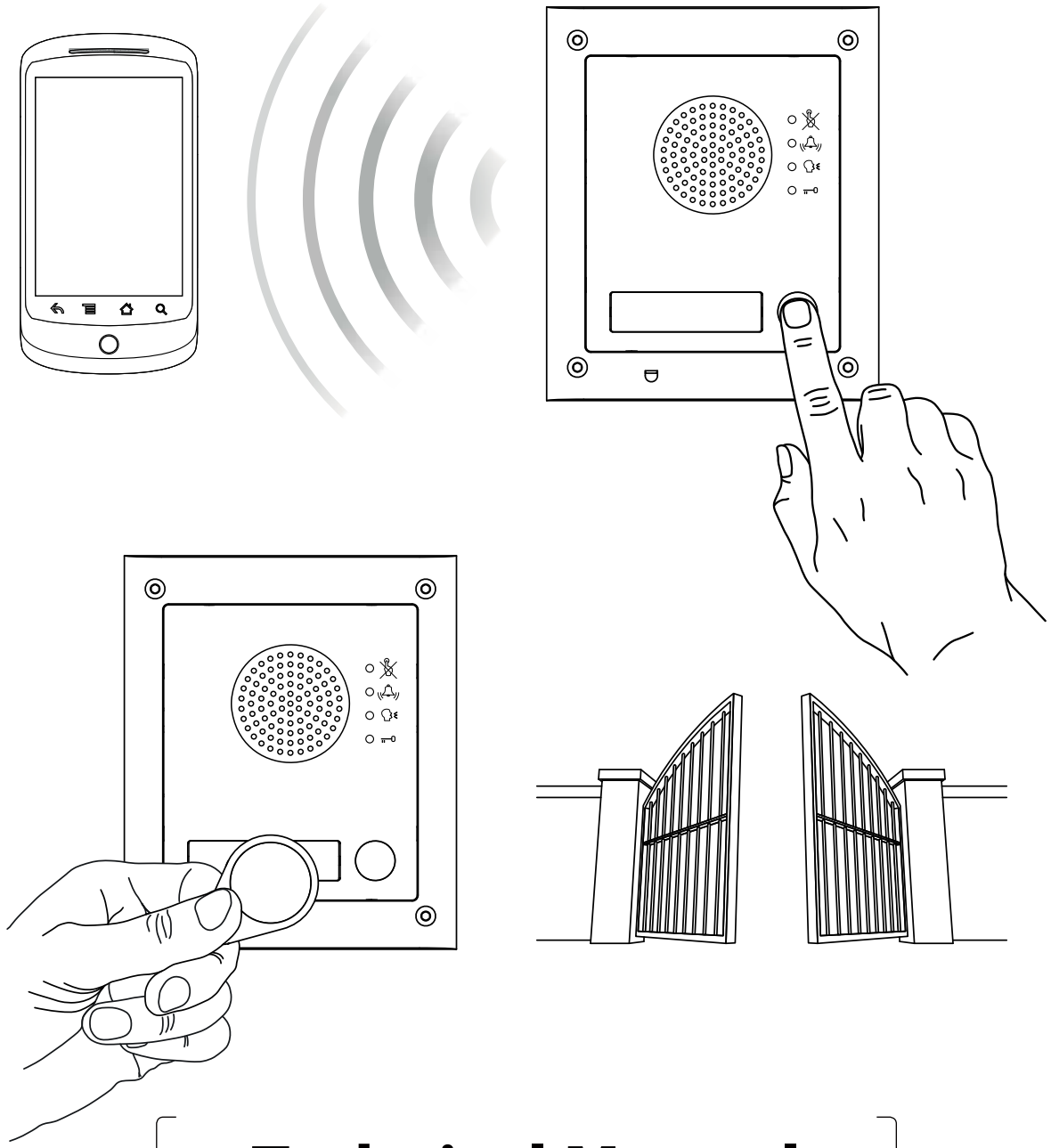
English

VIDEX
THE POWER TO SECURE

GSM AUDIO INTERCOM KIT

4000 Series GSM Audio Intercom with Proximity

GSM4K
GSM4KC



Technical Manual

ENUK
V1.4
25/01/17

We recommend
This equipment is installed by a Competent Electrician, Security or Communications Engineer.

Declaration of Conformity

EU RoHS DECLARATION OF CONFORMITY

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.

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.

CUSTOMER SUPPORT

All Countries:
VIDEX ELECTRONICS S.P.A.
www.videx.it
technical@videx.it
Tel: +39 0734-631699
Fax: +39 0734-632475

UK Customers:
VIDEX SECURITY LTD.
www.videxuk.com
tech@videxuk.com
Tech Line: 0191 224 3174
Fax: 0191 224 1559

CE conformity marking indicates that the product respects the requirements of the applicable European Community Directives in force specifically EMC 2004/108/ECC, LVD 2006/95/ECC and CE-MARKING 93/68/ECC. CE marking is applied by the manufacturer (or party delegated to do so by the manufacturer) under their own responsibility. It was created to eliminate obstacles to the circulation of products in European Union Member States by harmonising different national standards.

Contents

Introduction

MANUAL INTRODUCTION

The information in this manual is intended as an installation and commissioning guide for the 4000 series GSM PRO 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.

VIDEX run free training courses for engineers who are unfamilier or who have not installed this system before. Technical help is also available on tel: 0191 224 3174 during office hours (8:30am - 5:00pm MON to FRI) or via e-mail: ***tech@videxuk.com.***

A copy of this Technical Manual can also be downloaded from the Videx website: ***www.videxuk.com.***

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 50 call buttons can be connected to the door panel, each able to call four telephone numbers (if the first is busy or not answered, the call can be diverted to up to three different numbers). Features of the system include:

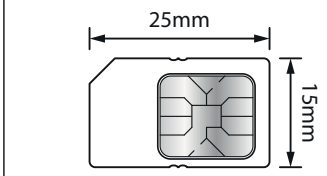
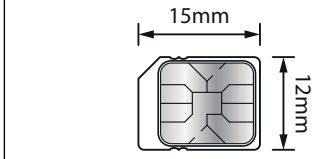
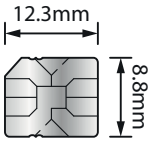
- A dry contact relay output.
- Two open collector auxiliary outputs.
- Two auxiliary inputs.
- A push to exit input.
- Integrated Proximity Access Control (up to 1000 proximity fobs or cards can be stored, these fobs/cards when presented to the name plate window on the GSM PRO intercom will activate the door/gate relay).
- Call progress speech annunciation and call progress LED indication.
- Dial to Open facility (this feature enables up to 1000 stored numbers to dial the GSM PRO intercom, the intercom panel will not answer these calls, but will activate the door/gate relay without being charged for the call).
- Programmable timeband facility.
- Micro USB connection (for ease of programming using the GSMSK PC software).
- Integrated bootloader function (for updating intercom panel firmware via the GSMSK PC software).
- Event logging system (which can record up to 4000 events).

Programming of the telephone numbers and the additional features, including programming key fobs for the integrated proximity access, can be carried out via text messaging (refer to pages 32 to 44) or PC using the GSMSK PC software (refer to the GSMSK PC software manual).

A SIM card is required for this product but not supplied. The GSM PRO intercom can only accept a standard size SIM card (refer to SIM card size chart on page 5), 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 web sites.

SIM CARD SELECTION

A SIM card is required for this product but not supplied by Videx. The digital GSM intercom can only accept a standard size SIM card (refer to the following SIM card size chart), 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 web sites.

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.

As an initial check we also recommend visiting the ofcom website ***www.ofcom.org.uk*** and follow the onsite links to their online mobile coverage tool. 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.

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 PRO module. To gain access to the GSM module and obtain this number the module will have to be opened. It is recommended that you contact Videx Technical on tel: 0191 224 3174 for advise on how to do this. The IMEI number is printed on the Telit chip label below the chip model number, as shown in **Fig.1**.

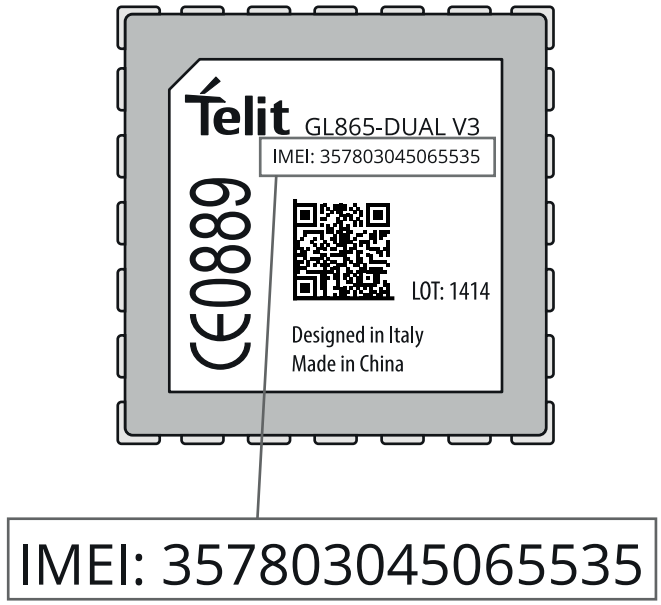


Fig. 1

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 web site or by calling their customer services. Recommended SIM card providers are: Vodafone, T-Mobile, O2 or Orange/EE. **We do not recommend using the 3 network at this present time.**

- To be able to receive text messages from the intercom panel, the SIM card will require an SMS service centre number. This is normally preinstalled 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.
- 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.**

IMPORTANT NOTE ABOUT THE SIM

When using a pay monthly SIM card you must 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. All providers offer this service. You will need to either ring them 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.

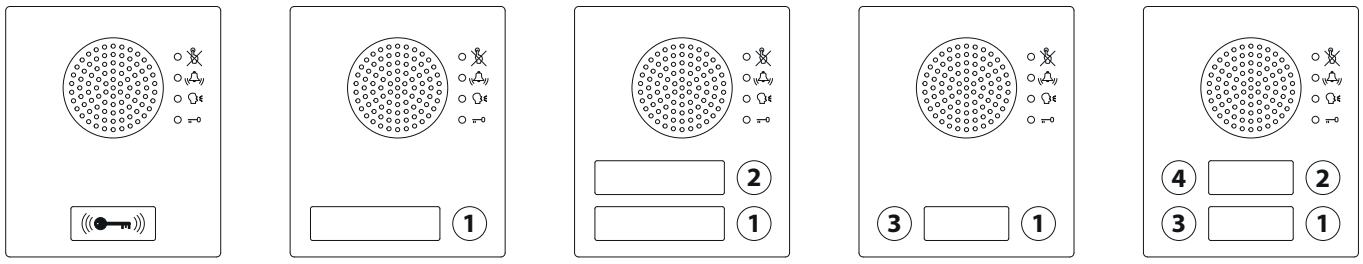
System Components and Available Versions

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 50 call buttons).

ART. 4810 GSM (PRO) INTERCOM AVAILABLE VERSIONS

The intercom panel can include any of the modules from the 4000 series range and uses the standard 4000 series surface and flush mounting frames. The GSM PRO module is however essential and includes all the GSM communication electronics, SIM card (supplied separately) and connections. The intercom module is available in a 0 button, 1 button, 2 button and 4 button configuration (with all onboard buttons internally wired), as shown in **Fig.2**, along with their part numbers.

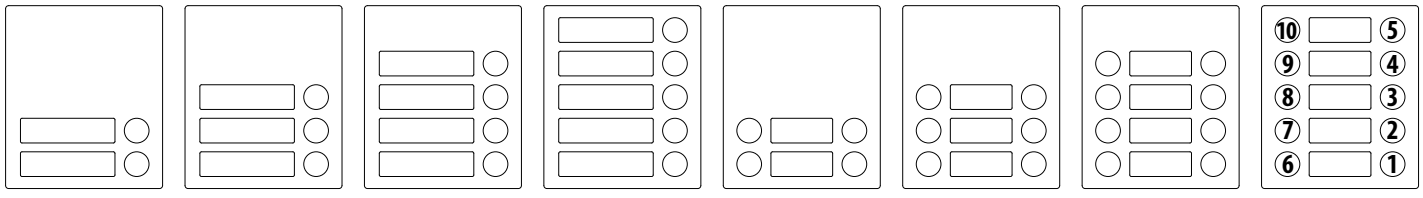


Art. 4810-0 Art. 4810-1 Art. 4810-2 Art. 4810-1D Art. 4810-2D

Fig. 2

EXTENSION BUTTON MODULES

The GSM intercom module will accept up to 50 call buttons. Any of the standard 4000 series button modules can be used as shown in **Fig.3** along with their part numbers. Please note that button 1 is in the bottom right corner of the module counting up.

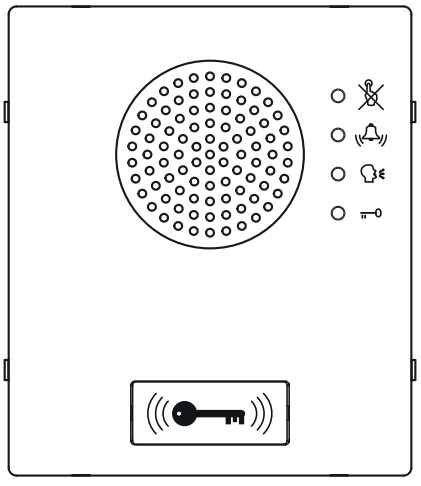


Art. 4842 Art. 4843 Art. 4844 Art. 4845 Art. 4842D Art. 4843D Art. 4844D Art. 4845D

Fig. 3

Button connections to the GSM module are shown in **Fig.5** on page 8 (only the wiring of the button matrix is shown). It is important to take care when using additional button modules with a GSM intercom module which also has onboard buttons. For example, an intercom module with one button means the extension button module used must start wiring from button 2, an intercom module with 2 buttons means the extension button module used must start wiring from button 3 and so on.

IMPORTANT NOTE: When extension button modules are being used on systems where proximity access is required and the Art.4810-0 GSM PRO module is used, the location of the proximity reader is on the front of the main GSM PRO module below the speaker, as shown in Fig.4.



Art. 4810-0

Fig. 4

BUTTON MATRIX WIRING

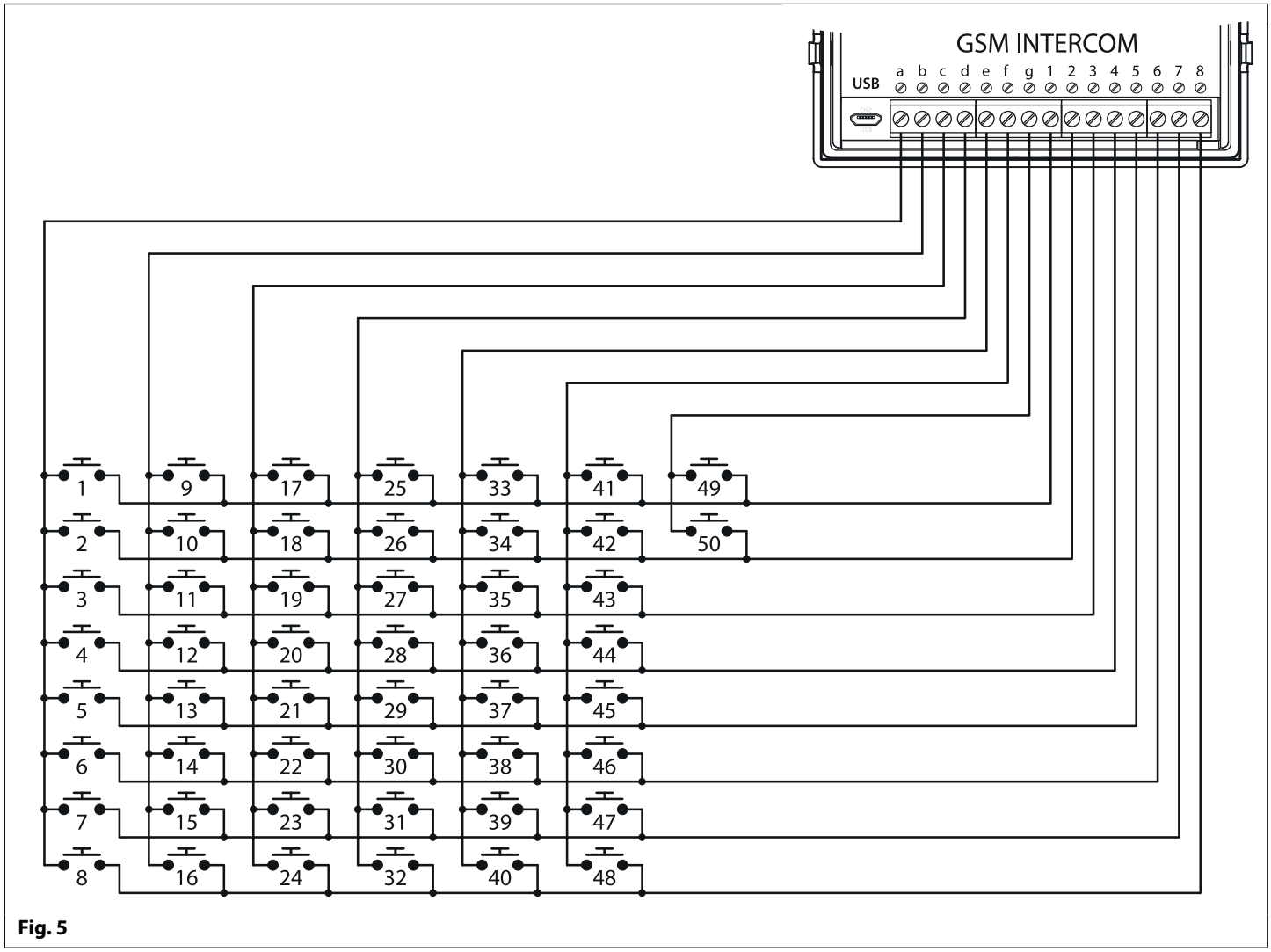


Fig. 5

BUTTON MODULE NOTES

If the GSM module has 1 button (Art.4810-1), the additional button module buttons should be wired starting from button number 2 (i.e. the first button of the button module should be connected between a & 2, the next between a & 3 etc.).

