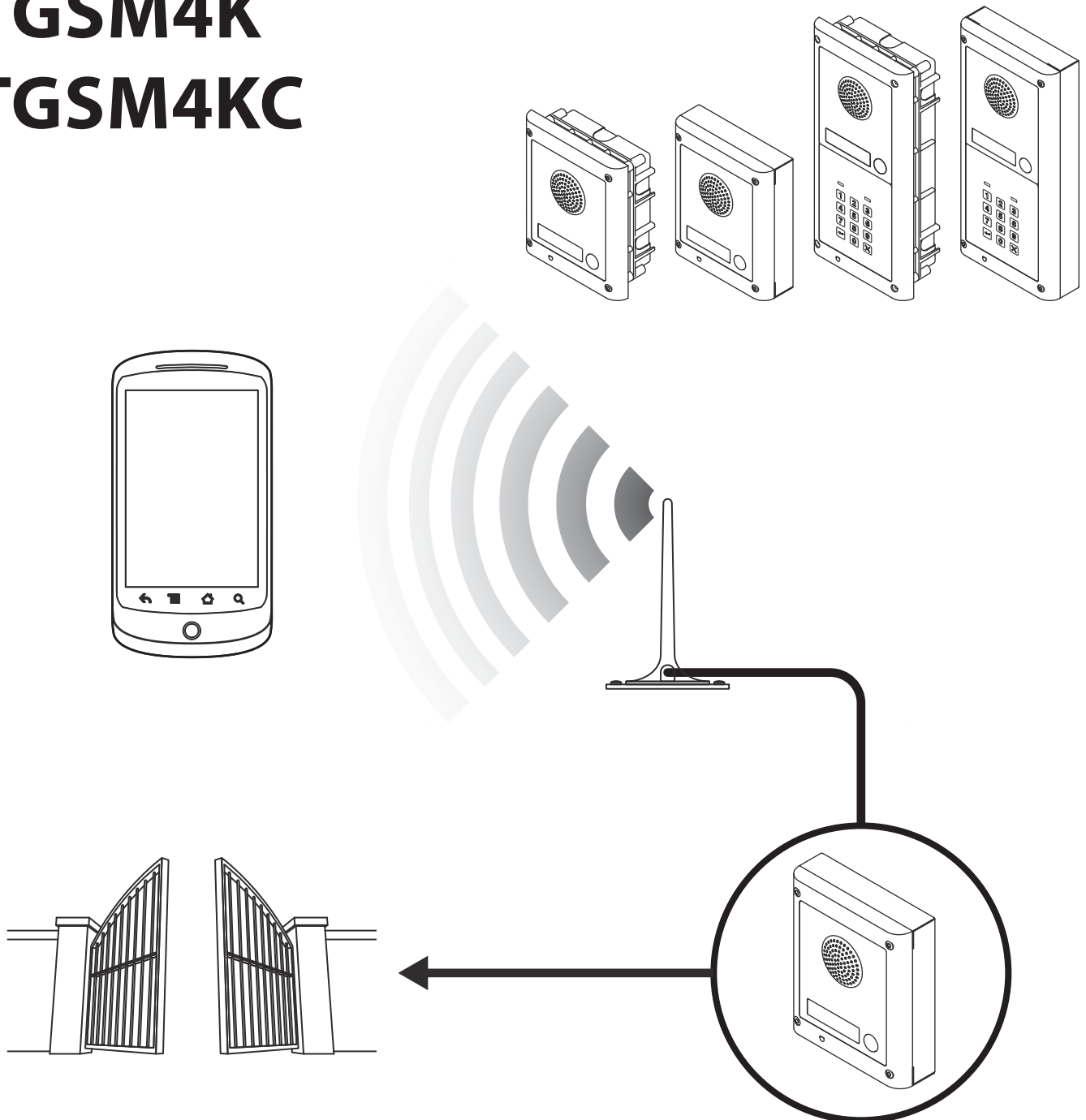


# GSM LITE AUDIO INTERCOM KIT

4000 Series GSM Lite Audio Intercom

## LTGSM4K

## LTGSM4KC



## Technical Manual



# Declaration of Conformity

## EU RoHS DECLARATION OF CONFORMITY

### 2G version

Telit Communications certifies that the GL865-QUAD V3 (Quad Band GSM850/EGSM900/DCS1800/PCS1900 GPRS Wireless Module) is in conformity with Directive 2011/65/EU of the European Parliament and the Council of 8th June 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment. The conformity with the applicable requirements of the Directive 2011/65/EU has been demonstrated against the following harmonized standard: EN 50581:2012 Technical Documentation for the assessment of electrical and electronic products with respect to the restriction of hazardous substances.

### 3G version

Telit Communications certifies that the UL865-EUR (Dual Band 2G EGSM900/DCS1800 and Dual Band 3G FDD I/FDD VIII Wireless Module) is in compliance with the essential requirements and other relevant provisions of European Directive 1999/5/EC (R&TTE). The conformity with the essential requirements of the Directive 1999/5/EC has been demonstrated against the following harmonized standards:

Article of Directive 1999/5/EC	Harmonized Standard Reference
Health & Safety (R&TTE art. 3.1a)	EN 60950-1:2006 + A11:2009 + A1:2010 + A12:2011 + AC2011 EN 62311:2008
EMC (R&TTE art. 3.1b)	EN 301 489-1 V1.9.2 EN 301 489-7 V1.3.1 EN 301 489-24 V1.5.1
RF Spectrum use (R&TTE art. 3.2)	EN 301 511 V9.02 EN 301 908-1 V5.2.1 EN 301 908-2 V5.2.1



### WARNING!

To comply with FCC RF exposure requirements, a separation distance of 20cm (7.87") or more must be maintained between the antenna of this product and all persons.

Separate FCC approval for this product is not required as it will be classed as a fixed installation.

**THIS PRODUCT IS NOT DESIGNED TO BE USED AS AN EMERGENCY CALL POINT.**

### MANUFACTURER



made in  
**ITALY**

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The product is CE marked demonstrating its conformity and is for distribution within all member states of the EU with no restrictions. This product follows the provisions of the European Directives 2014/30/EU (EMC); 2014/35/EU (LVD); 2011/65/EU (RoHS); CE marking 93/68/EEC.

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# Introduction

## MANUAL INTRODUCTION

The information in this manual is intended as an installation and commissioning guide for the 4000 series GSM LITE audio intercom system. This manual should be read carefully before the installation commences. Any damage caused to the equipment due to faulty installation where the information in this manual has not been followed is not the responsibility of Videx Security Ltd.

**It is recommended that the GSM audio intercom is installed by a competent electrician, security or communications engineer.**

For UK customers Videx run free training courses for engineers who are unfamiliar or who have not installed this system before. Technical help is also available for UK customers on tel: 0191 224 3174 during office hours (8:30am - 5:00pm MON to FRI) or via e-mail: [tech@videxuk.com](mailto:tech@videxuk.com) and for all overseas customers on tel: +39 0734 631669 or via e-mail: [technical@videx.it](mailto:technical@videx.it).

A copy of this Technical Manual can also be downloaded from the Videx websites: For UK customers [www.videxuk.com](http://www.videxuk.com) and for overseas customers [www.videx.it](http://www.videx.it).

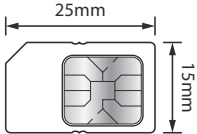
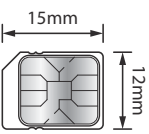
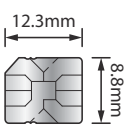
## SYSTEM INTRODUCTION

The system is designed to work on the same technology as mobile phones. It enables a call to be made from an entry point (door, gate etc), to any telephone number (mobile or land line). Up to 4 call buttons are available in the door panel, each able to call two telephone numbers a primary number and a divert number (if the first is busy or not answered, the call can be diverted to a second number). The standard GSM LITE intercom works on a 2G network. A 3G variant is also available (suffix /3G to the part number e.g. **Art.4811-1/3G, Art.4811-2/3G** etc.). Features of the system include:

- A dry contact relay output and push to exit input;
- A single open collector auxiliary output (**AO1**) and two auxiliary inputs;
- Dial to Open facility (this feature enables up to 100 stored numbers to dial the GSM LITE intercom, the intercom panel will not answer these calls, but will activate the door/gate relay without being charged for the call);
- Program both primary and divert number in a single text message;
- Program up to 5 dial to open (**DTO**) numbers in a single text;
- Delete a dial to open (**DTO**) number without knowing it's stored location;
- Up to 5 possible auxiliary output modes (**AOM**);
- Programming carried out via SMS text messages or limited programming features using the GSM mobile app, the **Videx SMS Wizard**.

## SIM CARD SELECTION

**A SIM card is required for this product but not supplied by Videx.** The GSM Lite intercom can only accept a standard size SIM card (refer to the following SIM card size chart below), both a micro-SIM and nano-SIM are not suitable. It is recommended to choose the SIM card which has the best coverage for the area in which the intercom panel will be installed. Both contract and 'Pay as you go' SIM cards can be used, however if using a 'Pay as you go' we would recommend setting up an automatic top up to avoid running short on credit and losing the use of the intercom panel. Alternatively if you already have a contract mobile phone it should be possible to get a second SIM card and telephone number on the existing account. For more information contact the SIM card provider or visit their website, as **this service is not provided by Videx**.

Standard SIM	Micro-SIM	Nano-SIM
		
✓	✗	✗

## NETWORK PROVIDER SELECTION

It is imperative that for the reliable operation of the system that the best network provider for the area is selected. Problems such as network disconnection can occur if the provider has signal or interference problems for that area. We would recommend using a GSM signal strength meter to survey the intended antenna location. Contact Videx for more information on where to purchase a tester.

For UK customers, as an initial check we also recommend visiting the ofcom website [www.ofcom.org.uk](http://www.ofcom.org.uk) and follow the onsite links to their online mobile coverage tool (**ofcom broadband and mobile checker app**). This tool will advise on the best coverage for the main network providers and other general queries that you may have about the service provider. For all overseas customers we suggest consulting the website of the network provider that will be used to check the coverage in your area.

## Introduction

The antenna should always be mounted vertically at the highest point possible. Metal structures and sources of interference such as power cables, control panels etc. can affect signals and so the antenna should be mounted away from these.

When registering a new SIM you may be asked for the IMEI number. This is the unique serial number of the GSM intercom. This number is located internally on the main hardware chip inside the GSM LITE module. To obtain the IMEI number from the GSM module refer to the programming notes **obtain the GSM's IMEI number** on page 39.

### PRECAUTIONARY ADVICE

- When mounting the GSM antenna, choose a location which is away from human interaction and away from the intercom panel. Route the GSM antenna cable from the intercom panel so that it is separate from the power supply cables and microphone wire.
- Always ensure the power is switched OFF to the intercom panel before inserting or removing the SIM card.
- New SIM cards will need registering with the network service provider 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 any PIN codes, call diverts, ring back and disable features such as voicemail and text alerts. Details of how to do this can be found on the SIM card provider's website or by calling their customer services. Recommended SIM card providers are: Vodafone, T-Mobile, O2 or Orange/EE. **The 3 network can only be used on our 3G devices (Art.4811-1/3G, Art.4811-2/3G etc.), also refer to page 6.**
- To be able to receive text messages from the intercom panel, the SIM card will require an SMS service centre number. This is normally pre-installed on new SIM cards but if you are having trouble receiving SMS messages you will need to confirm this by inserting the SIM card into a mobile phone and using the phones menu options to check it. If a number is not programmed then it should be programmed while in the phone (the number can be obtained from the network service provider).
- Voicemail and text alerts must be switched OFF on the SIM card when using the dial in to release the door/gate feature. For Vodafone and O2 this can be done while the SIM card is in the intercom panel. For Orange/EE, T-Mobile and other providers the SIM card must be removed from the intercom panel, inserted into a mobile phone and the mobile phone menu instructions followed. This procedure may vary from provider to provider of different countries, we suggest contacting your provider for information.
- When storing the intercom panel's telephone number in your own mobile phone avoid using an obvious name such as 'Front Door', or 'My Gate' as this would make it easy to decipher if your phone was lost or stolen.
- The PIN request feature must be disabled on the SIM card before using it in the Intercom panel. It is likely on a new SIM card that it will not be enabled but if it is, it will prevent the system from working at all.
- This product may not be suitable for installation in hospitals, health care facilities or in the presence of flammable gases or liquids. Seek advice and authorisation before installing this product in these locations. **This product is not designed to be used as an emergency call point.**

*Network provider and services configuration codes mentioned in this manual are specific for the UK. For overseas customers please contact the network provider of your country for the corresponding codes, however Videx offers **no guarantee** that any additional codes will work.*

### IMPORTANT NOTE ABOUT THE SIM

When using a pay monthly SIM card you can ask the service provider to put a spend limit (credit limit) on the account (Vodafone call this service 'spend checker'). This is to safeguard against possible problems which could result in a large phone bill at the end of the month. Most network providers offer this service. You will need to either ring or e-mail them to set this up. Automatic top ups should also have a monthly limit. We would suggest a limit of £50.00 which should be more than enough. **This service is not provided by Videx.**

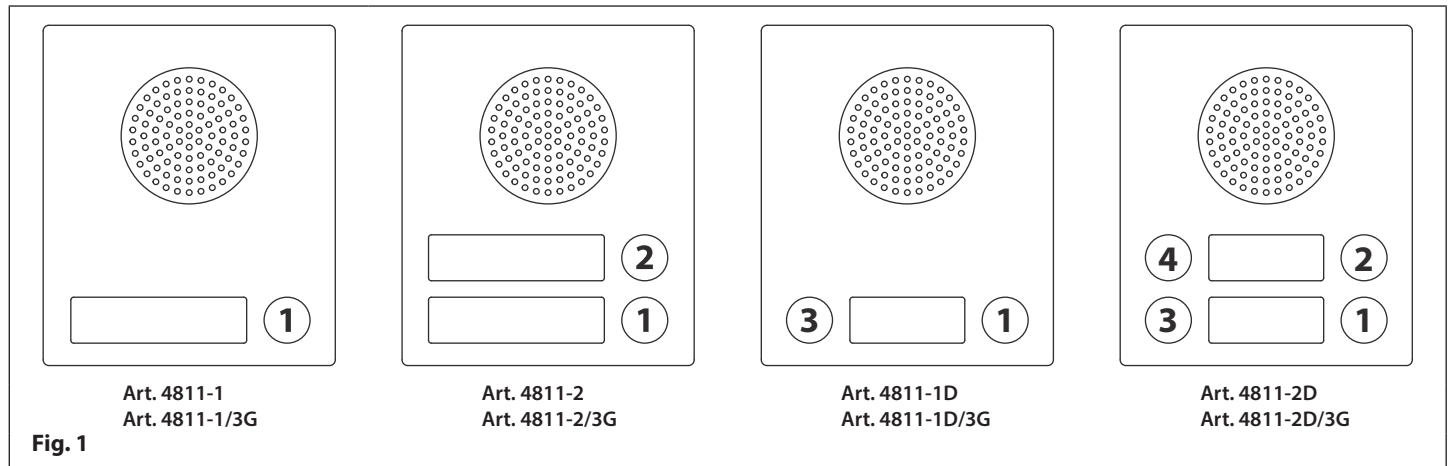
# System Components and Available Versions

## DESCRIPTION

A system comprises of an intercom panel, power supply, SIM card (SIM card not provided by Videx) and antenna. The intercom panel is part of the Videx 4000 series modular design allowing it to be customised to the installation requirements for example including coded access or including the correct number of call buttons (up to 4 call buttons in total, all of which are internally wired in the GSM LITE module).

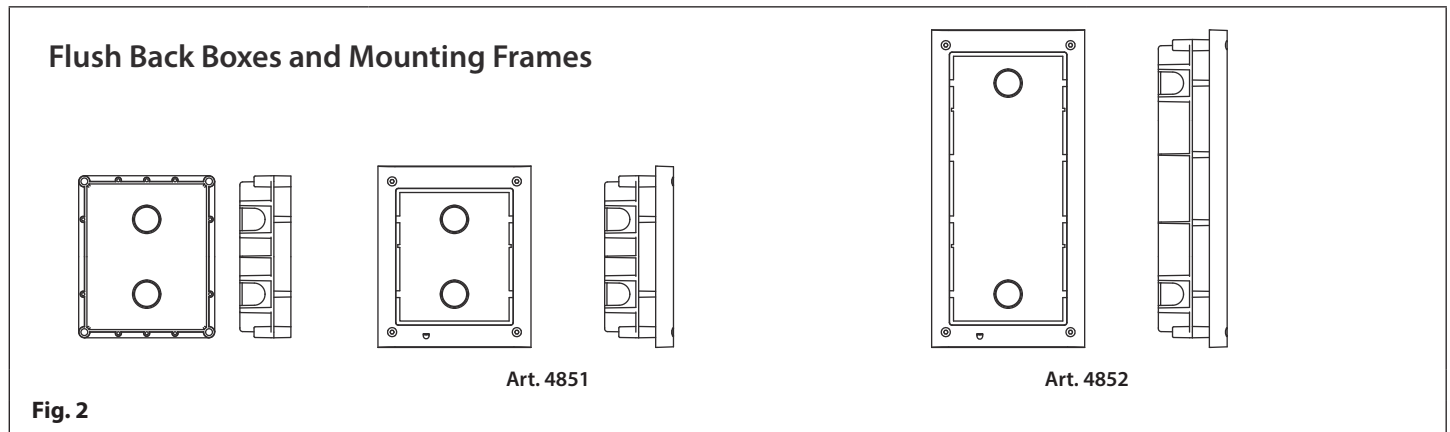
## ART. 4811 GSM (LITE) INTERCOM AVAILABLE VERSIONS

The intercom panel can include any of the following modules from the 4000 series range and uses the standard 4000 series surface and flush mounting frames. The GSM LITE module is however essential and includes all the GSM communication electronics, SIM card (supplied separately) and connections. The intercom module is available in a 1 button, 2 button and 4 button configuration (with all onboard buttons internally wired), as shown in **Fig.1** along with their part numbers.



## 4000 SERIES BACK BOXES AND MOUNTING FRAMES

Both surface and flush back boxes and mounting frames are available. The size of the frame will depend on the number of modules that make up the LTGSM4K/LTGSM4KC kit. The last digit of the frame code indicates the number of modules it will take. Frames are available in gun metal grey finish. The 4000 series mounting frames available GSM LITE kits are shown in **Fig.2** (flush) and **Fig.3** (surface) with the following tables showing the back box dimensions including the part numbers and dimensions for optional flush and surface 4000 series rainshields.

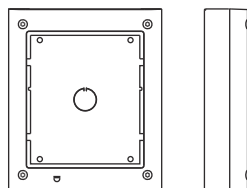


### Flush Back Box Dimensions (inc. optional flush rainshields)

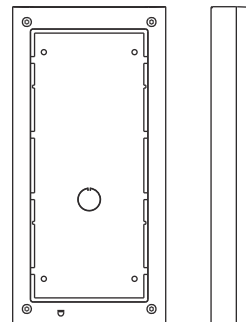
Part No.	Housed Modules	Front Frame (W x H x D) mm	Back Box (W x H x D) mm
Art.4851	1	135 x 160 x 15.7	120 x 143 x 46
Art.4852	2	135 x 280.2 x 15.7	120 x 263.2 x 46
Part No.	Module Size	Rainshield Dimensions (W x H x D) mm	
Art.4871	1	140 x 163 x 35	
Art.4872	2	140 x 283 x 35	

## System Components and Available Versions

### Surface Back Boxes and Mounting Frames



Art. 4851



Art. 4852

Fig. 3

### Surface Back Box Dimensions (inc. optional surface rainshields)

Part No.	Housed Modules	No. of Columns	Back Box (W x H x D) mm
Art.4881	1	1	135 x 160 x 43
Art.4882	2	1	135 x 280.2 x 43
Part No.	Module Size	Rainshield Dimensions (W x H x D) mm	
Art.4891	1	140 x 163 x 62	
Art.4892	2	140 x 283 x 62	

### 12VDC 2A POWER SUPPLY (HDR-15-12)

The Art. 4811 GSM LITE intercom is designed to work with power supplies in the range of 12Vdc and should be capable of supplying a constant current of no less than 1A. Both the LTGSM4K and LTGSM4KC kits are supplied with a slim line HDR-15-12, 12Vdc 1.25A power supply (refer to **Fig.4**).

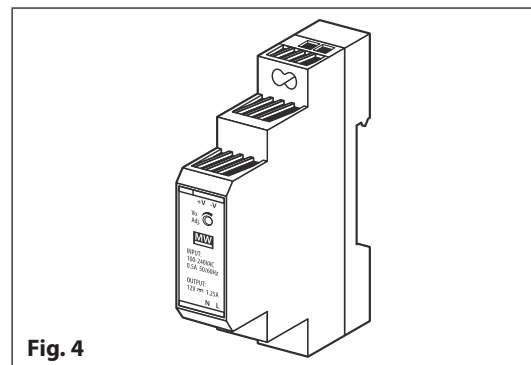


Fig. 4

## System Components and Available Versions

### ART. 432 GSM ANTENNA

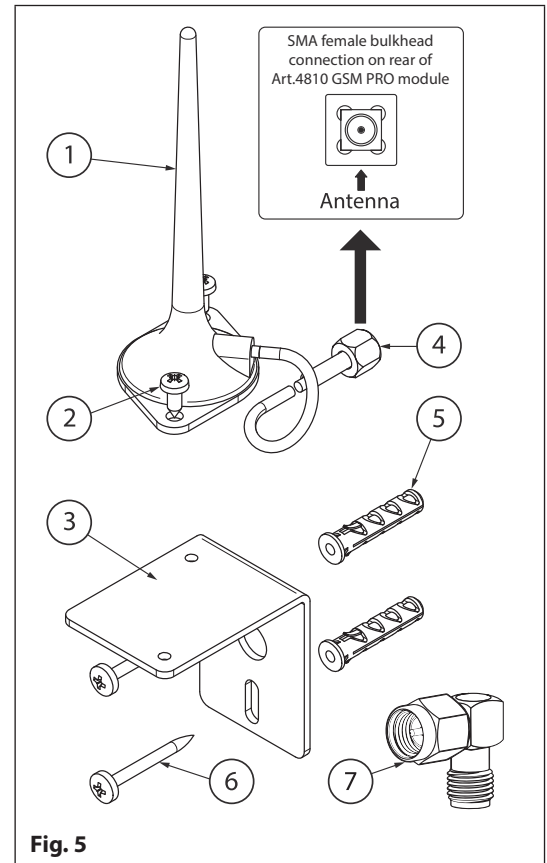
The Art.432 GSM antenna connects to the SMA female bulkhead connection on the rear of the Art.4811 GSM LITE module. A GSM antenna with an SMA male connector should be used (refer to **Fig.5**).

#### Antenna Parts

1. GSM antenna with magnetic base.
2. Self-threading screw ( $\varnothing 3.5mm \times 9.5mm$ ).
3. Aluminium L bracket for mounting.
4. SMA male connector (cable length 2.5m).
5. Expansion type wall plugs ( $\varnothing 6mm$ ).
6. Self-threading screw ( $\varnothing 4mm \times 30mm$ ).
7. Right angled SMA adapter.

**IMPORTANT NOTE:** An antenna must always be fitted for the GSM module to work. Always route the GSM antenna cable away from the microphone wires and the power supply wires to avoid interference on the speech channels.

In instances where there is a tight fitting space for the SMA male connector on the antenna cable the right angled SMA adapter ⑦ can be used to help reroute the cable down the back side of the GSM module.





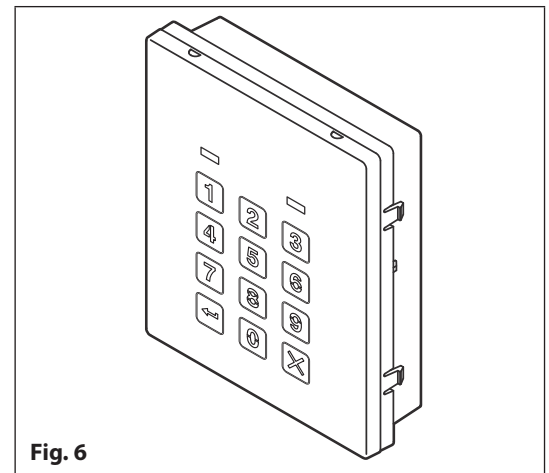
**Fig. 5**

### ART. 4901 CODELOCK

The Art.4901 code lock module with blue backlit buttons and is included as part of the LTGSM4KC kits, see **Fig.6**, can be powered from 12-24V AC or DC and includes three dry contact relay outputs and two switched 0V push to exit inputs which can be used to trigger relay 1 & 2.

