

# Keycell Prime 4G

- Advanced GSM Keypad/Prox Reader



**STILL HAVING TROUBLE?**  
Find all of our support options such as Web Chat, Full Manuals, Customer Helpline and more on our website:  
[WWW.AESGLOBALONLINE.COM](http://WWW.AESGLOBALONLINE.COM)

\* ALWAYS TEST THE UNIT ON SITE BEFORE INSTALLATION TO AVOID RE-STOCKING FEE \* See full T&C's on our website

## SIM Preparation

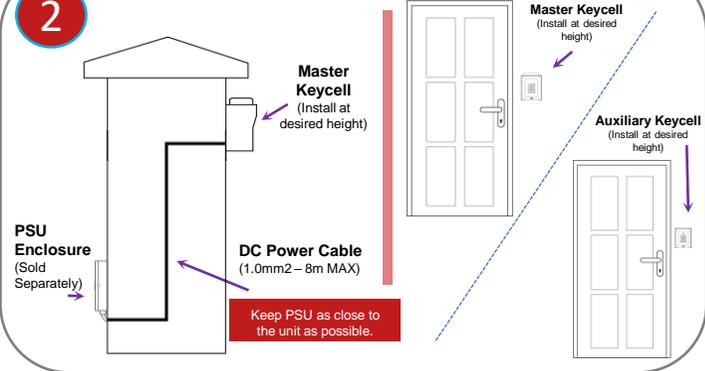
**1** Ensure you read all instructions before continuing.

**4G** The SIM cards provided need activated before use. Follow the instructions provided or visit our telecoms website for more details:

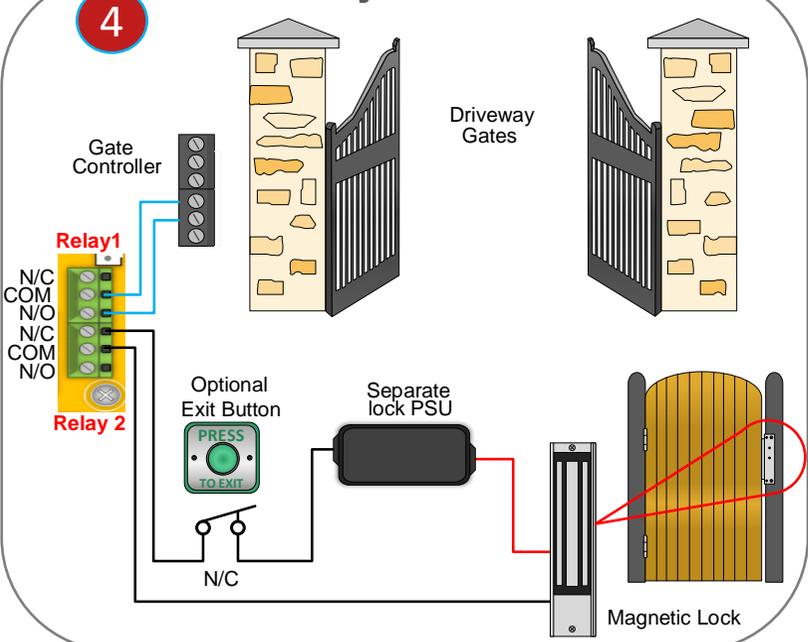
[www.aesglobaltelecom.com](http://www.aesglobaltelecom.com)

Different networks use different APNs, and these must be set correctly for full operation. See Details overleaf on setting a new APN.

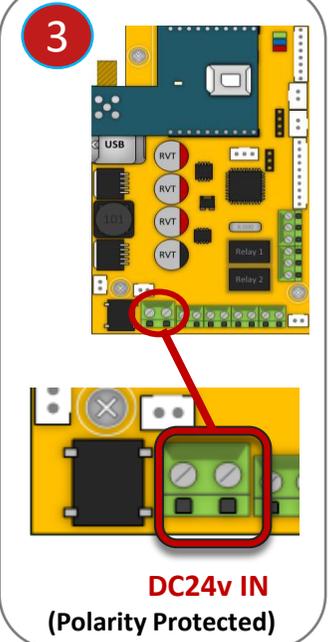
## Site Wiring – Master Unit



## Relay Connections



## Power



## SITE SURVEY



Please read this entire manual before installing this product. A full comprehensive manual is available on our website for additional information.



