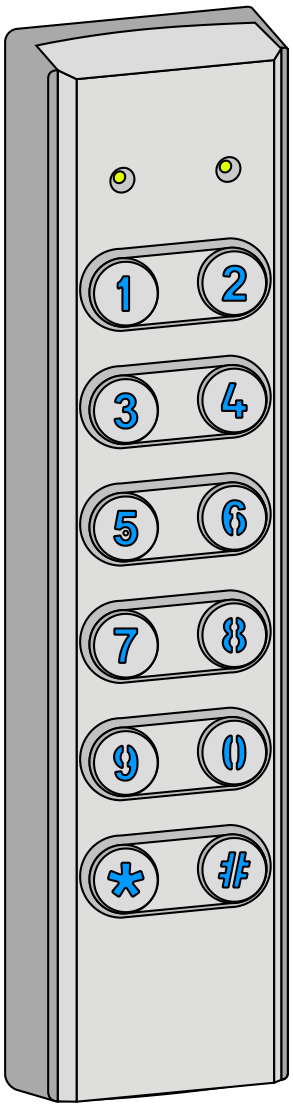
APC-KP2C-AU

Vandal and Weather Resistant Stand Alone Keypads



Instruction Manual

https://www.automotionplus.com.au
1-800-MY-GATE (1800 694 283)

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1 GENERAL INFORMATION

1.1 FEATURES

- Suitable for indoor and outdoor use.
- Durable and stylish metal keypad construction (satin chrome plated zinc die cast).
- 10 to 27 Volt D.C. operation.
- Controls up to 2 doors.
- 2 x 2A SPDT relays.
- 1 x dedicated REX (Request to EXit) input.
- 1 x Auxiliary input.
- REX input can be used with Normally Open or Closed and Momentary or Continuous switches.
- Choice of fixed or variable length codes of 3 to 8 digits.
- Up to 500 user codes.
- 3 levels of user codes.
- Lowest level user codes may be locked out by use of auxiliary input and/or higher level user codes.
- Built in optical tamper based on IR transmitter and receiver provides accurate tamper detection.
- Blue backlighting on keys with adjustable brightness.
- Vandal Resistant.
- Weather Resistant (IP67).
- Operating temperature range of -20ºC to 70ºC.
- 5 year manufacturer's warranty.

1.2 PACKAGE CONTENTS

Included in the package for your keypad is:

1 x keypad.

1 x Instruction manual (this document).

1 x keypad cable with rubber sealing boot.

1 x Hex Allen key to remove screw(s) for fascia.

1 x Mounting template .

If any of these items are missing please contact your supplier.

1.3 SPECIFICATIONS

Voltage: Recommended Range: 10V – 27V D.C.
Absolute Range: 7V – 30V D.C.

Current: 120 mA max @ 7V D.C.
75 mA max @ 12V D.C.
40 mA max @ 24V D.C.

Relays: 2 x SPDT, 2A @ 30V D.C.