One code per relay can be programmed into the device. Codes can be between 4 - 8 digits long.

The relay time can be 01 - 99 seconds or set for latching (00). When in latching mode, enter the code followed by **ENTER**  to latch the relay and the code followed by **CLEAR**  to unlatch the relay.


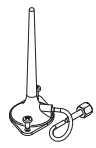


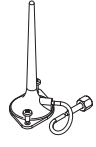


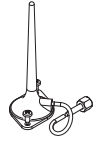


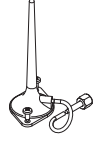


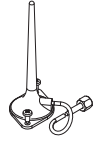
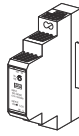

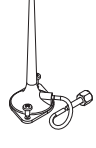

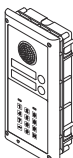
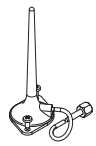


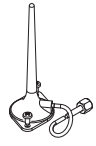



**Fig. 6**



## System Components and Available Versions

### GSM INTERCOM AUDIO KITS

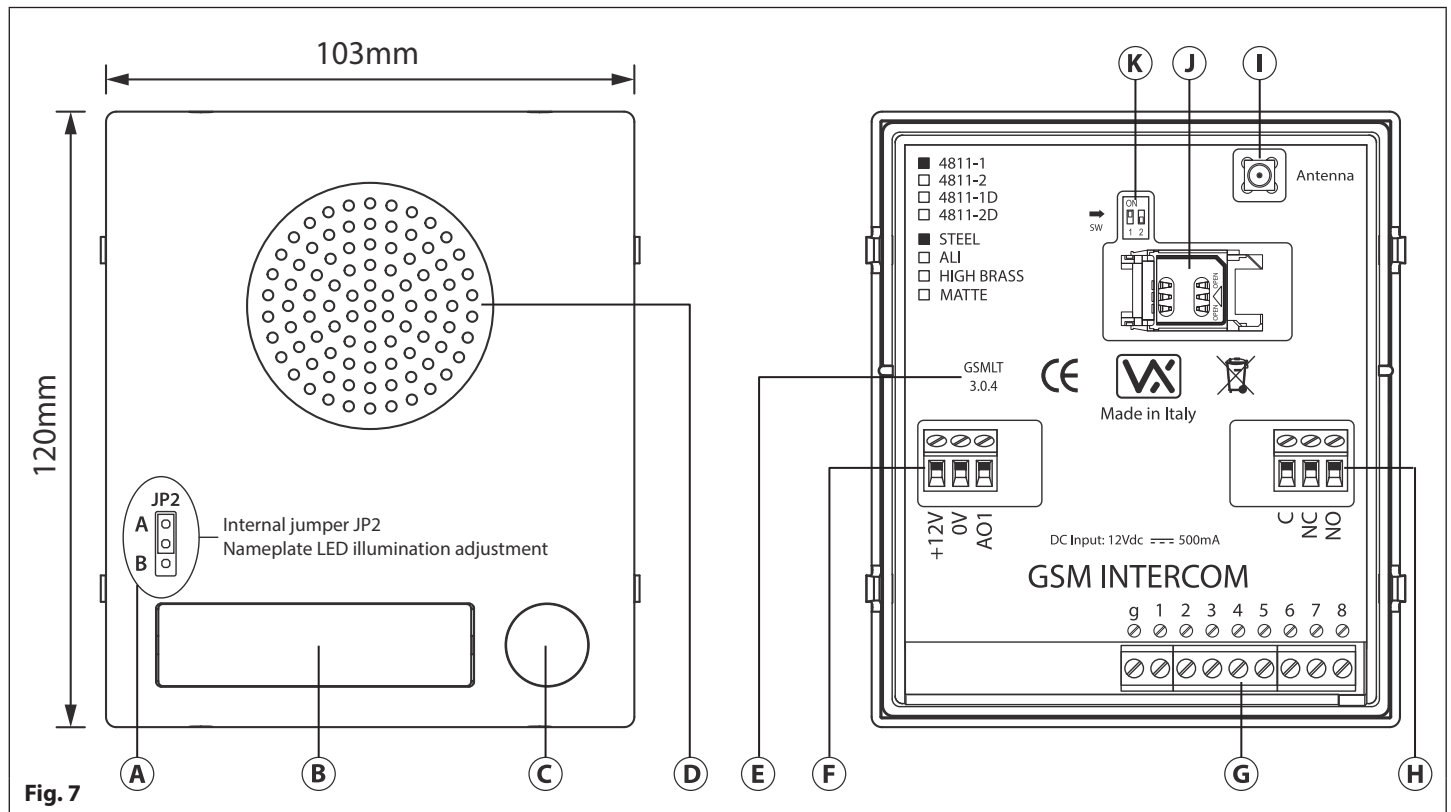
ONE WAY VERSIONS	<b>LTGSM4K-1 - flush mounting</b>		
	 <b>1 Outdoor station</b> composed of: 1 Art. 4811-1: 1 button GSM (lite) unit 1 Art. 4851: Flush mounting box	 <b>1 GSM antenna</b> Art. 432	 <b>1 Power supply</b> HDR-15-12 12Vdc 1.25A
	<b>LTGSM4K-1S - surface mounting</b>		
	 <b>1 Outdoor station</b> composed of: 1 Art. 4811-1: 1 button GSM (lite) unit 1 Art. 4881: Surface mounting box	 <b>1 GSM antenna</b> Art. 432	 <b>1 Power supply</b> HDR-15-12 12Vdc 1.25A
TWO WAY VERSIONS	<b>LTGSM4K-2 - flush mounting</b>		
	 <b>1 Outdoor station</b> composed of: 1 Art. 4811-2: 2 button GSM (lite) unit 1 Art. 4851: Flush mounting box	 <b>1 GSM antenna</b> Art. 432	 <b>1 Power supply</b> HDR-15-12 12Vdc 1.25A
	<b>LTGSM4K-2S - surface mounting</b>		
	 <b>1 Outdoor station</b> composed of: 1 Art. 4811-2: 2 button GSM (lite) unit 1 Art. 4881: Surface mounting box	 <b>1 GSM antenna</b> Art. 432	 <b>1 Power supply</b> HDR-15-12 12Vdc 1.25A
ONE WAY VERSIONS	<b>LTGSM4KC-1 - flush mounting</b>		
	 <b>1 Outdoor station</b> composed of: 1 Art. 4811-1: 1 button GSM (lite) unit 1 Art. 4901: 4000 series codelock 1 Art. 4852: Flush mounting box	 <b>1 GSM antenna</b> Art. 432	 <b>1 Power supply</b> HDR-15-12 12Vdc 1.25A
	<b>LTGSM4KC-1S - surface mounting</b>		
	 <b>1 Outdoor station</b> composed of: 1 Art. 4811-1: 1 button GSM (lite) unit 1 Art. 4901: 4000 series codelock 1 Art. 4882: Surface mounting box	 <b>1 GSM antenna</b> Art. 432	 <b>1 Power supply</b> HDR-15-12 12Vdc 1.25A
TWO WAY VERSIONS	<b>LTGSM4KC-2 - flush mounting</b>		
	 <b>1 Outdoor station</b> composed of: 1 Art. 4811-2: 2 button GSM (lite) unit 1 Art. 4901: 4000 series codelock 1 Art. 4852: Flush mounting box	 <b>1 GSM antenna</b> Art. 432	 <b>1 Power supply</b> HDR-15-12 12Vdc 1.25A
	<b>LTGSM4KC-2S - surface mounting</b>		
	 <b>1 Outdoor station</b> composed of: 1 Art. 4811-2: 2 button GSM (lite) unit 1 Art. 4901: 4000 series codelock 1 Art. 4882: Surface mounting box	 <b>1 GSM antenna</b> Art. 432	 <b>1 Power supply</b> HDR-15-12 12Vdc 1.25A

**IMPORTANT NOTE:** The GSM audio kits listed above work on a 2G network. For the 3G variant remember to suffix the kit part no. with /3G, e.g. LTGSM4K-1/3G, LTGSM4KC-2S/3G etc.

All GSM audio kits are supplied with a HDR-15-12 12Vdc, 1.25A slim line power supply and Art.432 antenna.





# Art. 4811 Technical Information

## ART. 4811 GSM (LITE) MODULE



### SPEAKER VOLUME ADJUSTMENT (DIP-SWITCH SETTINGS)

There are 2 dip-switches located on the back of the GSM module next to the antenna connection, see **Fig.7, (K)**. They can be used to adjust the volume from the door intercom speaker (see table below). Additionally, the volume can also be adjusted during a call electronically via the telephone keypad (refer to user command table on page 43).

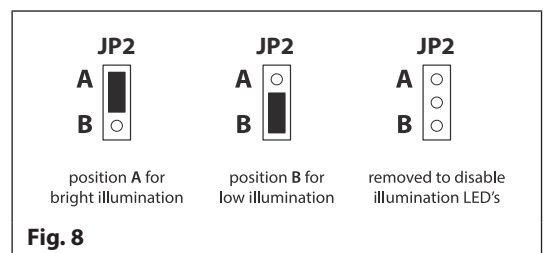
Dip-Switch	Dip-Switch Status		Gain (dB)
	Dip No.1	Dip No.2	
	ON	ON	6
	ON	OFF	12
	OFF	ON	18
	OFF	OFF	23.5

### NAMEPLATE ILLUMINATION JUMPER JP2

The nameplate LED illumination jumper **JP2** is located behind the GSM module's front facia, shown in **Fig.7, (A)**. To access the jumper the facia must be removed and the jumper can be adjusted as required. When **JP2** is set in position **A** (upper 2 pins) the LED is set for bright illumination, when **JP2** is set in position **B** (lower 2 pins) the LED is set for low illumination and if **JP2** is completely removed this will disable the nameplate LED's, see **Fig.8**.

### LEGEND

- (A) Internal nameplate LED jumper (JP2)
- (B) Nameplate window
- (C) Call button
- (D) Intercom speaker
- (E) Current firmware version (GSMLT X.X.X)
- (F) Power input and auxiliary terminal AO1
- (G) GSM function terminals (g, 1 - 8)
- (H) Relay output (C, NC and NO)
- (I) Antenna connection
- (J) SIM card holder
- (K) Speaker volume dip-switches



## Art. 4811 Technical Information

### TERMINAL CONNECTIONS

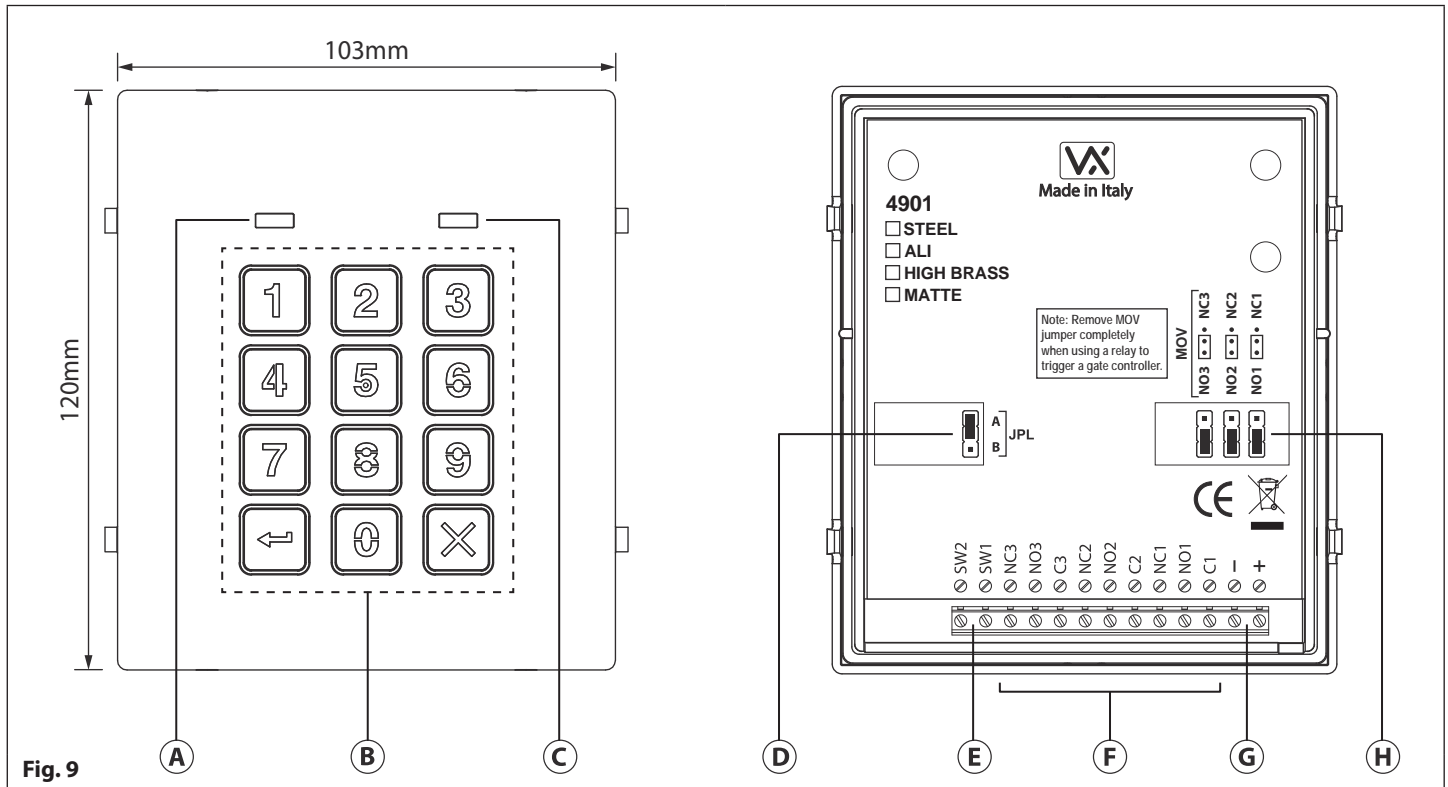
Terminal	Description	
+12V	12 - 24Vdc or ac power.	
0V	0V ground power.	
AO1	Auxiliary output (open collector, 150mA max.).	
C	Common relay contact.	Relay contacts: 3A@24Vdc 3A@120Vac
NC	Normally closed relay contact.	
NO	Normally open relay contact.	
g	<b>GSM function terminals:</b> Resets, PTE and auxiliary inputs. Auxiliary input 2, connects across <b>g-4</b> (sends an SMS message to the master number, also see <b>Fig.22</b> , page 21). Auxiliary input 1, connects across <b>g-5</b> (activates <b>AO1</b> when <b>A1M</b> set to mode <b>01</b> , also see <b>Fig.17</b> , page 18).	
1 - 8	PTE input, push-to-make (switched 0V), connects across <b>g-6</b> (also see <b>Fig.14</b> , page 16). 4 digit master code (1111) reset, connects across <b>g-7</b> (also see <b>Fig.37</b> , page 26). Full reset, connects across <b>g-8</b> (also see <b>Fig.40</b> , page 26).	
JP2	Nameplate window LED illumination adjustment. <b>JP2</b> position A = LED bright, <b>JP2</b> position B = LED low. <b>JP2</b> removed = LED disabled.	

### TECHNICAL SPECIFICATION

Working Voltage:	12 - 24Vdc or ac +/- 10%
Standby Current:	approx. 60mA
Max. Current:	approx. 500mA (max.)
Call Buttons:	up to 4 (max.)
Telephone Numbers per Button:	2 telephone numbers (1 primary, 1 divert)
Dial to Open Numbers:	up to 100 (max.)
Programming Method:	SMS messaging or the Videx SMS Wizard app
Push to Exit Input:	1 (push-to-make, across terminals <b>g-6</b> )
Auxiliary Inputs:	2 ( <b>A1</b> = across terminals <b>g-5</b> , <b>A2</b> = across terminals <b>g-4</b> )
Auxiliary Output:	1, <b>AO1</b> (open collector output, switched 0V, 150mA max.)
Dry Contact Relay:	<b>C</b> , <b>NC</b> and <b>NO</b> , 3A @ 24Vdc, 3A @ 120Vac
Working Temperature:	-10 +50°C

# Art. 4901 Technical Information

## ART. 4901 CODELOCK MODULE



### DESCRIPTION

The codelock module, **Fig.9**, features 12 stainless steel buttons, backlit in blue (keys 0 - 9, **ENTER** and **CLEAR**), 2 LED's for progress information during use and programming. With three integral relays (**RLY1**, **RLY2** and **RLY3**) each with **C**, **NO** and **NC** connections and two switched 0V push to exit inputs (**SW1** and **SW2**) to enable the external triggering of relays 1 and 2 only.

Key presses are signalled both acoustically and visually, while each button press has a tactile feel. Entering the correct code followed by **ENTER** will activate the relevant relay. Programming is carried out through the same keypad following a simple programming menu (refer to programming flowchart on page 14).

### RELAY BUILT-IN BACK EMF PROTECTION JUMPERS

The codelock includes selectable back EMF protection (metal oxide varistors) jumpers for each relay (marked **MOV**) and are used to select the protection type.

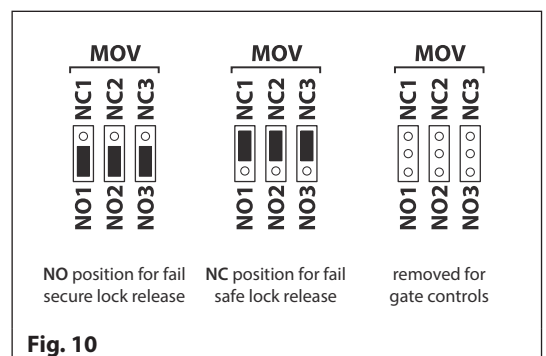
When using a fail secure lock with connections **C** & **NO** the jumper should be in the **NO** position for the selected relay (**RLY1**, **RLY3** or **RLY3**).

When using a fail open (safe) lock with connections **C** & **NC** the jumper should be in the **NC** position for the selected relay (**RLY1**, **RLY3** or **RLY3**).

When using the codelock to trigger a gate controller or another third party controller the respective jumper should be removed completely (this disables the protection on the relay), as shown in **Fig.10**

### LEGEND

- (A) Accept LED (green)
- (B) Key buttons (0 - 9, **ENTER** and **CLEAR**)
- (C) Program/error LED (red)
- (D) Backlight adjustment jumper (**JPL**)
- (E) PTE terminals (**SW1** and **SW2**)
- (F) Relay terminals (**RLY1**, **RLY2** and **RLY3**)
- (G) Power input terminals (+ / -)
- (H) Back EMF protection jumpers



### PROGRAMMING THE KEYPAD

All programming is carried out using the keypad. The programming menu is protected by an **ENGINEER'S CODE**, the factory default of which is 6x1 ("111111"). This code can be changed to any 4 to 8 digit **ENGINEER'S CODE** during the programming and is used to gain entry to the programming menu only.



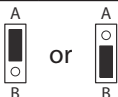

Each relay (**RLY1**, **RLY2** and **RLY3**) can be programmed with a 4 - 8 digit access code (one code per relay) and will activate the respective relay for the programmed relay time (01 - 99 seconds or 00 for latching). The access code programmed is stored in the keypads internal memory.

## Art. 4901 Technical Information

### BACK LIGHT ADJUSTMENT JUMPER (JPL)



The jumper JPL (**Fig.9, (D)**) is used to adjust the brightness and determine the operation of the backlit buttons. There are four brightness settings for the backlit buttons and two programming modes (mode 1 and 2) for the jumper.

The two modes that can be programmed change the functionality of the jumper JPL. The table below indicates the programming mode, the position of the jumper and the operation of the backlit buttons.

	Jumper Position	Back light Operation
Mode 1	A	 Back light OFF in standby. Full brightness when any buttons are pressed.
	B (default)	 Back light on low brightness in standby. Full brightness when any buttons are pressed.
Mode 2	A or B	 Back light on full brightness all of the time.
	JPL removed in either Mode	 No back light, the back light is completely disabled.



#### PROGRAMMING MODE 1 (DEFAULT MODE, JPL = B)

Follow the steps below to set the codelock to mode 1:

1. Disconnect the power from the Art.4901 codelock;
2. Short out terminals - and **SW2**;
3. Press and hold down button 1  and keep it pressed down while the power is switched back ON;
4. When power is restored to the codelock wait for the module to emit a single beep and the red program LED (**Fig.9, (C)**) to flash once;
5. Listen for the confirmation tone and wait for the red program LED (**Fig.9, (C)**) to flash once again;
6. Release button 1  and remove the short between terminals - and **SW2**;
7. Set the jumper JPL to the desired position.

#### PROGRAMMING MODE 2

Follow the steps below to set the codelock to mode 2:

1. Disconnect the power from the Art.4901 codelock;
2. Short out terminals - and **SW2**;
3. Press and hold down button 2  and keep it pressed down while the power is switched back ON;
4. When power is restored to the codelock wait for the module to emit a double beep and the red program LED (**Fig.9, (C)**) to flash once;
5. Listen for the confirmation tone and wait for the red program LED (**Fig.9, (C)**) to flash once again;
6. Release button 2  and remove the short between terminals - and **SW2**;
7. Set the jumper JPL to the desired position.

### BACK LIGHT AND BUTTON OPERATION

If the back light programming mode is set to mode 1 (with jumper JPL in either the A or B position) when a button is pressed on the keypad the back light will switch to full brightness for approximately 10 seconds.

After this time the back light will either switch OFF or switch back to low brightness (depending on the jumper position) unless another button has been pressed within the 10 second period in which case the back light will stay on full brightness for a further 10 seconds.

The exception to this is if the back light programming mode is set to mode 2, i.e. the back light will be on full brightness all of the time or if the jumper is removed the back light will be disabled.

### OPERATION

- Type in the programmed access code and press **ENTER** to confirm;
- If the access code is correct, the green accept LED (**Fig.9, (A)**) will illuminate for approx. 2 seconds and the relay that is relevant to the code will operate for the programmed relay time;
- If an incorrect access code is entered, a continuous melody will sound for 4 or more seconds, according to the number of mistakes and the red program/error LED (**Fig.9, (C)**) will illuminate.

### OPERATION NOTES

- To operate the relays together, set the same code for each relay;
- If an incorrect code is entered, the system will lock out for 5 seconds which will increase each time an incorrect code is entered. The system will only operate when the correct code is entered.

## Art. 4901 Technical Information

### PROGRAMMING GUIDE

- Enter the **ENGINEER'S CODE**: first time type six times 1 (111111 factory default) and press **ENTER** (the red LED will illuminate);
- Confirm **ENGINEER'S CODE**: re-type the same code again or type a new code (4 to 8 digits) then press **ENTER** (melody);
- Enter the code (4 to 8 digits) to enable **RELAY 1** then press **ENTER** (melody);
- Enter the **RELAY 1** operation time (2 digits 01 to 99, i.e. 05 = 5 seconds, 00 = latch) then press **ENTER** (melody);
- Enter the code (4 to 8 digits) to enable **RELAY 2** then press **ENTER** (melody);
- Enter the **RELAY 2** operation time (2 digits 01 to 99, i.e. 05 = 5 seconds, 00 = latch) then press **ENTER** (melody);
- Enter the code (4 to 8 digits) to enable **RELAY 3** then press **ENTER** (melody);
- Enter the **RELAY 3** operation time (2 digits 01 to 99, i.e. 05 = 5 seconds, 00 = latch) then press **ENTER** (melody);
- The system is ready to use (the red LED will switch OFF).