Ensure there is good 4G signal on site. 4G units will fall back to 3G service in some countries.



Set up on a bench in workshop BEFORE going to site. Program the unit in the comfort of your work bench and call technical support should you have any questions.



This product requires a regular voice & SMS SIM card. **Do not use a data only SIM, as this will not work in the unit.**

## POWER CABLE

KEEP POWER SUPPLY AS CLOSE AS POSSIBLE.

**TIP:** Most technical calls received are due to installers using CAT5 or alarm cable to power the unit.

**NEITHER** are rated to carry enough power! ( 1.2amp peak )

Please use the following cable:

- Up to 2 metres ( 6 feet ) – Use minimum 0.5mm<sup>2</sup> ( 18 gauge )
- Up to 4 metres ( 12 feet ) – Use minimum 0.75mm<sup>2</sup> ( 16 gauge )
- Up to 8 metres ( 24 feet ) – Use minimum 1.0mm<sup>2</sup> ( 14 gauge )

**Power Consumption:**  
80mA

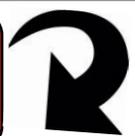
## INGRESS PROTECTION



We recommend sealing all entry holes for prevention of insects that can cause issues with a risk of shorting out components.  
To maintain the IP55 rating please follow the sealing instructions included. (also available online)

**LIGHTNING PRONE AREAS MUST USE SURGE PROTECTION FOR POWER SUPPLY!**

See overleaf for more PCB details  
**Turn Over**



**NEED MORE ASSISTANCE?**  
+44 (0)288 639 0693  
SCAN THIS QR CODE TO BE BROUGHT TO OUR RESOURCES PAGE.  
VIDEOS | HOW-TO GUIDES | MANUALS | QUICK START GUIDES

# Keycell Prime 4G

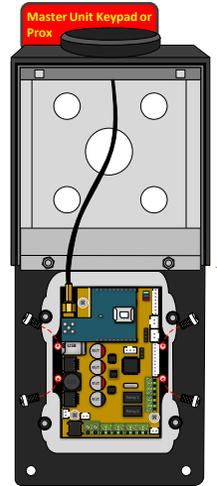
- Advanced GSM Keypad/Prox Reader



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## Master Wiring Connections

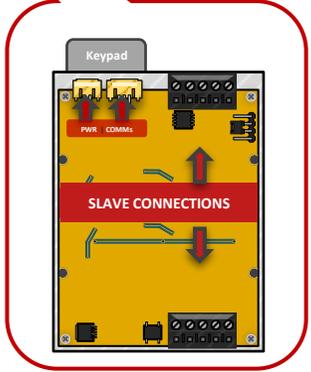
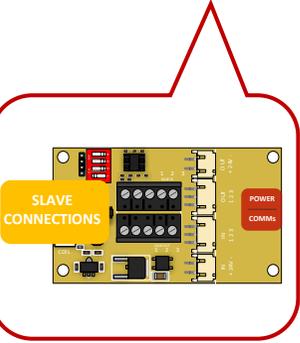
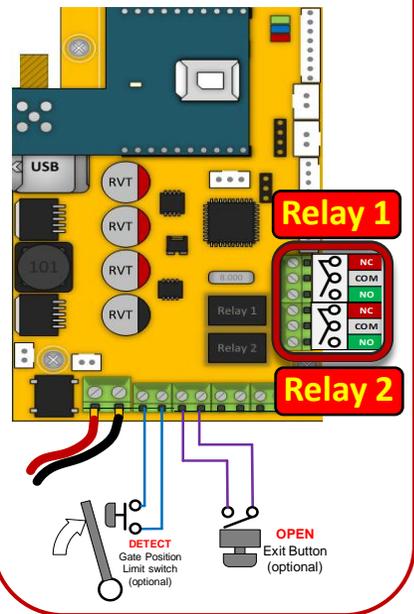


**Tip:** Keypad and Prox combination is an optional extra.

**Note:** A maximum of 6 auxiliary units can be connected to 1 master unit.

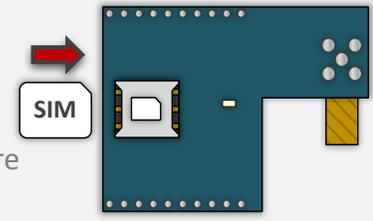
**PCB Status LEDs**

- SOLID RED = PCB POWERED ON
- SOLID RED + BLUE FLASHING = SEARCHING
- SOLID RED + BLUE FLASHING + GREEN FLASHING = SUCCESSFULLY CONNECTED

