



## GSM 3G AUTO DIALLER PLUS

Control and Monitoring from your mobile phone

[www.gsm-activate.co.uk](http://www.gsm-activate.co.uk)



MODEL NUMBER 3GADV2

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## Product Information

The GSM Auto Dialler Plus is a multi purpose unit with both 2G and 3G capabilities. It is compatible with all alarm panels with negative triggering through two inputs as well as having relay output for switching on or off external devices such as, temperature monitoring, mains failure monitoring with battery back up and an alarm input for PIR and IR beams. It also features an on board tilt sensor and a microphone for covert listening.

## Specification

- GSM Frequency: Quadband Frequency 850/900/1800/1900/2100 Mhz
- Power Supply Voltage: 9 - 24 volts DC
- Current Used in Standby Mode: 70 Milliamps
- Max Current: Up to 2 Amps
- Standard 2G or 3G Simcard
- No landline required
- Dimensions - L170 x W120 x H60mm
- Weight - 360 grams
- Operating Temperature: -10...+40°C
- Signal Strength Function
- Stay Active Simcard Function
- Watchdog and Self Repair Function
- 2 Inputs
- 2 - 10 Amp Relay Outputs
- 1 Standalone Alarm Sensor Input
- Temperature Reading by Text Message
- Temperature Alarm Controller
- 45 Degree Tilt Sensing Alarm
- Mains Failure and Restore Alarm
- Battery Backup for up to 24 hours standby
- Microphone you can call into and listen to the surroundings of the unit.

## PCB Reference

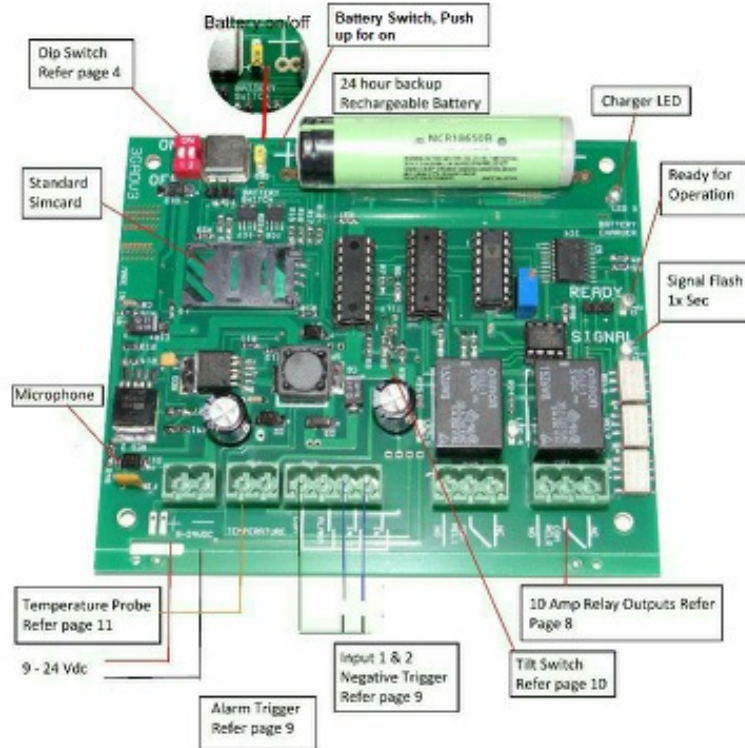


Figure 1

### **IMPORTANT - PLEASE READ**

PLEASE MAKE SURE YOU DISCONNECT THE POWER FROM POWER INPUT AND REMOVE THE BATTERY LINK WHEN YOU FIT THE SIMCARD AND PLACE THE SIMCARD WITH THE CLIPPED CORNER FACING OUT WARDS. SEE PICTURE ABOVE.

Signal LED (blue) - The blue LED flashes once per second indicating a signal has been found.

Ready LED (green) - The green LED will come on when the unit is ready for operation.

Charger LED (red) - The red LED indicates that the battery is in charging mode.

Battery Switch - push up for battery on (battery only charges with battery on)

### Dipswitch

1 - If Dipswitch 1 Set to OFF means it will ONLY search for a 2G signal on startup.