### PROGRAMMING NOTES

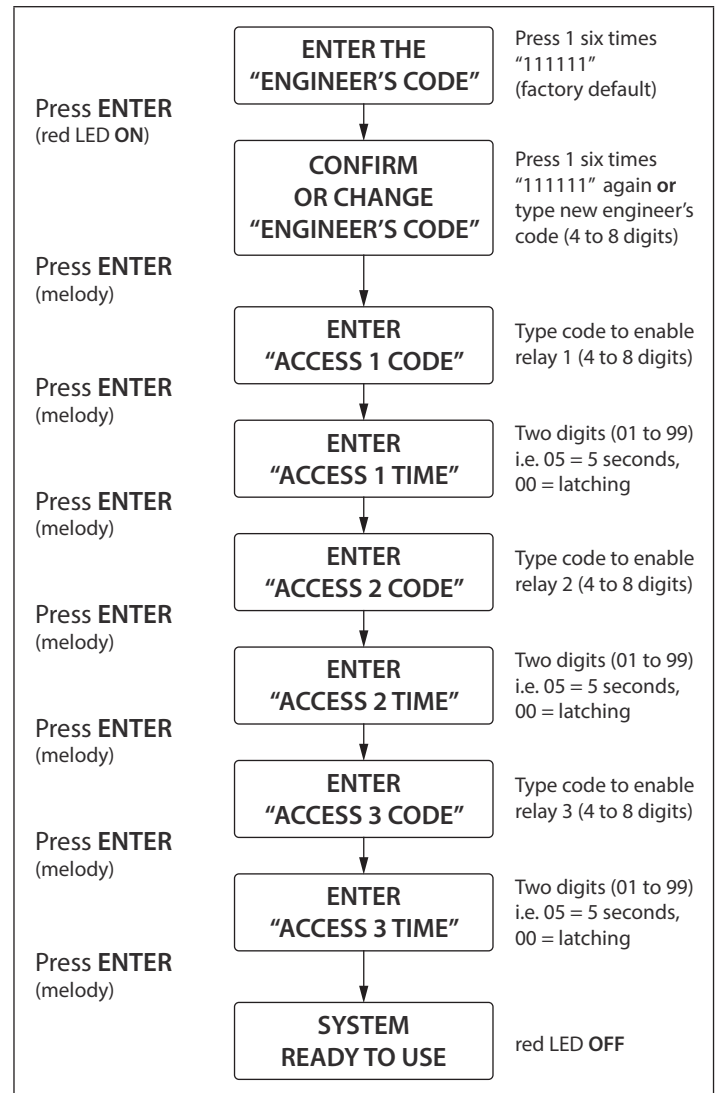
- Pressing the **ENTER** button twice during the programming process, without changing any parameters, will exit from the programming menu.
- When entering a relay code it must be different from the **ENGINEER'S CODE**.
- To latch the relay type in the access code then press **ENTER** to confirm. To unlatch the relay type in the same access code again then press **CLEAR** to confirm.

### RETURN SYSTEM TO PRESET ENGINEER'S FACTORY CODE

- Turn OFF the power to the codelock;
- Keep the **ENTER** button pressed while the power is turned back ON;
- Release the **ENTER** button;
- The **ENGINEER'S CODE** is now reset back to 6x1 ("111111").

### TERMINAL CONNECTIONS

Connection	Description	Relay contacts: 3A @ 24Vac/dc (max.)
+	12-24V AC or DC power input	
-	0V power input	
C1	Relay 1 common connection	
NO1	Relay 1 normally open connection	
NC1	Relay 1 normally closed connection	
C2	Relay 2 common connection	
NO2	Relay 2 normally open connection	
NC2	Relay 2 normally closed connection	
C3	Relay 3 common connection	
NO3	Relay 3 normally open connection	
NC3	Relay 3 normally closed connection	
SW1	Switched 0V PTE input to trigger relay 1	
SW2	Switched 0V PTE input to trigger relay 2	



### TECHNICAL SPECIFICATION

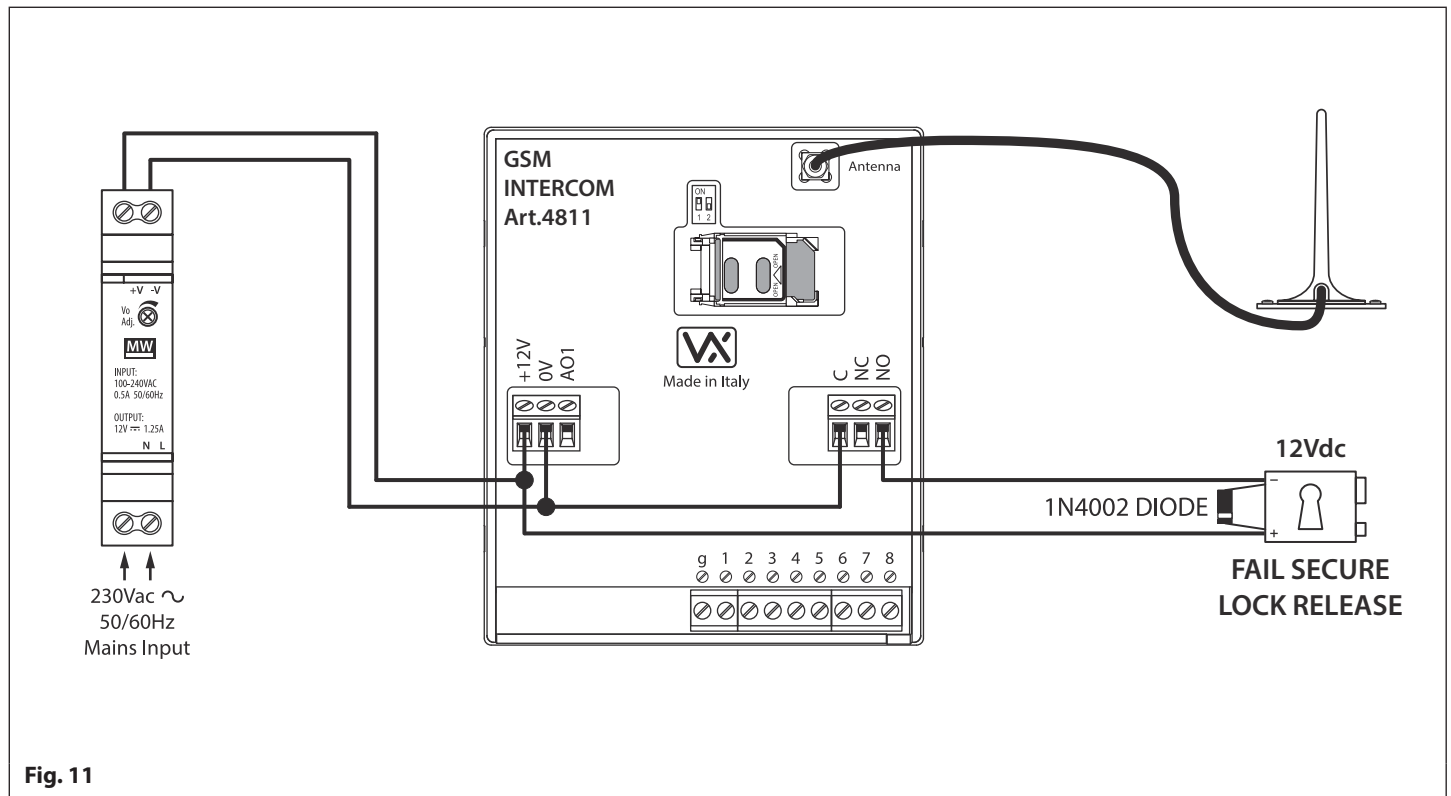
<b>Working voltage:</b>	12V - 24Vac/dc +/- 10%
<b>Current consumption:</b>	20mA (standby); 70mA (max.)
<b>Number of relays:</b>	3, RLY1, RLY2 & RLY3 (C, NC and NO)
<b>Relay current/voltage:</b>	3A @ 24Vac/dc (max.)
<b>Push to exit inputs:</b>	2, SW1 and SW2 (switched 0V)
<b>Back EMF protection:</b>	Yes, 3x MOV jumpers
<b>Number of codes:</b>	3 codes (1 code per relay)
<b>Programming:</b>	Via keypad
<b>Working Temperature:</b>	-10 +50°C



# Wiring Diagrams

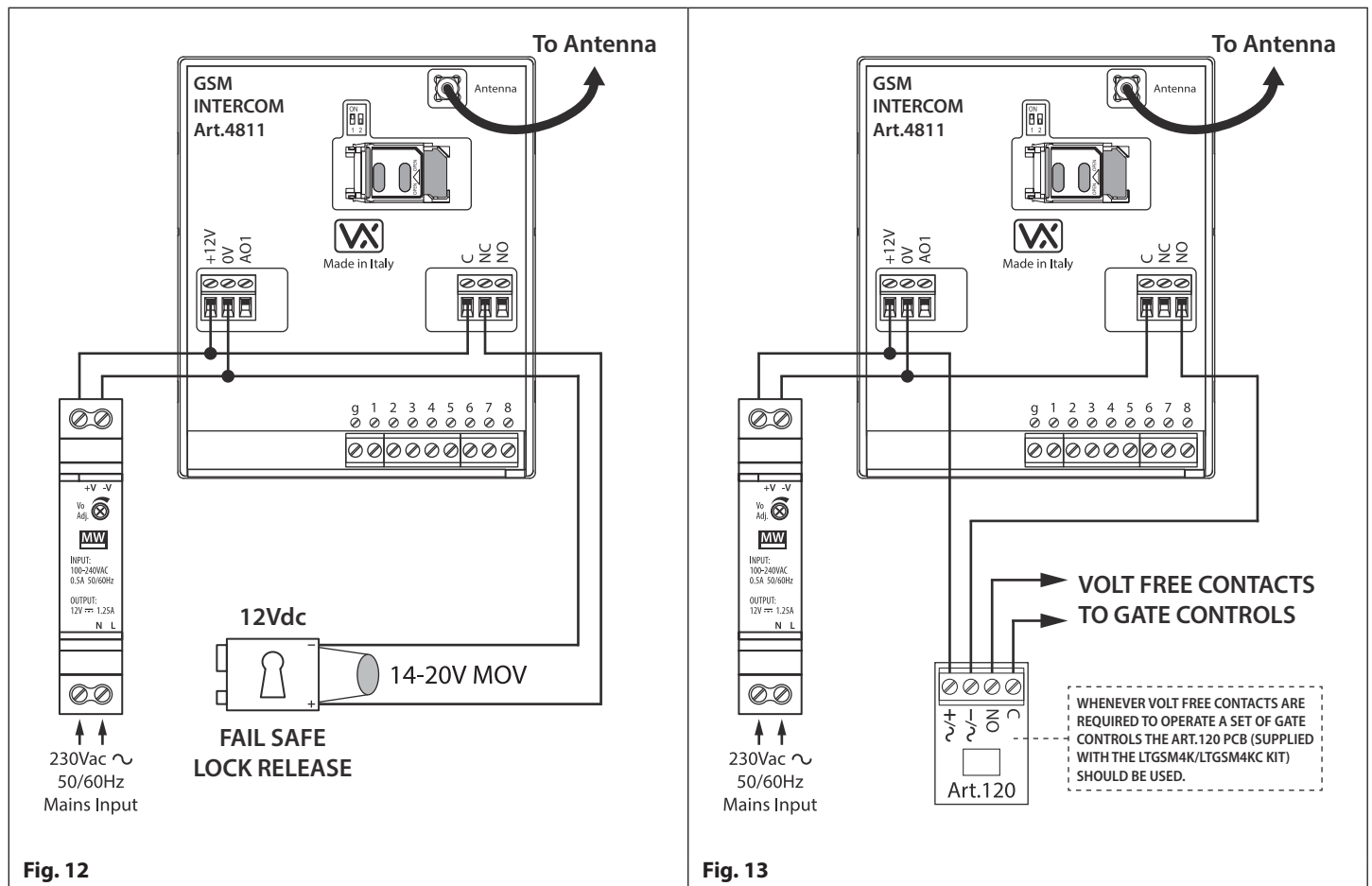
## LTGSM4K CONNECTIONS

**Fig.11** shows the wiring connections for a LTGSM4K-1/LTGSM4K-1S audiokit with a fail secure lock release.



**Fig. 11**

**Fig.12** shows the wiring connections for a LTGSM4K-1/LTGSM4K-1S audiokit with a fail safe lock release and **Fig.13** shows volt free wiring connections for a set of gate controls using the Art.120 pcb (supplied with the GSM LITE audiokits).



**Fig. 12**

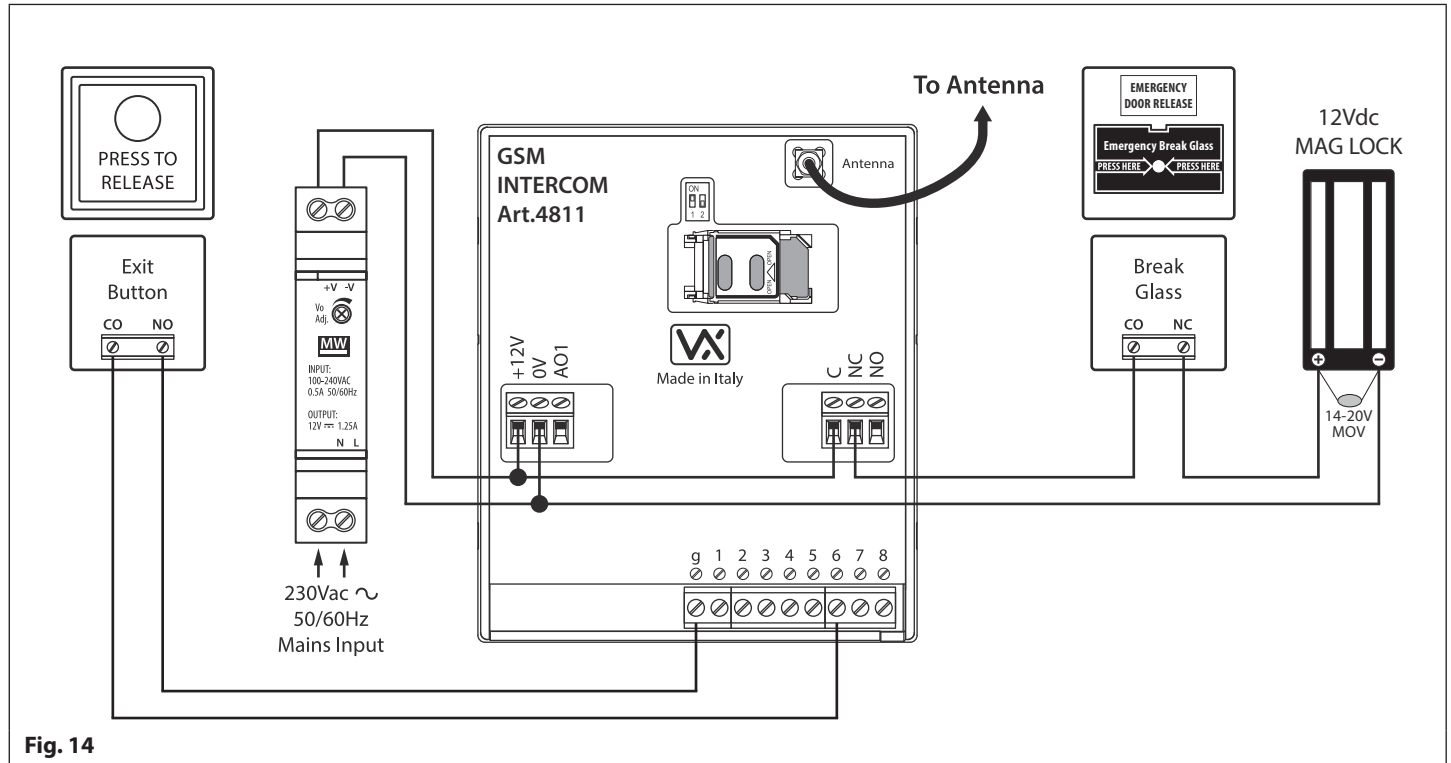
**Fig. 13**

## Wiring Diagrams

### CONNECTING A PUSH TO EXIT BUTTON AND A BREAK GLASS UNIT

The push to exit button must be configured as a “push-to-make” switch and connected across terminals **g** & **6** on the Art.4811 GSM LITE module. The break glass unit, configured as a “push-to-break”, would only be used when connecting a fail safe/fail open lock release (e.g. a mag lock) and would connect in series with the GSM’s relay connections **C** and **NC**, as shown in **Fig.14**.

When the exit button is pressed the GSM relay will trigger for the programmed relay time. When the break glass unit is activated it will break the power to the mag lock.



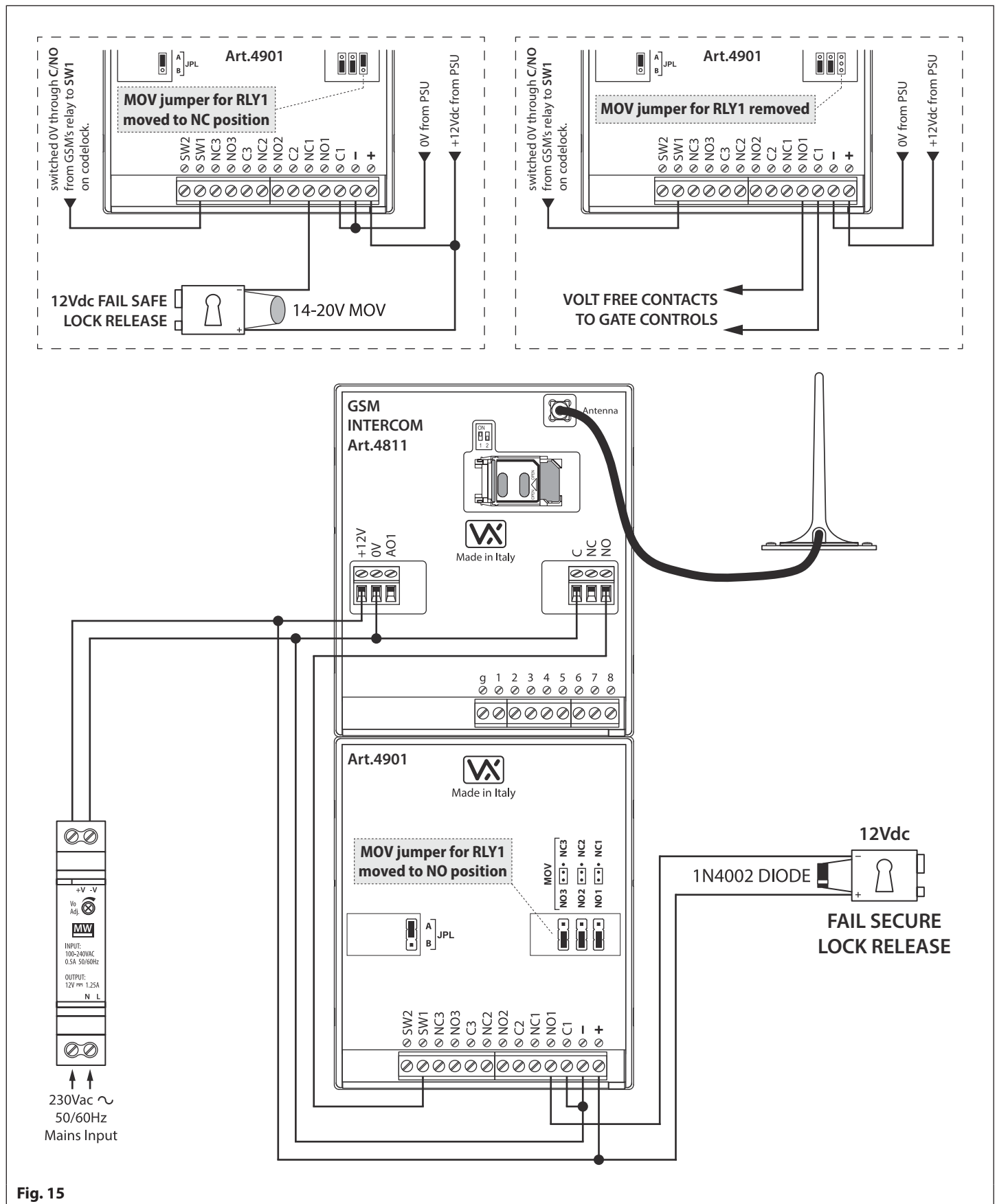
**IMPORTANT NOTE:** In instances where the current draw of the lock (fail secure or fail safe) exceeds the current rating of the HDR15-12 (1.25A) power supply a separate power supply with a sufficient current rating will be required to power the lock.



## Wiring Diagrams

### LTGSM4KC CONNECTIONS

**Fig.15** shows the wiring connections for a **LTGSM4KC-1/LTGSM4KC-1S** audiokit with a fail secure lock release wired through the relay contacts (**RLY1**) of the **Art.4901** code lock. Also shown is the wiring configuration for a fail safe lock and volt free connections for a set of gate controls using relay 1 (**RLY1**) of the **Art.4901** code lock.



**Fig. 15**

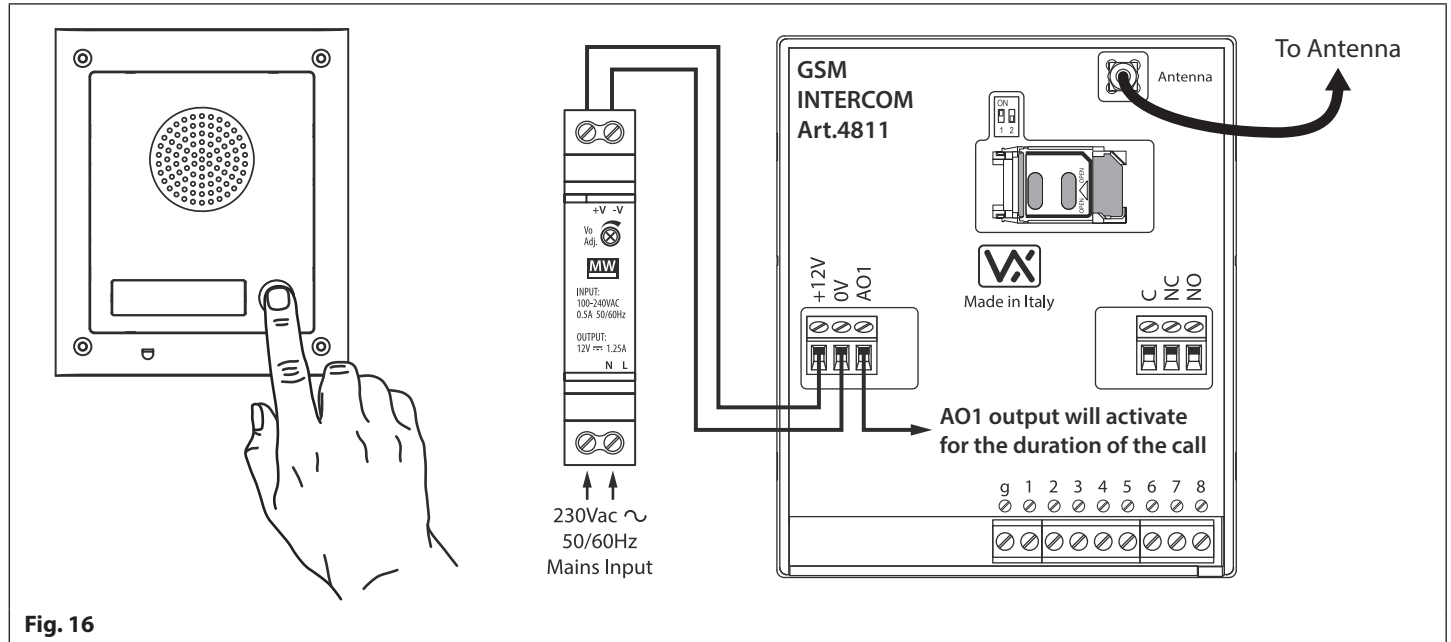
# Auxiliary Inputs/Outputs

## AUXILIARY OUTPUT AO1

The auxiliary output AO1 has six modes 00 - 05 and is set using the **A1M** command (refer to page nn for full list of **A1M** programming modes). It is an open collector output (switched low, 150mA max.) and depending on the mode it is set to will determine how the AO1 output behaves. The following examples show how the AO1 output can be connected.