If the GSM module has 2 buttons (Art.4810-2), the additional button module buttons should be wired starting from button number 3 (i.e. the first button of the button module should be connected between a & 3, the next between a & 4 etc.).

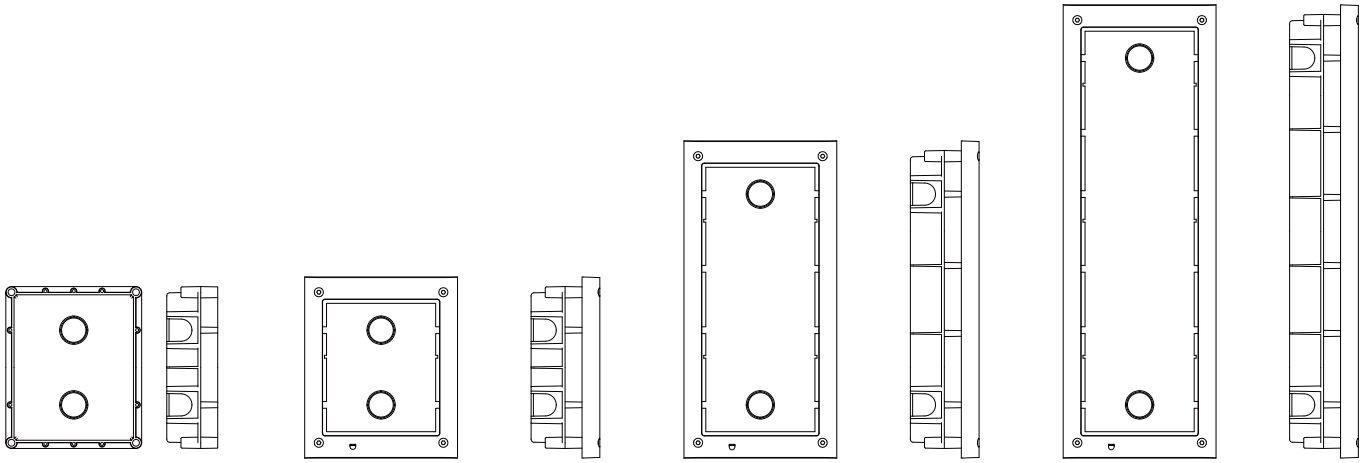
If the GSM module has 4 buttons (Art.4810-2D), the additional button module buttons should be wired starting from button number 5 (i.e. the first button of the button module should be connected between a & 5, the next between a & 6 etc.).

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 GSM4K/GSM4KC kit. The last digit of the frame code indicates the number of modules it will take. Frames are available in gun metal gray finish, chrome finish (suffix \C to the frame code) or gold finish (suffix \G to the frame code). The 4000 series mounting frames available are shown in **Fig.6** (flush) and **Fig.7** (surface) with the following tables showing the back box dimensions.

System Components and Available Versions

Flush Back Boxes and Mounting Frames



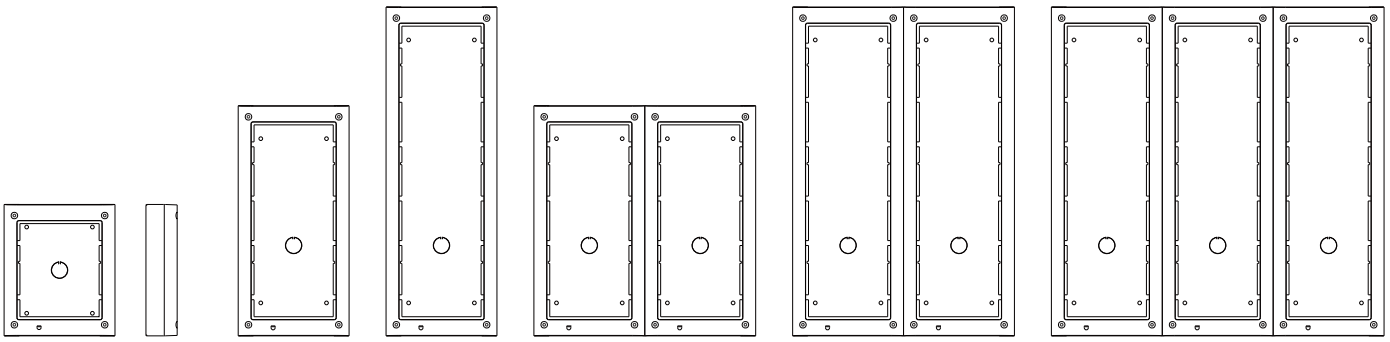
Art. 4851 Art. 4852 Art. 4853

Fig. 6

Flush Back Box Dimensions

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
Art.4853	3	135 x 400.4 x 15.7	120 x 383.4 x 46

Surface Back Boxes and Mounting Frames



Art. 4881 Art. 4882 Art. 4883 Art. 4884 Art. 4886 Art. 4889

Fig. 7

Surface Back Box Dimensions

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
Art.4883	3	1	135 x 400.4 x 43
Art.4884	4	2	270 x 280.2 x 43
Art.4886	6	2	270 x 400.4 x 43
Art.4889	9	3	405 x 400.4 x 43

ART. 324 POWER SUPPLY

The Art. 4810 GSM PRO intercom is designed to work with power supplies in the range of 12Vdc or 24Vac/dc and should be capable of supplying a constant current of no less than 2A. Both the GSM4K and GSM4KC kits are supplied with the Art. 324 power supply (refer to **Fig.8**).

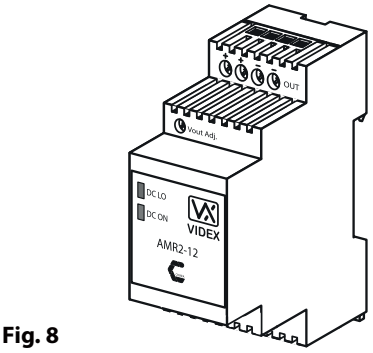


Fig. 8

ART. 432 GSM ANTENNA

The Art.432 GSM antenna connects to the SMA female bulkhead connection on the rear of the Art.4810 GSM PRO module. A GSM antenna with an SMA male connector should be used (refer to **Fig.9**).

Antenna Parts

1. GSM antenna with magnetic base.
2. Self-threading screw *(Ø3.5mm x 9.5mm)*.
3. Aluminium L bracket for mounting.
4. SMA male connector *(cable length 2.5m)*.
5. Expansion type wall plugs *(Ø6mm)*.
6. Self-threading screw *(Ø4mm x 30mm)*.

<u>IMPORTANT NOTE:</u> **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.**

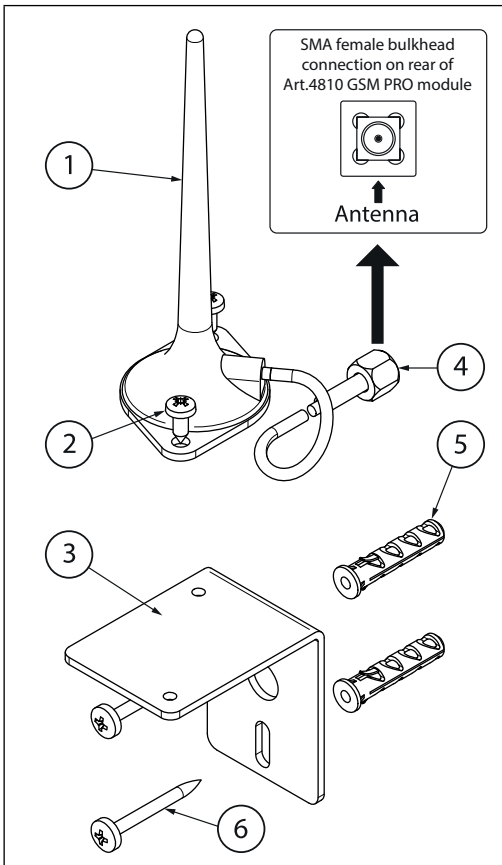


Fig. 9

ART. 4800M CODELOCK

The Art.4800M codelock module (included as part of the GSM4KC kits), see **Fig.10**, 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.

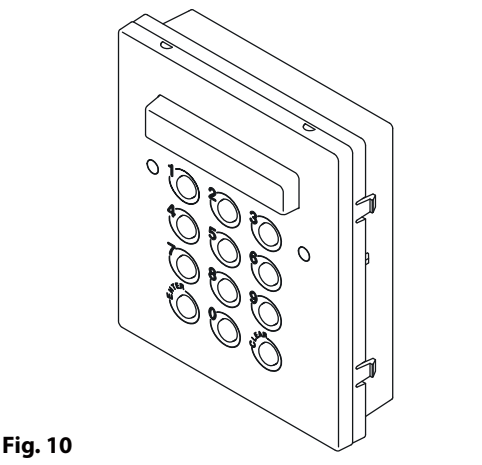


Fig. 10

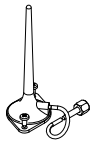
System Components and Available Versions

GSM INTERCOM AUDIO KITS

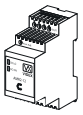
ONE WAY VERSIONS

GSM4K-1 - flush mounting

1 Outdoor station composed of:
1 Art. 4810-1: 1 button GSM (pro) unit
1 Art. 4851: Flush mounting box



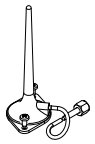
1 GSM antenna
Art. 432



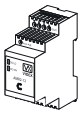
1 Power supply
Art. 324

GSM4K-1S - surface mounting

1 Outdoor station composed of:
1 Art. 4810-1: 1 button GSM (pro) unit
1 Art. 4881: Surface mounting box



1 GSM antenna
Art. 432

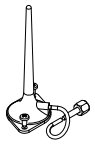


1 Power supply
Art. 324

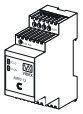
TWO WAY VERSIONS

GSM4K-2 - flush mounting

1 Outdoor station composed of:
1 Art. 4810-2: 2 button GSM (pro) unit
1 Art. 4851: Flush mounting box



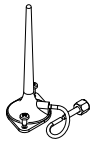
1 GSM antenna
Art. 432



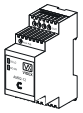
1 Power supply
Art. 324

GSM4K-2S - surface mounting

1 Outdoor station composed of:
1 Art. 4810-2: 2 button GSM (pro) unit
1 Art. 4881: Surface mounting box



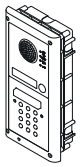
1 GSM antenna
Art. 432



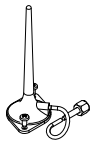
1 Power supply
Art. 324

ONE WAY VERSIONS

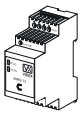
GSM4KC-1 - flush mounting



1 Outdoor station composed of:
1 Art. 4810-1: 1 button GSM (pro) unit
1 Art. 4800M: 4000 series codelock
1 Art. 4852: Flush mounting box



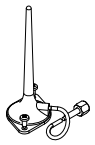
1 GSM antenna
Art. 432



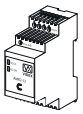
1 Power supply
Art. 324

GSM4KC-1S - surface mounting

1 Outdoor station composed of:
1 Art. 4810-1: 1 button GSM (pro) unit
1 Art. 4800M: 4000 series codelock
1 Art. 4882: Surface mounting box



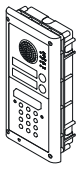
1 GSM antenna
Art. 432



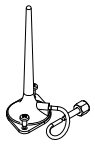
1 Power supply
Art. 324

TWO WAY VERSIONS

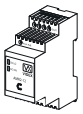
GSM4KC-2 - flush mounting



1 Outdoor station composed of:
1 Art. 4810-2: 2 button GSM (pro) unit
1 Art. 4800M: 4000 series codelock
1 Art. 4852: Flush mounting box



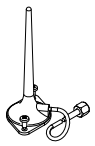
1 GSM antenna
Art. 432



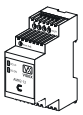
1 Power supply
Art. 324

GSM4KC-2S - surface mounting

1 Outdoor station composed of:
1 Art. 4810-2: 2 button GSM (pro) unit
1 Art. 4800M: 4000 series codelock
1 Art. 4882: Surface mounting box



1 GSM antenna
Art. 432



1 Power supply
Art. 324

GSM4K AUDIO KITS

Additional GSM4K-n (flush) kit versions available from 3 way kits up to 12 way kits: **GSM4K-3** up to **GSM4K-12**. Each audio kit comes with the appropriate Art.4810 GSM module, appropriate extension button module(s) and appropriate flush back box depending on the GSM4K-n kit required (where n = the number of call buttons).

Additional GSM4K-nS (surface) kit versions available from 3 way kits up to 12 way kits: **GSM4K-3S** to **GSM4K-12S**. Each audio kit comes with the appropriate Art.4810 GSM module, appropriate extension button module(s) and appropriate surface back box depending on the GSM4K-nS kit required (where n = the number of call buttons).

GSM4KC AUDIO KITS

Additional GSM4KC-n (flush) kit versions available from 3 way kits up to 12 way kits: **GSM4KC-3** up to **GSM4KC-12**. Each audio kit comes with the appropriate Art.4810 GSM module, appropriate extension button module(s), Art.4800M codelock module and appropriate flush back box depending on the GSM4KC-n kit required (where n = the number of call buttons).

Additional GSM4KC-nS (surface) kit versions available from 3 way kits up to 12 way kits: **GSM4K-3S** to **GSM4K-12S**. Each audio kit comes with the appropriate Art.4810 GSM module, appropriate extension button module(s), Art.4800M codelock module and appropriate surface back box depending on the GSM4KC-nS kit required (where n = the number of call buttons).

Technical Information

ART.4810 GSM (PRO) MODULE

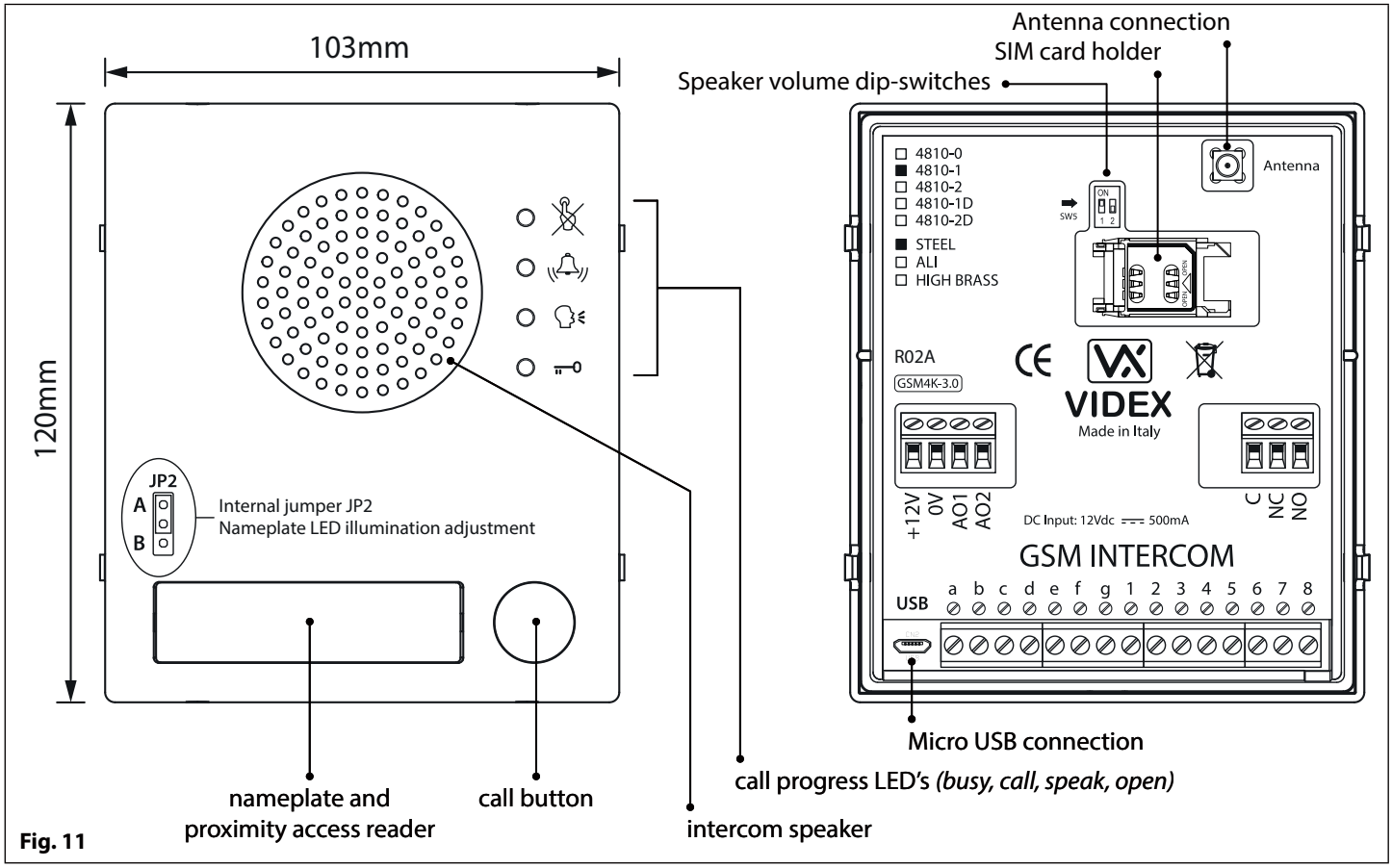


Fig. 11

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.11**. 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 46).