2 - If Dipswitch 1 Set to ON it will search for a 3G signal on start up.

Dipswitch 2 Is not used on this model

## Installing your Simcard

New SIM cards will need registering before they can be used. Full details of how this is done can normally be found in the SIM card pack. It will normally require that the SIM card is inserted into a mobile phone, a number dialled and instructions followed. While the SIM is in the mobile phone it would be a good time to disable call diverts, ring back and to disable features such as **voicemail** and **text** alerts.

The Auto Dialler has a built in "sim active function" which keeps track of the unit's activity. If there has been no usage for 6 weeks, it will send a text message to a preset recorded number to keep the simcard active. This then eliminates the problems of sims being shut down if they are unused for 3 months.

Activate and put credit on your simcard and disable voicemail using the following codes

Vodafone:	call 1210	Tesco	call 2915
T-Mobile:	call 222	O2	call 1760
Orange:	call 4502	Giff Gaff	call 1626
EE - send the text message command VM OFF to 150			

**ENSURE THE UNIT IS POWERED DOWN BEFORE INSERTING THE SIMCARD. WE DO NOT RECOMMEND USING THE "THREE" MOBILE NETWORK.**

- 1: Slide back the sim door and lift it up.
- 2: Slide the simcard in to the door making ensuring that the clipped corner of the simcard lines up with the clipped corner of the simcard holder.
- 3: Close the sim door.
- 4: Slide the sim door to lock the simcard in place.

Connect 9 through to 24 volts DC to the input connector as per figure 1. Once power has been applied (referring to figure 1) the **blue** network LED light will flash once every second. Once a signal has been found the **green** LED will come on and stay on indicating the unit is now ready for use.

## Signal Strength

Signal strength can be checked by sending the text command **#signal#**  
The unit will reply back with a score from 1 - 30. Anything less than a score of 10 will make the unit unreliable.

## 2G OR 3G

The intercom can work on both the 2G and 3G networks. You can choose which network the unit will use at the start up via Dipswitch setting 1

Dipswitch **OFF** - The unit will search for a 2G Network signal  
Dipswitch **ON** - The unit will search for a 3G Network signal

**We strongly recommend checking the signal strength on both 2G and 3G. The one with the highest signal strength score above 10 is the best option to use.**

## Programming Contact Numbers

The 3G Auto Dialler Plus has two inputs for a connection to electrical equipment plus separate hardware for temperature, tilt, mains failure and external sensing. When these are triggered the unit will call or text up to 3 separate numbers which can be stored on to the unit.

To programme the numbers you want to use, follow the examples below by sending the text message command to the simcard in the auto dialler.

NOTE - We have colour coded the symbols hash (#) and (=) to make programming easier.

To programme the mobile numbers please follow this example:

`#SAVE1=07712345678#` - Stores the mobile/landline phone number as contact no: 1

`#SAVE2=01903123456#` - Stores the mobile/landline phone number as contact no: 2

`#SAVE3=07123456789#` - Stores the mobile/landline phone number as contact no: 3

A maximum of 3 phone numbers in total.

To delete a stored number use the following example

`#DEL=1#` - This deletes stored contact number 1

### NOTE

Please send one message at a time and wait for the auto dialler plus to send you the text Acknowledgement '**NUMBER STORED**' before you try to send another number. This may take a few minutes depending on how busy the network is at the time.

## How to Programme the (SMS) Text Message

You can now change the alarm message to one of your choosing.

To change the message send the text command as follows:

`#MESS1=YOURMESSAGE#` This sets your custom message for input 1

`#MESS2=YOURMESSAGE#` This sets your custom message for input 2

The default message is ALARM 1 and ALARM 2

**Note** - you can only use a maximum of 16 characters including spaces for your customised message.

## Telephone Call Alerts

The auto dialler can be programmed to send you a telephone call after each text alarm has been sent. You will receive approximately three ring tones. The unit will then hang up automatically. This prevents call charges being incurred.