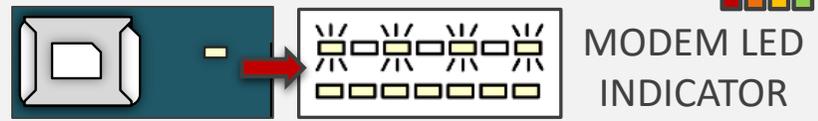


## SIM ORIENTATION

**ALWAYS** ensure the system is switched **OFF** when adding or removing your SIM card and ensure the orientation is correct.



## CONNECTION TO NETWORK



Quick Flashing = **Standby** | Constant ON/OFF = **Searching**

## CHANGE APN (for VoLTE / 4G services)

The system will arrive with an AES multi-network SIM and will be pre-programmed with the APN to suit. If you wish to use a different SIM then the correct APN must be set for full operation.

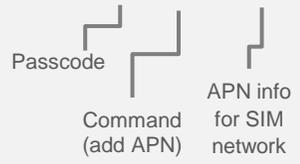
Check with your network provider for the correct APN for 4G data. Once you have confirmed the APN enter it in place of 'APNinfo' in an SMS to the intercom.

via SMS  
(if connected to network)

Ensure the PCB is powered on and connected to the network with a GREEN flashing LED.

Then send the below text as an SMS to the intercom Sim number. A power reboot is required after the 'OK' reply message is received back.

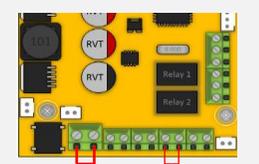
**9999#97APNinfo#**



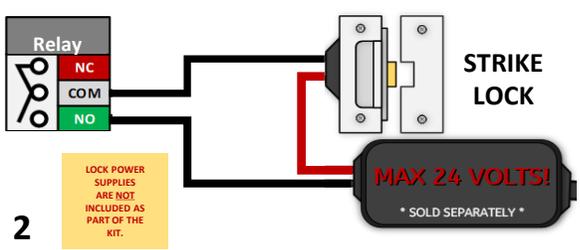
via Keypad (if no 3G signal)

Contact Technical Support or check our resource page for a list of the APN serial number.

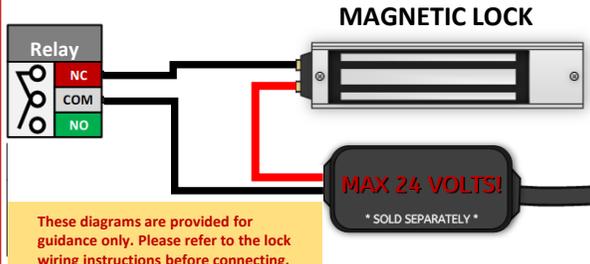
1. Power off the unit, then press and hold the call button and power the unit on again.
2. Upon power up, a long tone will be emitted from the speaker and the blue LED will remain solid - it is now in the APN setting mode.
3. After this, enter the APN serial number through the keypad then press #. (e.g. if you want to set APN No. 18, press 1 - 8, then #. A long beep will again be heard).
4. Reboot unit.



## ALTERNATIVE WIRING EXAMPLE



## ALTERNATIVE WIRING EXAMPLE



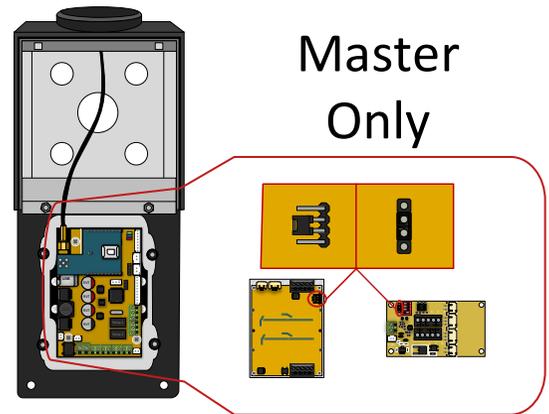
These diagrams are provided for guidance only. Please refer to the lock wiring instructions before connecting.