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 stainless steel facia, as shown in **Fig.11**. To access the jumper the facia must be removed and the jumper can be adjust 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.

TERMINAL CONNECTIONS AND JUMPER JP2

Terminal	Description	
+12V	12 - 24Vdc or ac power.	
0V	0V ground power.	
AO1	Auxiliary output 1 (open collector, 150mA max.).	
AO2	Auxiliary output 2 (open collector, 150mA max.).	
C	Common relay contact.	Relay contacts: 3A@24Vdc 3A@120Vac
NC	Normally closed relay contact.	
NO	Normally open relay contact.	
a	Button matrix for connecting up to 50 call buttons, PTE, and auxiliary inputs. The PTE *(push to exit button)* connects across g-6. Auxiliary 1 input connects across g-5 (activates AO1 when set to mode 01). Auxiliary 2 input connects across g-4 (sends SMS message to master telephone number).	
b		
c		
d		
e		
f		
g		
1	Button matrix for connecting up to 50 call buttons, PTE, and auxiliary inputs. The PTE (push to exit button) connects across g-6. Auxiliary 1 input connects across g-5 (activates AO1 when set to mode 01). Auxiliary 2 input connects across g-4 (sends SMS message to master telephone number).	
2		
3		
4		
5		
6		
7		
8		
JP2	Nameplate window LED illumination adjustment. JP2 position A = LED bright, JP2 position B = LED low, JP2 removed = LED disabled.	

CALL PROGRESS LED'S

LED *(sign)*	Description
	The busy LED when illuminated, indicates that it is not possible to make a call because a call or a conversation is in progress. The LED will be OFF when the system is in standby. If there is power on the GSM intercom and the Art.432 antenna is not connected this LED will flash continuously until the antenna is connected. The LED will flash while connecting to a network.
	The call LED when illuminated, indicates that the call from the GSM intercom panel is in progress. The LED will switch OFF when the call is answered or after the call time expires.
	The speak LED when illuminated, indicates that it is possible to speak because the call has been answered. The LED will switch OFF at the end of a conversation when the telephone/mobile that has been dialled hangs up or at the end of the call time.
	The open LED when illuminated, indicates that the door lock (GSM relay) has been operated. It will switch OFF at the end of the programmed "door opening" time. The LED will also illuminate and operate the relay if a programmed key fob is presented to the onboard proximity reader (nameplate window).

TECHNICAL SPECIFICATION

Working Voltage	: 12 - 24Vdc or ac +/- 10%
Standby Current	: approx. 60mA
Max. Current	: approx. 500mA (max.)
Call Buttons	: up to 50 (max.)
Telephone Numbers per Button	: 4 telephone numbers (1 primary, 3 diverts)
Dial to Open Numbers	: up to 1000 (max.)
Proximity Access *(fobs)*	: up to 1000 users (max.)
Call Progress LED's	: 4 (busy, call, speak and open)
Programming	: SMS messaging or PC software
Push to Exit	: 1 (across terminals g-6)
Auxiliary Inputs	: 2 (A1 = across terminals g-5, A2 = across terminals g-4)
Auxiliary Outputs	: 2 (open collector output, switched 0V, 150mA max.)
Dry Contact Relay	: 3A @ 24Vdc, 3A @ 120Vac
Event Log	: up to 4000 events
USB Port	: micro USB
Timebands	: 1 programmable timeband
Working Temp.	: -10 +50ºC

ART. 4800M CODELOCK MODULE

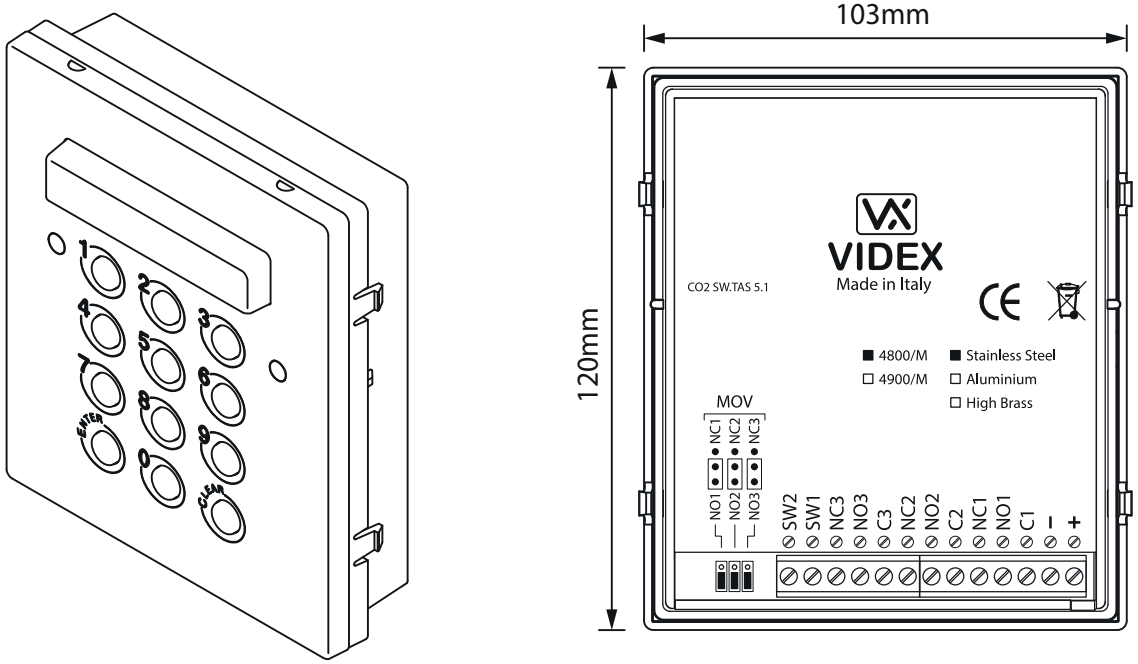


Fig. 12

RELAYS BUILT-IN BACK EMF PROTECTION

The Art.4800M includes selectable back EMF protection (metal oxide varistors) jumpers on the relays. These jumpers are marked MOV (one jumper for each relay) 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. When using a fail open lock with connections C & NC the jumper should be in the NC position, as shown in **Fig.13**. When using the codelock to trigger a gate controller or another third party controller the jumper should be removed completely (this disables the protection on the relay).

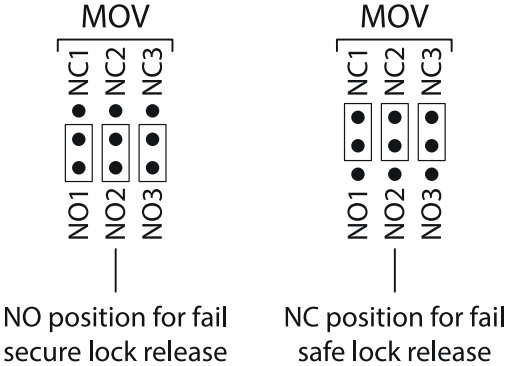


Fig. 13

TERMINAL CONNECTIONS

Connection	Description	
+	12-24V AC or DC power input	
-	0V power input	
C1	Relay 1 common connection	Relay contacts: 3A@24Vac/dc
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 common connection	
SW1	Switched 0V input to trigger relay 1	
SW2	Switched 0V input to trigger relay 2	

TECHNICAL SPECIFICATION

Working Voltage	: 12V - 24Vac/dc +/- 10%
Current (standby)	: 20mA
Current (during operation)	: 70mA (max.)
Dry Contact Relay	: 3A @ 24Vac/dc (max.)
Working Temp.	: -10 +50ºC

CONNECTING THE CODELOCK TO THE GSM INTERCOM

Follow the connections as shown in **Fig.14** when connecting the Art.4800M codelock to the Art.4810 GSM intercom.

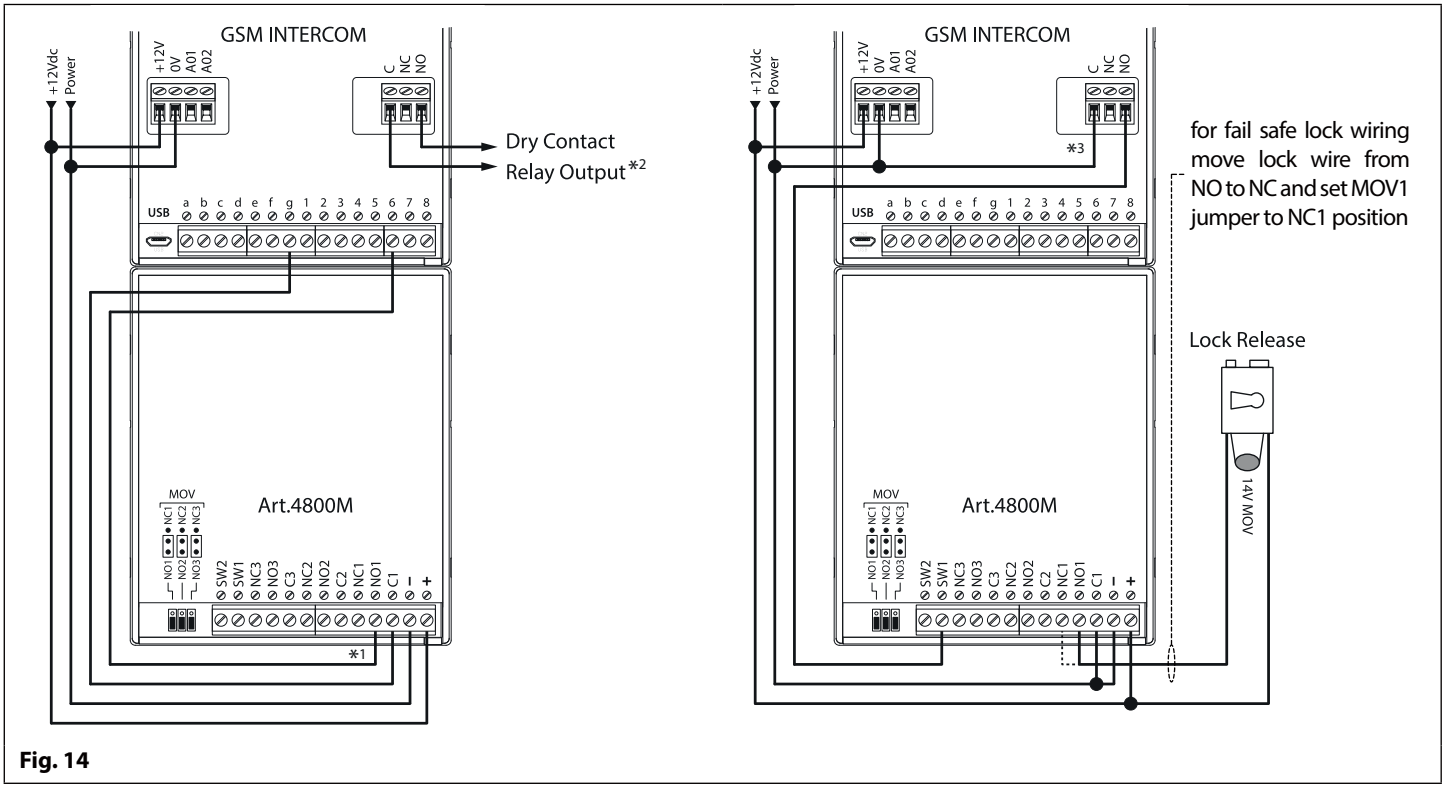


Fig. 14

***1** - Remember to set the Art.4800M relay time to a shorter time than that of the Art.4810 GSM intercom relay time.

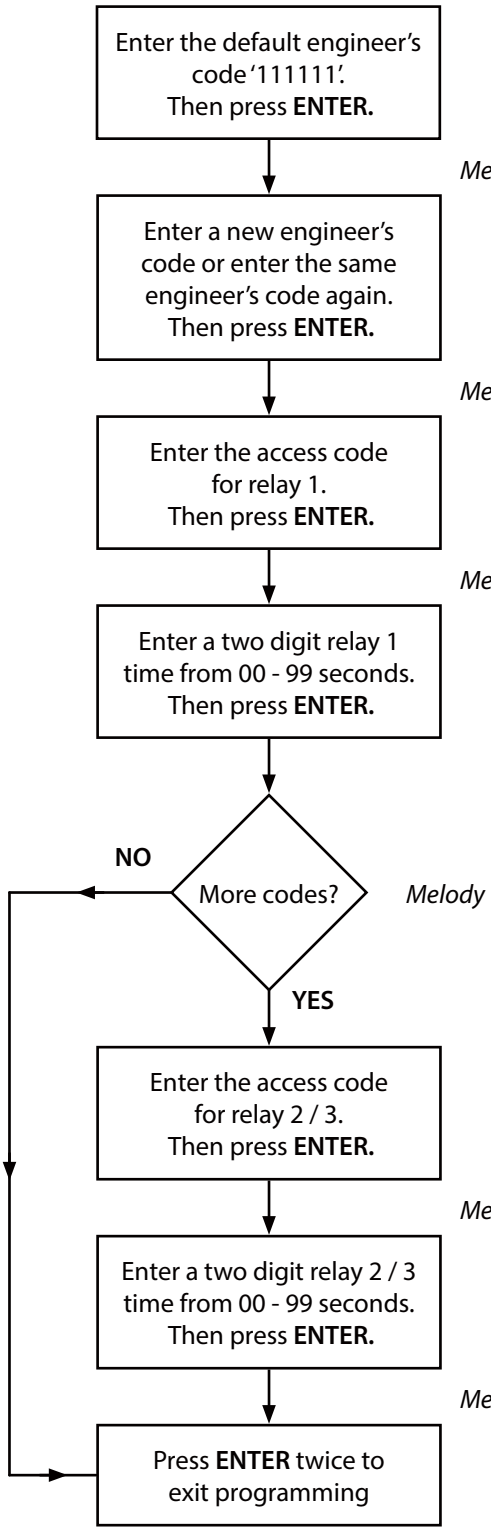
***2** - If connecting the Art.4810 GSM PRO intercom to a gate controller then please refer to page 20 for correct wiring configuration.

***3** - Set the Art.4810 GSM intercom relay time to a shorter time than that of the Art.4800M relay time.

ART. 4800M PROGRAMMING GUIDE

Initial Programming

All programming is carried out using the keypad. The programming menu is protected by an engineer's code. The factory default engineer's code is '111111' (6x1). This code can be changed to any 4 to 8 digit engineer's code during the programming, but must be different to the access codes used to gain entry. Follow the flow chart below to setup the access codes:



The red LED will illuminate to acknowledge the Art.4800 - Art.4800M is in programming mode. If the red LED does not illuminate check the engineer's code is correct. If the engineer's code has been changed from the factory default and you do not know what it is then follow the factory default procedure on page 14.

This new engineer's code can be from 4 – 8 digits long and will not activate the relays. It can only be used to enter programming mode. Please note that this new engineer's code will be needed to re-program the Art.4800 - Art.4800M relay codes in the future.

This access code will be used to open the door/gate for relay 1. The code can be from 4 – 8 digits long and must be different from the engineer's code.