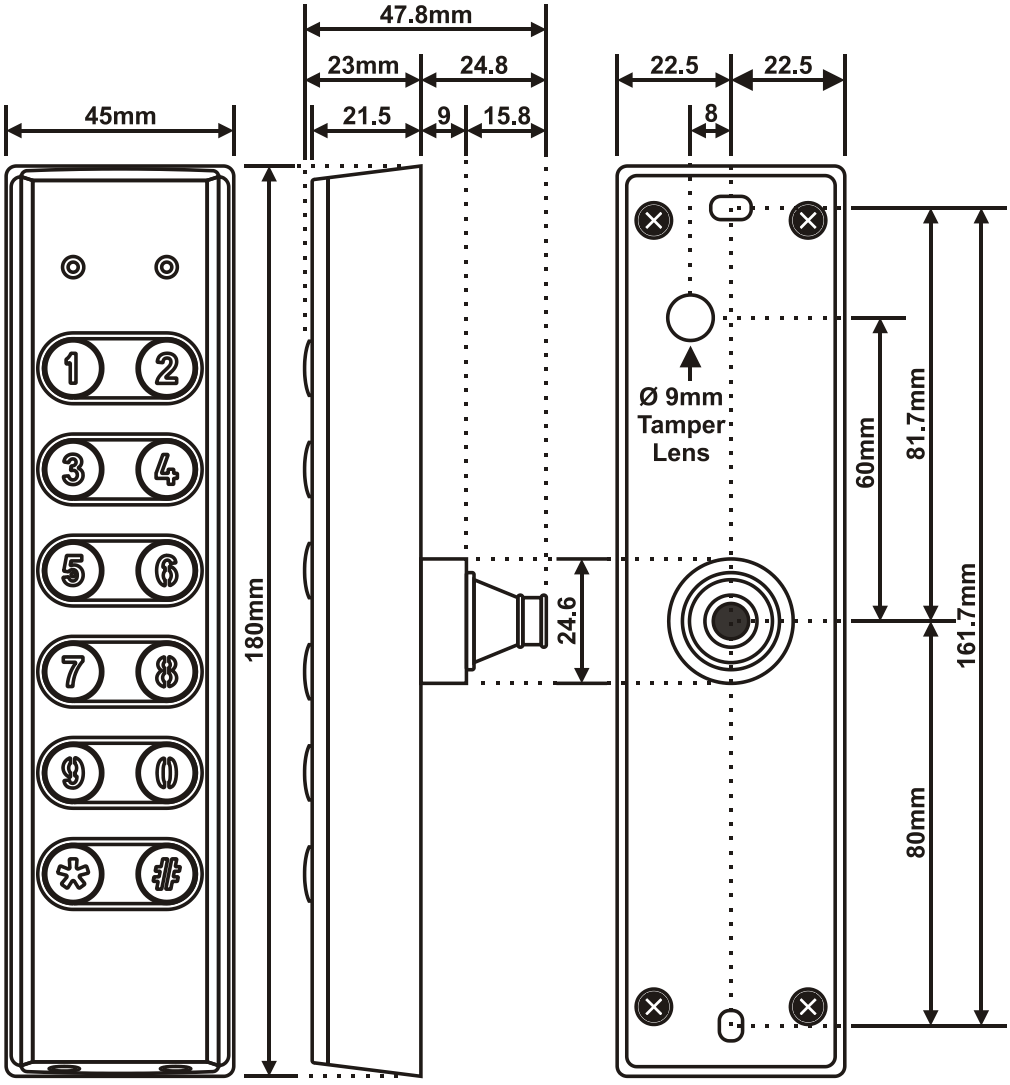
REX & Auxiliary Inputs Trigger Levels:
Low <= 1.5V D.C.
High => 2.5V D.C.
Input Current = 7mA max.

REX & Auxiliary Inputs Voltage range:
Minimum = 0V
Maximum = 30V D.C.

Tamper Output:
100mA maximum sink current (open collector).

Ingress Protection Rating:
IP67

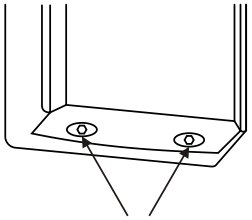
1.3.1 Dimensions



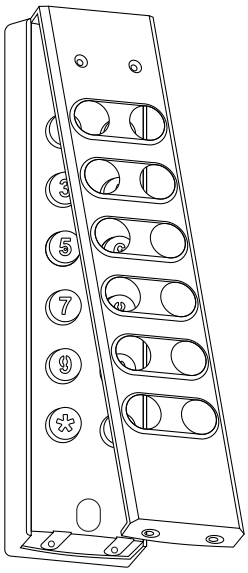
2 INSTALLATION

2.1 MOUNTING

1. Use the supplied template to mark the location of the cable exit and mounting screws. Drill out all points as necessary.
2. Using the supplied key remove the hex Allen screw(s) at the bottom of the keypad that secure the fascia to the chassis.



