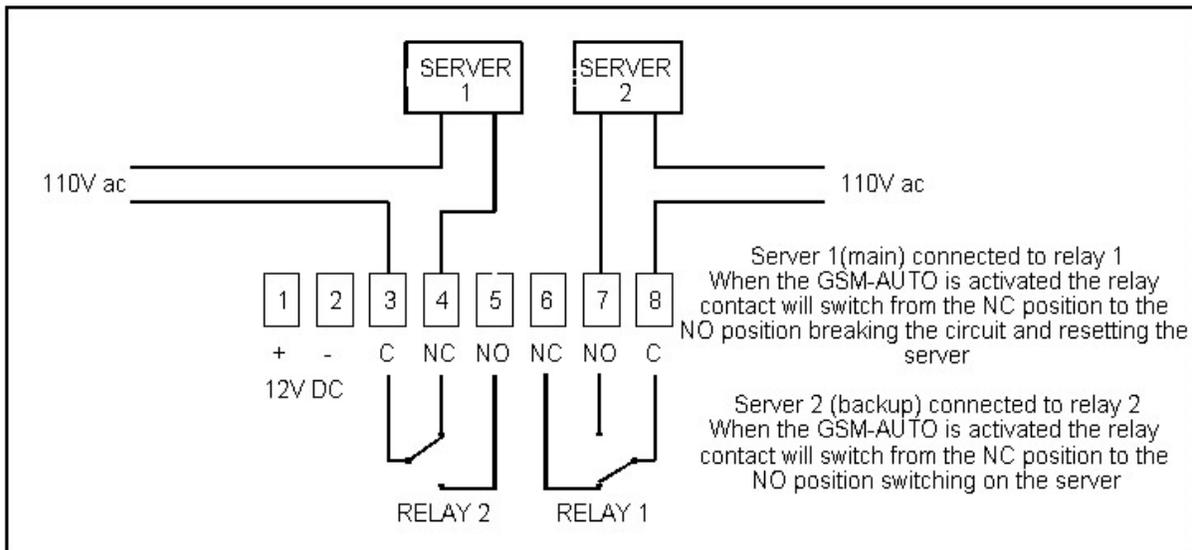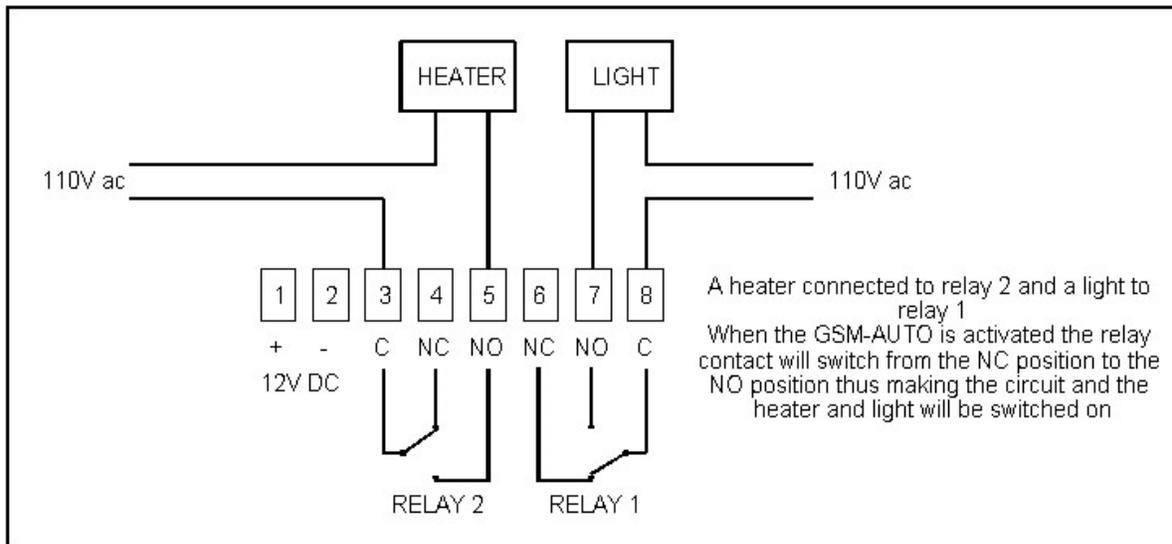
It is recommended that the GSM-AUTO be programmed to operate as required before final installation