To set call alerts to ON please send the text command

`#CALL=ON#`

The unit will reply back with "call on"

To disarm call alerts please send the text command

`#CALL=OFF#`

If the function has been set to ON you will receive a text message and shortly after a phone call.

## How to Use the Relay Outputs

The 3G Auto Dialler has two relay outputs which can be used to switch on external devices such as lighting, sirens etc...

- Relay 1 is independent and can be activated by SMS message
- Relay 2 is also independent but is also linked to the inputs and will go on for 30 seconds when an input is triggered.

### Activation by SMS Text Message

By texting the unit you can turn relay 1 and 2 ON or OFF individually. Below, are examples on how to do this.

- #REL1=ON# This will turn on relay 1
- #REL1=OFF# This will turn off relay 1
- #REL2=ON# This will turn on relay 2
- #REL2=OFF# This will turn off relay 2

After each operation the unit will reply with the status report **REL 1 ON/OFF**

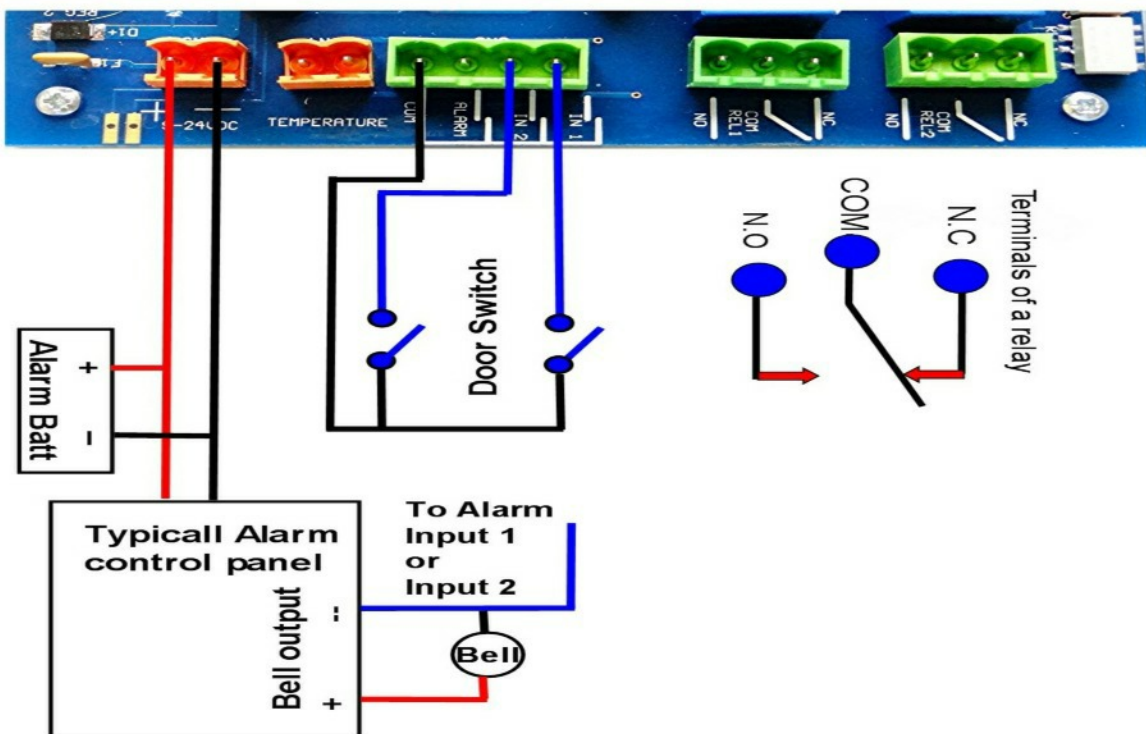
It is possible to pulse relay 1 & 2 for a period of 17 seconds. You will need to send the text message as follows.

- #PUL=REL1# - This will pulse relay 1 for 17 seconds
- #PUL=REL2# - This will pulse relay 2 for 17 seconds

The unit will reply back with **REL1** or **REL2 PULSE**

### Alarm Relay Output (Relay 2)

Relay 2 can be used with a siren or lighting relay and will automatically come on when either input or alarm input has been triggered for 30 seconds. Please be aware of any conflicts this may cause if you are using relay 2 as an independently activated relay.