3. Swing the fascia up from the bottom and it will unhook at the top allowing access to the mounting screw holes.



4. Attach the supplied cable by plugging in the connector (you may need to use a screw driver to push the connector around the edges to ensure it is in firmly). **Note** that it is designed to be inserted in one way only; however use of excessive force could allow it to be inserted wrongly so check the guide locators match before inserting.
5. Slide the rubber boot down the cable and press the first flange into the hole and leaving the second flange on the outside of the keypad. Make sure that it sits neatly in all places to ensure a correct seal.
6. Mount the keypad and reverse steps 2 & 3 to reattach the fascia to the keypad chassis.

2.2 WIRING THE KEYPADS

The VST keypads come with a 100cm long AWG-26 removable 12 conductor cable fitted with rubber boot.

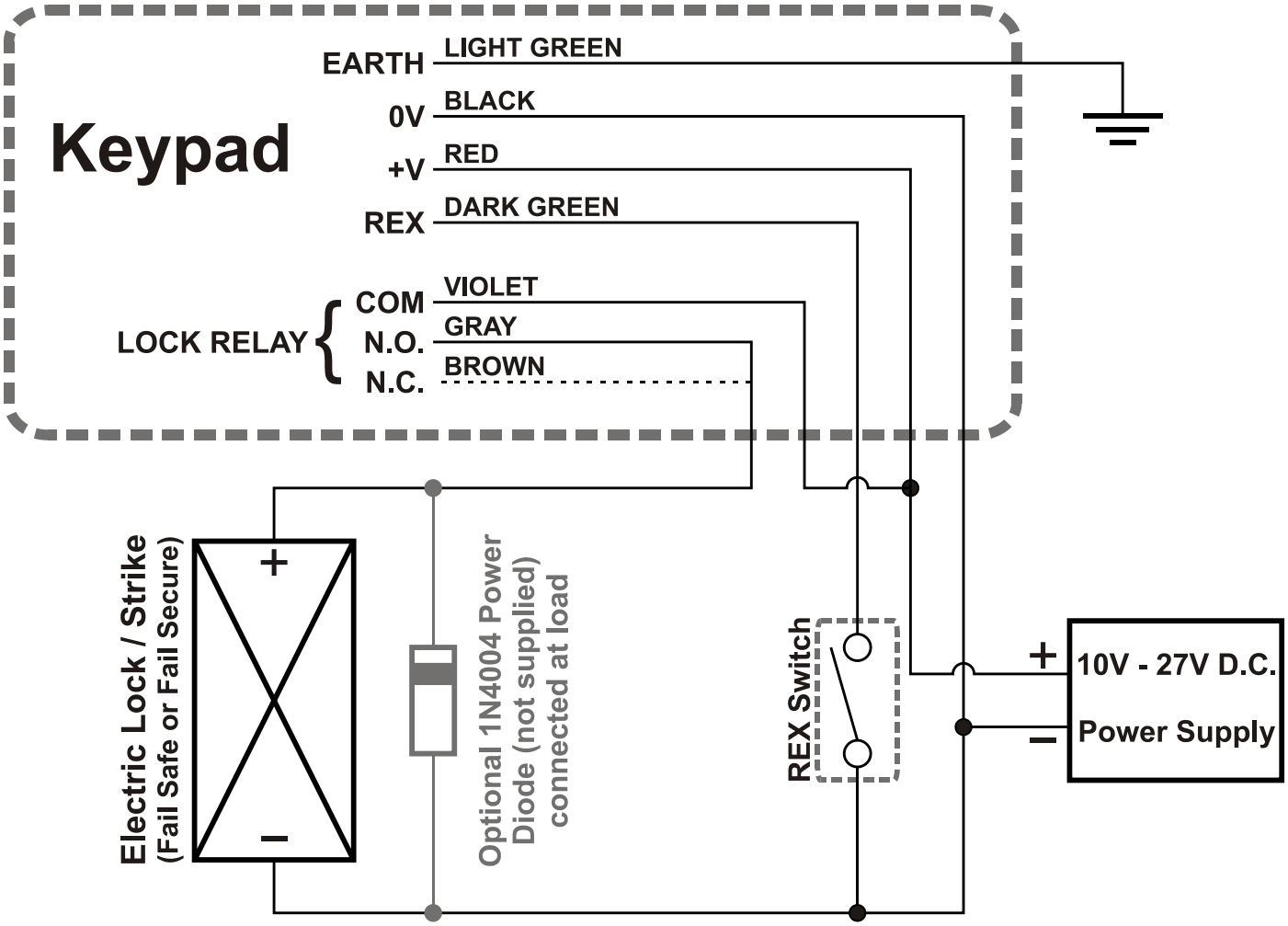
2.2.1 Wire Colours

There are 12 wires for the keypads, not all will be needed for each installation. The unused wires should always be terminated and left unconnected.