Connection details
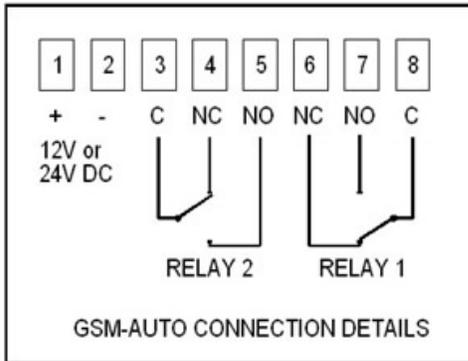
1	+ 12 or 24 volts	12 or 24 volt DC @ 500mA
2	0 volts	
3	COMMON (COM)	RELAY 2
4	NORMALLY CLOSED (N.C)	
5	NORMALLY OPEN (N.O)	
6	NORMALLY CLOSED (N.C)	RELAY 1
7	NORMALLY OPEN (N.O)	
8	COMMON (COM)	

GSM-AUTO CONNECTION DETAILS

Example connections

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(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

Default settings

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

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.

Remember that all SMS text commands must always be sent in **CAPITAL LETTERS**

DO NOT add spaces or any other characters

Programming commands
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 change 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 sent twice as confirmation of the new password.

You will receive the following confirmation from the unit **#CAP_OK**

The password is now 121212 and we shall use this in the following example commands

#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 **#ACM2** 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 07827829595.

Always remember to only use the last 10 digits of the telephone number or if in the UK the last 8

#PWD121212#WHL01=7827829595

You will receive the following confirmation from the unit **#WHL01_OK**

This is the first number in the White list and number 2 is sent as **#WHL02=** and so on up to a maximum of 99 numbers, number 99 would be **WHL99=**

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=7827829595**

Erasing a number is the white list
To erase a number in the white list you would send the following SMS text message to the unit.
#PWD121212#WHL01D
You will receive the following confirmation from the unit **#WHL01_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#WHL99D**

You will receive the following confirmation from the unit **#DELALL_OK**

#ACM2
Security Access Mode
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 **#PWD121212#ACM2**

You will receive the following confirmation from the unit **#ACM-ON** confirming the security access mode is on

To turn off the security access mode you would send the following SMS text message to the unit **#PWD121212#ACM0 the 0 is zero not the letter O**

You will receive the following confirmation from the unit **#ACM_OFF** confirming the security access mode is switched off and open access mode is activated

#TEL
Administrator List
This is the command that allows you to add or remove the administrator numbers that will receive alert messages from the unit when the relays are switched on via SMS text message.

It is possible to add up to 8 Administrator numbers to the list and it is possible to use up to 16 digits in the numbers.

These S.M.S text messages only apply to the following commands **#RLY** and **#RLOP**

To add 07827829595 to the administrator list you would send the following SMS text message to the unit **#PWD121212#TEL1=07827829595**

You will receive the following confirmation from the unit **#TEL1:07827829595**

To check all the administrator number in the list you would send the following S.M.S text message to the unit. **#PWD121212#TEL?**

You will receive the following similar confirmation from the unit

#TEL1:07827829595
#TEL2:07452314592
#TEL3:07865923401

#RERN
This is the command that allows you to enable, disable and check the status of the administrator list, these are the numbers that will receive text alerts.

To allow the first 4 administrators in the Administrator List to receive text alerts only, you would send the follow SMS text command to the unit. **#PWD121212#RERN=11110000**

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=11110000** and the first four administrator numbers in the list will receive SMS text alerts

To check the status of the RERN list you would send the following S.M.S text message to the unit **#PWD121212#RER?**

You will receive the following similar confirmation from the unit **#RERN=11110000**

#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 **#PWD121212#CSQ?**

You will receive an SMS 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.

You will receive the following similar confirmation from the unit **#CSQ<22>**

#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. **#PWD121212#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 shown
You will receive the following similar confirmation from the unit **#GOT1=00900**

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. **#PWD121212#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=00600**

#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 off 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=00005**

#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: 00900
GOT2: 00600
GOTS: 00005

#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 **#PWD121212#RLY1=00060**

Where 1 indicates the relay number and 00060 is the time in seconds and should be entered in a 5 digit format as shown

You will receive the following confirmation text message from the unit **#RLY1-ON: 00060** when the relay switches on and you will receive the following message when the relay switches off **#RLY-OFF**

To switch on relay 2 for 360 seconds you 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

You will receive the following confirmation from the unit **#RLY2-ON: 00360** when relay 2 switches on and the following confirmation when the relay switches off **#RLY-OFF**

To check the status of the relays you would send the following SMS text message to the unit
#PWD123456#RLY?

#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.
#PWD121212#RLOP1=1 (0 = OFF)

You will receive the following confirmation from the unit **#RLOP1-ON:** when the relay switches on and **#RLOP-OFF** when the relay one switches off

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

#RLY?
Checking the status of the relays
To check the status of the relays you would send the following SMS text message to the unit **#PWD121212#RLY?**

You will receive the following similar confirmation from the unit

RLY1:00000
RLY2:00030
RLOP1:OFF
RLOP2:OFF

#SMW
Relay 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 8 time sections for each relay.