## Mains Failure Alarm

By connecting to the mains power using a 9/24v power supply the auto dialler can act as a mains failure alarm. It will monitor the power connected to the power input and send a text message alert if the power is disconnected.

When the power is disconnected for a period of 4 minutes, you will receive the text message alert **POWER LOSS**. When the power is restored you will receive the text message alert **POWER RESTORED**. The default setting is power loss on.

## Battery Backup

When power has been disconnected the unit will revert to the onboard battery backup. The battery back will operate the auto dialler for up to 24 hours before it will need to be recharged by connecting 12 volts back to the power input.

**NOTE** - The battery will only work when the battery is switched on. If you do not switch the battery switch up/on then the battery backup will not work. Please refer to PCB reference on page 4

## Tilt Alert Alarm

The unit has a tilt sensor onboard to monitor movements for applications such as landslides, theft etc. To activate the tilt alarm please send the text message as follows.

**#TILT=ON#** - This will turn ON the tilt sensor monitoring.

When the tilt is triggered by moving past 90 degrees you will receive the text message alert **TILT ON**

To deactivate the alarm please send the text message

**#TILT=OFF#**

**NOTE** - For the tilt to work effectively the unit has to be mounted onto a wall vertically and not placed flat on a shelf or surface.

## Microphone and Speaker

The unit has an onboard microphone. To activate it, make a phone call to the units number. After a few rings the call will be answered and you will be able to hear what is happening in the surroundings of the unit. To cancel this operation simply hang up.

For two way audio, that will enable you to communicate with someone in the vicinity of the unit please purchase our speaker from the accessories page on the website. This can be plugged into the side socket of the unit to enable two way conversation.

## Temperature Monitoring

The auto dialler has its own temperature sensor which can monitor temperatures from -30 up to +99 degrees centigrade. Additionally, you can monitor temperatures at -40 and -50 degrees centigrade. The temperature sensor can be used in two ways.

1. To read the current temperature (please refer to example 1).
2. To be notified when a temperature setting has been reached (please refer to example 2).

### Example 1

At any time you can get a temperature report from the unit by sending the text command

`#READ#`

You will receive a text acknowledgement with the current temperature.

(Hash) (plus/minus symbol) (temperature) (settemp) (hash)

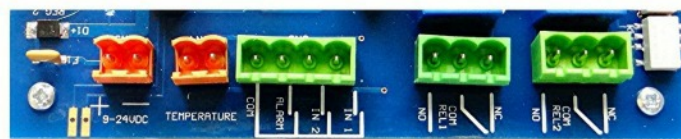
### Example 2

To activate the temperature alarm please send the following text message command.

`#+32SETTEMP#` - This will set the alarm for plus (+) 32 degrees centigrade.

`#-20SETTEMP#` - This will set the alarm for minus (-) 20 degrees centigrade.

**NOTE** - If you need further alerts you will need to repeat example two after receiving a temperature alert. When the temperature hits the designated alarm temperature it will send you a text message with the current temperature reading and it will also activate the relay 2 for 30 seconds.