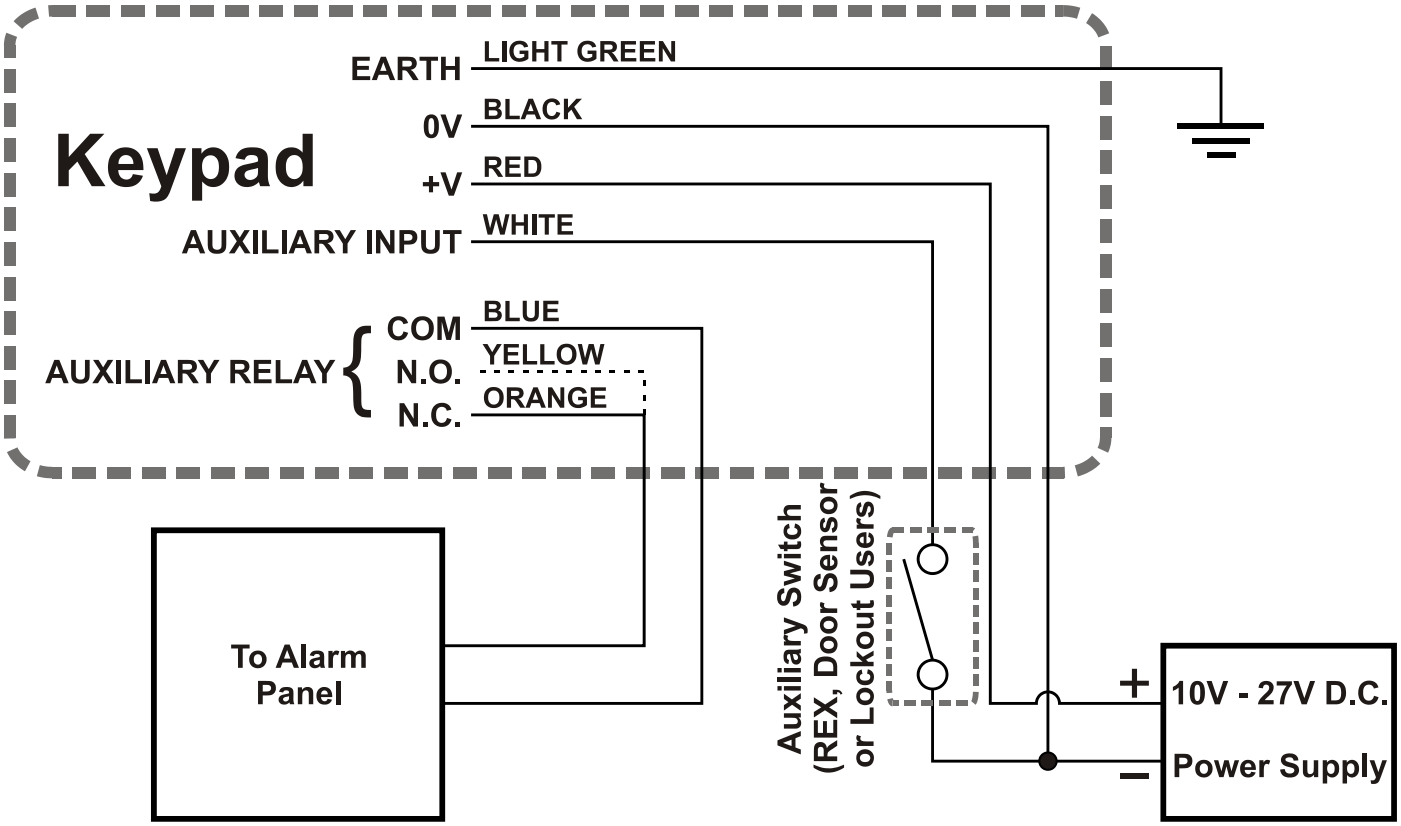
Black	0V (Power Supply -)
Red	+V (10V to 27V D.C. Power Supply +)
Dark Green	REX (Request to EXit) Input, connect switch between REX and 0V
White	Auxiliary Input, connect switch or door contact between Auxiliary Input and 0V
Grey	Lock Relay N/O
Violet	Lock Relay Common
Brown	Lock Relay N/C
Yellow	Auxiliary Relay N/O
Blue	Auxiliary Relay Common
Orange	Auxiliary Relay N/C
Pink	Tamper Output (Open Collector)
Light Green	Chassis Earth connection.