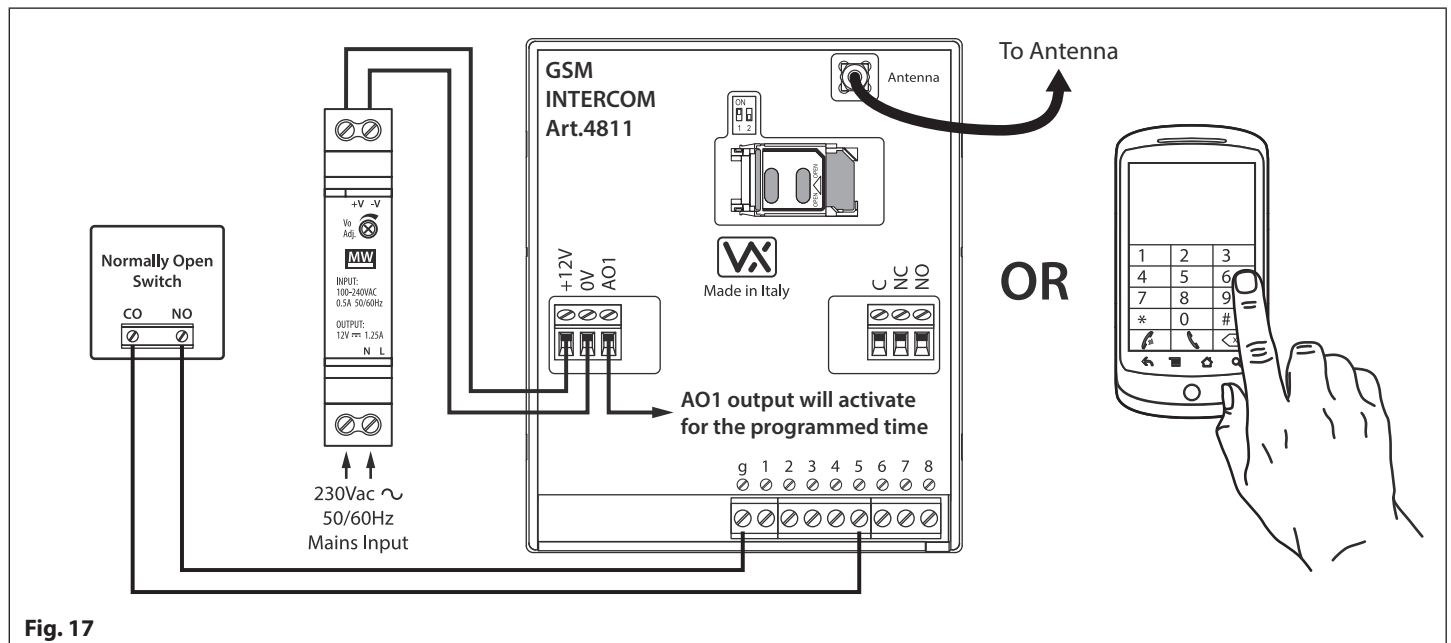
### AO1 SET TO MODE 00, 'CALL ACTIVATED'

When set to mode **00** auxiliary output AO1 will activate when the call begins and deactivate when the call ends, as shown in **Fig.16**.



### AO1 SET TO MODE 01, 'USER ACTIVATED'

When set to mode **01** auxiliary output AO1 will activate when the terminals **g** & **5** are shorted together on the GSM LITE module or by pressing **6** on the telephone during a call, as shown in **Fig.17**. Auxiliary output AO1 will only activate for the programmed time.

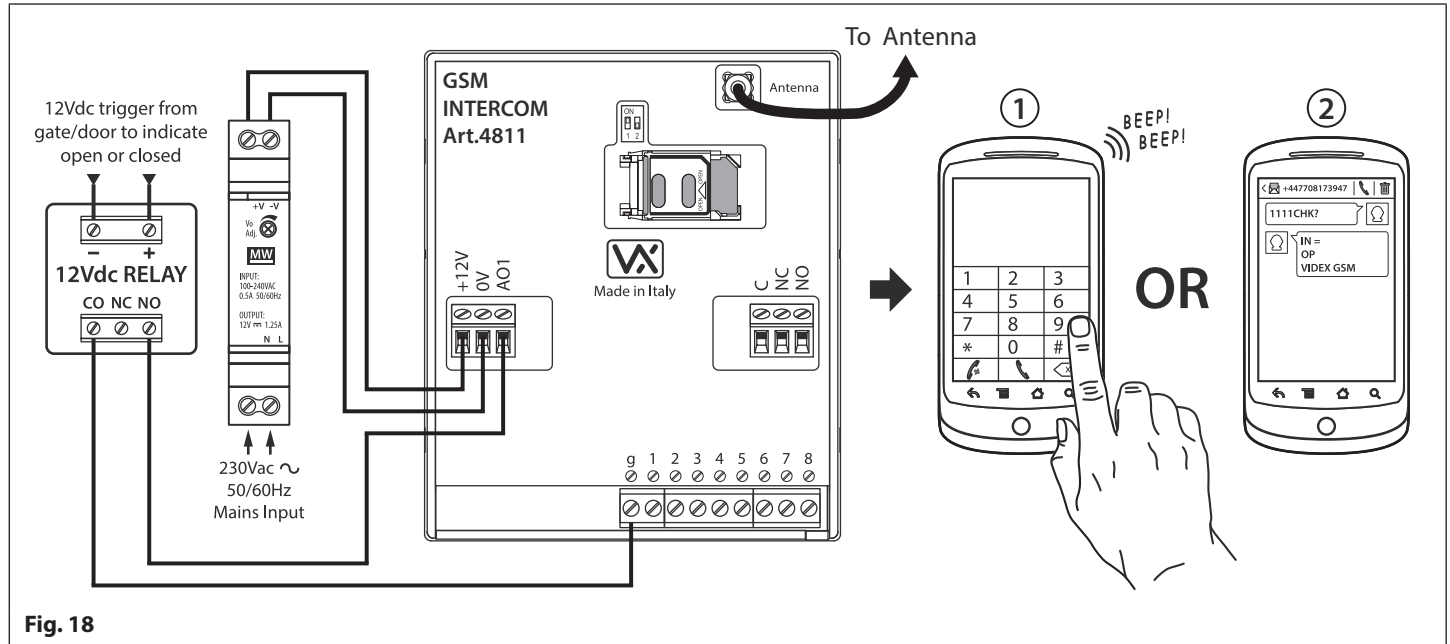


### AO1 SET TO MODE 02, 'STATUS INDICATION'

When set to mode **02** auxiliary output AO1 is used exclusively as a monitoring input. For example, checking if a gate/door is open or closed. Once set the AO1 input status can be interrogated in two ways:

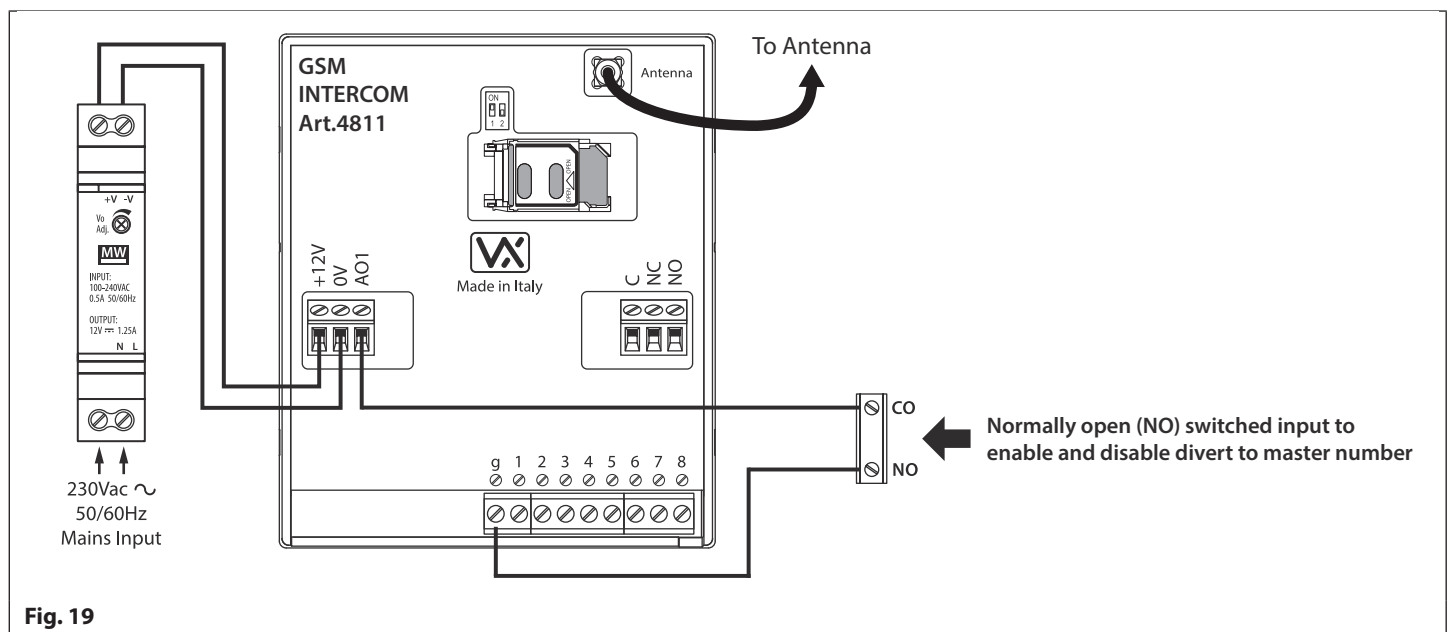
1. **During a call:** press **9** on the telephone keypad and listen to the number of beeps in the ear piece. One beep indicates the input is **CLOSED** and two beeps indicates the input is **OPEN**.
2. **At anytime:** send the SMS message **1111CHK?** to the GSM LITE intercom. An SMS message will be returned with **IN=OP** for **OPEN** or with **IN=CL** for **CLOSED**.

For this feature an additional relay will be required and the AO1 input must be wired as shown in **Fig.18**.



### AO1 SET TO MODE 03, 'DIVERT CALLS TO MASTER NUMBER'

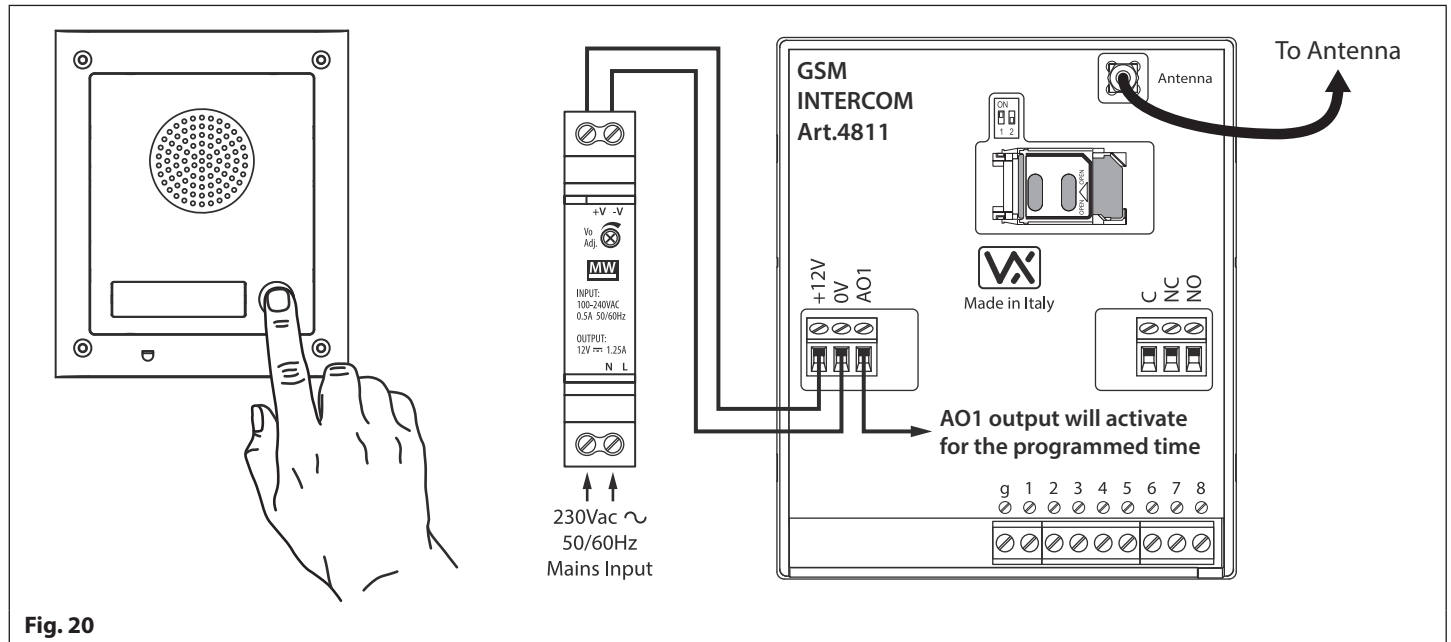
It is possible to have the GSM LITE call buttons diverted to the master number when auxiliary output AO1 has been set to mode **03** (auxiliary output AO1 is used as a monitoring input). In this instance a switched common and normally open (**CO/NO**) trigger needs to be used to enable or disable 'divert calls to master number' and the auxiliary output AO1 must be wired as shown in **Fig.19**. In either case a master number is required following the **STM** store master number feature (see **STM** programming notes on page 36). If there is no master number stored the GSM LITE intercom will indicate this with a series of beeps and no call will take place.



### AO1 SET TO MODE 04, 'CALL ACTIVATED (TIMED)'

Similar to mode 00, however, when set to mode 04 auxiliary output AO1 will activate when the call begins and deactivate when the auxiliary output time, A1T, expires, see **Fig.20**.

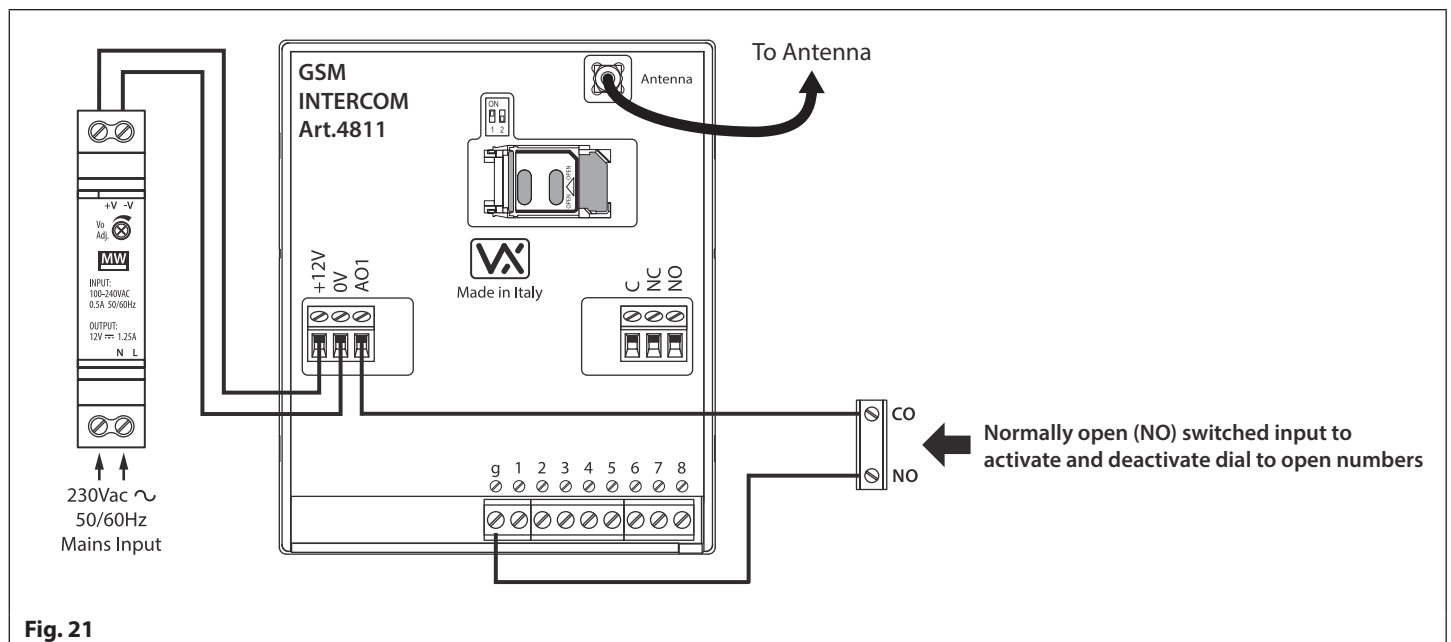
The auxiliary output time can be set using the SMS programming code 1111A1Tnn? (where nn = time in seconds, also refer to notes programming the GSM intercom on pages 29 - 40).



**Fig. 20**

### AO1 SET TO MODE 05, 'ENABLE/DISABLE DIAL TO OPEN NUMBERS'

When the auxiliary output AO1 mode is set to 05 the dial to open numbers (DTO) will only activate the GSM LITE's relay when a common and normally open (CO/NO) switch connected across terminals g & AO1, as shown in **Fig.21**, is open circuit. When the switch is CLOSED and terminals g & AO1 are short together this will disable the dial to open numbers (DTO).

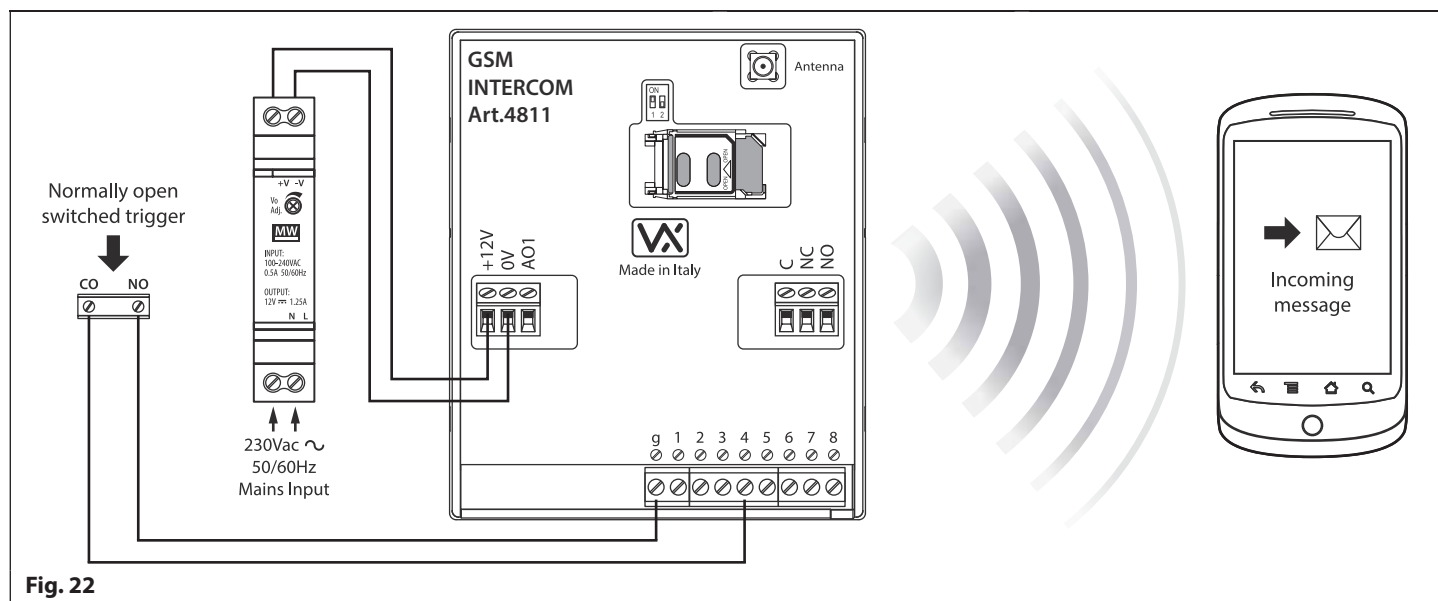


**Fig. 21**

**IMPORTANT NOTE:** When auxiliary output AO1 is set to a particular mode (00 - 05) it cannot be used as an input/output for anything else.

## AUXILIARY INPUT 2

Auxiliary input 2 connects across terminals **g** & **4** on the GSM LITE module. When this input is triggered it will send an SMS message to the master telephone number, as shown in **Fig.22**, (to store a master number **STM** follow the programming notes on page 36. Once this input is triggered it cannot be triggered again for up to 4 minutes, this is to avoid multiple SMS messages being sent for the same alarm.



# General Directions for Installation

## CABLE SIZE GUIDE

### POWER SUPPLY AND LOCK RELEASE CONNECTIONS

Refer to the table below for the connections for the power supply output to the Art.4811 GSM LITE intercom and the lock release connections.

Distance	20m	50m	100m
Cross Sectional Area (CSA)	0.5mm <sup>2</sup>	1.0mm <sup>2</sup>	1.5mm <sup>2</sup>

Ideally the power supply should be located as close to the intercom panel as possible for best performance. The maximum acceptable resistance for the above cables = 3Ω or less for best possible performance.

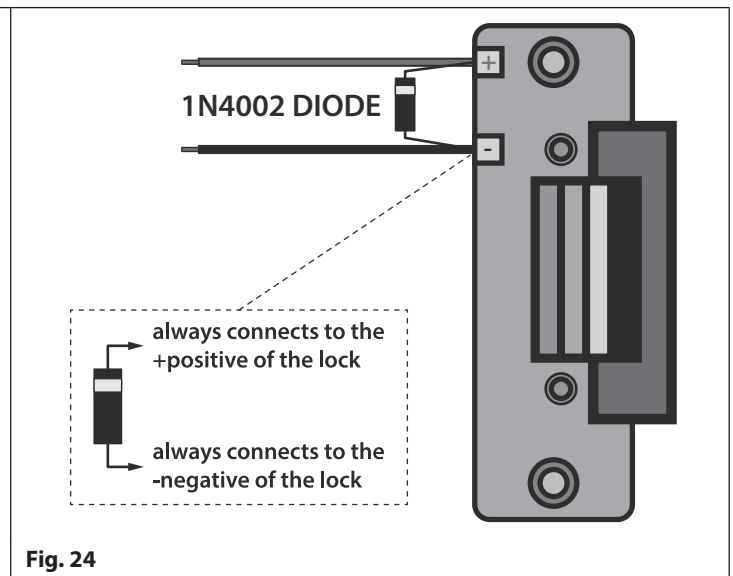
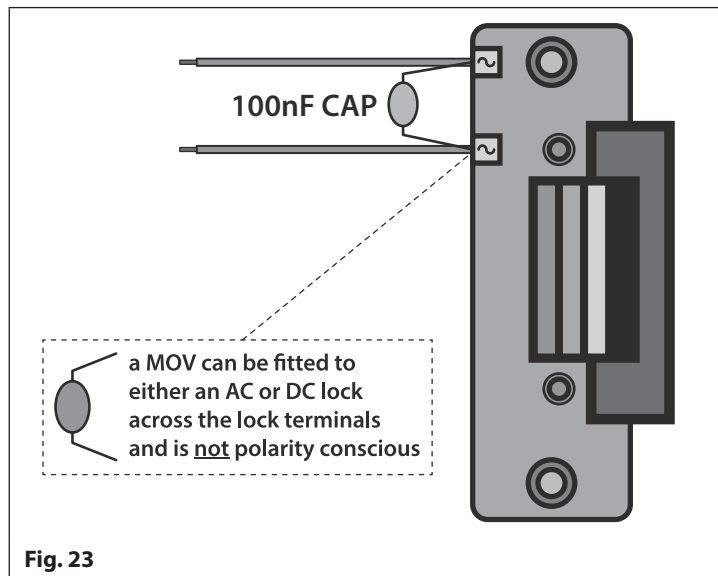
**IMPORTANT NOTE:** Only bare copper (BC) cable should be used (solid or stranded is acceptable). Please be aware that when selecting a cable the following should NOT be used: Copper Coated Steel (CCS) and Copper Clad Aluminium (CCA). While these types of cable may offer a low cost solution they will have a higher resistance than pure copper cable and can affect the overall performance of the system therefore Videx DO NOT recommend these types of cable.

### GENERAL INSTALLATION NOTES

- Check that all components are free from damage before installing (**do not proceed with installation in the event of damage**).
- Keep all packaging away from children (**please dispose of any excess waste and packaging responsibly**).
- **Do not obstruct** the ventilation openings or slots on any of the devices.
- All connections to mains voltages must be made to the current national standards (I.E.E. wiring regulations for the UK or the appropriate standards of your country if installing overseas).
- Install an appropriate fused spur or isolation switch to isolate the mains.
- Isolate the mains before carrying out any maintenance work on the system.
- Avoid water ingress into the rear of the module, always seal the module frame after installation using a suitable silicon based sealant.
- All intercom and access control cables must be routed separately from the mains (ideally in a separate cable tray or duct).