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## Jumper Link

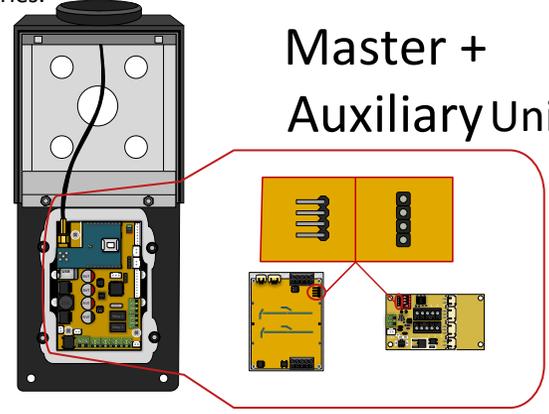
(Found on Prox and Keypad Boards)

If the master is the only unit being used keep the 'jumper' on for the use of both relays on the board.



Master Only

The jumper link needs to be off for the programming and use of auxiliaries.



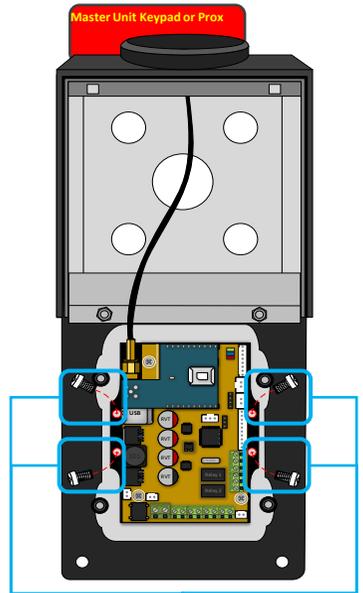
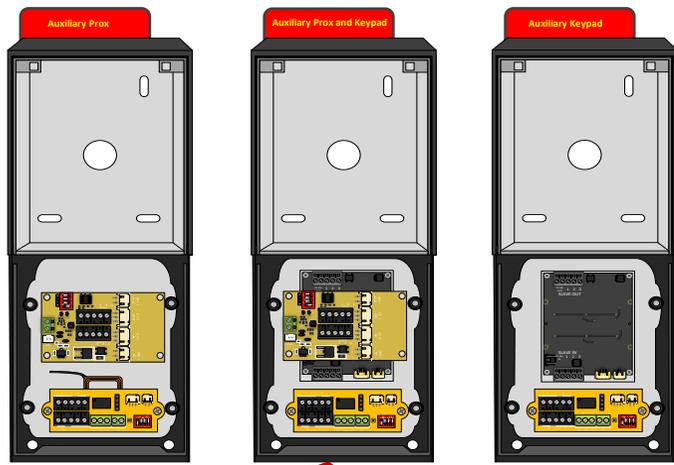
Master + Auxiliary Unit(s)

Send SMS 9999#001# to enable auxiliary unit(s)

### Maximum Distance

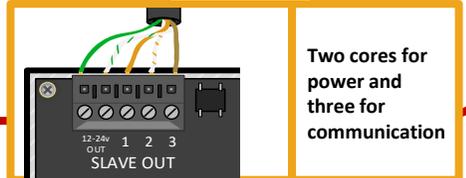
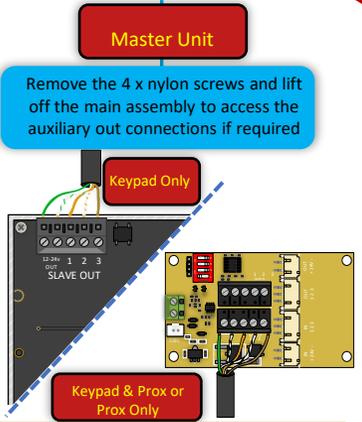
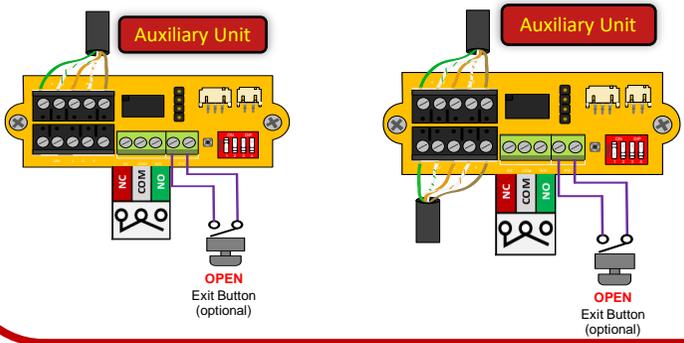
CAT 5 cable – 50m per power supply with a max of 2 units.