*This is the time that relay 1 will activate for. It is a two digit number, for example if relay 1 needs to activate for 5 seconds then enter '05' followed by **ENTER**. '00' will latch the relay when the access code is entered and require the access code followed by **CLEAR** to unlatch.*

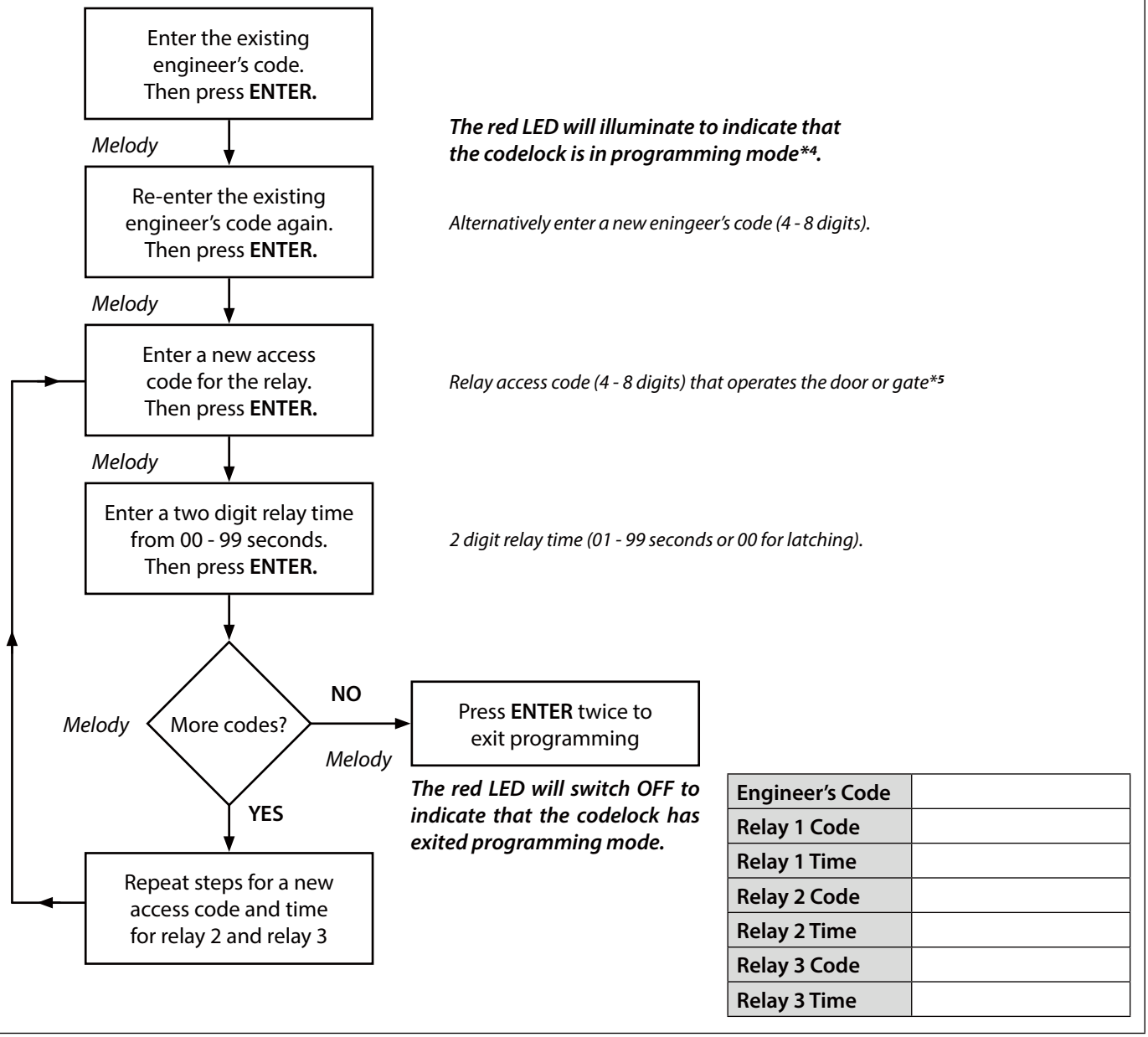
This access code will be used to open the door/gate for relay 2/relay 3. The code can be from 4 – 8 digits long and must be different from the engineer's code and different from the previous access codes.

*This is the time that relay 2/relay 3 will activate for. It is a two digit number, for example if relay 2/relay 3 needs to activate for 5 seconds then enter '05' followed by **ENTER**. '00' will latch the relay when the access code is entered and require the access code followed by **CLEAR** to unlatch.*

The Art.4800 - Art.4800M codelock will play a melody and the red LED will switch OFF to confirm all the settings are saved and exit from programming mode.

Re-programming the Codelock

If the Art.4800M codelock has been programmed with an existing access code and it needs to be changed then follow the flow chart below to re-program a new acces code:



Engineer's Code	
Relay 1 Code	
Relay 1 Time	
Relay 2 Code	
Relay 2 Time	
Relay 3 Code	
Relay 3 Time	

Programming Notes

***4 -** If the red LED does not illuminate then the engineer's code has been previously changed or is incorrect. To reset this code follow the factory reset procedure below.

***5 -** On the first loop of the flow chart above the access code is for relay 1 on the second loop the access code is for relay 2 and on the third loop the access code is for relay 3.

RESETTING THE ENGINEER'S CODE BACK TO FACTORY DEFAULT '111111' (6x1)

1. Remove/disconnect the power from the Art.4800M codelock.
2. Press and hold down the ENTER button while the power is switched back onto the codelock.
3. Once power is restored to the codelock release the ENTER button.
4. The engineer's code has been reset back to the factory default of '111111' (6x1).

Wiring Diagrams

GSM4K CONNECTIONS

Fig.15 shows the wiring connections for a **GSM4K-1** / **GSM4K-1S** audio kit.

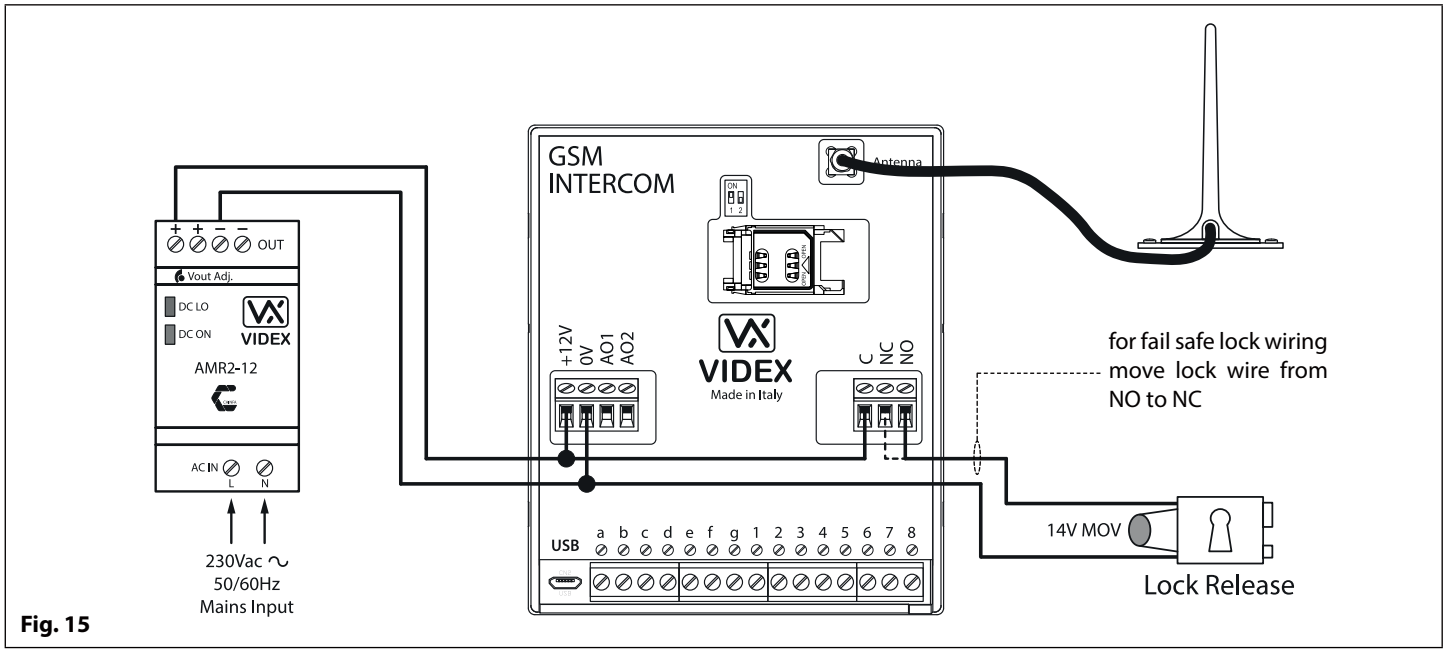


Fig. 15

GSM4KC CONNECTIONS

Fig.16 shows connections for a **GSM4KC-1** / **GSM4KC-1S** audio kit.

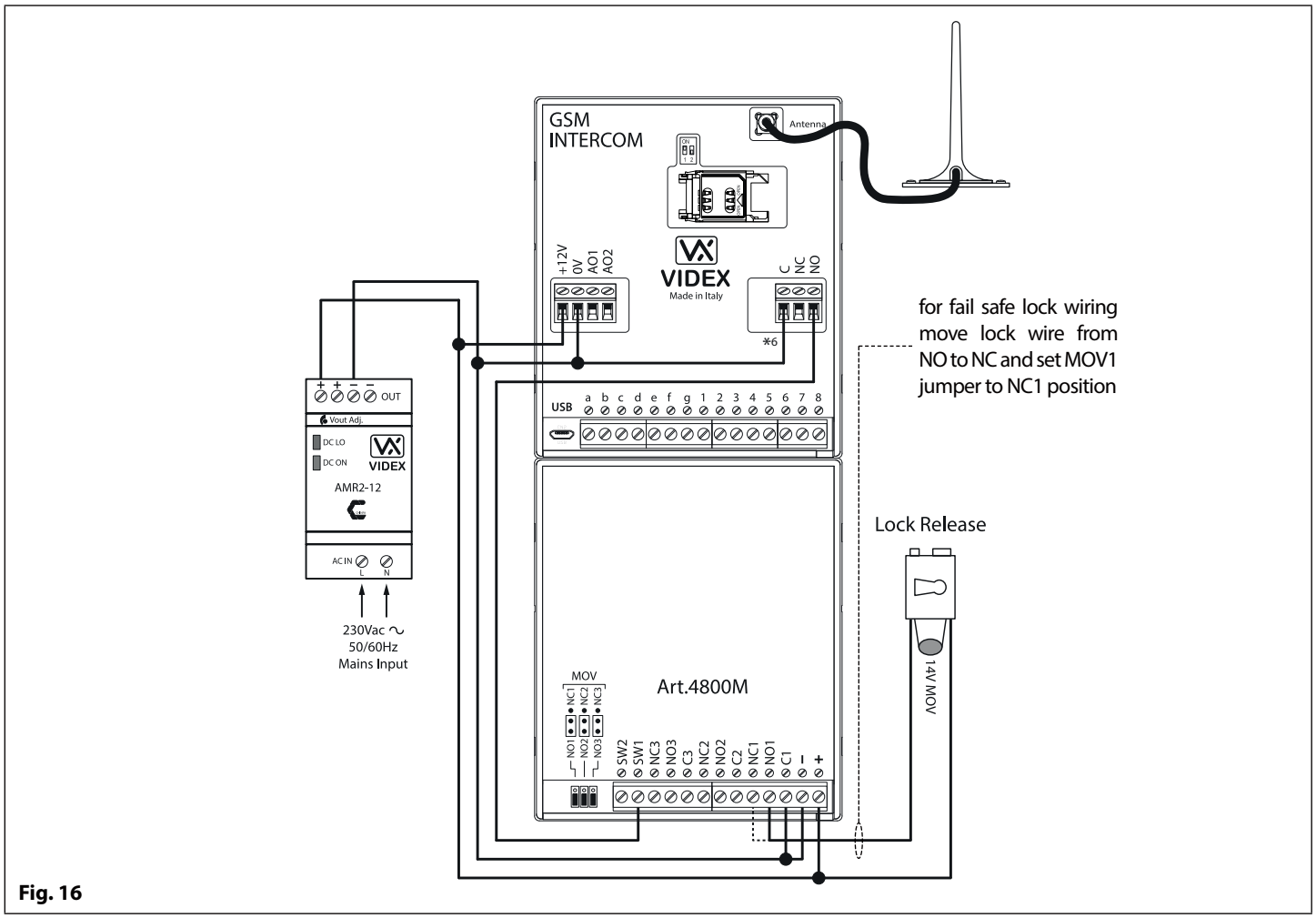


Fig. 16

***6** - Set the Art.4810 GSM intercom relay time to a shorter time than that of the Art.4800M relay time.

CONNECTING TO A GATE CONTROLLER (USING THE ART.120 OPTO-ISOLATOR PCB)

If the GSM intercom is going to be connected to a set of gate controls then it is recommended that the GSM relay is connected with the Art.120 opto-isolator pcb provided with the GSM kit. The gate controls can then be connected into the C and NO terminals on the Art.120 pcb. Follow the connections shown in **Fig.17**.

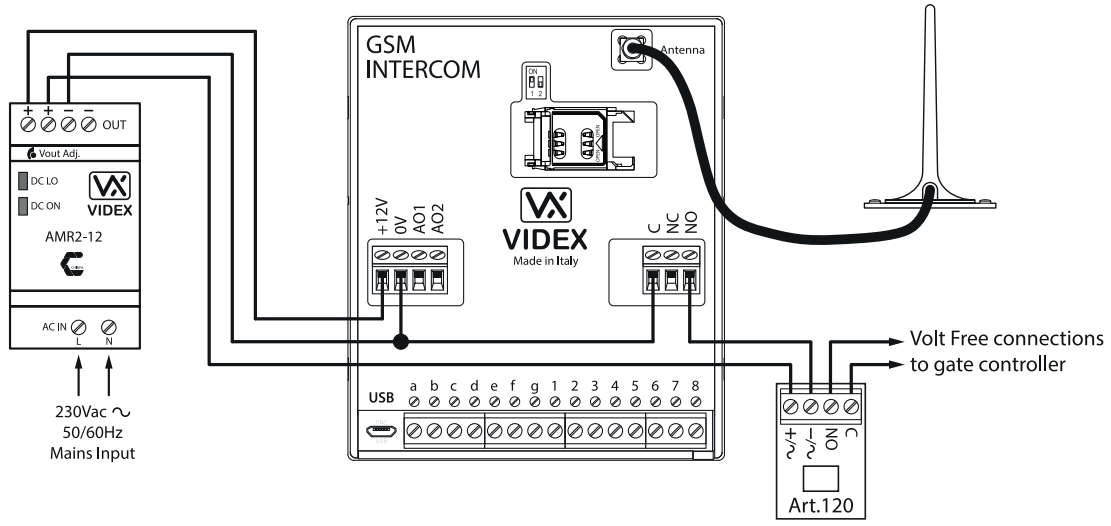


Fig. 17

CONNECTING A PUSH TO EXIT BUTTON

The push to exit button must be configured as a push-to-make switch and connected across terminals g & 6 on the Art.4810 GSM module. When the exit button is pressed the GSM relay will trigger for the programmed time (see **Fig.18**).

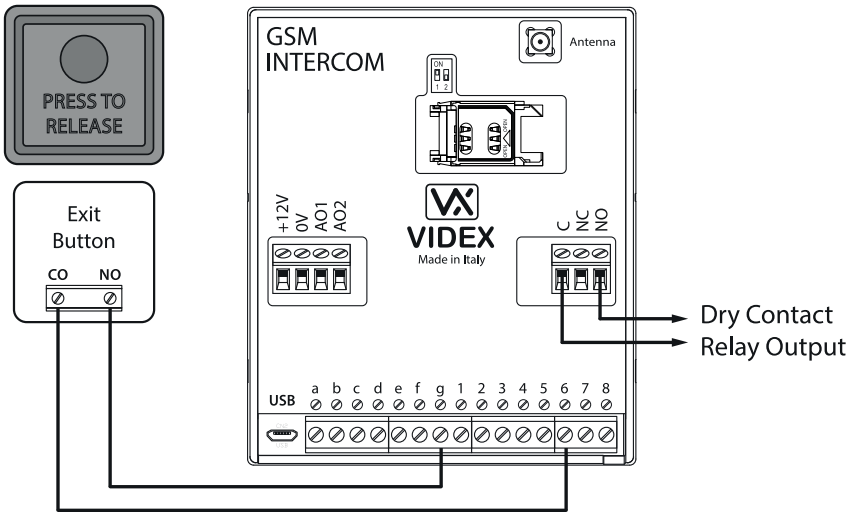


Fig. 18

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 35 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.19**.

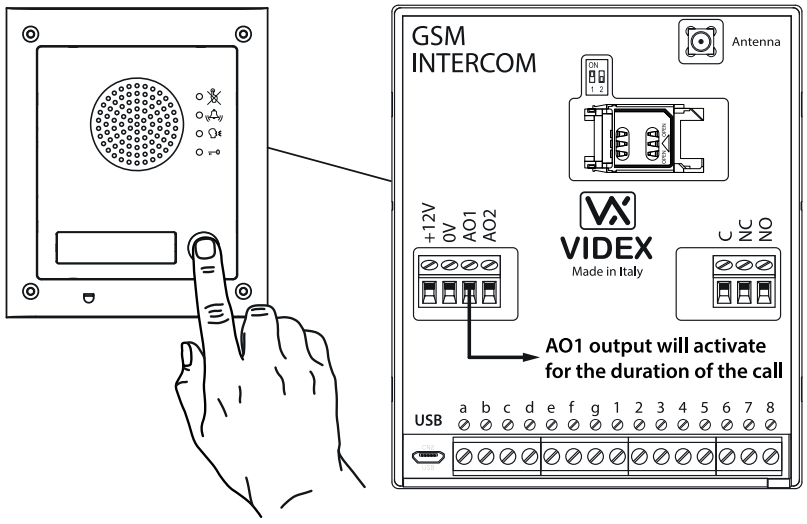


Fig. 19

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 PRO module or by pressing 6 on the telephone during a call, as shown in **Fig.20**. Auxiliary output AO1 will only activate for the programmed time.

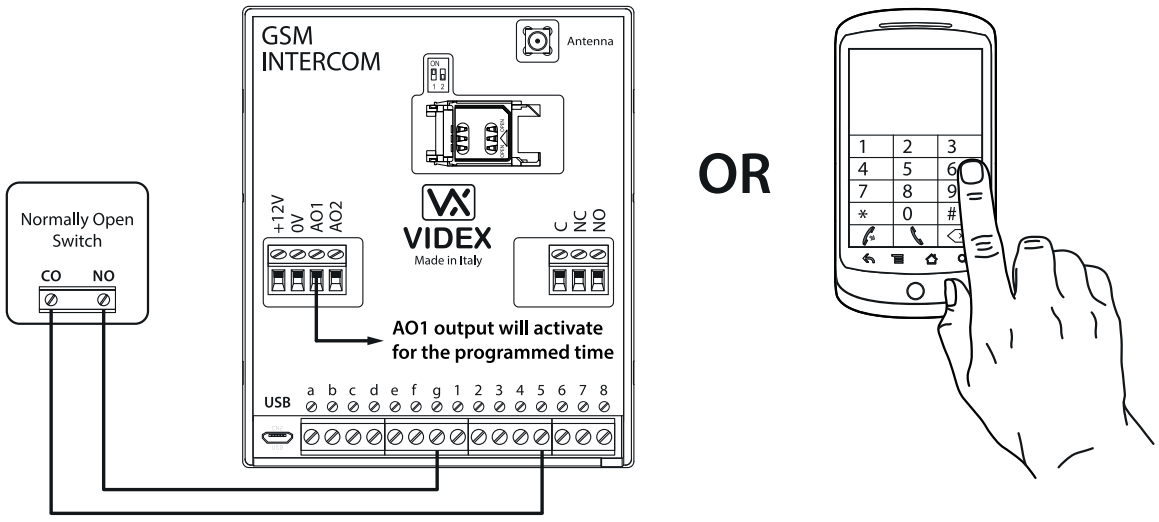


Fig. 20

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 interrorgated 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 PRO 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.21**.