### LOCK RELEASE WIRING AND BACK EMF PROTECTION

When fitting an electric lock release back EMF protection will be required. If fitting an AC lock release then a 100nF ceramic disc capacitor should be fitted across the terminals of the lock, shown in **Fig.23**. If fitting a DC lock release (fail secure or fail safe) then a 1N4002 diode should be fitted across the terminals on the lock, shown in **Fig.24**.



If a 100nF ceramic disc capacitor or a 1N4002 diode are not available then a 14 - 20V MOV (metal oxide varistor) can be fitted across the lock terminals instead (refer to **Fig.23** above) and can be fitted on both an AC and DC lock. Connection examples can also be seen on the various wiring diagrams on pages 15 - 17.

## General Directions for Installation

### CONNECTION TO MAINS, SAFETY AND GUIDANCE NOTES

**IMPORTANT: PLEASE READ THESE INSTRUCTIONS CAREFULLY BEFORE COMMENCING WITH THE INSTALLATION.**

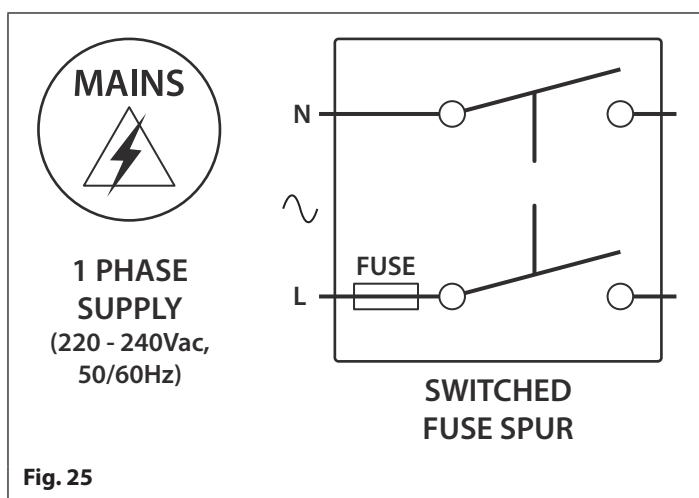
**IMPORTANT: IT IS RECOMMENDED THAT ANY CABLING AND VIDEX PRODUCTS BE INSTALLED BY A COMPETENT AND QUALIFIED ELECTRICIAN, SECURITY INSTALLATION SPECIALIST OR COMMUNICATIONS ENGINEER.**

- **DO NOT** install any Videx product in areas where the following may be present or occur:
- Excessive oil or a grease laden atmosphere.
- Corrosive or flammable gases, liquids or vapours.
- Possible obstructions which would prevent or hinder the access and/or removal of the Videx product.

### MAINS CONNECTION

The system **MUST** be installed in accordance with the current I.E.E. regulations (in particular I.E.E. Wiring regulations BS7671 for the UK), or the appropriate standards of your country if installing overseas, in particular Videx recommends:

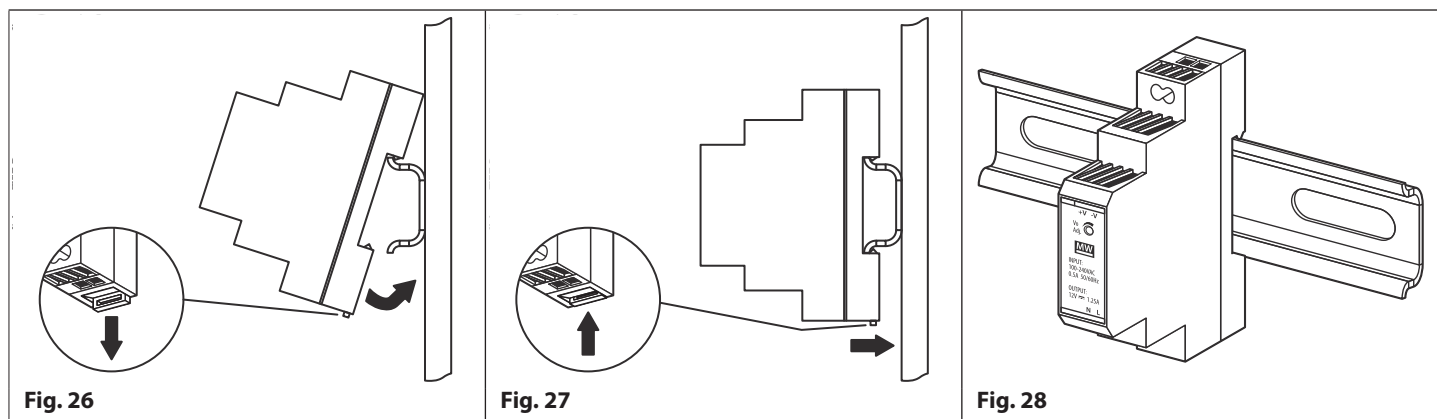
- Connecting the system to the mains through an all-pole circuit breaker (refer to **Fig.25**) which shall have contact separation of at least 3mm in each pole and shall disconnect all poles simultaneously.
- That the all-pole circuit breaker shall be placed in such a way to allow for easy access and the switch shall remain readily operable.
- Ensuring that the mains supply (Voltage, Frequency and Phase) complies with the product rating label (this is usually located on the topside of the power supply).
- Isolating the mains before carrying out any maintenance work on the system.



### POWER SUPPLY INSTALLATION

Follow the steps below when fitting the HDR-15-12 (12Vdc 1.25A) power supply.

- Fix the power supply to a DIN rail (following **Fig.26**, **Fig.27** and **Fig.28**).
- Switch **OFF** the mains using the circuit breaker (mentioned previously) and then make the connections as required shown on the various wiring diagrams throughout this manual.
- Check the connections and secure the wires into the terminals ensuring that the low voltage (signal) cables are routed separately from the high voltage (mains) cables.
- If applicable replace the terminal covers and fix them back into place using the relevant screws.
- When all connections are made restore the mains supply.



## General Directions for Installation

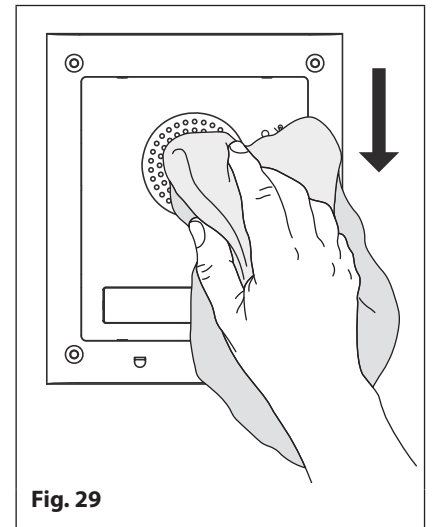
### PANEL CARE

The door panel's fascia is either a stainless steel mirror or matt finish, or matt finish aluminium. It is important that the fascia is cleaned on regular occasions to prevent dirt build up and tarnishing of the metal.

A clean and soft cloth can be used with moderate warm water or non-aggressive cleansers. Additional care should be taken to follow the grain of the metalwork when polishing panels with a matt finish and always only polish in one direction to avoid light scratching of the plate, see **Fig29**. Also try to avoid any polish build up around the panel's buttons which may prevent the buttons from operating correctly.

#### **DO NOT USE ANY OF THE FOLLOWING:**

- Abrasive liquids;
- Chlorine-based liquids;
- Metal cleaning products (including Sidol stainless steel cleaner as this can affect the etching and/or engraving);
- Hydrochloride bleaches.



**Fig. 29**



**IMPORTANT NOTE: IT IS IMPORTANT TO REGULARLY MAINTAIN THE "UP KEEP" OF THE GSM LITE PANEL (CLEANING AND GENERAL MAINTENANCE ETC.) ANY FAULT OR DAMAGE THAT MAY OCCUR TO THE GSM LITE PANEL DUE TO THE LACK OF CLEANING AND MAINTENANCE IS NOT THE RESPONSIBILITY OF VIDEX.**



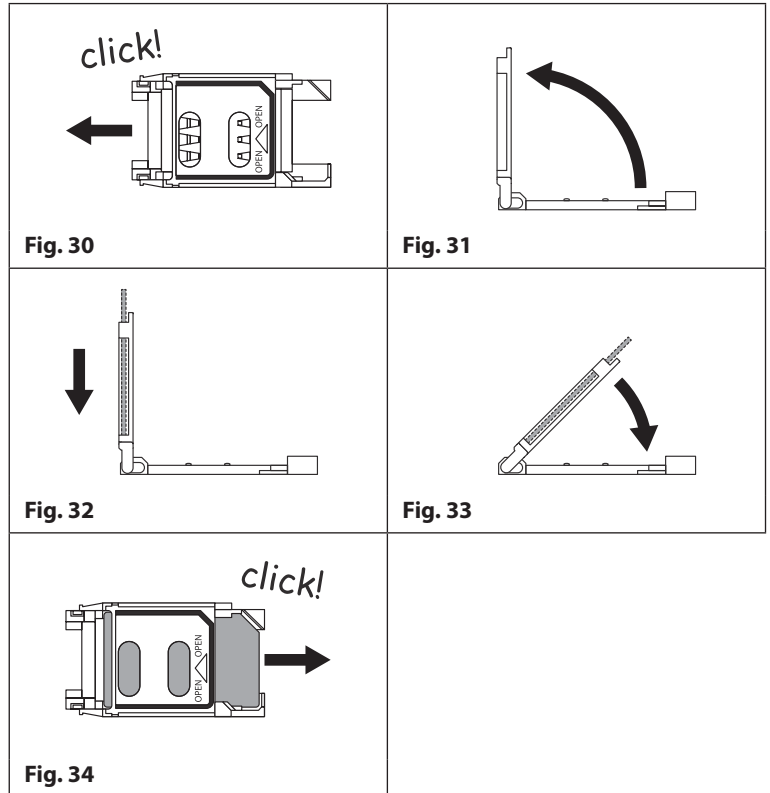
# Fitting the SIM & Connecting Power

## FITTING THE SIM CARD AND CONNECTING THE POWER TO THE GSM INTERCOM

After connecting the power supply, antenna, lock output and any auxiliary devices as shown in this manual and before powering up, a SIM card must be installed (the SIM must already be registered with the network provider). The SIM holder can be found on the back of the module under the SMA antenna connection. A SIM card from most network providers can be used (**remember a network 3 SIM will only work with the 3G version of the GSM LITE intercom**). Follow the steps below to insert the SIM card.

### FITTING THE SIM

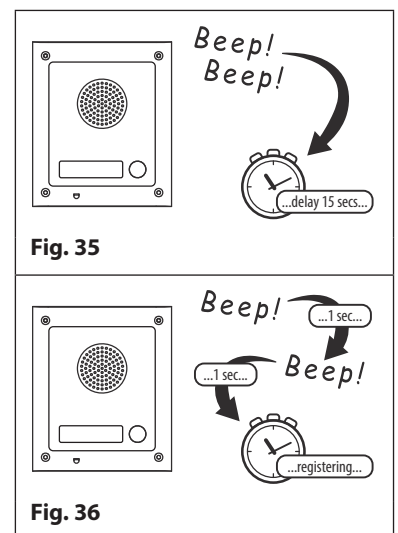
1. On the back of the Art.4811 GSM LITE module slide the SIM holder to the left until it 'clicks', as shown in **Fig.30**.
2. The SIM holder is hinged and will open out to the left, see **Fig.31**.
3. Place the SIM card into the holder (it will only fit one way, see **Fig.32**) and fold the holder back down, see **Fig.33**.
4. Slide the SIM holder back to the right until it 'clicks', see **Fig.34**.
5. Once the SIM is in place connect the Art.432 GSM antenna and then connect the 12Vdc power supply but **DO NOT** power up the system yet.
6. Follow the initialisation process described below.



### POWER UP INITIALISATION SEQUENCE

The Art.4811 GSM LITE module requires approximately 30 seconds to initialise properly. We recommend **NOT** sending any SMS messages or pressing buttons during this time.

1. First check all the necessary connections have been made correctly, following the wiring diagrams shown in this manual, and when ready power up the system.
2. Two short beeps will be heard from the GSM LITE module followed by a 15 second delay, as shown **Fig.35**.
3. Next a single short beep will be heard every second while the GSM module attempts to register with the chosen network, as shown in **Fig.36**, this will continue until the GSM LITE module has made a connection to the network.
4. Wait for the beeping to stop to indicate that the GSM LITE module has registered with the network.
5. The GSM LITE intercom is ready to be programmed.



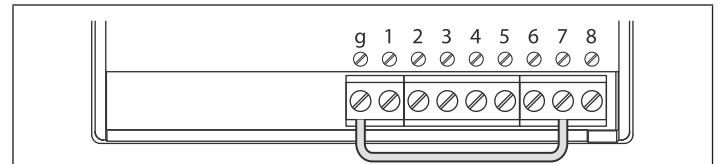
# Reset Procedure

## RESETTING THE GSM MODULE TO FACTORY DEFAULTS

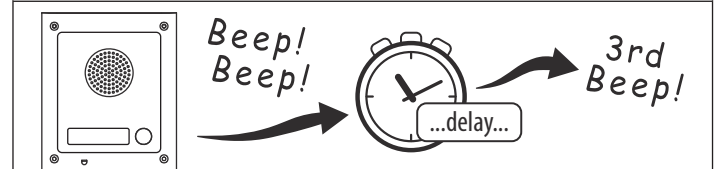
There are two 'hard-wired' reset options available. The first will reset the master code (1111) only and the second will reset everything and clear all the stored telephone numbers (primary, divert and dial to open) and all settings.

### RESETTING THE MASTER CODE TO 1111 (4x1)

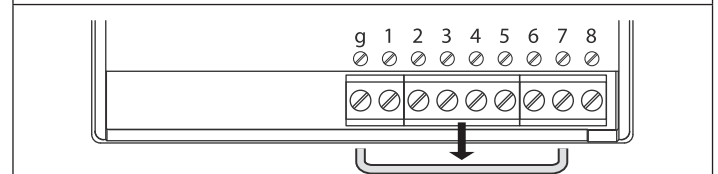
1. Power down the GSM LITE intercom module.
2. Put a short across terminals **g** & **7** on the back of the GSM LITE module, as shown in **Fig.37**.
3. Power up the GSM LITE module, 2 beeps will be heard followed by a brief delay and then a 3rd beep, as shown in **Fig.38**.
4. After the 3rd beep remove the short, as shown in **Fig.39**.
5. The master code is now reset back to 1111 (4x1).



**Fig. 37**



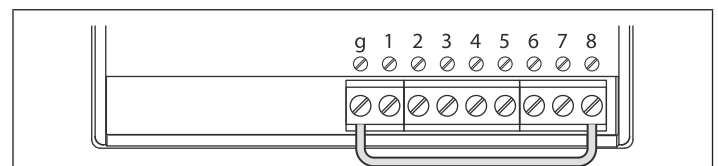
**Fig. 38**



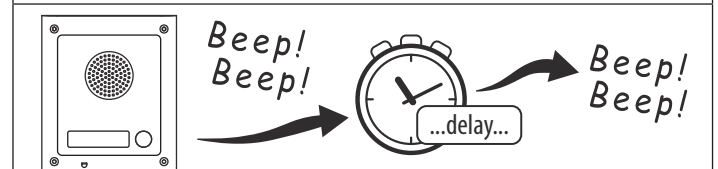
**Fig. 39**

### FULL SYSTEM RESET

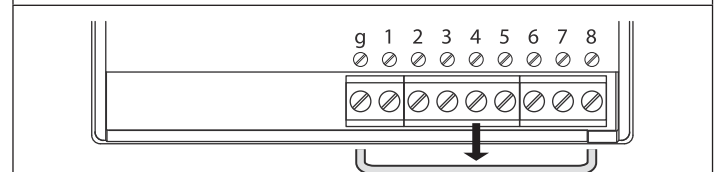
1. Power down the GSM LITE intercom module.
2. Put a short across terminals **g** & **8** on the back of the GSM LITE module, as shown in **Fig.40**.
3. Power up the GSM LITE module, 2 beeps will be heard followed by a brief delay and then a further 2 beeps, as shown in **Fig.41**.
4. After the 4th beep remove the short, as shown in **Fig.42**.
5. All settings on the GSM LITE module are returned to factory defaults.



**Fig. 40**



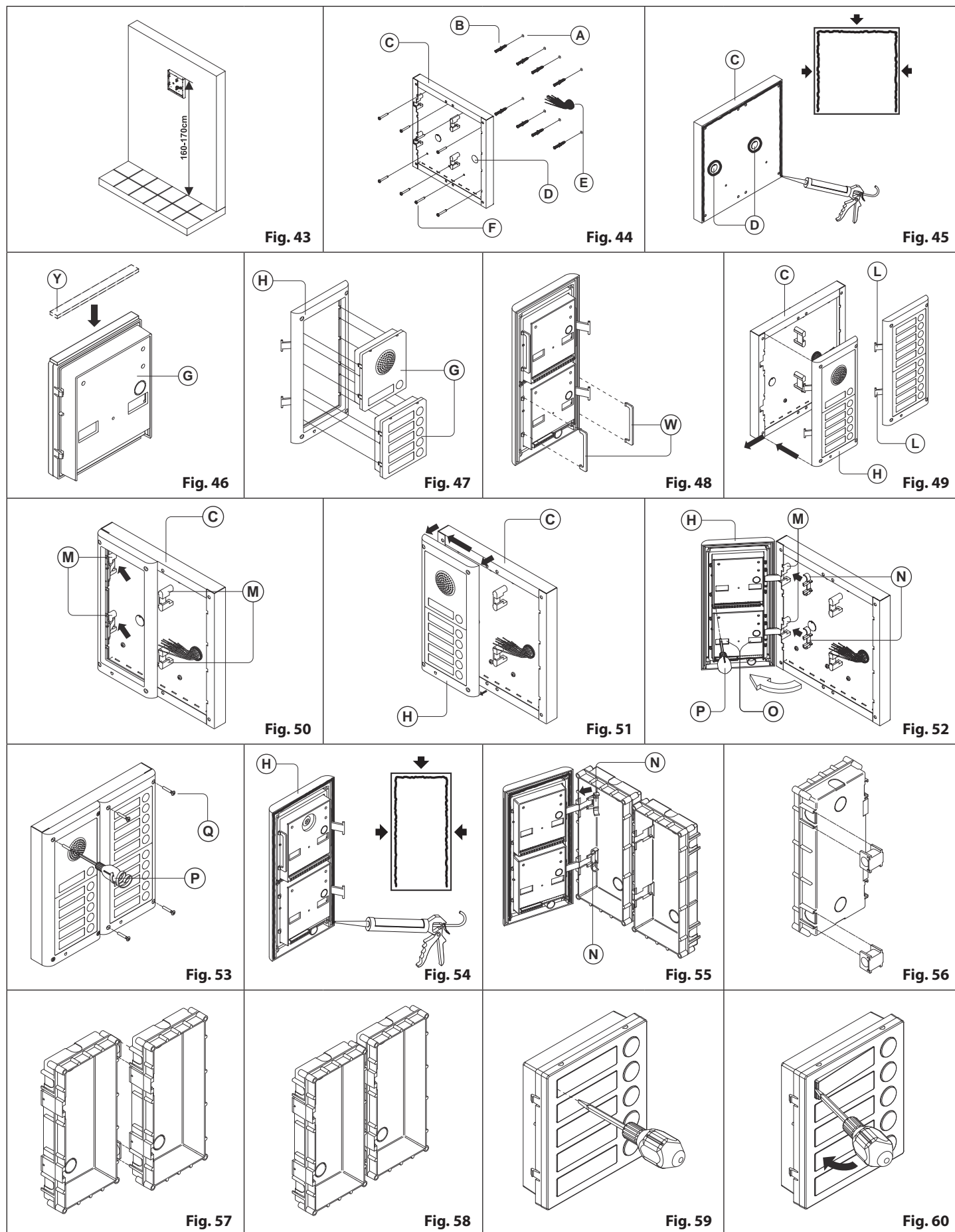
**Fig. 41**



**Fig. 42**

# 4000 Series Back Box Installation


## EXAMPLE: INSTALLING A 4000 SERIES FOUR MODULE BACK BOX



## 4000 Series Back Box Installation

### INSTALLING A SURFACE MOUNT DOOR STATION

- Place the surface box against the wall (165-170cm between the top of the box and the floor level as shown in **Fig.43**), mark the fixing holes (A) for the wall plugs (B) and the hole for the cables (E) (**Fig.44**). Observe the orientation of the box with the hinge on the left;

 **In order to prevent water ingress we highly recommend using a silicon sealant between the wall and the back box (C), ON THE LEFT, TOP AND RIGHT SIDES ONLY AND AROUND ALL HOLES (D). DON'T USE SILICON SEALANT ON THE BOTTOM SIDE OF THE BACK BOX (Fig.45);**

- As shown on **Fig.44**, drill the fixing holes (A), insert the wall plugs (B) and feed the cables (E) through the surface box opening (D), fix surface box (C) to the wall using the screws (F);
- Apply the (Y) neoprene seal on top of each module (G) as shown in **Fig.46**;
- Before installation of the module support frame, hook the modules (G) to the support frame (H) as shown in **Fig. 47** then, as shown in **Fig.48**, fit the two anti-tampering locks (W) for each module (do the same for the second module support frame);
- When you have more than one support frame, hook the support frame to the surface box starting from the left. For convenience we will describe how to attach the left frame but the same procedure must be carried out for the right frame. As shown in **Fig.49**, hook the module support frame (H) (complete with modules) to the surface box (C) moving the frame as suggested from the pointers. Ensure that the pivots (L) (**Fig.49**) go inside the relevant hinge housing (M) as shown in **Fig.50**;
- As shown on **Fig.51**, pull back the module support frame (H) while moving it slightly to the left as suggested by the pointers;
- As shown in **Fig.52**, open the module support frame (H) as suggested by the pointer, hook the hinge locks (N) to the hinge housings (M), make the required connections using the screwdriver provided (P) (flat blade end) and make the required adjustments by adjusting the settings (through openings (O)) and adjust trimmers;
- Repeat the same steps described above for the second module support frame (or for the third if available);
- When the system has been tested and is working correctly, move back the module support frames carefully, fix them to the surface box using the screwdriver provided (P) (torx end) and the pin machine torx screws (Q) (**Fig.53**). **Note: do not over tighten the screws more than is necessary.**


### INSTALLING A FLUSH MOUNTING DOOR STATION

When flush mounting and the number of modules is greater than 3, the required back boxes need to be linked together (before embedding them into the wall) as shown on **Fig.56, Fig.57 and Fig.58**:

- Arrange the back boxes and remove knockouts to allow cables to be fed from one back box to the other;
  - Hook the spacers to the first back box then hook the second back box to obtain the result shown on **Fig.58**;
- Protect the module support frame fixing holes from dust then embed the back box into the wall (165-170cm between the top of the box and the floor level as shown on the **Fig.43**) feeding the cables (E) (**Fig.44**) through a previously opened hole in the box. Observe the direction of the box ensuring the hinge is on the left and take care that the box profile is in line with the finished wall profile;

 **In order to prevent water ingress we highly recommend using a silicon sealant between the module support frame (H) and the back box (C), ON THE LEFT, TOP AND RIGHT SIDES ONLY. DON'T USE SILICON SEALANT ON THE BOTTOM SIDE OF THE MODULE SUPPORT FRAME (Fig.54);**

- Continue from step 4 of surface mounting instructions, but at step 7 hook the hinge locks (N) as shown on **Fig.55**.

 **Note: if additional holes are made in the surface box, oxidation problems may appear unless the unprotected metal is coated with a protective paint.**

### NOTES

- The screwdriver's blade has two sides, one flat and one torx, to select one of them unplug the blade from the screwdriver body and plug it into the required side.
- The example shows the use of only one back box bottom hole for wires, this is done to keep file drawings clear. Naturally the installer can use the left hole or the right or both if required.

### HOW TO REMOVE THE CARD NAME HOLDER

- To avoid damage to the module front plate, tape the side that will be in contact with the screwdriver blade;
- Insert the screwdriver (flat side) into the card-holder hole as shown in **Fig.59**;
- Move the screwdriver to the left as shown in **Fig.60** to extract the card name holder;
- Edit the card name then replace it inside the holder and refit: insert the holder inside its housing from the left or right side then push the other side until it clips into place.