## Auxiliary Wiring Connections (Optional)



Auxiliary Units are optional extras.  
 Up to 6 separate units can be added to a single master.  
 This will provide a maximum of 8 separate relays to control.

All connections will be pre-wired to the 'Sounder PCB' so you just need to connect each unit together

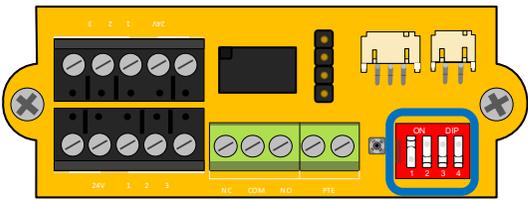


Two cores for power and three for communication

Detailed wiring diagrams available online.

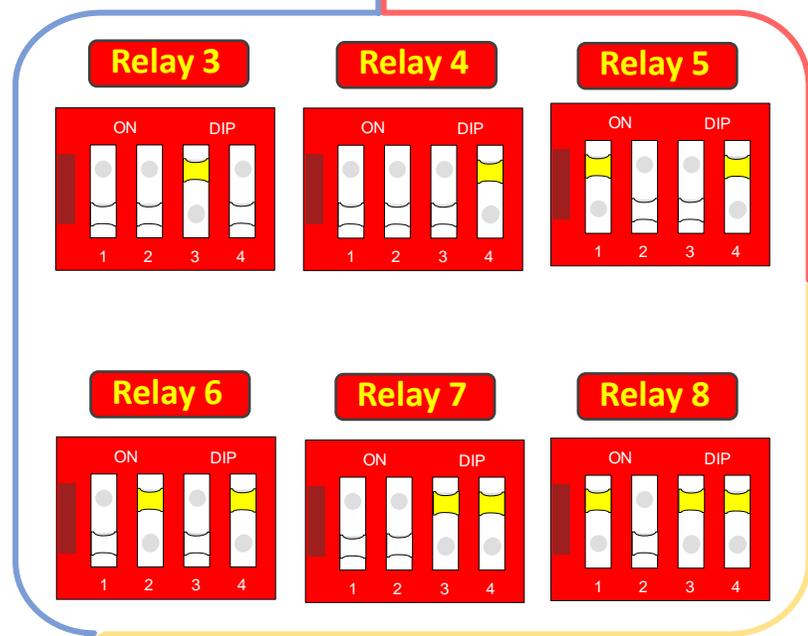
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## Sounder Board



The **sounder boards** dip switches set the **relay number** for the **auxiliary unit** it is in.

## Auxiliary Device Relay Setup



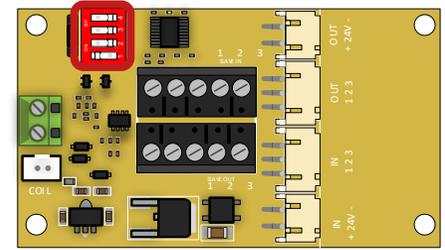
## Keypad

A keypad does not have dip switches. To assign the relay number use the keypad keys as follows.

```
*#91#RelayNumber#
```

(Relay Number = 3-8)

## Prox Board



The dip switch of the prox must match the dip switch configuration of the auxiliary it wants to trigger



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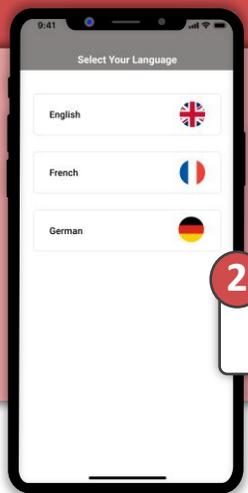