Text Prompts

#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 30 minutes 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;**

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.
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 8.00am, 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 **#PWD123456#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

#REST#
Resetting the unit
To reset the unit you would send the following S.M.S text message to the unit ***REST# followed by the 6 digit password - Note no password prefix**

Programming commands – Quick reference

Password #PWDXXXXXX (6 digits) This command must always pre-fix any SMS text commands (apart from the RESET command) sent to the unit. We are using the password 121212 in the commands below
Only use the LAST 10 or 8 (UK) digits of the telephone numbers to be entered

FUNCTION	COMMAND	FORMAT	NOTE
Changing the Password	#CAP	#PWD123456#CAP121212#CAP121212 Current password > new password twice	
White List	#WHL	#WHL01=27829595 Position > telephone number (last 8 digits)	Up to 99 numbers
Security Access Mode	#ACM	#ACM2 #ACM0 On > Off	
Administrator List	#TEL	#TEL1=827829595 Position > telephone number (last 8 digits)	Up to 8 numbers
Check signal strength	#CSQ	#CSQ?	0 – 31, minimum 5 required

Relay ON time	#GOT	#GOT1=00900
		1=RLY1, 2=RLY2 > time in seconds, 5 digits
			Maximum 65,535 seconds

Delay time between Relay 1 switching off and Relay 2 switching on	#GOTS	#GOTS=00005 time in seconds, 5 digits	

Temporary latching of output relays	#RLY	#RLY1=00060
		1=RLY1, 2= RLY2 > time in seconds, 5 digits
			Maximum 65,000 seconds

Switching Relay 1 and Relay 2 permanently on and off	#RLOP	#RLOP1=1
		1=RLY1, 2=RLY2 > 1=ON, 0=OFF	

Setting the time	#TSET	#TSET=SS,MM,HH;
		SS=Seconds, MM=Minutes, HH=Hours all 2 digit values
			24 Hour format

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	*REST#121212	*REST#121212 Reset to factory default settings including password	DO NOT USE THE PASSWORD PREFIX

Specifications

Model	GSM-AUTO
Operating Voltage	12 or 24V dc
Operating Current	Maximum 500mA, typically 55mA
Relay Contacts	2 x 230V @ 30 Amp, Normally Open and Normally Closed contacts (Form C)
GSM Frequency MHz	GSM-850, GSM-900, GSM-1800, GSM-1900
Humidity	Less Than 80% RH
Operating Temperature	-20°C to 55°C
Physical size	130 x 100 x 50 mm
Protection	IP65
Weight	250 Grams
Approvals	C.E

SIM CARD

We strongly recommend that if you are using a PAYG SIM card and you choose to automatically 'Top-Up'. Contact your network provider or visit their website for more details.
Most but not all PAYG SIM cards will be de-activated by the network if not used to make an outgoing voice call or send an SMS text message within a specific period. To prevent this simply send the GSM-AUTO a text command asking it 'what is the signal strength' using the CSQ command it will reply by text message, do this once a month to keep the SIM active.

Preparing the SIM card

Before you install the GSM-AUTO, we strongly recommend you 'prepare' the SIM card. This is done by inserting the SIM card into a normal mobile phone and powering up.
All new SIM cards have to be registered with the network provider before they can be used, either by calling the network provider on the number supplied with the SIM card or by registering on the service providers website. Once this is done, ensure there are no PIN numbers on the SIM card when switching on. Also ensure there is sufficient credit on the SIM card for programming confirmation texts to be returned.
We also recommend you go through the procedure to setup your 'top up card' as the network provider usually sends a confirmation text which needs to be read on a mobile phone.

You MUST ensure the PIN request is disabled from the SIM card before inserting it into the GSM-AUTO
If you do not disable the PIN request the GSM-AUTO will not work and if the unit is switched on more than 3 times you will have to reset the PIN using the PUK Code which will have to be obtained from the service provider.

To check the PIN request is disabled switch the mobile phone off and back on and you should be able to make a call without putting any PIN numbers or codes in.

You MUST disable any voicemail that is set on the SIM using the codes below

These are for UK networks please refer to your network operator if outside the UK

VodaFone: 1210 >Send - you will hear 'order is accepted and confirmed.
O2 - Call 1760 >Send - you will hear 'order is accepted and confirmed.
T-Mobile - Call 222 and follow instructions
Orange - - Call 450 and follow instructions

The SIM Card is now ready.