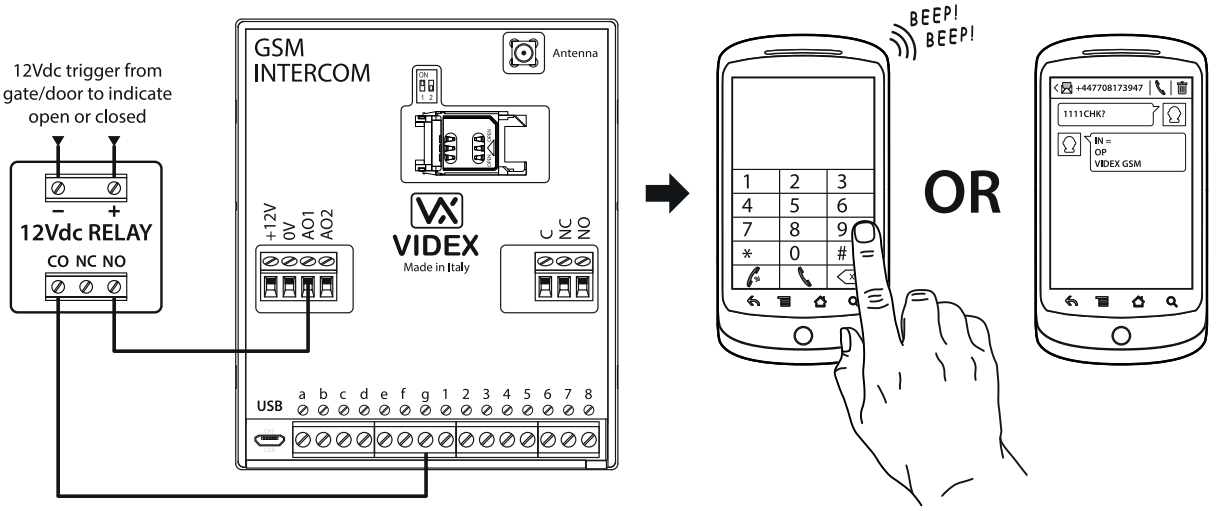


Fig. 21

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

It is possible to have all call buttons diverted to the master number outside certain hours or when auxiliary output AO1 has been set to mode 03 (auxiliary output AO1 is used as a monitoring input). If there is no master number stored, the intercom will beep and the busy LED will flash once to indicate no call is taking place (if the speech board is switched ON, this will announce "the phone is switched off please try later").

For this feature to work a time band must be setup and a master number stored (to setup the time band and store a master number follow the SMS programming section on page 38 or the relevant steps in the GSMSK PC software manual). A switched common and normally open (CO/NO) trigger needs to be used to enable or disable call divert to master number and the auxiliary output AO1 must be wired as shown in **Fig.22**.

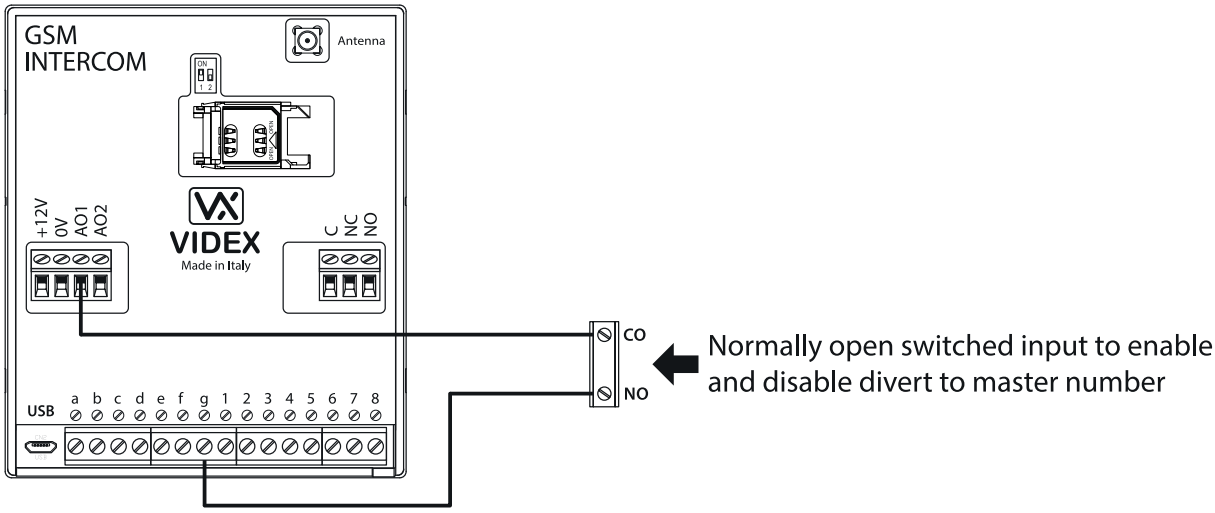


Fig. 22

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 AO1 time expires, see **Fig.23**.

The auxiliary output AO1 time can be set using the SMS programming code **1111A1Tnn?** (where nn = time in seconds, also refer to programming notes on page 35) or setup by using the GSMSK PC programming software.

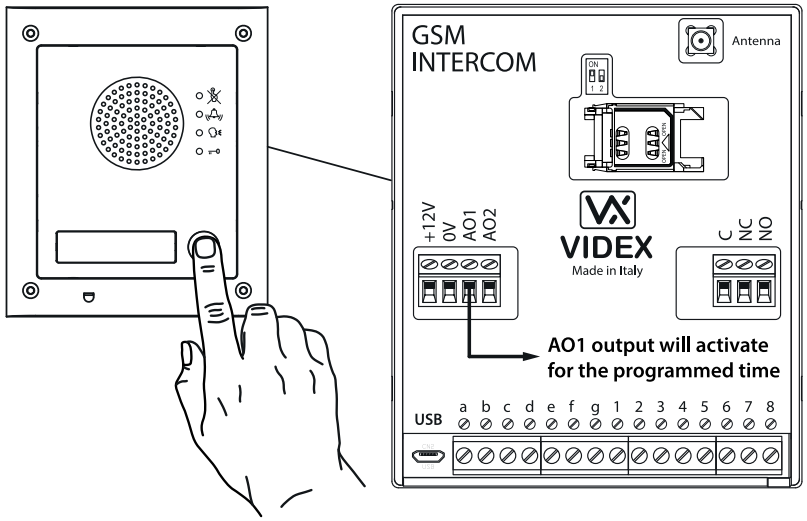


Fig. 23

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 will only activate the GSM relay when a common and normally open (CO/NO) switch connected across terminals g & AO1, as shown in **Fig.24**, is open circuit. When the switch is closed and terminals g & AO1 are short together this will disable the dial to open numbers.

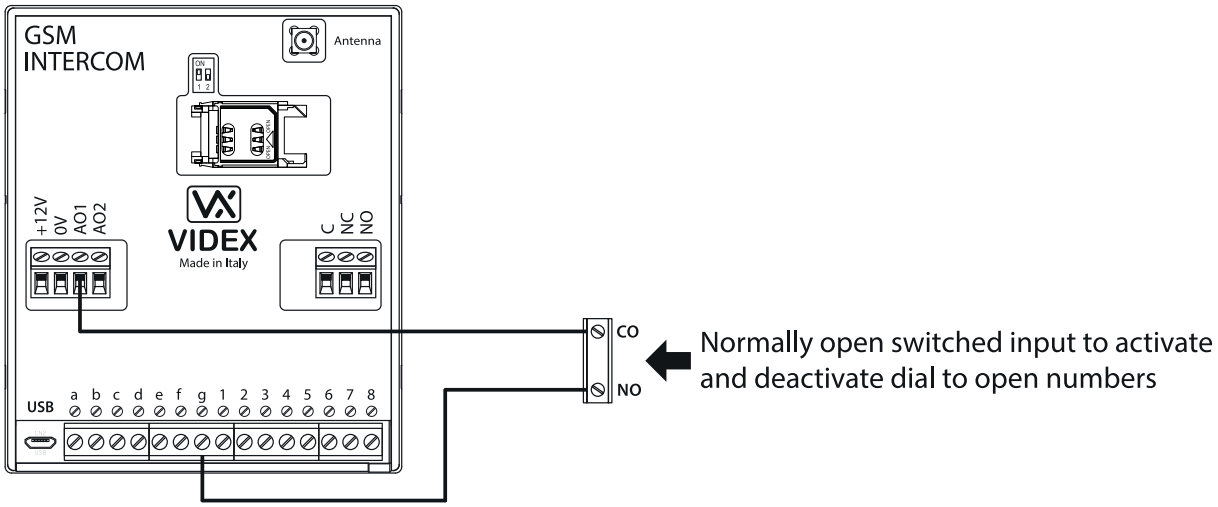


Fig. 24

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

AUXILIARY OUTPUT AO2

The auxiliary output AO2 is an open collector output (switched low, 150mA max.) and can be used to switch a negative trigger onto a transistor switched device, for example an Art.506N, for the programmed **A2T** time (refer to notes on page 35 setting the **A2T** time). This can be particularly useful when switching an additional device for instance a secondary gate control.

The AO2 output can only be triggered in two ways:

1. **During a call:** press 5 on the telephone keypad to activate AO2 for the programmed **A2T** time.
2. **At anytime (depending on the operation required) send one of the following SMS messages to the GSM intercom: 1111A2O?** to trigger the AO2 output for the programmed **A2T** time. **1111A2L?** to latch the AO2 output. **1111A2U?** to unlatch the AO2 output.

For this feature an additional transistor switched device will be required. **Fig.25** below shows an example of connecting an Art.506N relay to the AO2 output.

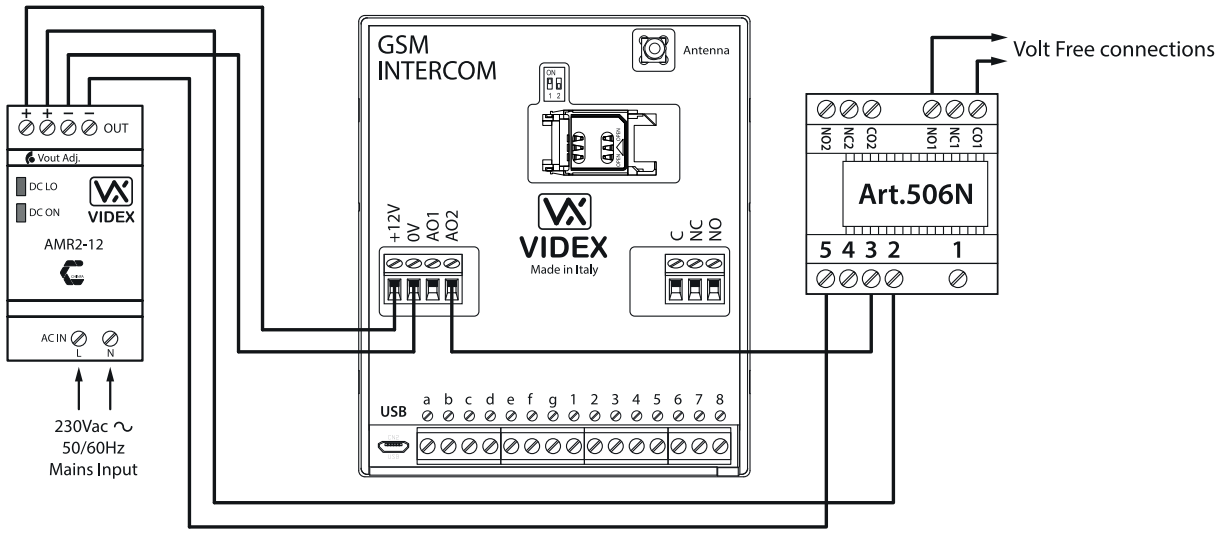


Fig. 25

AUXILIARY INPUT 2

Auxiliary input 2 connects across terminals g & 4 on the GSM PRO module. When this input is triggered it will send an SMS message to the master telephone number, as shown in **Fig.26**, (to store a master number **STM** follow the SMS programming section on page 38 or the relevant steps in the GSMSK PC software manual). Once this input is triggered it cannot be triggered again for 4 minutes. This is to avoid multiple SMS messages being sent for the same alarm.

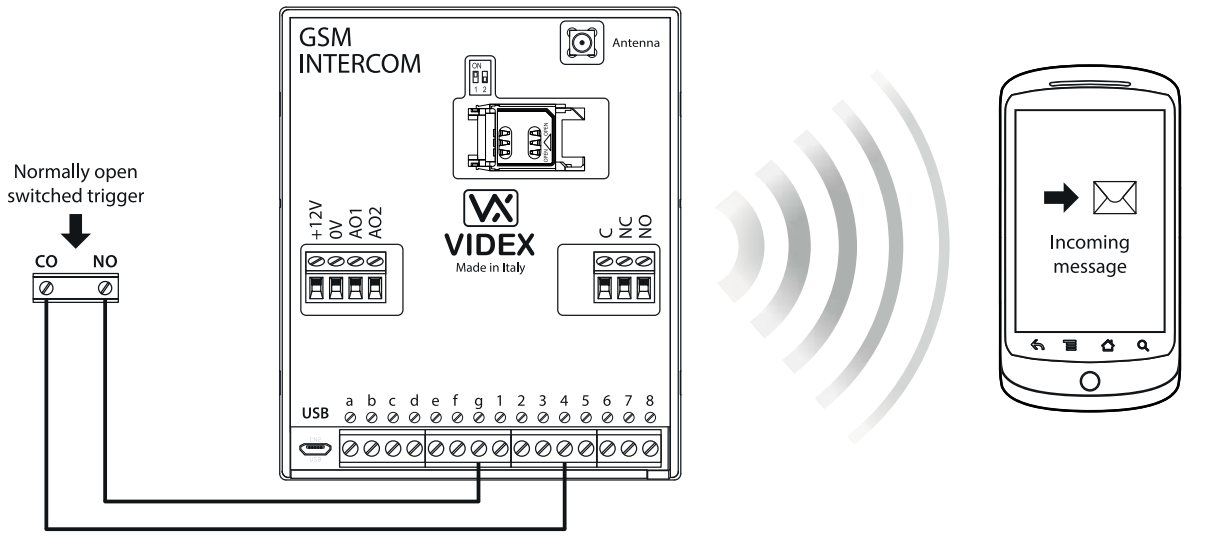


Fig. 26

IMPORTANT NOTE: auxiliary input 2 has been specifically setup for this function and does not activate auxiliary output AO2. Refer to the notes at the top of this page for activating auxiliary output AO2.

General Directions for Installation

CABLE SIZE GUIDE

Refer to the table below for the connections for the power supply output to the Art.4810 GSM PRO intercom and the lock release connections.

Distance	20m	50m	100m
Cross Sectional Area (CSA)	0.5mm^2	1.0mm^2	1.5mm^2

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.
- 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 or the appropriate standards of your country).
- 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.

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 must be fitted across the terminals of the lock, shown in **Fig.27**. If fitting a DC lock release (fail secure or fail safe) then a 1N4002 diode must be fitted across the terminals on the lock, shown in **Fig.28**.

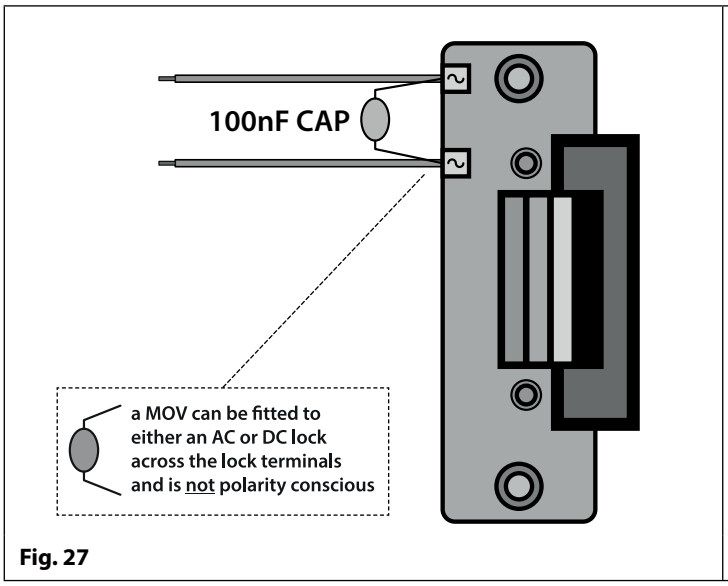


Fig. 27

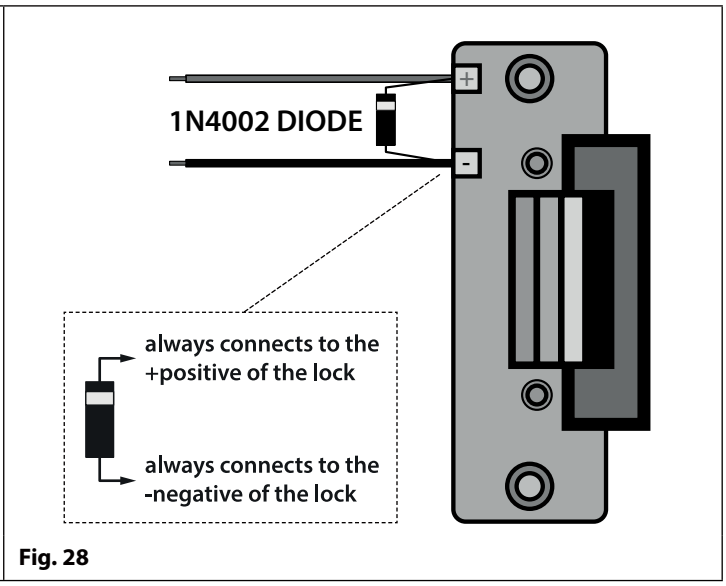


Fig. 28

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.27** above) and can be fitted on both an AC and DC lock. Connection examples can also be seen on the wiring diagrams on pages 16 and 19.