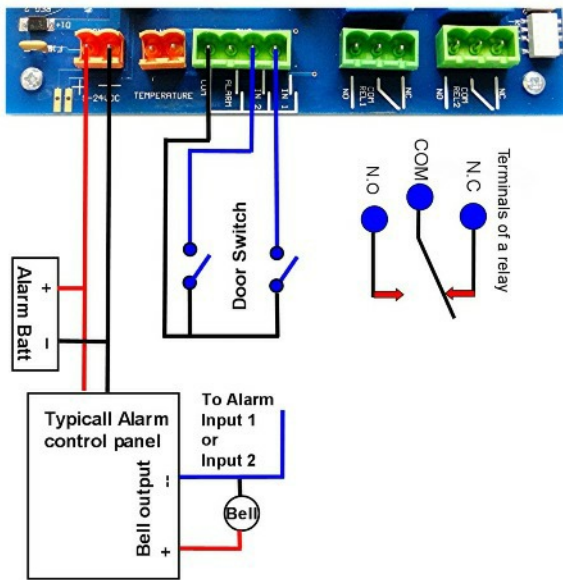
Temperature Sensor

+99 / -30 Celsius

## Quick Reference

Send Text	Operation	Acknowledgment		
#PUL=REL1#	Pulse Relay 1	Relay 1 Pulse	17 Seconds Default	
#PUL=REL2#	Pulse Relay 2	Relay 1 Pulse	17 Seconds Default	
#REL1=ON#	Turn Relay 1 On	Staus Report - Relay 1 On/Off, Relay 2 On/Off		
#REL1=OFF#	Turn Relay 1 Off	Staus Report - Relay 1 On/Off, Relay 2 On/Off		
#REL2=ON#	Turn Relay 2 On	Staus Report - Relay 1 On/Off, Relay 2 On/Off		
#REL2=OFF#	Turn Relay 2 Off	Staus Report - Relay 1 On/Off, Relay 2 On/Off		
#STATUS#	Gives Status Report on Relays	Staus Report - Relay 1 On/Off, Relay 2 On/Off		
#MESS1=YOURMESSAGE#	Stores a custom message for input 1	Message 1 Stored		
#MESS2=YOURMESSAGE#	Stores a custom message for input 2	Message 2 Stored		
#SIGNAL#	Gives a Signal Strenth Test	Score of 1-30		
#TILT=ON#	Turns Tilt Alarm On	TILT ON		
#TILT=OFF#	Turns Tilt Alarm Off	TILT Off	Default	
#READ#	Sends a Temperature check comman	Temperature +?? Or - ??		
#+??SET TEMP#	Sets Temperature to Trigger at positive Temperature Selected	TEMP ON ??		
	Sets Temperature to Trigger at negative Temperature Selected	TEMP ON ??		
#SAVE1=NUMBER#	Saves Contact Number 1	Number Stored		
#SAVE2=NUMBER#	Saves Contact Number 2	Number Stored		
#SAVE3=NUMBER#	Saves Contact Number 3	Number Stored		
#DEL=1#	Deletes Contact Number 1	Number Deleted		
#DEL=2#	Deletes Contact Number 2	Number Deleted		
#DEL=3#	Deletes Contact Number 3	Number Deleted		
#CALL=ON#	Switches Text & Call Alerts on	Call on		
#CALL=OFF#	Text Alerts Only	Call off	Default	
#ALARM=ON#	Sets Alarm to On	Alarm On		
#ALARM=OFF#	Sets Alarm to Off	Alarm Off	Default	
#POWER=ON#	Turns Mains Alarm On	MAINS ON		
#POWER=OFF#	Turns Mains Alarm Off	MAINS OFF		

## Inputs 1 & 2



### Inputs 1 & 2 - Automatically Reset

Inputs 1 & 2 are triggered by a negative pulse eg: pulled to the ground for a period of not less than one second. The image (to the left) is a typical application of how to connect the unit to an alarm panel.

Input 1 and Input 2 are constantly monitored by the auto dialler and will react immediately when an input is pulled to the ground. The inputs will automatically reset when the input triggers are cleared/ reset. The Auto-Dialler will then be ready for the next trigger input.