# Programming the GSM Intercom

## PROGRAMMING THE GSM INTERCOM

Programming the GSM LITE intercom can be carried out by sending text (SMS) messages to the module.

**IMPORTANT NOTE:** When you are required to use " in a text message it is very important to use the correct symbol and not for example ' (or two ' single apostrophes side by side which you will see look the same but will be interpreted differently by the GSM LITE intercom panel).

## PROGRAMMING BY TEXT MESSAGE

Programming by text message is a simple way to customise the settings of the GSM LITE intercom panel and add or delete telephone numbers. Simply send texts in the following format shown below to the telephone number of the SIM within the GSM LITE intercom panel:

<4 DIGIT CODE> <3 DIGIT FUNCTION CODE> <OPTIONAL DATA> <OPTIONAL ?>

### 4 DIGIT CODE

This code prevents unauthorised access to the programmable features of the system. The code must be four digits long but can be any combination using digits 0 – 9. The default code is 1111 and will be used for all examples in this manual.

### 3 DIGIT FUNCTION CODE

The 3 digit function code identifies the programmable feature to be changed. The code must be in capital letters. The following table lists the available codes.

DESCRIPTION	CODE	EXAMPLE	SETTINGS	DEFAULT	PAGE
Store a primary telephone no.	STN	1111STNnnn"01912243174"	nnn = 001 - 004	n/a	30
Store divert telephone no.	STD	1111STDnnn"01912241559"	nnn = 001 - 004	n/a	30
Store a primary telephone no. and divert no in a single text message	STN	1111STNnnn"pn","dn" 1111STNnnn"01912243174", "01912241559"	nnn = 001 - 004 pn = primary no. dn = divert no.	n/a	30 - 31
Store a dial to open no. (DTO) <b>or</b> Store up to 5 dial to open no's (DTO) in a single text message to the next available locations	STR	1111STRnnn"07771234567" 1111STR"n1","n2","n3","n4","n5" 1111STR"01912243174", "01912241559","01912243678", "01912245326","07897123456"	nnn = 000 - 099 <b>or</b> nnn = optional n1 = 1st DTO n2 = 2nd DTO n3 = 3rd DTO n4 = 4th DTO n5 = 5th DTO	n/a	31 - 32
Delete a dial to open no. without knowing it's location	DET	1111DET"01912243174"	n/a	n/a	33
Set call time	SPT	1111SPTnn	nn = 01 - 12	02 (40s)	33
Set relay time	RLT	1111RLTnn	nn = 00 - 99	05 (5s)	33
Set auxiliary AO1 output time	A1T	1111A1Tnn	nn = 00 - 99	05 (5s)	33
Set auxiliary AO1 out mode	A1M	1111A1Mnn	nn = 00 - 05	01	33 - 34
Keep connection facility	NOD	1111NODnn	nn = 01 - 99	0 (disabled)	34
Divert to next no. time	DIT	1111DITnn	nn = 01 - 99	15 (15s)	34
Check GSM signal strength	SIG	1111SIG?	n/a	n/a	34
Check software version	VER	1111VER?	n/a	n/a	34
Dial a number	DLE	1111DLE"123"	n/a	n/a	34 - 35
Store SMS message for g-4	SMS	1111SMS"HouseAlarm"	n/a	AUX TRIG	35
Change 4 digit code	CDE	1111CDE1234	Any 4 digits	1111	35
Trigger the relay	RLY	1111RLY	n/a	n/a	35
Trigger the auxiliary output AO1	A1O	1111A1O	n/a	n/a	35
Store balance check dial string	SDL	1111SDL"*#1345#"	n/a	n/a	35
Check credit balance	BAL	1111BAL?	n/a	n/a	35 - 36
Store master telephone no.	STM	1111STM"07771234567"	n/a	n/a	36
Latch the relay	RLA	1111RLA	n/a	n/a	36
Unlatch the relay	RUL	1111RUL	n/a	n/a	36
Latch the auxiliary AO1 output	A1L	1111A1L	n/a	n/a	36
Unlatch the auxiliary AO1 output	A1U	1111A1U	n/a	n/a	36
Input status check and set	CHK	1111CHK?	n/a	n/a	36 - 37
Silent dialling mode	AUE	1111AUEnn	nn = 00 or 01	01	37

## Programming the GSM Intercom

Send tone after answer (But 1)	DTP	1111DTPn	n = 0 - 9 or X	X	37
Send tone after answer (Div 1)	DTD	1111DTDn	n = 0 - 9 or X	X	37
Send DTMF tone delay	DTT	1111DTTnn	nn = 01 - 12	03	37
Enable dial 0 on answer function	EDZ	1111EDZnn?	nn = 00 or 01	00	37 - 38
Enable # (hash) function	ED#	1111ED#nn?	nn = 00 or 01	00	38
Find a telephone number	FDT	1111FDT" number or ends in"	n/a	n/a	38
End on Last Divert	EOD	1111EODnn?	nn = 00 or 01	00	38
Shutdown and Restart	RBT	1111RBT	n/a	n/a	39
Simulate button press via SMS	BUT	1111BUTnn	nn = 01 - 50	n/a	39
Initiate a special command	PRG	1111PRG(command)	AT commands	n/a	39
AT command to send at start up	AT1	1111AT1"ATxxxxxx"?	Any AT command	n/a	39
AT command to send at start up	AT2	1111AT2"ATxxxxxx"?	Any AT command	n/a	39
AT command to send at start up	AT3	1111AT3"ATxxxxxx"?	Any AT command	n/a	39
Obtain the GSM's IMEI number	IME	1111IME?	n/a	n/a	39
Unlatch prevention feature	LLA	1111LLAnn?	nn = 00 or 01	00	40

### OPTIONAL DATA

The optional data will vary depending on the command used. It may be a telephone number, a time setting or may not be used at all. For more information refer to the following command settings.

### OPTIONAL ?

Most of the commands support the ? feature. When this is added to the end of the text message, a confirmation text message will be sent back to the sender indicating the new data has been received and stored.

When sending text messages there may be a delay from when you send the message to when it is received by the GSM LITE depending on how congested the network is. If you are at the intercom panel when sending the message you will hear a single beep from the GSM LITE intercom to indicate it has received the message.

### STORING THE CALL BUTTON TELEPHONE NUMBERS (STN AND STD)

Telephone numbers can be stored for the 4 available call buttons. Each call button can call two telephone numbers, if the first number is busy or not answered in a certain time it can call a second number if the divert facility is setup. The STN code stores the first number called (primary number) when the button is pressed, while the STD code stores the second number to be called (divert number) if the first is busy or not answered. The messages to store/check numbers are as follows (replace STN with STD when storing/checking divert number).

1111STNnnn"yyyyyyyyyy"	Store the primary telephone number yyyyyyyyyy in position nnn.
1111STNnnn"yyyyyyyyyy"?	Store the telephone number yyyyyyyyyy in position nnn and send a confirmation text message to confirm storage of new number.
1111STNnnn?	Query the telephone number stored in location nnn. A text message will be sent to the sender with the stored number for that location.
1111STNnnn""	Delete the telephone number stored in location nnn.
1111STNnnn""?	Delete the telephone number stored in location nnn. A text message will be sent to the sender with the delete confirmation for that location.

nnn is a button number between 001 and 004. The telephone number y can be a maximum of 30 digits. For example: to store the number 01912243174 for button 2 and a divert number (if the first one is not answered or busy) of 01912241558, the two SMS messages would be sent to the GSM intercom:

1111STN002"01912243174" (primary no.)

followed by,

1111STD002"01912241558" (divert no.)

**IMPORTANT NOTE:** When sending the command 1111STNnnn? to query the telephone number stored for the call button the GSM LITE will reply with the list of all the numbers stored for that call button i.e. the primary number and the divert number as shown in the example below \*.

### STORING THE PRIMARY AND DIVERT NUMBER IN A SINGLE TEXT MESSAGE (USING STN)

It is also possible to program the primary telephone number and the divert number for a particular call button in a single text message instead of using the individual programming codes STN and STD for the numbers. Expanding on the STN programming command the text messages used to store/check the primary number and divert number are as follows.

1111STNnnn"pn" (or 1111STNnnn"yyyyyyyyyy") 1111STNnnn"pn","dn"	Store the primary number and divert number in position nnn, (where pn = primary no, dn = divert no and nnn = call button 001 - 004).
---	--



## Programming the GSM Intercom

1111STNnnn"pn"? (or 1111STNnnn"yyyyyyyyyy"?) 1111STNnnn"pn";dn"?	Store the primary number and divert number in position nnn, (where pn = primary no, dn = divert no and nnn = call button 001 - 004), also send confirmation of stored numbers for that location.
---	--

Using the same telephone numbers from the previous example: to store the primary number 01912243174 (pn) for button 1 and the divert number of 01912241558 (dn), the following single text message would be sent to the GSM intercom instead of sending two individual text messages:

**1111STN001"01912243174";01912241558"**

Remember an optional ? can be included at the end of the message to receive confirmation of the stored numbers, like so:

**1111STN001"01912243174";01912241558"?**

\* The following reply will be received from the GSM LITE:

**MEM 001 = 01912243174  
MEM (DIVERT 1) 001 = 01912241558  
OK VIDEX GSM**

Remember to include " and , where appropriate.

### STORING A DIAL TO OPEN NUMBER (STR)

Dial in door release or dial to open (DTO) allows users to release the door/gate simply by dialling the telephone number of the SIM in the GSM LITE intercom panel. The intercom panel will check the callers ID when it receives a call and if it matches the list of stored numbers, it will clear the call down (avoiding the caller being charged for the call) and will activate the relay for the programmed time. Up to 100 numbers can be stored (000 - 099). The messages to check, store or delete numbers are as follows.

1111STRnnn"yyyyyyyyyy"	Store the telephone number yyyyyyyyyy in position nnn, where nnn = 000 - 099.
1111STRnnn"yyyyyyyyyy"?	Store the telephone number yyyyyyyyyy in position nnn, where nnn = 000 - 099, and send a confirmation text message to confirm storage of new number.
1111STRnnn?	Query the telephone number stored in location nnn, where nnn = 000 - 099. A text message will be sent to the sender with the stored number for that location.
1111STRnnn""	Delete the telephone number stored in location nnn, where nnn = 000 - 099.
1111STRnnn""?	Delete and confirm deletion of a telephone number in location nnn, where nnn = 000 - 099.

**IMPORTANT NOTE:** It is important to switch OFF voicemail and automatic SMS features on the SIM card in the GSM intercom when using this feature (see the 'Forced Dial' section for more details). Also note that it will not be possible to use the dial in to speak facility from a number stored to release the door/gate when dialling in (door release takes priority).

Please also note it is important that the number stored, when dialling in to release the door/gate, must have any "caller ID" or "withhold or withheld number" function switched OFF on the telephone/mobile that is making the call to the GSM intercom. If this feature is not switched OFF the GSM intercom will not recognise the caller's number and no further action will take place.

### STORING UP TO 5 DIAL TO OPEN NUMBERS IN A SINGLE TEXT MESSAGE TO THE NEXT AVAILABLE LOCATIONS (STR)

It is also possible to program up to a maximum of 5 dial to open numbers (DTO) at a time to the next available memory locations and in a single text message instead of programming them individually. Expanding on the existing STR programming command the text messages used to store/check the dial to open numbers are as follows.

1111STR"n1" 1111STR"n1";n2" 1111STR"n1";n2";n3" 1111STR"n1";n2";n3";n4" 1111STR"n1";n2";n3";n4";n5"	Store the dial to open numbers (DTO) to the next available memory location(s), where n1 = 1st DTO number, n2 = 2nd DTO number, n3 = 3rd DTO number, n4 = 4th DTO number, n5 = 5th DTO number.
1111STR"n1" ? 1111STR"n1";n2"? 1111STR"n1";n2";n3"? 1111STR"n1";n2";n3";n4"? 1111STR"n1";n2";n3";n4";n5"?	Store the dial to open numbers (DTO) to the next available memory location(s), where n1 = 1st DTO number, n2 = 2nd DTO number, n3 = 3rd DTO number, n4 = 4th DTO number, n5 = 5th DTO number, also send confirmation text of DTO numbers and locations of where they are stored.

For example to store the following 5 dial to open numbers (DTO): 01912243174 (n1), 01912241558 (n2), 07771234567 (n3), 01912241559 (n4) and 07897123456 (n5) respectively to start from the next available memory location, the following single text message would be sent to the GSM intercom instead of sending 5 individual text messages:

**1111STR"01912243174";01912241558";07771234567";01912241559";07897123456"**

Similarly if only 3 dial to open numbers (DTO) n1, n2 and n3 were required, the following message would be sent:

## Programming the GSM Intercom

1111STR"01912243174","01912241558","07771234567"

Remember an optional ? can be included at the end of the message to receive confirmation of the stored numbers, like so:

1111STR"01912243174","01912241558","07771234567","01912241559","07897123456"?

The following reply will be received from the GSM LITE:

MEM OPEN 003 = 01912243174  
 MEM OPEN 004 = 01912241558  
 MEM OPEN 005 = 07771234567  
 MEM OPEN 006 = 01912241559  
 MEM OPEN 007 = 07897123456  
 OK VIDEX GSM

Remember to include " and , where appropriate. In the example above if locations 001 and 002 already had numbers programmed then the dial to open numbers (DTO) n1, n2, n3, n4 and n5 would be stored in the GSM LITE starting from location 003 up to 007.

**IMPORTANT NOTE:** It should be noted that when programming multiple dial to open numbers (DTO) using this command the GSM LITE starts checking for free memory locations from 001 to see if there is enough available space to store them. So if the number of DTO numbers being programmed is greater than the number of available locations the GSM LITE will skip to find the next available location that has enough space to store the numbers.

For example: the DTO locations from 001 to 003 and locations from 006 to 008 may be occupied with DTO numbers, location 004, location 005 are available and locations from 009 onwards are available (refer to table on the right). If the intention is to store three DTO numbers: 01912243174 (n1), 01912241558 (n2), 07771234567 (n3). The following text message would be sent to the GSM LITE:

1111STR"01912243174","01912241558","07771234567"?

The GSM LITE will reply with the following text:

MEM OPEN 009 = 01912243174  
 MEM OPEN 010 = 01912241558  
 MEM OPEN 011 = 07771234567  
 OK VIDEX GSM

DTO location	Location status (free/occupied)
001	occupied location
002	occupied location
003	occupied location
004	free location
005	free location
006	occupied location
007	occupied location
008	occupied location
009	free location
010	free location
011	free location

In the example above although the DTO locations 004 and 005 are available the programming command sent to the GSM LITE is to store three DTO numbers. As the quantity of DTO numbers to be stored is greater than the number of memory locations available from location 004 the GSM LITE will look for the next set of free locations that is able to accommodate the three DTO numbers. So in this example the GSM LITE will bypass locations 004 and 005 as there isn't sufficient space to store the three DTO numbers, it will also bypass locations 006, 007 and 008 as these locations are already occupied. However the locations from 009 onwards are free to use so the GSM LITE will store the first DTO number (n1) in location 009 and then the next DTO number (n2) in location 010 and so on.

**IMPORTANT NOTE:** It is also possible that when storing multiple DTO numbers using the STR code a start location, nnn, can be included in the programming command i.e. 1111STRnnn"n1","n2","n3","n4","n5". However when a start location is included in the command, while the GSM LITE will store the DTO numbers from this location, any memory location after it that already has a DTO number stored will be overwritten with the new DTO number.

Using the same details from the previous example: The DTO locations from 001 to 003 and 006 to 008 are already occupied with DTO numbers, location 004 and 005 are available. Locations from 009 onwards are also available (refer to previous table). If the intention is to store the following three DTO numbers: 01912243174 (n1), 01912241558 (n2), 07771234567 (n3) starting from location 004. The following text message would be sent to the GSM LITE:

1111STR004"01912243174","01912241558","07771234567"?

The GSM LITE will reply with the following text:

MEM OPEN 004 = 01912243174  
 MEM OPEN 005 = 01912241558  
 MEM OPEN 006 = 07771234567  
 OK VIDEX GSM

In this example the 1st and 2nd DTO numbers 01912243174 (n1) and 01912241558 (n2) would be stored in the available locations 004 and 005 as expected, however the 3rd DTO number 07771234567 (n3) would overwrite the number that was already stored in location 006.



## Programming the GSM Intercom

### DELETE A DIAL TO OPEN NUMBER WITHOUT KNOWING IT'S LOCATION (DET)

Although a dial to open number (DTO) can be deleted from the GSM LITE using the programming command **1111STRnnnn"?**, it is also possible to delete a dial to open number if the location is not known. The following messages can be used to delete and confirm a dial to open number has been deleted from the GSM LITE.

<b>1111DET"yyyyyyyyyy"</b>	Delete the dial to open number yyyyyyyyyy (where yyyyyyyyyy DTO number).
<b>1111DET"yyyyyyyyyy"?</b>	Delete the dial to open number yyyyyyyyyy (where yyyyyyyyyy DTO number). Also send a confirmation text back to the sender.

Note that when using this command the full telephone number **will be required** otherwise the GSM LITE will respond with:

NOT FOUND  
OK VIDEX GSM

### SET CALL TIME (SPT)

The call time is the maximum time in seconds that a call will last before the GSM LITE intercom automatically clears the call down. The time can be set from 20 seconds up to 240 seconds (4 minutes) and begins from when the call button is first pressed. The default time is set to 40 seconds. The following messages can be used to set/check the maximum call time.

<b>1111SPTnn</b>	Store the time nn x 20 seconds (e.g. nn = 03, time = 60 seconds).
<b>1111SPTnn?</b>	Store the time nn x 20 seconds (e.g. nn = 02, time = 40 seconds, refer to table below), also send a confirmation text back to the sender.
<b>1111SPT?</b>	Query the current stored time. A text message will be sent back to the sender showing the stored time (remember to multiply the number in the received text by 20 seconds).

<b>nn multiplier:</b>	nn = 01, time = 20 secs	nn = 02, time = 40 secs	nn = 03, time = 60 secs
	nn = 04, time = 80 secs	nn = 05, time = 100 secs	nn = 06, time = 120 secs
	nn = 07, time = 140 secs	nn = 08, time = 160 secs	nn = 09, time = 180 secs
	nn = 10, time = 200 secs	nn = 11, time = 220 secs	nn = 12, time = 240 secs

### SET RELAY TIME (RLT)

The relay time can be from 01 – 99 seconds or latching (set the relay time to 00 for latched mode. In latch mode, the relay will stay energised until the command is sent again).

<b>1111RLTnn</b>	Store the relay time nn = time in seconds (e.g. nn = 05, time = 5 seconds).
<b>1111RLTnn?</b>	Store the relay time nn = time in seconds. Also send a confirmation text back to the sender.
<b>1111RLT?</b>	Query the current stored relay time. A text message will be sent back to the sender showing the stored relay time.

### SET AUXILIARY OUTPUT AO1 TIME (A1T, FOR A1M = 01 ONLY)

The auxiliary output AO1 time can be set from 01 - 99 seconds or latching (set the AO1 output time to 00 for latched mode. In latch mode the AO1 output will stay triggered until the relevant command is sent again to unlatch the AO1 output. This option is only available when the AO1 output mode, **A1M**, is set to mode 01. Please refer to the **A1M** commands below for more details).

<b>1111A1Tnn</b>	Store the AO1 time nn = time in seconds (e.g. nn = 05, time = 5 seconds).
<b>1111A1Tnn?</b>	Store the AO1 time nn = time in seconds. Also send a confirmation text back to the sender.
<b>1111A1T?</b>	Query the current stored AO1 time. A text message will be sent back to the sender showing the stored AO1 time.

### SET AUXILIARY OUTPUT AO1 MODE (A1M, MODES 00 - 05)

The auxiliary output AO1 has up to six modes that can be set:

**Call Activated: nn = 00**

AO1 output will activate when a call begins and deactivate when a call ends. See example, **Fig.16**, on page 18.

**User Activated: nn = 01**

To activate the AO1 output either short terminals **g** to **5** (auxiliary 1 input) on the GSM LITE intercom or press **6** on the telephone during a call. See example, **Fig.17**, on page 18.

**Used for Status Indication: nn = 02**

When in this mode, the AO1 terminal is used exclusively for monitoring the status of an input. For example, checking if a gate/door is open or closed. See example, **Fig.18**, on page 19.

## Programming the GSM Intercom

### Divert Calls to Master Number: nn = 03

When in this mode, the AO1 terminal is used exclusively for monitoring the status of a switched input to decide if calls should be diverted to the master number or not. See example, **Fig.19**, on page 19.

### Call Activate (Timed): nn = 04

AO1 output will activate when a call begins and deactivate when the auxiliary 1 output time (A1T) expires. See example, **Fig.20**, on page 20.

### Enable/Disable "Dial to Open": nn = 05

When in this mode, the AO1 terminal is used to enable/disable the dial to open feature via an external C/NO switched input across terminals **AO1** & **g**, (for example the C/NO relay contacts on a timeclock could be connected across terminals **AO1** & **g** on the GSM LITE intercom. When the timeclock relay is ON then no dial to open numbers are allowed. The GSM LITE answers the call and awaits the master code to be entered. When the timeclock relay is OFF all dial to open numbers will operate as normal). See example, **Fig.21**, on page 20.

1111A1Mnn	Store the AO1 mode nn = 00 - 05.
1111A1Mnn?	Store the AO1 mode nn = 00 - 05. Also send a confirmation text back to the sender.
1111A1M?	Query the current stored AO1 mode. A text message will be sent back to the sender showing the stored A1O mode.

### SET DAYS TO WAIT BEFORE MAKING A CALL (NOD)

In the event the GSM LITE intercom panel is not used for long periods of time it could be possible that the network disconnects it. To prevent this from happening it is possible to program a time period (from 01 – 99 days or disabled 00) to wait before the intercom panel makes a short call to refresh the connection to the network. This time period is reset after each call made on the system and will only happen if the full time period elapses without any incoming or outgoing calls.

1111NODnn	Store the time nn = time in days (e.g. nn = 07, time = 7 days).
1111NODnn?	Store the time nn = time in days. Also send a confirmation text back to the sender.
1111NOD?	Query the current stored time. A text message will be sent back to the sender showing the stored time.

### DIVERT TIME (DIT)

The divert time is the number of seconds to wait for a call to be answered before diverting to the second number. The default time is 15 seconds (the count down begins from when the call button is pressed, but is refreshed when the telephone begins to ring) and can be set from 01 – 99 seconds.

1111DITnn	Store the divert time nn = time in seconds (e.g. nn = 15, time = 15 seconds).
1111DITnn?	Store the divert time nn = time in seconds. Also send a confirmation text back to the sender.
1111DIT?	Query the current stored divert time. A text message will be sent back to the sender showing the stored divert time.

### CHECK SIGNAL STRENGTH (SIG)

At any time the signal strength of the GSM LITE can be checked (also see notes **understanding the signal strength** on page 44). It is advisable that when the GSM is first setup and before any other programming is carried out to check the signal strength of the GSM LITE intercom. If the signal strength is too low the GSM intercom may not operate properly and therefore the GSM antenna will need to be repositioned to increase the signal strength. Use the following command to check the signal strength.

1111SIG?	Check the signal strength of the GSM LITE intercom and send a confirmation text back to the sender.
----------	---

### CHECK SOFTWARE VERSION (VER)

It is possible to check the current version of software in the GSM LITE module. This may be necessary to see if an update is required for any additional features or updates on the GSM LITE intercom which may be included on later versions. Use the following command to check the software version.

1111VER?	Check the software version of the GSM LITE intercom and send a confirmation text back to the sender.
----------	--

### FORCED DIAL/DIAL A NUMBER (DLE)

A useful feature of the GSM LITE intercom is its ability to call a number sent to it in a text message. This feature can be used when setting up the SIM card. For example, disabling the voicemail facility or disabling automatic SMS messages or missed calls. Any

## Programming the GSM Intercom

number up to 15 digits can be called and the call will last for a maximum of 40 seconds. The example below would switch OFF voicemail on a Vodafone SIM card. Substitute the Vodafone number for other service providers.

1111DLE"1210"	Dial 1210 for the intercom panel.
---------------	-----------------------------------

Other useful numbers which can be used with this feature are as follows. Please also check the network service provider's web sites for other useful codes.