IMPORTANT: When using the keypad in an area subject to static discharges the chassis of the keypad should be connected to EARTH via the Light Green wire. It is highly recommended that this always be done no matter what the environment.

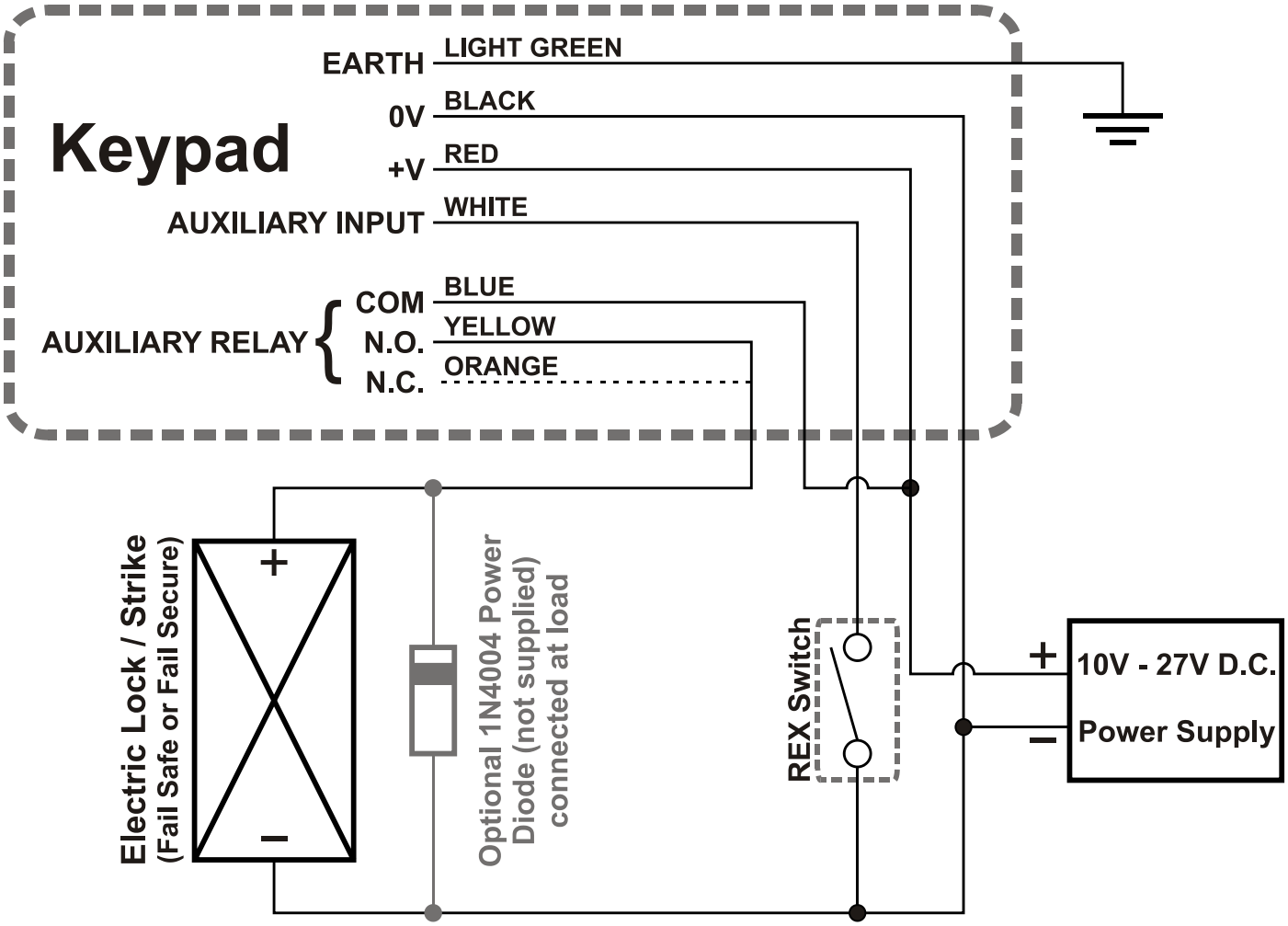
2.2.2 Lock Wiring



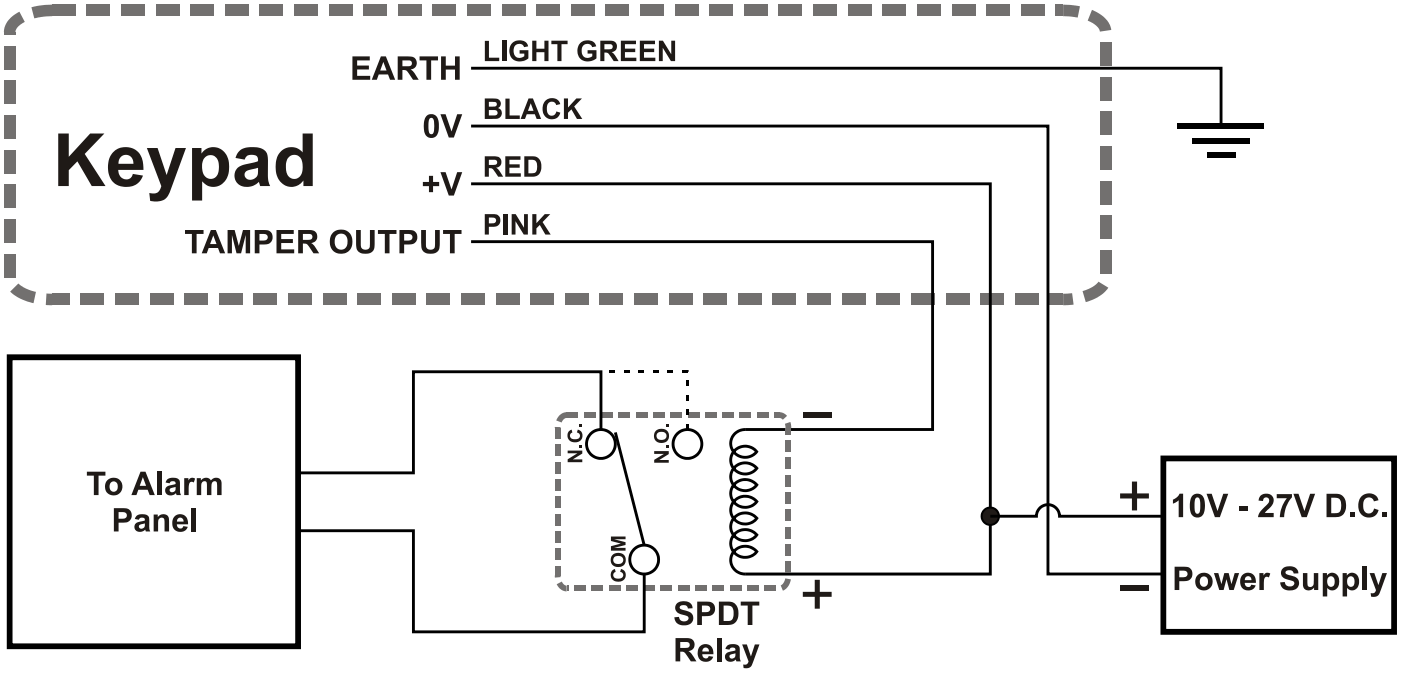