AES PRO App

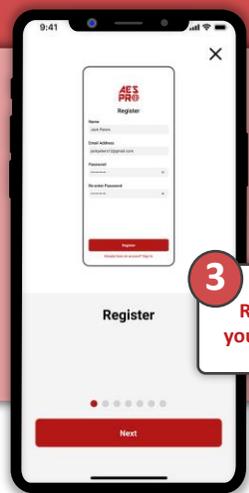
**1** Download the App and Accept all permissions when the app is opened



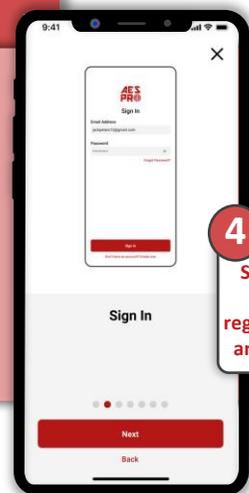
## Getting Started



**2** Choose your language



**3** Register your details

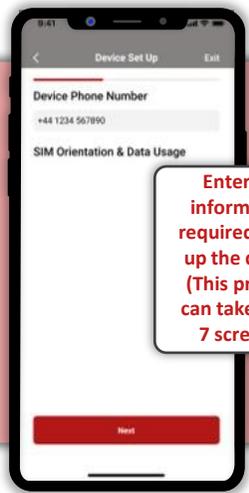


**4** Sign in using previously registered email and password

## Device Setup

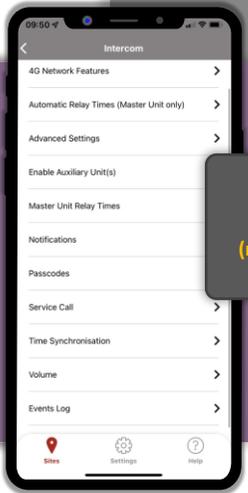


Choose your device from the list provided

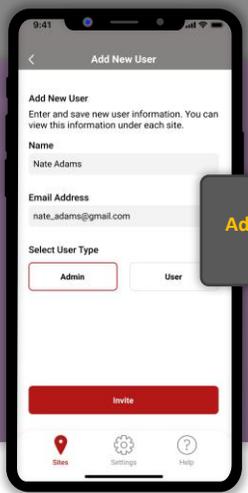


Enter the information required to set up the device (This process can take up to 7 screens)

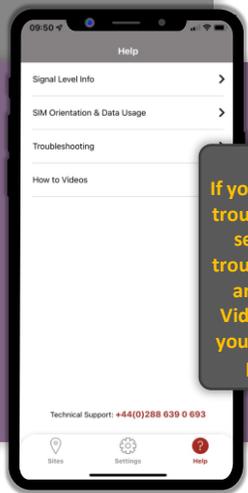
## Additional App Configuration/Help



Customise Advanced Features (more on this on pg4)



Add additional app users



If you are having trouble the help section has troubleshooting and How to Videos to help you resolve the problem

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**Note:** Advanced programming available in full manual

### Keypad Programming

Store permanent keypad code (maximum of 250 codes). X = 1-8 for relay 1-8. Code = 4 digit passcode Time = 1-9999 seconds, or 0 for latching code. Name = Name of cardholder (optional) (max 6 characters).	<b>9999#81Xcode#time#name#</b>
--	--------------------------------

### Prox Card/Tag Programming

Store permanent prox card/tag ID (maximum of 250 cards/tags). X=1-8 for relay 1-8. Card ID = Prox ID number (fixed 10 digits) Time = 1-9999 seconds, or 0 for latching code. Name = Name of cardholder (optional) (max 6 characters)	<b>9999#61XcardID#time#name#</b>
--	----------------------------------

### Caller ID

Store permanent caller ID number (maximum 14 digits long, maximum of 250 numbers). (Only last 6 digits compared for ID). Max 8 per message	<b>9999#72phonenum#</b>
Switch Caller ID from relay 1 to 2 (permanent caller ID numbers only). (An unstored number will still trigger relay 1 via the default user code 1234, even if Caller ID is set to relay 2)	<b>9999#54X#</b>

### Master Unit Relay Times

Relay 1 time. Default = 1 X = Relay time (1-9999 seconds)	<b>9999#50X#</b>
Relay 2 time. Default = 1 X = Relay time (1-9999 seconds)	<b>9999#51X#</b>

### Auxiliary Unit Relay Times (Optional)

Relay 3-8 times. Default = 1 X = Relay Number (3-8) Y = Relay time (1-9999 seconds)	<b>9999#05XY#</b>
---	-------------------