CONNECTION TO MAINS, SAFETY AND GUIDANCE NOTES

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

Videx recommends that any cabling and Videx product be installed by a competent and qualified electrician, security installation speclialist 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**), or the appropriate standards of your country, in particular Videx recommends:

- Connecting the system to the mains through an all-pole circuit breaker (refer to **Fig.29**) 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.
- Isolating the mains before carrying out any maintenance work on the system.

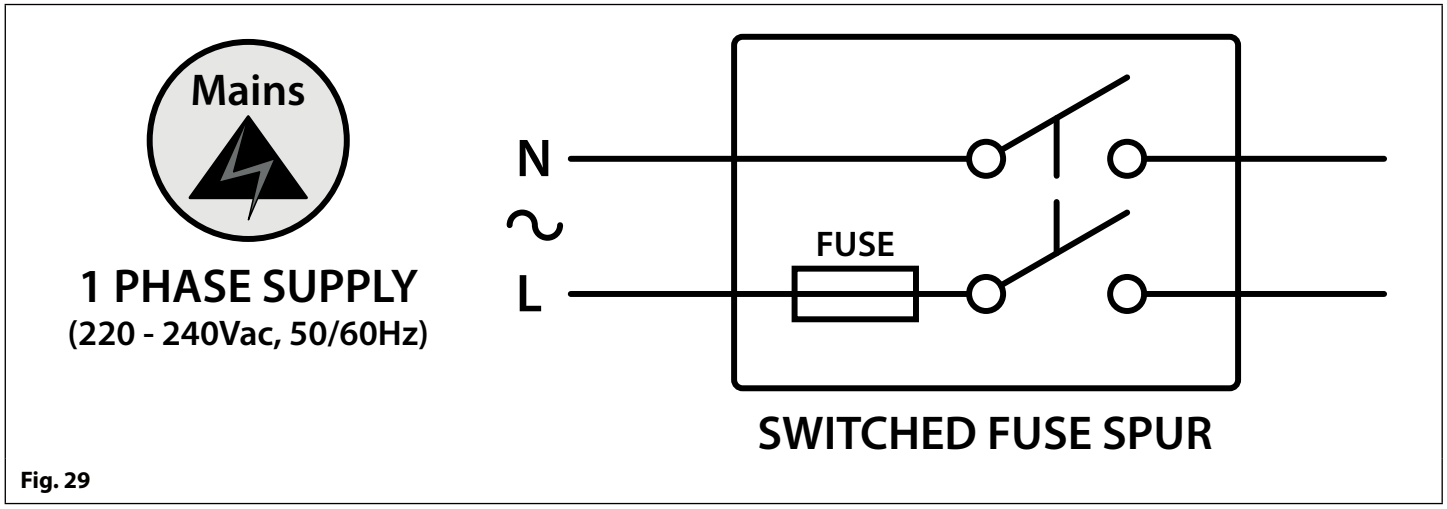


Fig. 29

POWER SUPPLY INSTALLATION

Follow the steps below when fitting the Art.324 power supply.

- First remove the terminal side covers by unscrewing the retaining screws.
- Fix the power supply to a DIN rail (following **Fig.30**, **Fig.31** and **Fig.32**).
- Switch OFF the mains using the circuit breaker (mentioned previously) and then make the connections as shown on the installation diagrams.
- 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.
- Replace the terminal covers and fix them back into place using the relevant screws.
- When all connections are made restore the mains supply.

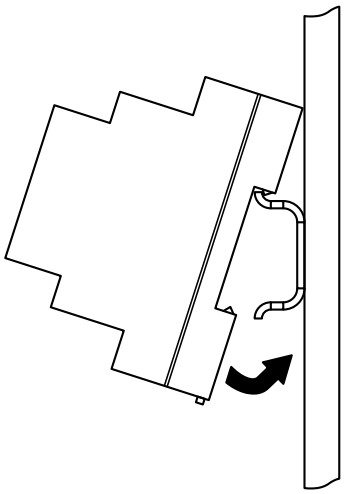


Fig. 30

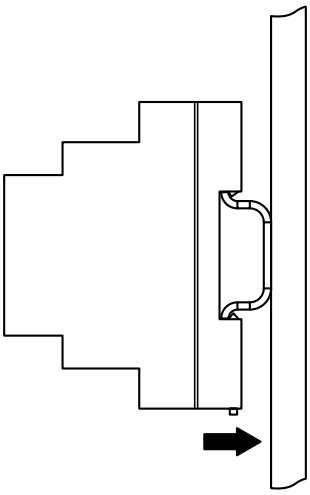


Fig. 31

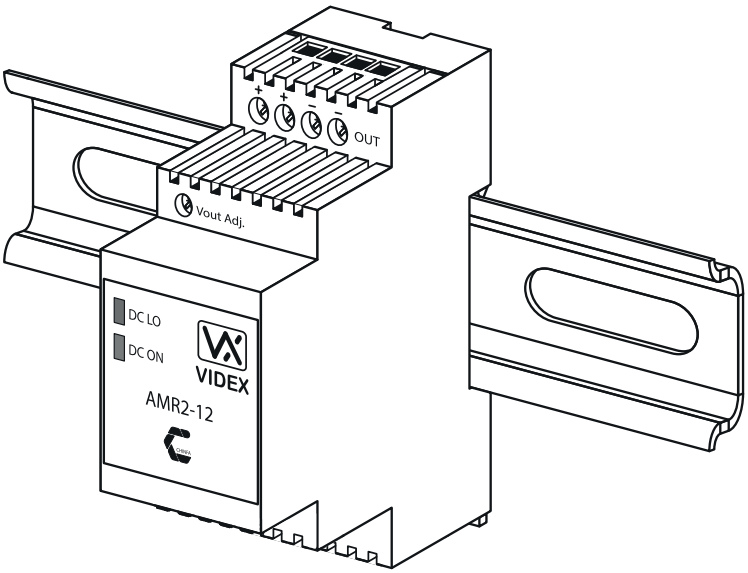


Fig. 32

PANEL CARE

The door panel's facia is either mirror finish stainless steel or matt finish aluminium. It is important that the facia is cleaned on regular occasions to prevent dirt build up and tarnishing of the metal. A general household metal polish can be used but care should be taken to follow the grain of the metal when polishing and also avoid any polish build up around the call buttons which may prevent the buttons from operating correctly.

FITTING A SIM CARD

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 with the exception of the 3 network. Follow the steps below to insert the SIM card:

1. First slide the SIM holder on the back of the GSM module to the left until it 'clicks', as shown in **Fig.33**.

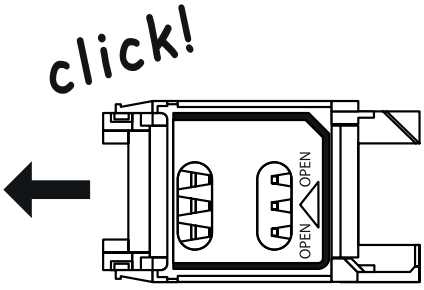


Fig. 33

2. The SIM holder is hinged and will open out to the left, see **Fig.34**.

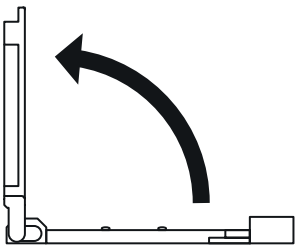


Fig. 34

3. Place the SIM card into the holder (it will only fit one way, see **Fig.35**) and fold the holder back down, see **Fig.36.**

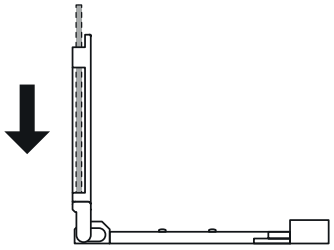


Fig. 35

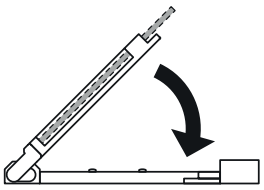


Fig. 36

4. Slide the SIM holder back to the right until it 'clicks', see **Fig.37**.

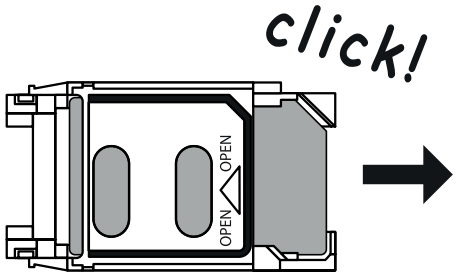


Fig. 37

5. Once the SIM is in place follow the initialisation process.
6. Check all the connections have been made correctly and then power up the system.
7. The GSM PRO intercom requires approximately 30 seconds too initialise properly. We recommend NOT sending SMS messages or pressing buttons during this time. The busy LED will flash while initialising.
8. From power up; two short beeps will be heard and then following a short delay of approximately 15 seconds, a further short beep will be heard. After approximately another 15 seconds another short beep will be heard (if you hear a different combination of beeps in place of the last short single beep then you can find the meaning of these beeps towards the back of this manual).
9. Once the GSM PRO module has initialised (the busy LED has stopped flashing) you can begin programming.

POWER UP INITIALISATION SEQUENCE

- 2 short beeps.
- Approx. 15 seconds delay.
- 1 short beep.
- Approx. 15 seconds delay.
- 1 short beep.
- Wait for busy LED to stop flashing.
- System is ready.

Reset Procedure

RESETTING THE GSM MODULE TO FACTORY DEFAULTS

There are two reset modes available. The first will reset the master code only and the second will reset everything and clear all stored telephone numbers, proximity cards and settings.

RESETTING THE MASTER CODE TO 1111 (4x1)

1. Power down the intercom panel.
2. Put a short across terminals g & 7.
3. Power up, 2 beeps will be heard followed by a delay and then a further beep.
4. Remove the short after the 3rd beep.
5. The master code is now reset to 1111.

FULL SYSTEM RESET

1. Power down the intercom panel.
2. Put a short across terminals g & 8.
3. Power up, 2 beeps will be heard followed by a delay and then a further 2 beeps.
4. Remove the short after the 4th beep.
5. All settings are returned to factory defaults.

4000 Series Back Box Installation

EXAMPLE: INSTALLING A 4000 SERIES FOUR MODULE BACK BOX

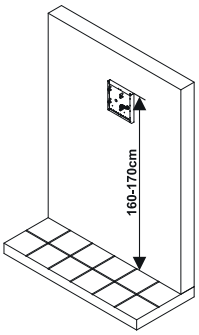


Fig. 38

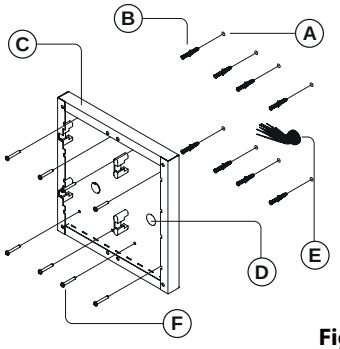


Fig. 39

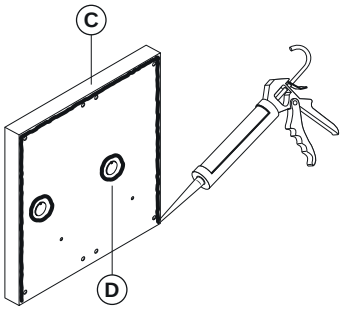


Fig. 40

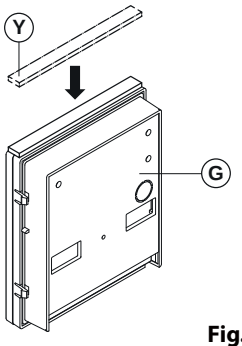


Fig. 41

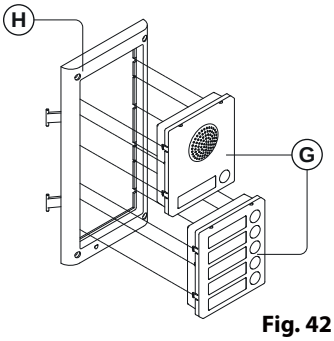


Fig. 42

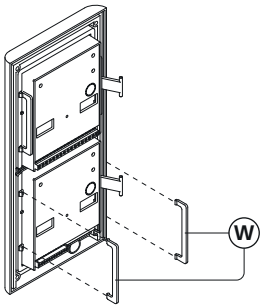


Fig. 43

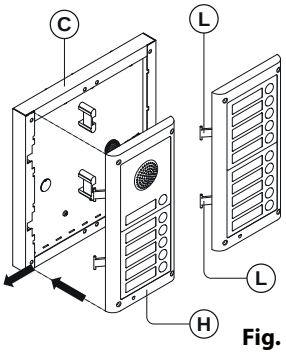


Fig. 44

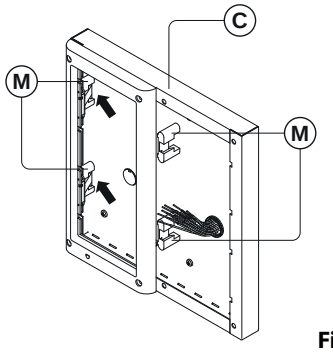


Fig. 45

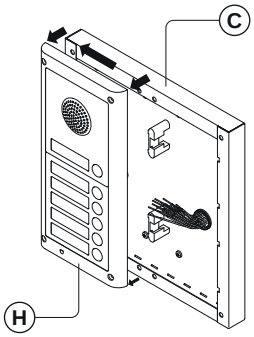


Fig. 46

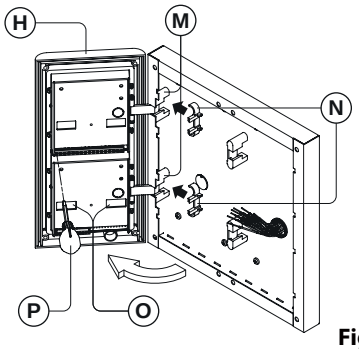


Fig. 47

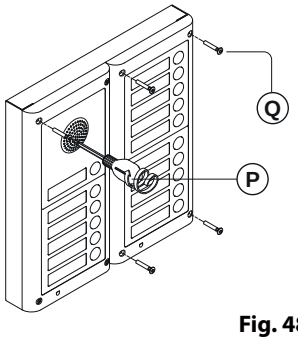


Fig. 48

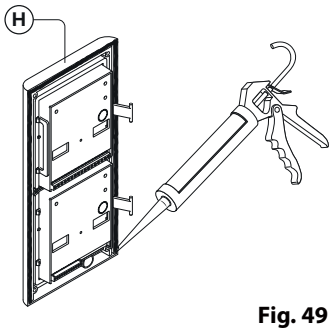


Fig. 49

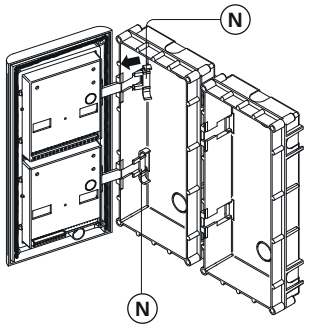


Fig. 50

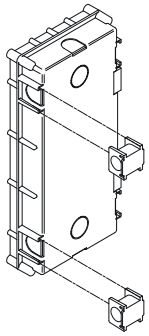


Fig. 51

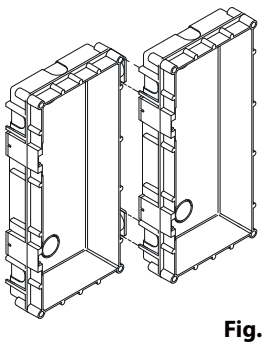


Fig. 52

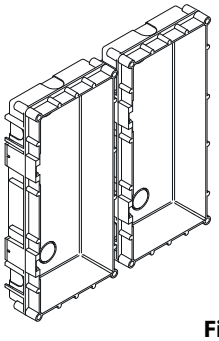


Fig. 53

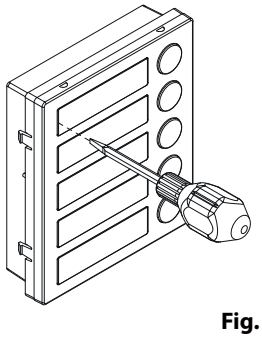


Fig. 54

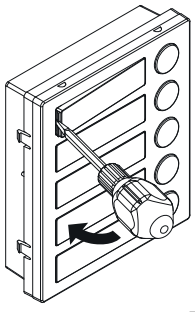


Fig. 55

4000 Series Back Box Installation

INSTALLING A SURFACE MOUNT DOOR STATION

1. Place the surface box against the wall (165-170cm between the top of the box and the floor level as shown in **Fig.38**) and mark the fixing holes for the wall plugs and the hole for the cables **E (Fig.39).** 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 (Fig.40) and around all holes D (Fig.40);**

2. As shown on **Fig.39,** 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**;
3. Apply the **Y** neoprene seal on top of each module as shown in **Fig.41;**
4. Before installation of the module support frame, hook the modules **G** to the support frame **H** as shown in **Fig. 42** then, as shown in **Fig.43,** fit the two anti-tampering locks **W** for each module (do the same for the second module support frame);
5. 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.44,** hook the module support frame **H** (complete with modules) to the surface box **C** moving the frame as suggested from pointers. Ensure that the pivots **L (Fig.44)** go inside the relevant housing **M** as shown in **Fig.45;**
6. As shown on **Fig.46,** pull back the module support frame **H** while moving it slightly to the left as suggested by the pointers;
7. As shown in **Fig.47,** open the module support frame **H** as suggested by the pointer, hook the hinge locks **N** to the hinges **M,** make the required connections using the screwdriver provided **P** (flat blade end) and make the required adjustment by adjusting the settings (through openings **O**) and adjust trimmers;
8. Repeat the same steps described above for the second module support frame (or for the third if available);
9. 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.48). 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 in the wall) as shown on **Fig.51, 52 and 53:**

- Arrange the back boxes and remove knockouts to allow cables to be fed from one back box to the other;
- Hook the spacers to first back box then hook the second back box to obtain the result shown on **Fig.53;**

1. 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.38**) feeding the cables **E (Fig.39)** 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 wall and the back box H (Fig.49);**

2. Continue from step **4** of surface mounting instructions , but at step **7** hook the hinge locks **N** as shown on **Fig. 50.**

> ⚠ **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.54;**
- Move the screwdriver to the left as shown in **Fig.55** 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 PRO intercom can be carried out in two ways, either by sending text (SMS) messages or by using the GSMSK PC software (ver 3.0.0.2 or later).