	Vodafone	O <sup>2</sup>
DISABLE VOICEMAIL	1210	1760
DISABLE TEXT ALERTS	#148#	1760

**IMPORTANT NOTE:** Disabling voicemail and text alerts is very important as there is no way to retrieve either of these services from a GSM intercom panel. Disabling these features will also prevent the intercom panel switching to voicemail or sending a text when dialling in from another phone.

### STORE SMS AUXILIARY MESSAGE (SMS, WHEN AUXILIARY INPUT 2 IS TRIGGERED)

When terminals **g** & **4** (auxiliary input 2) are triggered on the GSM LITE intercom, a text message will be sent to the master telephone number. The text message can be customised using the following command.

1111SMS"HouseAlarm"	Change SMS message to HouseAlarm.
---------------------	-----------------------------------

Please also note that the message can be a maximum of 32 characters long and cannot include spaces or " as part of the message. See an example of this feature, **Fig.22**, on page 21.

### CHANGE THE FOUR DIGIT CODE (CDE)

The four digit code can be any combination of numbers between 0-9 but must be 4 digits long. The code allows access to the programming menu in dial in mode and must be used when sending text messages to the GSM intercom panel. Use the following message to change the code.

1111CDEnnnn	Change the 4 digit code to nnnn (where nnnn = new 4 digit code).
-------------	--

### TRIGGER THE RELAY (RLY)

There are a few ways to trigger the GSM's relay. The first is to press button **3** on the telephone during a call and the relay will operate for the programmed time. Another way is to send the following text message.

1111RLY	Operate the GSM relay (for the programmed time).
1111RLY?	Operate the GSM relay (for the programmed time) and send a confirmation text back to the sender.

### TRIGGER AUXILIARY OUTPUT AO1 (A1O)

It is possible to trigger the auxiliary output AO1 for the programmed AO1 output time (please note that this method of triggering auxiliary output AO1 is only possible when the **A1M** mode has been set to mode **01**: user activated, also refer to **A1M** notes on page 33 and the example on page 18, **Fig.17**). This can be done by shorting terminals **g** & **5** on the GSM LITE intercom, pressing button **6** on the telephone during a call or by sending the following message to the GSM intercom.

1111A1O	Trigger auxiliary output AO1 (for the programmed time).
1111A1O?	Trigger auxiliary output AO1 (for the programmed time) and send a confirmation text back to the sender.

### STORE BALANCE CHECK DIAL STRING (SDL)

Several network providers offer the facility to check available balance on their pay as you go tariffs. For example, on Vodafone the string is **\*#1345#** and on O2 the string is **\*#10#**. Other networks may also have this feature. Because the intercom will not know the details of the network provider's SIM card which you have inserted it will be necessary to store the correct string in order to use the credit balance check features.

1111SDL"*#1345#"	Store the balance check string for a Vodafone pay as you go.
1111SDL"*#10#"	Store the balance check string for an O <sup>2</sup> pay as you go.

**IMPORTANT NOTE:** Videx are only aware of the balance check dial string codes for the network providers mentioned above. Check dial string codes for other networks are currently unavailable at this time. Please also note that this programming function is only applicable for pay as you go SIM cards.

### CHECK CREDIT BALANCE (BAL)

The balance can only be checked if the correct balance check string has previously been stored using the **SDL** code explained above. At any point the user will be able to send the following text message and the GSM LITE intercom will reply with the current balance stored on the SIM card.

## Programming the GSM Intercom

1111BAL?	Check current balance of the SIM in the GSM LITE intercom and send a confirmation text back to the sender.
----------	--

In addition to this feature the GSM LITE intercom also has the facility to monitor the available credit and then text the user to inform them when the credit has fallen below £5.00, €5.00 or \$5.00. It will then remind the user with another text after every 5 calls until the credit has either increased or if it runs out. To use this feature, the following settings must first be made:

- A Pay As You Go SIM card from a provider that offers this service (Vodafone, O2) must be used.
- The correct balance check string must be stored using the **SDL** code (see store balance check dial string).
- A mobile phone number that is to receive the 'balance low' text must be stored in the master telephone number location using the **STM** code (refer to 'store master telephone number' feature below).

### STORE THE MASTER TELEPHONE NUMBER (STM)

The master telephone number is the number which will receive automatic balance updates when the balance gets low (if this feature is setup) and will receive the SMS message if auxiliary input 2 is triggered (also refer to example on page 21, **Fig.22**). To store a master telephone number the following programming texts can be sent to the GSM LITE intercom.

1111STM"yyyyyyyyyyy"	Store the telephone number yyyyyyyyyyy.
1111STM"yyyyyyyyyyy"?	Store the telephone number yyyyyyyyyyy and send a confirmation text back to the sender.
1111STM?	Query the master telephone number stored. A text message will be sent to the sender with the stored number for that location.
1111STM""	Delete the master telephone number stored.
1111STM""?	Delete the master telephone number stored and send a confirmation text back to the sender.

### LATCH THE RELAY (RLA)

It is also possible to latch the GSM intercom relay closed. This function is particularly useful if the GSM intercom relay is connected to a gate controller (via an Art.120 pcb, refer to **Fig.13**, page 15) and the user wishes to 'hold open' the gate. The following text message can be sent to the GSM LITE intercom.

1111RLA	Latch the GSM LITE relay to the C/NO position.
1111RLA?	Latch the GSM LITE relay to the C/NO position and send a confirmation text back to the sender.

### UNLATCH THE RELAY (RUL)

If the GSM LITE's relay has been latched it is possible to unlatch the relay with the following text message.

1111RUL	Unlatch the GSM LITE relay back to the C/NC position.
1111RUL?	Latch the GSM LITE relay to the C/NC position and send a confirmation text back to the sender.

**IMPORTANT NOTE:** The GSM LITE's relay can also be unlatched by pressing 3 on the telephone during a call, unless the LLA feature has been enabled (also see LLA program notes on page 41).

### LATCH AUXILIARY OUTPUT AO1 (A1L)

Auxiliary output AO1, like the onboard relay, can be latched. To latch auxiliary output AO1 the following text message can be sent to the GSM LITE intercom.

1111A1L	Latch auxiliary output AO1.
1111A1L?	Latch auxiliary output AO1 and send a confirmation text back to the sender.

### UNLATCH AUXILIARY OUTPUT AO1 (A1U)

Auxiliary output AO1 can also be unlatched. To unlatch auxiliary output AO1 the following text message can be sent to the GSM LITE intercom.

1111A1U	Unlatch auxiliary output AO1.
1111A1U?	Unlatch auxiliary output AO1 and send a confirmation text back to the sender.

### CHECK INPUT STATUS (CHK)

**IMPORTANT NOTE:** This feature is only applicable when auxiliary output AO1 mode has been set to mode 02. If auxiliary output AO1 is set to any other mode then this feature will not work (also refer to Fig.18 on page 19 and setting auxiliary output AO1 mode, A1M, on page 33).

If the auxiliary output **A1M** mode has been set to mode **02** then the status of this mode can be checked by sending the following text to the GSM LITE intercom.

## Programming the GSM Intercom

<b>1111CHK?</b>	Check the current status of auxiliary output AO1 and send a confirmation text back to the sender.
-----------------	---

**Example:** Check the current status of auxiliary output AO1, the following text can be sent to the GSM LITE intercom:

**1111CHK?**

The GSM intercom will reply with either of the following texts:

<b>IN = OP</b>	or	<b>IN = CL</b>
<b>OK VIDEX GSM</b>		<b>OK VIDEX GSM</b>
<b>(status open)</b>		<b>(status closed)</b>

### SILENT DIALLING MODE (AUE)

When the GSM LITE intercom is calling the telephone number stored there is a choice of either hearing the ringing noise from the intercom panel or just hearing beeps to indicate a call is in progress.

- Ringing heard during calling: nn = 01
- Beeps heard during calling: nn = 00

The following text messages can be sent to the GSM to enable (00), disable (01) or query the setting of the silent dialling feature.

<b>1111AUEnn</b>	Set the silent dialling mode nn: 01 or 00.
<b>1111AUEnn?</b>	Set the silent dialling mode nn: 01 or 00 and send a confirmation text back to the sender.
<b>1111AUE?</b>	Query the current mode stored. A text message will be sent back to the sender confirming which silent dialling mode has been set.

### SEND DTMF TONE AFTER CALL ANSWERED FOR CALL BUTTON 1 (DTP, DTD AND DTT)

It is possible to set the GSM LITE intercom to send a DTMF tone after a call is answered. This option is only available for both the primary number and the divert number for button 1. This feature is useful if the intercom is dialling into a telephone system where an automated menu is present and a DTMF tone is required to select a particular option from the menu. This feature is disabled by default. The following programming text messages allow the user to setup the DTMF tone(s) required.

- The DTP command sets the DTMF tone required (from 0 - 9) after a call is answered for button 1.
- The DTD command sets the DTMF tone required (from 0 - 9) after the diverted call is answered for button 1.
- The DTT command sets the delay time from when the call is answered to when the DTMF is sent.

SET DTMF TONE REQUIRED FOR BUTTON 1 PRIMARY CALL	
<b>1111DTPn</b>	Set DTMF tone required, where n = 0 - 9 for DTMF tones 0 - 9 or X to disable this feature (for button 1).
<b>1111DTPn?</b>	Set DTMF tone required, where n = 0 - 9 for DTMF tones 0 - 9 or X to disable this feature. Also send a confirmation text back to the sender with the stored DTMF tone setting (for button 1).
SET DTMF TONE REQUIRED FOR BUTTON 1 DIVERT CALL	
<b>1111DTDn</b>	Set DTMF tone required, where n = 0 - 9 for DTMF tones 0 - 9 or X to disable this feature (for divert 1).
<b>1111DTDn?</b>	Set DTMF tone required, where n = 0 - 9 for DTMF tones 0 - 9 or X to disable this feature. Also send a confirmation text back to the sender with the stored DTMF tone setting (for divert 1).
SET THE DELAY TIME FROM WHEN THE CALL IS ANSWERED TO WHEN THE DTMF TONE IS SENT	
<b>1111DTTnn</b>	Set the time nn, where nn = 01 - 12 seconds.
<b>1111DTTnn?</b>	Set the time nn, where nn = 01 - 12 seconds and also send a confirmation text back to the sender of the time stored.
QUERY THE SETTINGS	
<b>1111DTP?</b>	Query the DTMF tone set, replies TP = n, where n = 0 - 9 or X.
<b>1111DTD?</b>	Query the DTMF tone set, replies TD = n, where n = 0 - 9 or X.
<b>1111DTT?</b>	Query the delay time set, replies TT = nn, where nn = 01 - 12 seconds.

### ENABLE THE DIAL '0' ON ANSWER FUNCTION (EDZ)

When enabled this feature allows an incoming call to be diverted to the programmed divert telephone number if the '0' button on the telephone has not been pressed after answering the call. This can be useful if the user's number has an answerphone service (or answer machine) and they do not want the call to be answered by this service or if the primary number (mobile no.) is switched off.



## Programming the GSM Intercom

The default for this function is disabled (set to 00). The following texts can be used to enable or disable this function.

<b>1111EDZnn</b>	Set the dial '0' function nn: 01 or 00 (01 = enable, 00 = disabled).
<b>1111EDZnn?</b>	Set the dial '0' function nn: 01 or 00 (01 = enable, 00 = disabled) also send a confirmation text back to the sender.
<b>1111EDZ?</b>	Query the dial '0' mode set.

When this feature is set the user answering the call must press '0' on their phone to accept the call otherwise the call will be diverted to the second (divert) number.

### ENABLE THE # (HASH) FUNCTION (ED#)

Once enabled the end user must press the # button on their phone before pressing any other button (also refer to the user command table on page 43) with the exception of when the user needs to enter the 4 digit programming code "1111".

The user will have up to 3 seconds to press the user command button (e.g. button 3 to activate the relay), if the user doesn't press the next button within the 3 second window they will have to press the # button again.

By default this function is disabled (set to 00). The following texts can be used to enable or disable this function.

<b>1111ED#nn</b>	Set the # function nn: 01 or 00 (01 = enable, 00 = disabled).
<b>1111ED#nn?</b>	Set the # function nn: 01 or 00 (01 = enable, 00 = disabled) also send a confirmation text back to the sender.
<b>1111ED#?</b>	Query the # mode set.

### FIND A TELEPHONE NUMBER (FDT)

The find a telephone number feature allows the user to find the dial to open location (between 000 - 099) of where a particular telephone number is stored in the GSM LITE intercom. It can locate the number either from using the full telephone number or a minimum of the last 4 digits of a number (see following examples). The following text messages can be used.

<b>1111FDT"yyyyyyyyyy"?</b>	Find dial to open location of telephone number yyyyyyyyyy stored, where yyyyyyyyyy = telephone number (minimum of 4 digits).
-----------------------------	--

**Example 1:** Find dial to open location of the telephone number using the full number **01234567890**, the following text can be sent to the GSM LITE intercom:

**1111FDT"01234567890"?**

The GSM intercom will reply with the following text:

**STORED IN nnn**  
**OK VIDEX GSM**

where nnn = the dial to open location of where the number is stored.

**Example 2:** Find dial to open location of the telephone number using the last 4 digits of the number **4567**, the following text can be sent to the GSM LITE intercom:

**1111FDT"4567"?**

The GSM intercom will reply with the following text:

**STORED IN nnn**  
**OK VIDEX GSM**

where nnn = the dial to open location of where the number is stored.

### END ON LAST DIVERT (EOD)

The end on last divert feature allows the GSM intercom to ring the programmed divert number as usual and if the divert number is not answered within the divert time it will then end the call. It will also end the call if there is no divert number stored in the GSM intercom.

By default this feature is disabled (set to 00), but can be enabled (set to 01). The following programming commands can be used to set/check the end on divert function.

<b>1111EODnn</b>	Set end on last divert to nn, where nn = 00 (disabled) or 01 (enabled).
<b>1111EODnn?</b>	Set end on last divert to nn, where nn = 00 (disabled) or 01 (enabled). Also send a confirmation text back to the sender.
<b>1111EOD?</b>	Query the end on last divert status stored in the GSM module.

## Programming the GSM Intercom

### SHUTDOWN AND RESTART (RBT)

This command feature allows the GSM LITE intercom to be remotely shutdown and then rebooted again. The following command can be sent to the GSM module.

1111RBT	Shutdown and restart the GSM module.
---------	--------------------------------------

**IMPORTANT NOTE:** This feature should not be confused with the 'hard-wired' reset (described on page 26). The RBT function simply powers down the GSM module and then powers it back up again.

### SIMULATE A BUTTON PRESS VIA SMS MESSAGE FOR BUTTONS 01-04 (BUT)

It is possible to simulate a button press (for the call button range 01 - 04) on the intercom by sending the following programming command, shown below, to the GSM LITE intercom. This feature can be useful if there is suspected fault with a call button or if there is an issue with the wiring for the buttons into the GSM's button matrix.

1111BUTnn	Simulate a button press for button number nn, where nn = button number 01 - 04.
-----------	---

The following commands are reserved for the technical department for interrogating the GSM LITE module when testing and applying specific additional features that are not covered in this technical manual. For the application of these commands please contact Videx Technical on tel: 0191 224 3174 for UK based customers and Videx customer support on tel: +39 0734 631699 for overseas customers.

### PROGRAM BY 'AT' COMMANDS (PRG)

This is an advanced feature of the system which can allow an 'AT' format command to be sent to the OEM GSM module.

1111PRG(command)	Send an 'AT' command to the OEM module.
------------------	---

### AT COMMAND SEND AT START UP (AT1, AT2 AND AT3)

The AT commands AT1, AT2 and AT3 are advanced commands of the GSM LITE that allows additional features to be incorporated into the module for testing purposes and include additional features for a specific application that is not already covered in this manual. The following commands can be sent to the GSM module.

1111AT1"ATxxxxxx"?	Include any AT command for AT1.
1111AT2"ATxxxxxx"?	Include any AT command for AT2.
1111AT3"ATxxxxxx"?	Include any AT command for AT3.

### OBTAIN THE GSM'S IMEI NUMBER (IME)

If the IMEI number (unique 15 digit number of the main internal hardware chip) of the GSM LITE intercom is required the following text message can be sent to obtain the number.

1111IME?	Query IMEI number of the GSM module, also send confirmation to the sender.
----------	--

**Example:** Obtain IMEI number of the GSM module, the following message can be sent to the GSM intercom:

1111IME?

The GSM LITE intercom will reply with the following text:

IMEI-357803045065535  
OK VIDEX GSM

**IMPORTANT NOTE:** If installing the GSM LITE for the first time, when registering the SIM card with the chosen network provider they may ask for the IMEI number of the GSM module. As the programming command described above will only work with a SIM card that has already been registered with a network the command will not work.

Instead to obtain the GSM's IMEI number, which is located on the main hardware chip internally, the GSM module will have to be opened. The IMEI number is printed on the Telit chip label just below the model number, as shown in Fig.61.

It is recommended that you contact Videx Technical on tel: 0191 224 3174 for UK based customers and Videx Customer Support: +39 0734 631669 for overseas customers for advise on how to do this.

Alternatively use a SIM that is already registered with another network provider and fit it into the GSM LITE intercom (following the procedure on page 25 for initialisation), then use the programming command above 1111IME? to obtain the GSM LITE's IMEI number so that when registering the actual SIM that will be used with the GSM LITE with the chosen network you will have the appropriate IMEI number to hand.

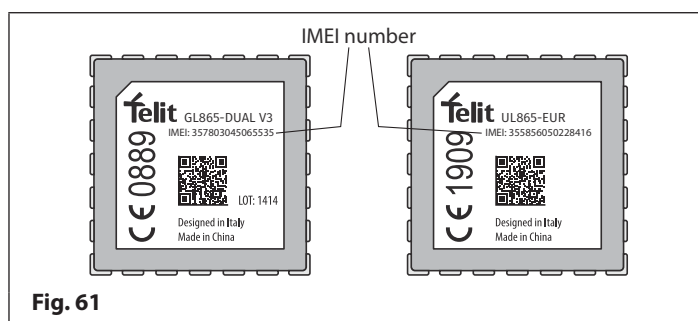


Fig. 61

## Programming the GSM Intercom

### UNLATCH PREVENTION FEATURE (LLA)

The unlatch prevention command **LLA**, when enabled, will prevent a programmed latched output (the GSM's relay or the auxiliary output) from being inadvertently unlatched by a DTO number or by pressing the relevant button (3) on the phone during a call. Even when this feature is enabled if either the GSM's relay or the auxiliary output have been setup to latch they can still be unlatched using the relevant **1111RUL** or **1111A1U** programming command.

By default this feature is disabled (set to 00), but can be enabled (set to 01). The following programming commands can be used to enable/disable and check the unlatch prevention feature.

<b>1111LLAnn</b>	Set the unlatch prevention feature to nn, where nn = 00 (disabled) or 01 (enabled).
<b>1111LLAnn?</b>	Set the unlatch prevention feature to nn, where nn = 00 (disabled) or 01 (enabled). Also send a confirmation text back to the sender.
<b>1111LLA?</b>	Query the status of the unlatch prevention feature stored in the GSM module.



# The GSM Mobile App

## THE VIDEX SMS WIZARD

In addition to programming by direct text messages it is also possible to program the GSM LITE intercom using the GSM mobile app, the **Videx SMS Wizard**.

The SMS wizard can be used to simplify the programming of the GSM intercom using SMS messages.



The SMS wizard generates the text message required to communicate with the GSM intercom. Depending on the model of the GSM (digital GSM, GSM PRO, GSM Lite, GSMVRK and 2270 GSM module) text messages can be generated to program features such as access codes, proximity access fobs/cards, dial to open (DTO) telephone numbers, assign pre-existing access levels, free access periods and call button/apartment telephone numbers.

Other features are also included to simplify the programming setup process. Additionally it is also possible for users to control their gate or door via the dial to open (DTO) or text message features.

## WHERE TO DOWNLOAD THE SMS WIZARD AND GETTING STARTED

The SMS wizard is available for both Android smart devices (mobile smartphones and tablets) and also Apple iOS (iPhones and iPads) and can be downloaded for free from the Google Play Store (for Android devices) and the App Store (for iOS devices).

Before using the SMS wizard the following details will be required for initial setup:

- **Model of the GSM intercom module** - e.g. Art.4811 (GSM LITE), Art.4812 or Art.4812R (digital GSM) etc.
- **Firmware level of the GSM intercom** - e.g. for the Art.4811 GSM LITE the firmware might be **LT3.0.4** (the firmware version of the GSM module can usually be found on the label on the back of the GSM intercom or by sending the text message **1111VER?** to obtain the firmware version, also refer to notes on page 34).
- **Telephone number of the GSM intercom** - i.e. the mobile number of the SIM card being used in the GSM module.
- **Master code of the GSM intercom** - i.e. the 4 digit code used for programming, by default this is set to '1111'. In the event that this code has been forgotten or lost please refer to '**change the 4 digit master code (CDE)**' notes on page 35 or '**resetting the master code to 1111**' notes on page 26 to reset the code back to factory default if required.

Once downloaded and installed it is recommended that you first tap on the help icon (?) in the top right corner of the app's homescreen and then follow the '**TO GET STARTED**' quick guide.

It should also be noted when navigating between the app's menu to the required programming screens the help icon (?), always located in the top right corner of each screen, can be used to offer additional guidance on how to use the current programming screen.

## SMS WIZARD APP COMPATIBILITY

The SMS wizard is compatible with the latest GSM intercoms and modules available. It is also compatible with the older Art.4810N model from firmware version **1.0.4** onwards.

# System Operation

## MAKING A CALL AND CANCELLING A CALL FROM THE GSM LITE INTERCOM TO THE PHONE

Press the required call button. Two beeps will be heard from the GSM LITE intercom to indicate the call has been placed.

If a mistake is made, simply press any other button to cancel the call, a long beep will be heard to confirm the call has been cancelled.

**IMPORTANT NOTE:** If the silent dialling mode AUE has been left on default (i.e. silent dialling mode disabled) a normal telephone dial tone will be heard through the GSM's speaker after the call button has been pressed to indicate that the number is being called. If the same button is pressed again after five seconds of placing the initial call this will also cancel the call. Pressing the same button before the five seconds is up will do nothing.

## ANSWERING AND ENDING A CALL FROM THE GSM LITE INTERCOM

After answering the call the speech will be open and a conversation can take place. While the speech is open the user can:

- release the door/gate (see notes below).
- latch the door/gate (see notes below).
- activate the auxiliary output **AO1** (depending on auxiliary mode setup, also see programming notes).
- adjust speech volumes to and from the GSM LITE.

Also refer to the **user command tables** on page 43.

To end the call simply hang up the phone.

## DIVERTED CALL

First make a call from the GSM intercom, as described above. If a divert number is programmed and the primary number is not answered the GSM will then dial the divert number after the programmed divert time **DIT** has elapsed (also refer to **STD** divert number programming and **DIT** divert time setup in the programming section of this manual).

**IMPORTANT NOTE:** When the GSM LITE intercom diverts to a programmed divert number there will be a brief pause before the intercom then proceeds to dial the divert number. Also if the silent dialling mode AUE has been left on default (i.e. silent dialling mode disabled) a normal telephone dial tone will be heard from the GSM's speaker after the brief pause to indicate that the divert number is being called.

## RELEASING THE DOOR/GATE FROM THE PHONE AFTER A CALL FROM THE GSM LITE INTERCOM (INC. LATCH/UNLATCH)

Releasing the door/gate is signalled by 1 second interval beeps from the GSM LITE intercom panel.

After the call is answered pressing **3** on the phone releases the door/gate for the programmed relay time.

Pressing **1** followed by **0** will latch the door/gate in the open position (to unlatch press **3** and the door/gate will unlatch or send text message **1111RUL** to the GSM LITE intercom).

Also refer to the **user command tables** on page 43.

## RELEASING THE DOOR/GATE BY DIALLING THE GSM LITE INTERCOM (DIAL TO OPEN)

Releasing the door/gate by dialling into the GSM LITE using the dial to open **DTO** number is only possible if the caller's number has been stored correctly using the **STR** programming command (also refer to **STR** programming notes for correct setup).

Simply dial the mobile number of the SIM in the GSM LITE intercom. The GSM intercom will recognise the stored dial to open number that's calling. The GSM will drop the call and open the door/gate for the programmed relay **RLT** time.

**IMPORTANT NOTE:** For this function to operate correctly the stored **DTO** number must have any "caller ID" or "withheld number" feature switched OFF. If this is not switched OFF on the number making the call to the GSM LITE intercom then the GSM module will not recognise the caller's number and simply drop the call and the door/gate will not operate.