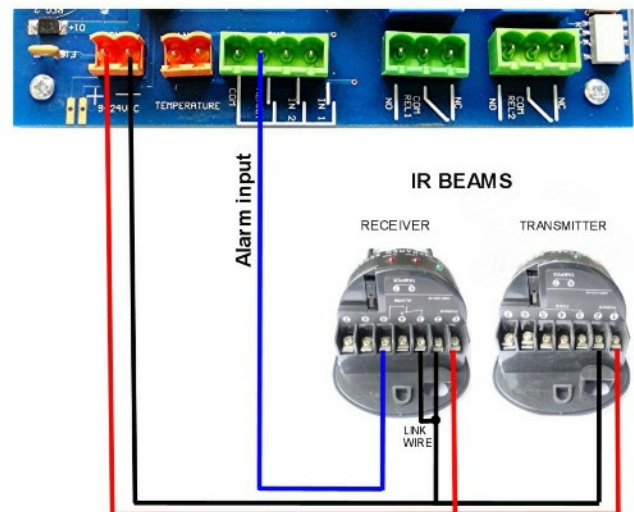
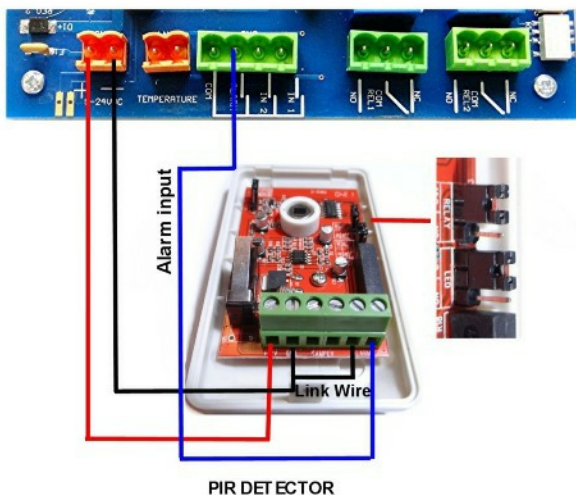
## Alarm Input - Manual Reset

### Alarm Input

This is triggered by a negative pulse eg: pulled to the ground for a period of not less than one second. Before this can be triggered you must activate the alarm input by sending the text command as follows. The units will need manually activating again once triggered by a text message.

**#ALARM=ON#** - This will activate the alarm if the input is pulled to the ground. You will receive a text message reading **ALARM TRIGGERED**