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 PRO intercom panel).

PROGRAMMING BY TEXT MESSAGE

Programming by text message is a simple way to customise the settings of the GSM PRO intercom panel and add or delete telephone numbers. If you have a large number of buttons or telephone numbers to enter you may find programming easier with the GSMSK PC software. Simply send texts in the following format shown below to the telephone number of the SIM within the GSM PRO 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 - 050	n/a	33 - 34
Store divert 1 telephone no.	**STD**	1111STDnnn"01912241559"	nnn = 001 - 050	n/a	33 - 34
Store divert 2 telephone no.	**STE**	1111STEnnn"01912243678"	nnn = 001 - 050	n/a	33 - 34
Store divert 3 telephone no.	**STF**	1111STFnnn"01912245326"	nnn = 001 - 050	n/a	33 - 34
Store dial to open no.	**STR**	1111STRnnn"07771234567"	nnn = 000 - 999	n/a	34
Set call time	**SPT**	1111SPTnn	nn = 01 - 12	02 *(40s)*	34
Set relay time	**RLT**	1111RLTnn	nn = 00 - 99	05 *(5s)*	34
Set auxiliary AO1 output time	**A1T**	1111A1Tnn	nn = 00 - 99	05 *(5s)*	35
Set auxiliary AO1 out mode	**A1M**	1111A1Mnn	nn = 00 - 05	01	35
Set auxiliary AO2 output time	**A2T**	1111A2Tnn	nn = 00 - 99	05 *(5s)*	35
Keep connection facility	**NOD**	1111NODnn	nn = 01 - 99	0 *(disabled)*	35 - 36
Divert to next no. time	**DIT**	1111DITnn	nn = 01 - 99	15 *(15s)*	36
Check GSM signal strength	**SIG**	1111SIG?	n/a	n/a	36
Check software version	**VER**	1111VER?	n/a	n/a	36
Dial a number	**DLE**	1111DLE"123"	n/a	n/a	36
Store SMS message for g-4	**SMS**	1111SMS"HouseAlarm"	n/a	AUX TRIG	36
Change 4 digit code	**CDE**	1111CDE1234	Any 4 digits	1111	37
Trigger the relay	**RLY**	1111RLY	n/a	n/a	37
Trigger the auxiliary output AO1	**A1O**	1111A1O	n/a	n/a	37
Trigger the auxiliary output AO2	**A2O**	1111A2O	n/a	n/a	37
Store balance check dial string	**SDL**	1111SDL"*#1345#"	n/a	n/a	37
Check credit balance	**BAL**	1111BAL?	n/a	n/a	37 - 38
Store master telephone no.	**STM**	1111STM"07771234567"	n/a	n/a	38
Latch the relay	**RLA**	1111RLA	n/a	n/a	38
Unlatch the relay	**RUL**	1111RUL	n/a	n/a	38
Latch the auxiliary AO1 output	**A1L**	1111A1L	n/a	n/a	38
Unlatch the auxiliary AO1 output	**A1U**	1111A1U	n/a	n/a	38
Latch the auxiliary AO2 output	**A2L**	1111A2L	n/a	n/a	38
Unlatch the auxiliary AO2 output	**A2U**	1111A2U	n/a	n/a	39

Store time band	**TBA**	1111TBA"06002300"	HHMMHHMM	00002359	39
Check/Set date & time	**CLK**	1111CLK"yy/mm/dd,hh:mm"?	yy/mm/dd,hh:mm	n/a	39
Input status check and set	**CHK**	1111CHK?	n/a	n/a	39 - 40
Silent dialling mode	**AUE**	1111AUEnn	nn = 00 or 01	01	40
Send tone after answer (But 1)	**DTP**	1111DTPn	n = 0 - 9 or X	X	40
Send tone after answer (Div 1)	**DTD**	1111DTDn	n = 0 - 9 or X	X	40
Send DTMF tone delay	**DTT**	1111DTTnn	nn = 01 - 12	03	40
Enable dial 0 on answer function	**EDZ**	1111EDZnn?	nn = 00 or 01	00	41
Enable proximity	**EPR**	1111EPRnn?	nn = 00 or 01	00	41
Proximity number of bytes to check	**PBY**	1111PBYnn?	nn = 02, 03 or 04	02	41
Store/query a fob or card	**FOB**	1111FOBnnn"site"","user"	nnn = 000 - 999	n/a	42
Disable (1) or enable (2) speech board	**SBM**	1111SBMnn?	nn = 01 or 02	02	42
Set speech board volume	**SBV**	1111SBVnn?	nn = 00 - 99	75	42
Find a telephone number	**FDT**	1111FDT" number or ends in"	n/a	n/a	42 - 43
Find a fob or card number	**FDF**	1111FDF"user code"	n/a	n/a	43
Door or Gate	**GAT**	1111GATnn?	00 or 01	n/a	43
Shutdown and Restart	**RBT**	1111RBT	n/a	n/a	43
Initiate a special command	**PRG**	1111PRG(command)	AT commands	n/a	44
AT command to send at start up	**AT1**	1111AT1"ATxxxxxx"?	Any AT command	n/a	44
AT command to send at start up	**AT2**	1111AT2"ATxxxxxx"?	Any AT command	n/a	44
AT command to send at start up	**AT3**	1111AT3"ATxxxxxx"?	Any AT command	n/a	44

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 PRO intercom depending on how congested the network is. If you are at the door panel when sending the message you will here a single beep from the GSM PRO intercom to indicate it has received the message.

STORING THE CALL BUTTON TELEPHONE NUMBERS (STN, STD, STE AND STF)

Telephone numbers can be stored for the 50 available call buttons. Each call button can call up to four telephone numbers (if the first is busy or not answered in a certain time it can call a 2nd, 3rd and 4th number if the divert facility is setup). The STN code stores the first number called (primary telephone number) when the button is pressed. The STD, STE and STF codes stores the diverted telephone numbers if the first is busy or not answered (the GSM PRO intercom will divert to the 2nd number then divert to the 3rd number and finally the 4th number). The messages to store/check numbers are as follows (replace STN with STD, STE or STF when storing/checking divert numbers).

1111STNnnn"yyyyyyyyyyy"	Store the primary telephone number yyyyyyyyyyy in position nnn.
1111STNnnn"yyyyyyyyyyy"?	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 & 050. The telephone number y can be a maximum of 30 digits. For example: to store the number 01912243174 for button 5 and three divert numbers (if that one is not answered or busy) of 01912241558, 07771234567 and 01912241559 respectively, the following SMS messages would be sent to the GSM intercom:

1111STN005"01912243174"

1111STD005"01912241558"

1111STE005"07771234567"

1111STF005"01912241559"

STORING A TELEPHONE NUMBER FOR DIAL IN DOOR RELEASE (STR)

Dial in door release allows users to release the door/gate simply by dialling the telephone number of the SIM in the GSM PRO 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 1000 numbers can be stored. The messages to check, store or delete numbers are as follows.

1111STRnnn"yyyyyyyyyy"	Store the telephone number yyyyyyyyyy in position nnn, where nnn = 000 - 999.
1111STRnnn"yyyyyyyyyy"?	Store the telephone number yyyyyyyyyy in position nnn, where nnn = 000 - 999, and send a confirmation text message to confirm storage of new number.
1111STRnnn?	Query the telephone number stored in location nnn, where nnn = 000 - 999. 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 - 999.
1111STRnnn""?	Delete and confirm deletion of a telephone number in location nnn, where nnn = 000 - 999.

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 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.

SET CALL TIME (SPT)

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

1111SPTnn	Store the time nn x 20 seconds (e.g. nn = 03, time = 60 seconds).
1111SPTnn?	Store the time nn x 20 seconds (e.g. nn = 02, time = 40 seconds. Also send a confirmation text back to the sender.
1111SPT?	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).

nn multiplier:

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).

1111RLTnn	Store the relay time nn = time in seconds (e.g. nn = 05, time = 5 seconds).
1111RLTnn?	Store the relay time nn = time in seconds. Also send a confirmation text back to the sender.
1111RLT?	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).

1111A1Tnn	Store the AO1 time nn = time in seconds (e.g. nn = 05, time = 5 seconds).
1111A1Tnn?	Store the AO1 time nn = time in seconds. Also send a confirmation text back to the sender.
1111A1T?	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 on page 21.

User Activated: nn = 01

To activate the AO1 output either short terminals g to 5 (auxiliary 1 input) on the GSM PRO intercom or press 6 on the telephone during a call. See example on page 21.

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 on page 22.

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 on page 22.

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 on page 23.

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 PRO intercom. When the timeclock relay is ON then no dial to open numbers are allowed. The GSM PRO 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 on page 23.

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 AUXILIARY OUTPUT AO2 TIME (A2T)

The auxiliary output AO2 time can be set from 01 - 99 seconds or latching (set the AO2 output time to 00 for latched mode. In latch mode the AO2 output will stay triggered until the relevant command is sent again to unlatch the AO2 output).

1111A2Tnn	Store the AO2 time nn = time in seconds (e.g. nn = 05, time = 5 seconds).
1111A2Tnn?	Store the AO2 time nn = time in seconds. Also send a confirmation text back to the sender.
1111A2T?	Query the current stored AO2 time. A text message will be sent back to the sender showing the stored AO2 time.

SET DAYS TO WAIT BEFORE MAKING A CALL (NOD)

In the event the GSM PRO 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 2nd, 3rd and 4th 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 PRO can be checked (also see notes on understanding the signal strength on page 47). It is advisable that when the GSM PRO is first setup and before any other programming is carried out to check the signal strength of the GSM PRO intercom. If the signal strength is too low the GSM PRO 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 PRO intercom and send a confirmation text back to the sender.

CHECK SOFTWARE VERSION (VER)

It is possible to check the current version of software on the GSM PRO intercom. This may be necessary to see if an update is required for any additional features or updates on the GSM PRO 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 PRO intercom and send a confirmation text back to the sender.

FORCED DIAL/DIAL A NUMBER (DLE)

A useful feature of the GSM PRO intercom panel 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 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 service provider's web sites for other useful codes.

	Vodafone	**O²**
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 PRO intercom panel, 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 on page 24.

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 several ways to trigger the GSM PRO 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, refer to page 35 and the example on page 21). This can be done by shorting terminals g & 5 on the GSM PRO 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.

TRIGGER AUXILIARY OUTPUT AO2 (A2O)

It is possible to trigger the auxiliary output AO2 for the programmed AO2 output time (refer to page 35). This can be done by sending the following message to the GSM intercom.

1111A2O	Trigger auxiliary output AO2 (for the programmed time).
1111A2O?	Trigger auxiliary output AO2 (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^2 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 PRO intercom will reply with the current balance stored on the SIM card.

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

In addition to this feature the GSM PRO 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 page 22). To store a master telephone number the following programming texts can be sent to the GSM PRO 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 possible to latch the GSM PRO intercom relay closed. This function is particularly useful if the GSM PRO intercom relay is connected to a gate controller and the user wishes to 'hold open' the gate. The following text message can be sent to the GSM PRO intercom.

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

UNLATCH THE RELAY (RUL)

If the GSM PRO intercom relay has been latched it is possible to unlatch the relay with the following text message.

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

IMPORTANT NOTE: The GSM PRO intercom relay can also be unlatched by pressing 3 on the telephone during a call.

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 PRO 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 PRO intercom.

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

LATCH AUXILIARY OUTPUT AO2 (A2L)

Auxiliary output AO2, like auxiliary output AO1, can be latched. To latch auxiliary output AO2 the following text message can be sent to the GSM PRO intercom.

1111A2L	Latch auxiliary output AO2.
1111A2L?	Latch auxiliary output AO2 and send a confirmation text back to the sender.

UNLATCH AUXILIARY OUTPUT AO2 (A2U)

Auxiliary output AO2 can also be unlatched. To unlatch auxiliary output AO2 the following text message can be sent to the GSM PRO intercom.

1111A2U	Unlatch auxiliary output AO2.
1111A2U?	Unlatch auxiliary output AO2 and send a confirmation text back to the sender.

STORE TIME BAND (TBA)

IMPORTANT NOTE: This feature relies on the network providers time zone setting and also if they support NITZ (Network Identity and Time Zone). First check the time/date is correct by sending the SMS message 1111CLK? (also refer to check intercoms time & date feature below). If the time/date returned is incorrect, it maybe that they do not support it. The clock can be set manually but any power cut will result in the time and date being lost unless battery backup is included.

The time band feature allows the call buttons to be disabled or diverted to the master telephone number outside a certain time window. For example, if the time band is set from 6:00am to 11:30pm then the user will only receive calls between the hours of 06:00 in the morning until 23:30 at night. Remember to always use the 24hr clock and also ensure the start time is earlier than the stop time. Use the following text messages to store, query and delete the time band.

1111TBA"HHMMHHMM"	Store the time using this format. The first HHMM is the **start** time to receive calls (i.e. 0600 for 6am in the morning) and the second HHMM is the time to **stop** receiving calls (i.e. 2330 for 11:30pm at night).
1111TBA"HHMMHHMM"?	As above but also send a confirmation text back to the sender with the stored setting.
1111TBA?	Query time band setting. A text message will be sent to the sender with the stored time window.
1111TBA""	Delete the time band and allow calls to be received at any time.
1111TBA""?	Delete and confirm deletion of the time band.

CHECK/SET DATE & TIME (CLK)

The check date and time feature relies on the network providers time zone setting (also refer to important note above). After a SIM has been placed into the GSM PRO intercom and powered up the SIM will attempt to register with the network and automatically synchronise with the network providers time zone setting. The following text messages can be sent to the GSM PRO intercom to check and set the current time and date. The date and time format is as follows: yy/mm/dd, hh:mm, where yy = year, mm = month, dd = date and hh = hour, mm = minutes.

1111CLK?	Check current time & date and send a confirmation text back to the sender.
1111CLK"yy/mm/dd,hh:mm"	Set current time & date.
1111CLK"yy/mm/dd,hh:mm"?	Set current time & date and send a confirmation text back to the sender.

Example: Setting the current time & date to 10:05am, 18th April 2016, the following text can be sent to the GSM PRO intercom:

1111CLK"16/04/18,10:05"?

The GSM PRO intercom will reply with the following text:

CLK = 16/04/18, 10.05
OK
VIDEX GSM

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 example on page 22 and setting auxiliary output AO1 mode, A1M, on page 35).

If auxiliary output AO1 (**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 PRO intercom.

1111CHK?	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 PRO intercom:

1111CHK?

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

IN = OP **VIDEX GSM**	**or**	**IN = CL** **VIDEX GSM**
(status open)		**(status closed)**

SILENT DIALLING MODE (AUE)

When the GSM PRO 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 PRO intercom to enable (00), disable (01) or query the setting of the silent dialling feature.

1111AUEnn	Set the silent dialling mode nn: 01 or 00.
1111AUEnn?	Set the silent dialling mode nn: 01 or 00 and send a confirmation text back to the sender.
1111AUE?	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 PRO intercom to send a DTMF tone after a call is answered. This option is only available for both the primary number of button 1 and the divert 1 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 divert 1 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	
1111DTPn	Set DTMF tone required, where n = 0 - 9 for DTMF tones 0 - 9 or X to disable this feature (for button 1).
1111DTPn?	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	
1111DTDn	Set DTMF tone required, where n = 0 - 9 for DTMF tones 0 - 9 or X to disable this feature (for divert 1).
1111DTDn?	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	
1111DTTnn	Set the time nn, where nn = 01 - 12 seconds.
1111DTTnn?	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	
1111DTP?	Query the DTMF tone set, replies TP = n.
1111DTD?	Query the DTMF tone set, replies TD = n.
1111DTT?	Query the delay time set, replies TT = nn.