### Keypad Code Access



Enter the programmed code

### Prox Card Access



Hold the programmed tag/card up to the Prox symbol

### Dial In Access



Call the SIM phone number from a programmed CallerID number. **Relay 1 or 2 only**

### UNIT MAINTENANCE

Bug ingress is a common issue in unit failures. Ensure that all components are sealed accordingly and check occasionally. (Do not open the panel in the rain / snow unless correctly equipped to keep the internals dry. Ensure the unit is securely closed after maintenance)

### SIM MAINTENANCE

If using a pre-pay casual SIM card it will need topped up occasionally. It is recommended to advise the home owner / end user to register the SIM card on the provider's web site if available. Most major networks allow registration of card payment details for an auto top up feature, which means they will automatically top up your intercom when the balance runs low or in some cases, they offer a low balance reminder to be sent if they do not wish the auto top up feature.

### ENVIRONMENTAL INFORMATION

The equipment that you bought has required the extraction and use of natural resources for its production. It may contain hazardous substances for the environment. In order to avoid the dissemination of those substances in our environment and to diminish the pressure on the natural resources, we encourage you to use the appropriate take-back systems. Those systems will reuse or recycle most of the materials of your end-of-life equipment.



The crossed-bin symbol marked in your device invites you to use those systems.

If you need more information on the collection, reuse and recycling systems, please contact your local or regional waste administration. You can also contact AES Global Ltd for more information on the environmental performances of our products.

### WARRANTY

Please note, by installing this product, you are accepting the following warranty terms:

- The manufacturer's warranty is a "return to base" 2 year warranty from date of manufacture. This means that any suspected defective components or items are returned to the manufacturer's agent for investigation and diagnosis and returned at the cost of the customer.
- The warranty does not cover, nor is the manufacturer or agent responsible for any of the following whatsoever: Storm damage, lightning or surge damage, flooding, accidental damage, vandalism or deliberate damage, un-explained corrosion or unusually harsh environments, failure of telephone networks, future un-interoperability between the product and network providers which cause malfunction due to changes implemented by the phone providers after manufacture of the product, or that which is outside of control of the manufacturer (e.g. 2G, 3G switch off, removal or inability to obtain VOLTE service), and damage due to inaccurate installation.
- The manufacturer in no way accepts liability for any of the following incurred due to a product defect: Cost of attending site, inconveniences, labor rates, time lost, loss to or damage to property, security breaches, late payment clauses or breaches of any contracts between the installer and the client.
- This is a professional install product only. The product is a component of an overall system. Therefore, it is the responsibility of the installer to certify the safety and compliance of the overall finished system. As soon as this product is fixed to another item, or connected to another third-party device, then the product has been modified, and compliance with local regulations in the country of install is strictly the responsibility of the installer.
- Re-stocking fees may apply to items returned that are found to be non-defective. Complete units will also attract a re-stocking fee if returned for credit, regardless if a defect is discovered or not. Re-stocking fees may vary depending on the condition of the item being returned, and whether it can be determined as in brand new condition. The warranty terms do not entitle customers to an automatic full refund. For more details on returns procedures and re-stocking fees, contact the agent.
- Items with physical signs of surge damage are not covered by warranty. Items with visible signs of surge damage will only be covered by warranty if photographic evidence is provided from site, showing surge protection has been installed.

Full warranty terms and conditions available upon request to AES Technical Department.



**Tip:** New programming app due to release late 2021

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## INFORMATION

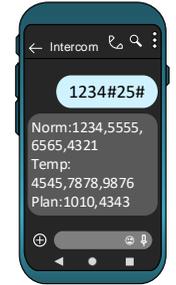
**SIGNAL STRENGTH**  
Will reply with signal range 1-31. Min signal level should be 10 on 4G systems

**STORED NUMBERS**  
I= Dial IN Caller number.  
N = Message to follow  
E = End of messages

**STORED KEYPAD CODES**  
NORM= Permanent  
TEMP= Temporary  
PLAN= Time restricted

**STORED PROX ID CODES**  
NORM=Permanent codes.  
TEMP=Temporary codes.  
PLAN=Time restricted codes.

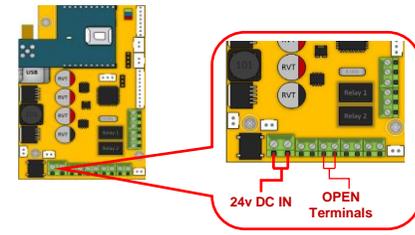
**ACTIVITY LOG**  
Use this to see who used the intercom and when. Which pin codes were used, who used caller ID, who answered the call.