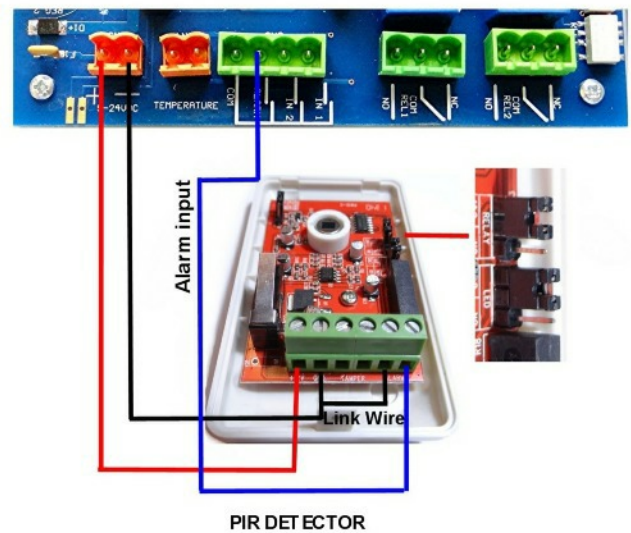
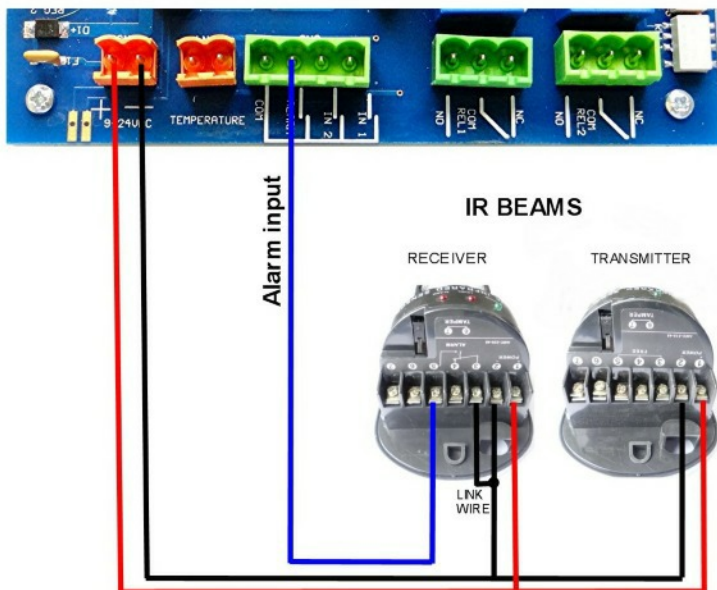
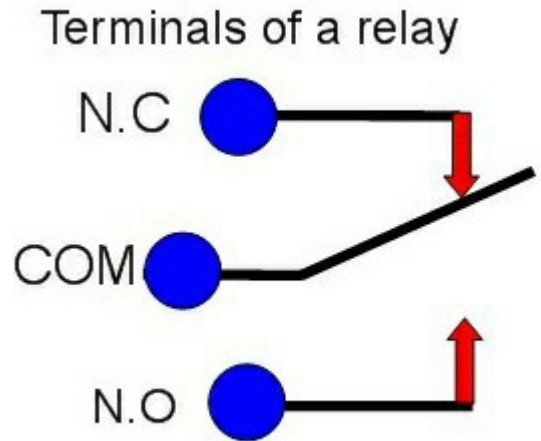
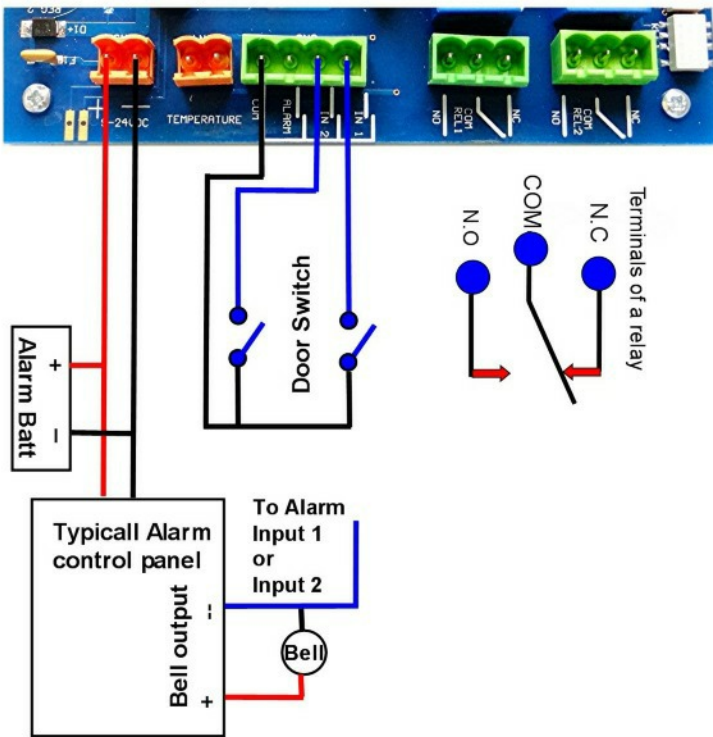
**#ALARM=OFF#** - This will deactivate the alarm. Pulling the input to the ground will mean you will receive NO notifications.



## Important Installer Notes

- When installing the aerial antenna cable please ensure that the cable leaves the box by the shortest possible route and is not coiled up and left inside the box
- Do not stick the aerial onto any metal surface. This will degrade the signal strength received.
- Please remove all voicemail functions from the simcard before installing it into the Auto Dialler. All major UK network voicemail removal codes are shown on page 5
- Before commissioning, please ensure the signal strength is sufficient by sending the text message #SIGNAL#  
We strongly recommend you need a score of at least 10. Also try the signal using both the 2G and 3G via dipswitch 1.
- If you do not receive a good signal, please reposition the aerial antenna to improve the signal strength or alternatively change the network provider as signal strength can vary between providers.
- We do not recommend using the three network simcards as they only work on 3G which means sometimes they struggle for a consistent signal as they cannot fall back to 2G like other networks.

## Diagrams



For more technical support please browse the FAQ's on our website [www.gsm-activate.co.uk](http://www.gsm-activate.co.uk) or alternatively email our technical support team at [technical@gsm-activate.co.uk](mailto:technical@gsm-activate.co.uk) and we will reply or call back within 24 hours Monday - Friday.