# User Commands

## USER COMMAND TABLES

The following user command table shows the user commands that can be carried out during a call. Successful commands are signalled by two beeps from the telephone, errors are signalled by four beeps.

**IMPORTANT NOTE:** When the ED# function has been enabled the user must press the # button on their phone before pressing any of the following user commands (also refer to ED# notes on page 38 for further information).

FUNCTION	1st KEY TO PRESS	2nd KEY TO PRESS
Latch the relay (unlatch by pressing 3)	1	0
Release the door or gate	3	n/a
Activate auxiliary output AO1 <sup>1</sup> (when A1M = mode 01)	6	n/a
Adjust door speech volume (GSM speaker)	4	0 - 9 (0 = lowest, 9 = highest)
Adjust phone speech volume (GSM mic)	7	0 - 9 (0 = lowest, 9 = highest)
Status Indication for AO1 <sup>2</sup> (when A1M = mode 02)	9	n/a

<sup>1</sup> - Activating auxiliary output **AO1** in this way is only possible when **A1M** mode has been set to mode **01** (also see notes on page 33, **set auxiliary output AO1 mode**, and **Fig.17**, on page 18) and will operate for the programmed **AO1** time. If the **AO1** output time has been set to latch simply press **6** on the phone to unlatch the output again.

<sup>2</sup> - Auxiliary input **AO1** status indication is only possible when **A1M** mode has been set to mode **02** (also see notes on page 33, **set auxiliary output AO1 mode**, and **Fig.18**, on page 19).

The next user command table shows the SMS text messages that can be sent to the GSM LITE intercom while in standby (the examples shown in the table use the default 4 digit master code 1111).

FUNCTION	MESSAGE TO SEND
Check the signal strength	1111SIG?
Check the available balance <sup>3</sup>	1111BAL?
Check the software version	1111VER?
Release the door/gate	1111RLY? (? optional, send if confirmation is required)
Latch the relay	1111RLA? (? optional, send if confirmation is required)
Unlatch the relay	1111RUL? (? optional, send if confirmation is required)
Activate auxiliary output AO1	1111A1O? (? optional, send if confirmation is required)
Latch auxiliary output AO1	1111A1L? (? optional, send if confirmation is required)
Unlatch auxiliary output AO1	1111A1U? (? optional, send if confirmation is required)
Check Input Status	1111CHK? (also see notes on pages 36 - 37)
Find a Dial to Open (DTO) number (000 - 999)	1111FDT"yyyyyyyyyy"? (where yyyyyyyyyy = telephone number, minimum of 4 digits, also see notes on page 38)

<sup>3</sup> - The balance can only be checked if the correct balance check string has been stored (also see **SDL** notes on page 35). This feature is only applicable for pay-as-you-go SIM cards.

# Additional User Information

## UNDERSTANDING THE SIGNAL STRENGTH (SIG) AND BIT ERROR RATE (BER)

When a request for signal strength message is sent to the GSM LITE intercom it will reply with a two part code.

The first part of the code is a signal strength code **SIG** which will be between 0 – 31 or 99. Ideally the signal strength should be as close to 31 as possible for the best possible performance. The lower the number, the weaker the signal. Signal strengths lower than 10 may cause operational problems such as loss of speech quality (and possibly missing DTMF tones) and/or network loss. A signal strength of 99 indicates it could not be detected.

The second part of the code is the bit error rate **BER**. The bit error rate is used in digital telecommunication as a figure of merit for how effectively the receiver (in this case the GSM LITE intercom) is able to decode transmitted data (the data in this instance are the various text message commands used to program the GSM LITE intercom, described on pages 29 - 40, speech and DTMF signals used by the GSM LITE intercom for normal operation). It is the percentage of bits that have errors relative to the total number of bits received in a transmission. Ideally the **BER** code should be as close to 0 as possible, the lower the **BER** the better. High **BER** codes can be caused by noise, interference, distortion or bit synchronisation errors over the transmission of data to the GSM LITE intercom and as a result the problems described above (loss of speech quality, possibly missing DTMF tones and/or network loss etc.) can occur.

The example below shows the ideal reply to expect when the signal strength query **111SIG?** is sent to the GSM LITE intercom:

**SIGNAL = 31**  
**BER = 0**  
**OK VIDEX GSM**

To achieve the best overall performance from the GSM LITE intercom a high signal strength **SIG** and low bit error rate **BER** is required. In the event that a low signal strength and high bit error rate is received it is recommended that the **Art.432** antenna is repositioned, where permissible, at the highest point to achieve the best signal. Where this is not possible an alternative high gain antenna can be used, in particular Videx recommends using the **ANT-GSM-2dB-5M** or **ANT-GSM-2dB-15M** high gain antennas or another suitable GSM antenna with a standard SMA male connector.

## DIALLING INTO THE GSM INTERCOM FROM ANOTHER TELEPHONE

There are three possible outcomes to dialling into the GSM LITE intercom depending on the telephone number you are dialling in from and the features setup during programming. The three possible outcomes are shown in the table below and are shown in order of priority. For example, if the number is programmed to automatically activate the relay, this will take priority over the following two options and if the telephone number is stored as a telephone number called from one of the push buttons, this will take priority over the last option.

FUNCTION	REQUIREMENT	PRIORITY
<b>Dial in to open the Door.</b> After dialling the GSM number, the relay will activate and the call will be dropped.	The telephone number of the telephone dialling in must be stored in memory location (dial to open list) STR000 - STR099.	<b>1st</b>
<b>Dial in to activate a call (live speech, activate relay/ auxiliary AO1).</b> After dialling the GSM number, the call will be answered and two beeps will be heard. The speech will then be live.	The telephone number of the telephone dialling in must be stored in memory location: <div style="text-align: center;">STN001 - STN004 STD001 - STD004</div>	<b>2nd</b>
<b>Dial in to open the speech from a telephone number not stored in the GSM intercom.</b> After dialling the GSM number, the call will be answered and two beeps will be heard. You will then be required to enter the 4 digit code to open the speech.	If neither of the two requirements above are met.	<b>3rd</b>

## UNDERSTANDING THE BEEPS

Functions and errors are indicated by beeps from the GSM LITE intercom panel. The following table will help you understand the different beeps heard and what, if anything, needs to be done in response to the beeps.

BEEP	REASON	SOLUTION
Short beeps at 1 second intervals.	Relay or auxiliary output activated.	None, this is normal.
Single short beep while the system is in standby and not being used.	A valid text message has been received and processed.	None, this is normal.

## Additional User Information

Double beep, a single short beep followed by a long beep.	Button pressed but no number stored.	Program a telephone number for the button pressed.
Long beep followed by short beep while the system is in standby.	Invalid text message received.	If this has happened when sending one of the programming text messages then check the message for errors. These beeps will also be heard if the 4 digit code in the text message is incorrect. If you are unsure of the 4 digit code, try resetting it to 1111.
Double beep.	Button pressed, GSM LITE dialling stored number.	None, this is normal.
Long beep while the system is in use.	Manually ending/cancelling a call by pressing another call button.	None, this confirms the call has been cancelled. Another call can be placed if required.
Four long beeps.	Not registered with a network provider but still trying.	Leave it a short while to see if it manages to find the network. If the beeps repeat every 30 seconds then try moving the antenna to a better location or changing the SIM to another network provider.
Six long beeps.	Unknown registering problem.	Try moving the antenna to a better location. Try changing the SIM card to another network provider.
Single short beep every 10 seconds after power up.	Unable to see the SIM card.	Check the SIM card is fitted correctly. Try removing the SIM card, cleaning and fitting again. Try a different SIM card.
Short beep, long beep repeated 3 times.	Call button pressed and either the call is on divert to the master number or there is no master number stored.	This may be the required setup but if it's not then either check and store a master number to divert the calls to or open the switch between <b>AO1</b> & <b>g</b> used to switch the calls into divert mode.

# User Management

## RECORD SHEET

In order to manage the GSM LITE intercom more effectively it is recommended that an up to date record sheet is kept for all the programming and system settings stored in the GSM intercom. This will also be useful if any future changes need to be made. The following table format can be used to record the GSM's basic information.

GSM LITE intercom telephone No.	
IMEI number	
Master code (default 1111)	
Master telephone No.	

The table format below can be used to record the call button numbers and the divert numbers (from 001 to 004).

BUTTON	MEM. LOCATION	TELEPHONE NO.	USERNAME
Button 1 (primary pn)	STN001		
Button 1 (divert dn)	STD001		
Button 2 (primary pn)	STN002		
Button 2 (divert dn)	STD002		
Button 3 (primary pn)	STN003		
Button 3 (divert dn)	STD003		
Button 4 (primary pn)	STN004		
Button 4 (divert dn)	STD004		

It is also recommended that a record sheet of the dial to open DTO (**STR**) numbers and username is kept (from 000 to 099), following the table format below:

MEM. LOCATION	TELEPHONE NO.	USERNAME
STR000.....STR099		

# Troubleshooting

## SYSTEM CHECKS AND TESTING

The following table can be used to help diagnose any potential issues that may be occur during installation and the system checks that can be carried out to help resolve them.

SYMPTOM	TEST / SOLUTION
Interference on the speech.	Check the signal strength <b>1111SIG?</b> (if the signal strength is too low the GSM module increases it's power to compensate, causing interference with the speech circuits). Try relocating the antenna or using a more powerful or directional antenna (e.g. high gain antenna).
	Ensure the antenna cables are not running close to the power supply cables or the microphone wires inside the intercom panel.
	Try a different SIM card from a different service provider as they may have better coverage in that area.
The intercom panel repeatedly beeps twice and the back lit name plate of the module (not additional button modules) does not illuminate.	Check the power supply has adequate voltage as described earlier in this manual (refer to pages 7 and 23).
	Try a full reset (refer to page 26), powering up with terminals <b>g</b> & <b>8</b> shorted.
	Try a different SIM card.
	The GSM LITE intercom module may have a fault.
Double beep, a single short beep followed by a long beep.	No telephone number programmed for that button. Check the programming.
	Check the SIM card is fitted correctly (refer to page 25).
The intercom panel does not respond to SMS messages.	Check the SIM card has an SMS service centre number stored. This will require putting the SIM card into a mobile phone to check. Contact the SIM card provider if you are not sure.
	Check the number you are sending the message to is correct (the number of the SIM card in the GSM LITE intercom panel).
	After sending an SMS message to the GSM LITE intercom listen for a single short beep from the intercom panel. This will indicate that the message was received and understood. If a long beep followed by a short beep is heard it indicates the message was either not understood or the 4 digit master code was incorrect.
	Try resetting the 4 digit master code to 1111 (refer to page 26), powering up with terminals <b>g</b> & <b>7</b> shorted.
The GSM PRO intercom does not respond to SMS messages, but all other functions appear to operate ok, e.g. DTO feature, adjusting speech volumes, releasing the door/gate when button 3 pressed on the phone etc.	<p>This issue can occur on smartphones where the SMS messaging input method is set to UNICODE. Smartphones generally have 3 input methods: GSM alphabet, Automatic and UNICODE. The UNICODE setting is typically used when emoticons/emojis are used in the message so the GSM will not recognise text messages that are set to this mode.</p> <p>Check that the SMS messaging input method setting on the smartphone is <b>not</b> set up as UNICODE and is set to either GSM alphabet or Automatic. This can usually be done via the settings icon on the smartphone. If you are unsure of how to do this Videx recommend consulting with the user's manual that came with the smartphone or consulting directly with the manufacturer of the smartphone.</p>
The call keeps dropping out.	Increase the call time ( <b>SPT</b> ) in programming (refer to page 33).
	Check the signal strength and if necessary, move or change the antenna or try a different SIM card provider.
Speech echoes and feeds back.	Try lowering the speaker volume using the dip-switches on the back of the GSM LITE intercom (refer to page 10).
	Try adjusting the volume using the programmable settings during a call (refer to user commands on page 43).
	Check the microphone is fitted correctly in the intercom panel and that the mic hole is not blocked in any way.
ERROR message returned in SMS when programming or no SMS returned at all even though a ? was included at the end of the message sent.	<p>Check over the message sent again and compare it with the examples in this manual. Common errors include:</p> <ol style="list-style-type: none"> <li>Using two apostrophe marks side by side instead of ". Note that these look the same in the message. An easy way to see if this is the problem is to move the cursor along in the message and if the cursor can get between the two " then it is not the correct character used.</li> <li>Lower case letters instead of upper case. For example using <b>stn</b> when <b>STN</b> should be used.</li> </ol>



## Troubleshooting

Unable to open the gate/door from the telephone during a call (DTMF tones not being recognised)	<p>If the DTMF tone to release the gate/door (or other DTMF tones shown in the first user command table on page 43) does not work then check to see if the <b>ED#</b> function has been enabled:</p> <ol style="list-style-type: none"> <li>1. Send the following SMS command <b>1111ED#?</b> to the GSM and wait for a reply confirming the status of this function.</li> <li>2. <b>Note:</b> If the <b>1111EDZ</b> function is set to 01 (enabled) then when answering the call it will be necessary to first press <b>0</b> to accept the call before <b>3</b> can be used to operate the gate/door.</li> </ol> <p>Further notes on how to effectively use these functions and on the setup of these functions can be found on pages 37 and 38.</p>
	<p>If the DTMF tones are not working reliably then try the following adjustments:</p> <ol style="list-style-type: none"> <li>1. Send the following SMS command <b>1111AT1"AT#DTMFCFG=8,2500,1500"?</b> to the GSM intercom and wait for a reply.</li> <li>2. After receiving the reply send the SMS command <b>1111RBT</b> then wait for the GSM intercom to reboot.</li> <li>3. After the GSM intercom has rebooted test the door opening feature from the telephone during a call.</li> </ol>
	<p>If the first option doesn't resolve the issue then try the following:</p> <ol style="list-style-type: none"> <li>1. Send the following SMS command <b>1111AT1"AT#DTMFCFG=7,2300,1300"?</b> to the GSM intercom and wait for a reply.</li> <li>2. After receiving the reply send the SMS command <b>1111RBT</b> then wait for the GSM intercom to reboot.</li> <li>3. After the GSM intercom has rebooted test the door opening feature from the telephone during a call.</li> </ol>
	<p>If neither of the above solutions resolve the problem then please contact Videx technical on tel: <b>0191 224 3174</b> for further assistance. For overseas customers contact Videx customer support on tel: <b>(+39) 0734 631 699</b> for further assistance.</p>

Further guidance can also be found in the **additional user information** section of this manual on pages 44 - 45 in the 'understanding the beeps' table.

# General Information

## FIRMWARE REVISION

DATE	FIRMWARE VERSION	REVISION
10/05/16	LT3.0.0	Launch of 4811 GSM LITE.
01/07/16	LT3.0.1/2G , LT3.1.1/3G	Change to registry beeps. No beeps at automatic restart.
09/11/16	LT3.0.2/2G , LT3.1.2/3G	Firmware update to include: Added AT commands, up to 3 commands can be programmed using <b>1111ATn"command"?</b> , where n = 1 - 3. Bug with D0 fixed. Change Telit modules CPCUMODE to higher speed to overcome DTMF issues in Belgium. Fixed bug with busy, engaged and No answer, where call's didn't end straight away upon these events.
17/07/17	LT3.0.3/2G , LT3.1.3/3G	Firmware update to include: <b>ED#</b> function. PTE to work while unit is still initialising. Moved balance check from ATH routine and placed in call end routine. Add ATH send for every 8.5 minutes. Change DTMF settings to improve DTMF decoding.
24/05/19	LT3.0.4/2G , LT3.1.4/3G	New major firmware update to include: <ul style="list-style-type: none"> <li>• Added SMS commands ready for new app.</li> <li>• Added SMS force dial button command <b>1111BUT</b>.</li> <li>• New commands –               <ul style="list-style-type: none"> <li>□ <b>STN</b> for programming both numbers in single SMS.</li> <li>□ <b>STR</b> for programming up to 5 dial to opens in a single SMS.</li> <li>□ <b>DET</b> for deleting a <b>DTO</b> number without knowing it's location.</li> </ul> </li> </ul>
27/09/19	LT3.0.5/2G , LT3.1.5/3G	Firmware update to fix double = = on <b>SDL</b> SMS reply. Fixed <b>BAL</b> issue where message wasn't returned when querying via SMS.  Firmware update to include SMS <b>LLA</b> command to prevent a latched output being unlatched by a <b>DTO</b> number or pressing lock release during a call. SMS unlatch can still be used.

## FURTHER READING

Additional information regarding connection to mains supply voltage can be found in the following regulations (for the UK only):

- I.E.E. Wiring Regulations BS7671

For overseas customers it is recommended that you consult with the relevant governing body for the appropriate regulations and standards of your country.

## Notes

[illegible]

## ENG DISPOSAL

In accordance with the Legislative Decree no. 49 of 14 March 2014 "Implementation of the Directive 2012/19/EU on waste electrical and electronic equipment (WEEE)".

The crossed-out bin symbol on the equipment or on the packaging indicates that when the product reaches the end of its lifetime, it must be collected separately from mixed municipal waste. The user must, therefore, dispose of the equipment at the end of its lifetime in the suitable waste collection centres or bring it to the retailer during the purchase of a new equipment of equivalent type at the ratio of one-to-one. Furthermore, the user is allowed to dispose of the WEEEs of very small size (domestic appliances without any external dimension exceeding 25 cm (9.84 inches) for free to the retailers, without any purchase obligation. The correct waste disposal of the WEEEs contributes to their reuse, recycling and recovery and avoids potential negative effects on the environment and human health due to the possible presence of dangerous substances within them.



## ITA SMALTIMENTO

Ai sensi del Decreto Legislativo 14 marzo 2014, n° 49 "Attuazione della direttiva 2012/19/UE sui rifiuti di apparecchiature elettriche ed elettroniche (RAEE)".

Il simbolo del cassonetto barrato riportato sull'apparecchiatura o sulla sua confezione indica che il prodotto alla fine della propria vita utile deve essere raccolto separatamente dagli altri rifiuti urbani misti. L'utente dovrà, pertanto, conferire l'apparecchiatura giunta a fine vita presso gli idonei centri di raccolta differenziata oppure riconsegnarla al rivenditore al momento dell'acquisto di una nuova apparecchiatura di tipo equivalente, in ragione di uno a uno. L'utente ha, inoltre, la possibilità di conferire gratuitamente presso i distributori, senza alcun obbligo di acquisto, per i RAEE di piccolissime dimensioni (per le apparecchiature di tipo domestico con nessuna dimensione esterna superiore a 25 cm). L'adeguata raccolta differenziata dei RAEE contribuisce al loro riutilizzo, riciclaggio e recupero ed evita potenziali effetti negativi sull'ambiente e sulla salute umana dovuti alla eventuale presenza di sostanze pericolose al loro interno.

## FRA ÉLIMINATION

Conformément au décret législatif n° 49 du 14 mars 2014 relatif à l'« Application de la directive 2012/19 / UE relative aux déchets d'équipements électriques et électroniques (DEEE) ».

Le symbole de la poubelle barrée sur l'équipement ou sur son emballage indique que le produit en fin de vie utile doit être collecté séparément des autres déchets municipaux en mélange. L'utilisateur doit donc remettre l'équipement en fin de vie aux centres de collecte appropriés ou le restituer au revendeur lors de l'achat d'un nouveau type d'équipement équivalent, dans le rapport de un à un. De plus, l'utilisateur a la possibilité de conférer gratuitement aux distributeurs, sans aucune obligation d'achat, de très petits DEEE (pour les appareils ménagers sans dimensions extérieures supérieures à 25 cm). La collecte séparée adéquate des DEEE contribue à leur réutilisation, leur recyclage et leur valorisation et évite les éventuels effets négatifs sur l'environnement et la santé humaine en raison de la présence possible de substances dangereuses dans ceux-ci.

## SPA ELIMINACIÓN

De conformidad con el Decreto legislativo n. 49 de 14 de marzo 2014 "Aplicación de la Directiva 2012/19/UE relativa a residuos de aparatos eléctricos y electrónicos (RAEE)".

El símbolo del contenedor tachado indicado sobre los aparatos o sobre los embalajes señala que el producto al final de su vida útil debe ser recogido separadamente de otros residuos municipales mezclados. Por tanto, el usuario deberá conferir los aparatos al final de su vida útil en los apropiados centros de recogida selectiva o devolverlos al revendedor al momento de la compra de nuevos aparatos equivalentes, en una relación de uno a uno. Además, el usuario tiene la posibilidad de entregar sin cargo a los distribuidores, sin ninguna obligación de compra, los RAEEs muy pequeños (para electrodomésticos sin dimensiones externas superiores a 25 cm).

La recogida selectiva apropiada de los RAEEs contribuye a su reutilización, reciclaje y valorización y evita potenciales impactos negativos sobre el medio ambiente y la salud humana debidos a la posible presencia de sustancias peligrosas dentro de ellos.

## NLD VERWIJDERING

In overeenstemming met het Wetsbesluit nr. 49 van 14 maart 2015 "Implementatie van de Richtlijn 2012/19/EU inzake afgedankte elektrische en elektronische apparaten (AEEA)".

Het doorgekruiste vuilnisbaksymbool op het apparaat of de verpakking geeft aan dat het product aan het einde van zijn levensduur niet samen met het gewone huisvuil weggegooid mag worden. De gebruiker moet het apparaat aan het einde van zijn levensduur inleveren bij een gepast inzamelpunt of de winkel waar hij een nieuw apparaat van een gelijksoortig type zal kopen. De gebruiker kan tevens AEEA's van een zeer klein formaat (huishoudapparaten met een buitenafmeting kleiner dan 25 cm (9,84 inch)) gratis en zonder enige aankoopverplichting bij handelaars inleveren. Een juiste verwijdering van AEEA's draagt bij tot hergebruik, recycling en terugwinning, en voorkomt potentiële negatieve effecten op het milieu en de menselijke gezondheid door de mogelijke aanwezigheid van gevaarlijke stoffen.

<b>MANUFACTURER</b> <b>FABBRICANTE</b> <b>FABRICANT</b> <b>FABRICANTE</b> <b>FABRIKANT</b> الشركة المصنعة	<b>VIDEX ELECTRONICS S.P.A.</b> Via del Lavoro, 1 63846 Monte Giberto (FM) Italy Tel (+39) 0734 631669 Fax (+39) 0734 632475 www.videx.it - info@videx.it	
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The product is CE marked demonstrating its conformity and is for distribution within all member states of the EU with no restrictions. This product follows the provisions of the European Directives 2014/30/EU (EMC); 2014/35/EU (LVD); 2011/65/EU (RoHS); CE marking 93/68/EEC.

Le produit est marqué CE à preuve de sa conformité et peut être distribué librement à l'intérieur des pays membres de l'union européenne UE. Ce produit est conforme aux directives européennes 2014/30/EU (EMC); 2014/35/EU (LVD); 2011/65/EU (RoHS); marquage CE 93/68/EEC.

Het product heeft de CE-markering om de conformiteit ervan aan te tonen en is bestemd voor distributie binnen de lidstaten van de EU zonder beperkingen. Dit product volgt de bepalingen van de Europese Richtlijnen 2014/30/EU (EMC); 2014/35/EU (LVD); 2011/65/EU (RoHS); CE-markering 93/68/EEC.

Il prodotto è marchiato CE a dimostrazione della sua conformità e può essere distribuito liberamente all'interno dei paesi membri dell'Unione Europea UE. Questo prodotto è conforme alle direttive Europee: 2014/30/UE (EMC); 2014/35/UE (LVD); 2011/65/UE (RoHS); marcatura CE 93/68/EEC.

El producto lleva la marca CE que demuestra su conformidad y puede ser distribuido en todos los estados miembros de la unión europea UE. Este producto cumple con las Directivas Europeas 2014/30/EU (EMC); 2014/35/EU (LVD); 2011/65/EU (RoHS); marca CE 93/68/EEC.

يحمل المنتج علامة التوافق الأوروبي CE لإظهار توافقه مع المواصفات ذات الصلة وإمكانية توزيعه في كافة دول الاتحاد الأوروبي بدون أية قيود. يلبي هذا المنتج جميع متطلبات التوجيهات الأوروبية 2014/30/UE (EMC); 2014/35/UE (LVD); 2011/65/UE (RoHS); علامة المطابقة للمواصفات الأوروبية 93/68/EEC.



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