## TROUBLESHOOTING

Symptoms caused	Problem/error	Solution
No LEDs on.	The unit will not power up.	Check power supply voltage at intercom is 23.4v DC or more. Cable length from PSU to intercom should be less than 8 metres and a minimum of 1 mm in diameter for longer distances. See guide.
No green CPU light	The unit powers up but is not showing network reception or will not respond to SMS.	A. This means the unit is not able to detect the network for some reason. -Power off the unit, remove the SIM and check it in a mobile phone to verify it can make a call and has calling credit if it is a Pay As You Go SIM. -Disable any PIN code request if active on the SIM card. -Check the SIM is a standard voice capable SIM. If you are unsure, contact your SIM card provider to verify. -Check the reception is medium or good. Poor reception is not sufficient. -Power off, remove the SIM, use fine sand paper to lightly sand the SIM pads and contacts on the GSM unit, lightly bend the contacts upwards so that they make better contact with the SIM and try again. -Check antenna is connected and does not have too many sharp bends on the antenna cable.
The caller ID function does not work.	Incorrect programming or poor signal	If your number is a private or number withheld, then it will not work. -Ensure the number is programmed as you would normally dial it from another phone. - Ensure you have adequate GSM signal at the intercom by sending *20# as a text.
The keypad has no tones and/or no LEDs	The keypad may not be properly connected to the board.	Check the connections from the keypad to the board. If there is no LEDs the red and black power cable may not be seated properly. If there is no tones from the keypad the white communications cable may not be seated properly. In each of these instances try reseating them in their respective ports.

## Reset / Default Unit



- 1) Power off the unit. (approx 60 secs)
- 2) Make a link across the terminals marked OPEN.
- 3) Switch on power
- 4) After several seconds the relay will click.
- 5) The unit will then clear memory and be defaulted
- 6) Remove the link and wait around 20 seconds.

**Note:** Performing this process will remove all current programming including saved users & access codes.

Manufacturer: Advanced Electronic Solutions Global Ltd  
Address: Unit 4C, Kiltcrannagh Business Park, Cookstown, Co Tyrone, BT809HJ, UK

Complies with the following essential requirements for 2014/53/EU:  
ETSI draft EN 301 489-1 V2.1.1 (2017-02) (Electromagnetic compatibility)  
ETSI draft EN 301 489-52 (2016-11) (Electromagnetic compatibility, specific to cellular) (2G bands 900/1800, 3G band 1.8 LTE bands 1, 3, 7, 8, 20).  
Test report number LCS181101028AEA  
ETSI EN 301 511 V12.5.1 (2017-03) (3.2 of directive 2014/53/EU)  
ETSI TS 151 010-1 V12.8.0 (2016-05) (Digital cellular telecoms compliance)  
Test report number LCS181101028AEB  
ETSI EN 301 908-1 V11.1.1 (2016-07) (IMT Cellular networks, 3.2 of directive 2014/53/EU)  
ETSI EN 301 908-2 V11.1.2 (2016-07) (CDMA spread / UTRA FDD)  
Test report number LCS181101028AEC  
ETSI EN 301 908-13 V11.1.2 (2017-07) (E-UTRA and UE standards)  
Test report number LCS181101028AED  
EN 62311 :2008 (Electromagnetic safety and human exposure)  
Test report number: LCS181101028AEE  
EN 60950-1, (A1, A11, A12, A2)  
EN 62311  
IEC 60950 (IT equipment safety)  
Test report number: LCS181101029AS



The notified body is: Micom Labs (CAB number 2280).  
This declaration is issued under the sole responsibility of the manufacturer.

Signed by:

Paul Creighton, Managing Director. Date: 4th Dec 2018

*This product is not a complete product until fully installed. It is therefore considered a component part of an overall system. The installer is responsible to check that the end installation complies with local regulatory requirements. This equipment forms part of a "fixed installation".*

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