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.

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

1111EDZnn	Set the dial '0' function nn: 01 or 00 (01 = enable, 00 = disabled).
1111EDZnn?	Set the dial '0' function nn: 01 or 00 (01 = enable, 00 = disabled) also send a confirmation text back to the sender.
1111EDZ?	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 next number.

ENABLE PROXIMITY READER (EPR)

The GSM PRO intercom features a built-in proximity fob/card reader. The proximity reader can be enabled or disabled depending on whether this feature is required. The default setting for this is disabled. The following programming texts are used to enable or disable the proximity reader.

1111EPRnn	Set proximity reader nn: 01 or 00 (01 = enabled, 00 = disabled).
1111EPRnn?	Set proximity reader nn: 01 or 00 (01 = enabled, 00 = disabled) and send a confirmation text back to the sender.
1111EPR?	Query mode. A text message will be sent back to the sender confirming if the proximity reader is enabled or disabled.

PROXIMITY NUMBER OF BYTES TO CHECK (PBY, 02, 03 & 04)

This function of the built-in proximity reader will only be applicable if the proximity reader has been enabled (see **EPR** function above). After the proximity reader is enabled the number of bytes that the reader checks is dependant on which type of proximity fob/card is used (also refer to GSMSK PC software manual).

Understanding the Fob Format and Card Number

It is important to understand the relationship between the fob format and the card number when setting up the proximity reader to check for the correct number of bytes.

- **Fobs/Cards with 5 digit number (user code):** If a proximity fob/card has no site code but a 5 digit user code (e.g. 955/T or 955/C) the **PBY** format should be set to check for 2 bytes (02).
- **Fobs/Cards with 3 digit site code and 5 digit user code:** If using a fob/card with a 3 digit site code and 5 digit user code (e.g. PBX1E or PBX2) the **PBY** format can be set to check for 2 bytes (02) or 3 bytes (03).
- **Fobs/Cards programmed using the PROXE desktop reader:** If using the PROXE desktop reader the **PBY** format can be set to check for 2 bytes (02), 3 bytes (03) or 4 bytes (04).

The default setting for this function is set to check for 2 bytes, '02'. The following texts can be used to change this setting.

1111PBYnn	Set proximity reader to check for number of bytes nn: 02, 03 or 04 (02 = check for 2 bytes, 03 = check for 3 bytes, 04 = check for 4 bytes).
1111PBYnn?	as above and send a confirmation text back to the sender.
1111PBY?	Query the number of bytes that the GSM PRO has been set to check for.

PBY setting	Description
2 bytes	Will read all fobs/cards types programmed.
3 bytes	Will not read fobs/cards programmed with only 2 bytes (5 digit) information.
4 bytes	Will not read fobs/cards programmed with only 2 bytes (5 digit) or 3 bytes (8 digit) information.

IMPORTANT NOTE: It is recommended that only one fob/card type is used to allow for easier set up and programming of the GSM PRO reader. Mifare cards cannot be used.

STORE/QUERY A PROXIMITY FOB/CARD (FOB, 000 - 999)

Once the built-in proximity reader has been enabled and the number of bytes to check for has been set (refer to the **EPR** and **PBY** setup on the previous page) the proximity fobs/cards can be programmed into the GSM PRO intercom.

The GSM PRO intercom can store up to 1000 fobs/card (000 - 999). The reader can be programmed with any one of the following fobs:

- **955/T or 955/C** = Videx fobs or cards. These fobs and cards have no site code and have a 5 digit user code, so the **PBY** function must be set to 02 (the default setting, checking for 2 bytes).
- **PBX1E or PBX2** = Portal Plus fobs or cards. These fobs and cards have a 3 digit site code and 5 digit user code, so the **PBY** function can be set to 02 or 03.

The following texts can be used to program fobs or cards.

1111FOBnnn"site","user"	Store fob/card in location nnn, where nnn = the memory location from 000 - 999 of where the fob/card is actually stored (see examples below for each type of fob/card). The "site" and "user" code is the number taken directly from the fob/card.
1111FOBnnn?	Query the fob/card stored in memory location nnn and send a confirmation text back to the sender with the stored fob/card details.

The following examples show how to program each fob/card type:

Example 1: Programming a **955/T** or **955/C** with no site code, a 5 digit user code of **12345** and storing it in memory location **001**, the following text can be sent to the GSM PRO intercom:

1111FOB001"0","12345"

(for these fob/card types a '0' must be inserted for the "site" code).

Example 2: Programming a **PBX1E** or **PBX2** with a 3 digit site code of 123, a 5 digit user code of **45678** and storing it in memory location **010**, the following text can be sent to the GSM PRO intercom:

1111FOB010"123"",45678"

DISABLE OR ENABLE SPEECH BOARD (SBM)

The GSM PRO intercom includes call progress speech annunciation which can be disabled (01) or enabled (02). The default setting for this function is enabled. The following text messages can be used to enable or disable this feature.

1111SBMnn	Disable or enable speech board nn: 01 or 02 (01 = disabled, 02 = enabled).
1111SBMnn?	Disable or enable speech board nn: 01 or 02 (01 = disabled, 02 = enabled), also send a confirmation text back to the sender.
1111SBM?	Query the speech board status.

SET SPEECH BOARD VOLUME (SBV)

The volume setting of the speech board in the GSM PRO intercom can be adjusted. The default volume level is set to 75, but can be set anywhere between 00 (low) up to 99 (high). The following text messages can be used to increase or decrease the volume level and query the current speech board volume setting stored.

1111SBVnn	Increase or decrease speech board volume nn, where nn = 00 (low) - 99 (high).
1111SBVnn?	Increase or decrease speech board volume nn, where nn = 00 (low) - 99 (high), also send a confirmation text back to the sender.
1111SBV?	Query the speech board volume setting.

FIND A TELEPHONE NUMBER (FDT)

The find a telephone number feature allows the user to find the dial to open location (between 000 - 999) of where a particular telephone number is stored in the GSM PRO 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.

1111FDT"yyyyyyyyyyy"?	Find dial to open location of telephone number yyyyyyyyyyy stored, where yyyyyyyyyyy = 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 PRO intercom:

1111FDT"01234567890"?

The GSM PRO 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 PRO intercom:

1111FDT"4567"?

The GSM PRO 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).

FIND A FOB OR CARD (FDF)

The find a fob or card feature allows the user to search and find the fob/card location (between 000 - 999) of where a proximity fob or card is stored in the GSM PRO intercom. It locates the fob or card using the 5 digit user code printed on the fob (see the following example). The following text message can be used.

1111FDF"nnnnn"?	Find the fob/card location with user code nnnnn, where nnnnn = user code (5 digit user code printed on fob/card).

Example: Find fob/card location of card no. **12345**, the following text can be sent to the GSM PRO intercom:

1111FDF"12345"?

The GSM PRO intercom will reply with the following text:

STORED IN nnn
OK
VIDEX GSM

(where nnn = the fob/card location of where the fob/card is stored).

DOOR OR GATE (GAT)

This command feature of the GSM PRO allows the internal speech board to change the default speech annunciation that is heard from the intercom when the onboard relay is activated. For this feature to be heard the internal speech board must be switched ON (refer to notes on enabling or disabling the speech board, **SBM**, on page 42).

By default the mode of this feature is set to '01', whereby the internal speech board will announce **"the gate is open"** when the onboard relay is activated. The alternative mode can be set to '00', whereby the internal speech board will announce **"the door is open"**. To set the required mode the following commands can be sent to the GSM module.

1111GATnn	Set the speech board annunciation to mode nn: 01 or 00 (01 = "the gate is open", 00 = "the door is open").
1111GATnn?	Set the speech board annunciation to mode nn: 01 or 00 (01 = "the gate is open", 00 = "the door is open") also send a confirmation text back to sender.
1111GAT?	Query the speech board annunciation mode set.

SHUTDOWN AND RESTART (RBT)

This command feature allows the GSM PRO 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 29). The RBT function simply powers down the GSM module and then powers it back up again.

The following commands are reserved for the technical department for interrorgating the GSM PRO 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**.

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 PRO that allows additional features to be incorprated 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.

System Operation

MAKING A CALL FROM THE GSM INTERCOM

Press the required call button. Two beeps will be heard to indicate the call has been placed (see **Fig.56**). The busy LED will illuminate and the call LED will flash to indicate that the system is engaged and a call is in progress (see **Fig.57**).

If a mistake is made, press any other button to clear the call (see **Fig.58**). A long beep followed by a short beep will be heard to confirm the call has been cleared. Both the busy and call LEDs will switch OFF (see **Fig.59**).

IMPORTANT NOTE: **If the same button is pressed again after five seconds of placing the initial call this will also clear the call down. Pressing the same button before the five seconds is up will do nothing.**

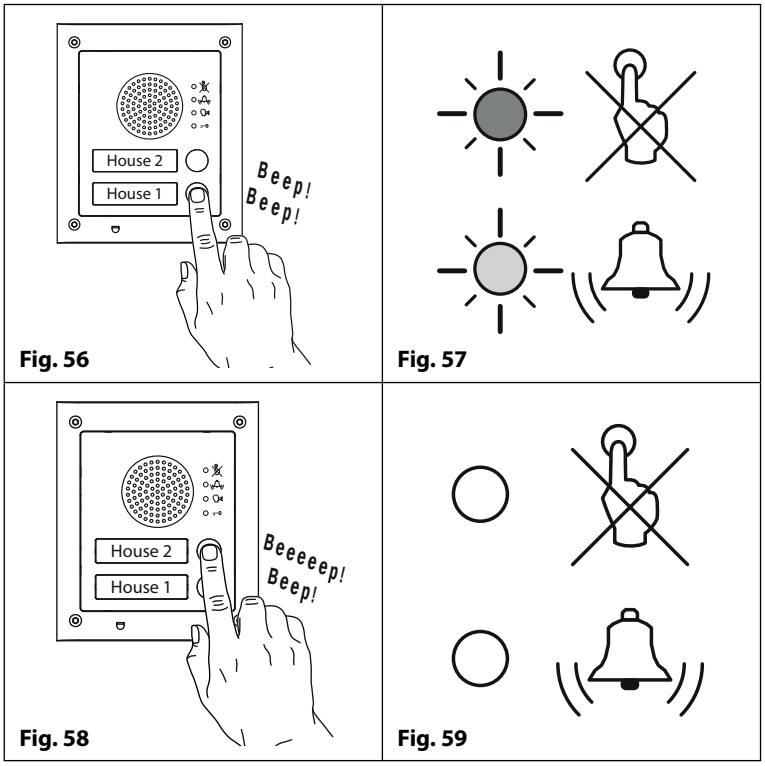


Fig. 56 **Fig. 57**

Fig. 58 **Fig. 59**

DOOR/GATE RELEASE

This is signalled by 1 second interval beeps from the GSM PRO intercom panel. Pressing **3** on the phone releases the door/gate for the programmed 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 after the programmed time or send the SMS text message 1111RUL, also refer to page 38).

RELEASING THE DOOR/GATE BY DIALLING THE GSM PRO INTERCOM (DIAL IN DOOR RELEASE STR)

This feature is only possible if the caller's number has been stored correctly for this feature (also refer to page 34 for correct setup). Simply dial the number of the GSM PRO intercom panel. The intercom panel will drop the call and then open the gate/door for the programmed time.

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.

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*7	6	n/a
Activate auxiliary output AO2*8	5	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)

***7 -** Activating auxiliary output AO1 in this way is only possible when **A1M** mode has been set to mode 01 (also see notes on page 35, 'set auxiliary output AO1 mode') 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.

***8 -** Auxiliary output AO2 will activate for the programmed AO2 time. If the AO2 output time has been set to latch simply press 5 on the phone to unlatch the output again.

The next user command table shows the SMS text messages that can be sent to the GSM 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*9	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)
Activate auxiliary output AO2	1111A2O? (? optional, send if confirmation is required)
Latch auxiliary output AO2	1111A2L? (? optional, send if confirmation is required)
Unlatch auxiliary output AO2	1111A2U? (? optional, send if confirmation is required)
Check Time band setting	1111TBA?
Check Intercom Time and Date	1111CLK?
Check Input Status	1111CHK?
Find a Dial to Open (dial to open) number	1111FDT"yyyyyyyyyy"? (where yyyyyyyyyy = telephone number, minimum of 4 digits, also refer to pages 42 and 43)
Find a Fob or Card location	1111FDF"nnnnn"? (where nnnnn = 5 digit user code printed on fob/card, also refer to page 43)

***9 -** The balance can only be checked if the correct balance check string has been stored (also see **SDL** notes on page 37).

Additional User Information

UNDERSTANDING THE SIGNAL STRENGTH (SIG)

When a request for signal strength message is sent to the GSM PRO intercom panel it will reply with a 4 digit code. The code is broken down into two parts, a signal strength code which will be between 0 – 31 or 99. Ideally the signal strength should be as close to 31 as possible. 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 network loss. A signal strength of 99 indicates it could not be detected. The second part of the code is the BER (bit error rate). Ideally the BER code should be as close to 0 as possible, the lower the BER the better. The example below shows the reply to expect from the GSM PRO:

SIGNAL = 31
BER = 0
OK VIDEX GSM

DIALLING INTO THE GSM INTERCOM FROM ANOTHER TELEPHONE

There are three possible outcomes to dialling into the GSM PRO 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
Dial in to open the Door. 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 - STR999.	**1st**
Dial in to activate a call (live speech, activate relay/ auxiliary AO1, AO2). 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: STN001 - STN050 STD001 - STD050 STE001 - STE050 STF001 - STF050	**2nd**
Dial in to open the speech from a telephone number not stored in the GSM intercom. 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.	**3rd**

UNDERSTANDING THE BEEPS

Functions and errors are indicated by beeps from the GSM PRO intercom panel. The following 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.
Two short beeps 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.
Long beep followed by short beep while the system is in use.	Manually ending a call by pressing a 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 it is outside the time set in the time band and there is no master number stored.	This may be the required setup but if it's not then either change the time band times, store a master number to divert the calls to or open the switch between AO1 & g used to switch the calls into divert mode.
PROXIMITY READER		
BEEP	**REASON**	**SOLUTION**
Successive short beeps lasting for the duration of the relay time ("the door is open").	Programmed fob/card presented to the onboard reader.	None, this is normal.
Single long beep ("invalid code").	Fob/card presented to the onboard reader that is **not** programmed.	The fob/card requires programming into the GSM PRO module (ensuring the onboard reader is enabled).
Single long beep ("invalid code").	Fob/card presented to the onboard reader that **is** programmed.	Although the fob/card presented is programmed in the GSM PRO module the number of bytes to check for is incorrect. Change the number of bytes to check for to 2 bytes (ensuring the onboard reader is enabled).
No beeps. The onboard reader is unresponsive.	The onboard reader has not been enabled (regardless of whether fobs have or have not been programmed).	Enable the onboard proximity reader.

User Management

RECORD SHEET

In order to manage the GSM PRO intercom effectively it is recommended that an up to date record sheet is kept for all the programming particularly if there is a high volume of telephone numbers and fob/cards 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 PRO 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 three divert numbers (from 001 to 050).

BUTTON	MEM. LOCATION	TELEPHONE NO.	USER NAME
Button 1	STN001		
Button 1 (divert 1)	STD001		
Button 1 (divert 2)	STE001		
Button 1 (divert 3)	STF001		
⋮	⋮	⋮	⋮
Button 50	STN050		
Button 50 (divert 1)	STD050		
Button 50 (divert 2)	STE050		
Button 50 (divert 3)	STF050		

It is also recommended that a record sheet, following the table format below, of the dial to open **(STR)** numbers should be kept (from 000 to 999).

MEM. LOCATION	TELEPHONE NO.	USER NAME
STR000....STR999		

If the onboard proximity reader is being used it is recommended that a record sheet, following the table format below, of the fob/card **(FOB)** numbers should be kept (from 000 to 999).

MEM. LOCATION	SITE CODE	USER CODE	USER NAME
FOB000....FOB999			

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
Interference on the speech.	Check the signal strength **1111SIG?** (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 10 and 26).
	Try a full reset (refer to page 29), powering up with terminals g & 8 shorted.
	Try a different SIM card.
	The GSM PRO intercom module may have a fault.
A long beep is heard when the button is pressed.	No telephone number setup for that button. Check the programming.
	Check the SIM card is fitted correctly (refer to pages 27 and 28).
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 PRO intercom panel).
	After sending an SMS message to the GSM PRO 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 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 29), powering up with terminals g & 7 shorted.
The call keeps dropping out.	Increase the call time **(SPT)** in programming (refer to page 34).
	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 PRO intercom (refer to page 7).
	Try adjusting the volume using the programmable settings during a call (refer to user commands on page 46).
	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.	Check over the message sent again and compare it with the examples in this manual. Common errors include: 1. 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. 2. Lower case letters instead of upper case. For example using **stn** when **STN** should be used.

General Information

SOFTWARE REVISION

DATE	SOFTWARE VERSION	REVISION
10/05/16	4K3.0.0	Launch of 4810 GSM PRO
19/12/16	4K3.0.2	Update **AT** commands. Included door/gate setup **(GAT)** and shutdown and restart feature **(RBT)**. User command to activate auxiliary output **AO2** included.

FURTHER READING

Additional programming information using the GSMSK PC software can be found in the following technical manual:

- **GSMSK PC SOFTWARE MANUAL ENUK V1.0**

Additional information regarding connection to mains supply voltage can be found in the following regulations:

- **I.E.E. Wiring Regulations BS7671**

Notes

Notes

Notes

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