2.2.3 Auxiliary Wiring



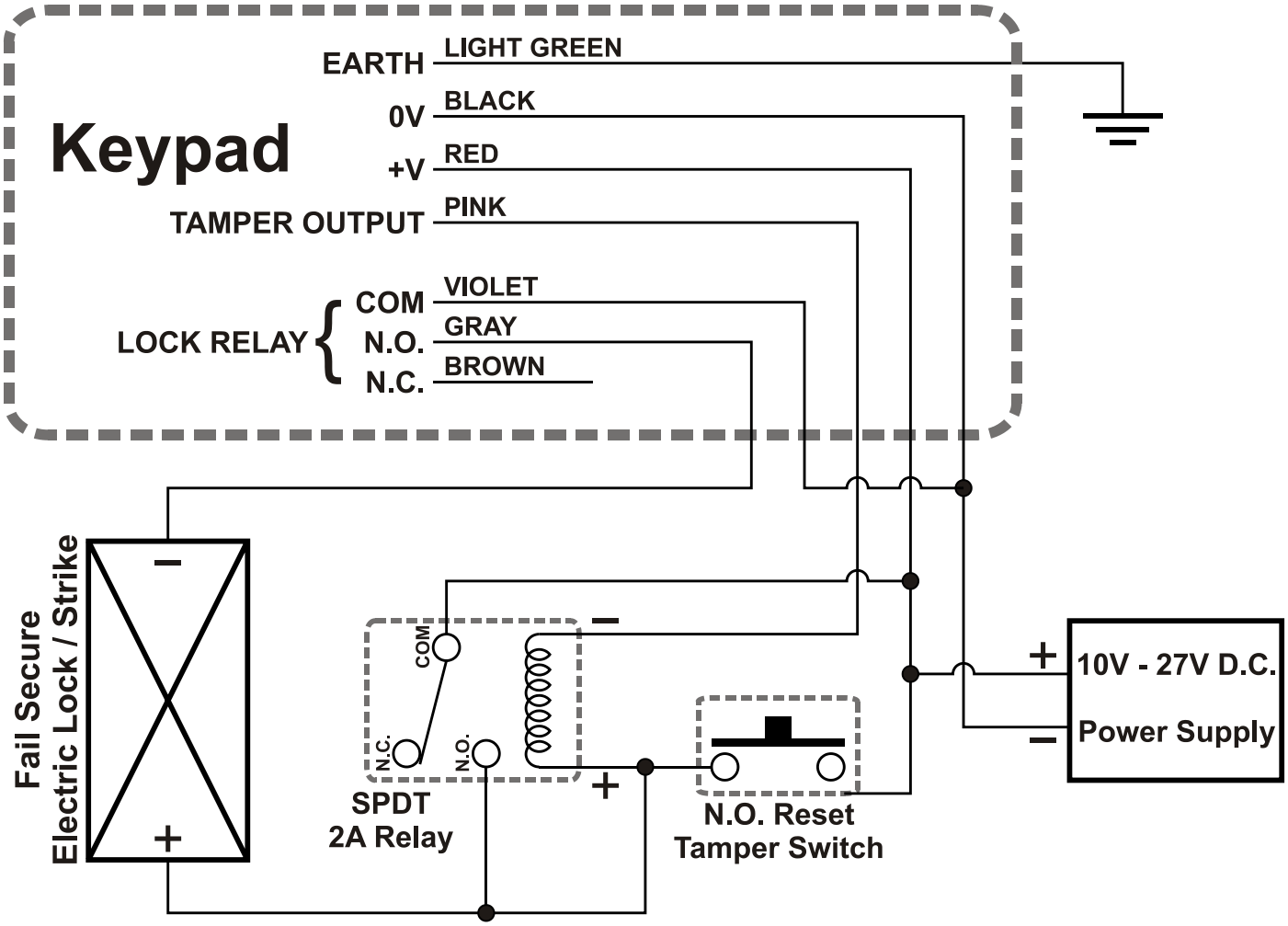
2.2.4 Auxiliary Lock Wiring



2.2.5 Tamper Output



2.2.6 Fail Secure Lock Wiring with Tamper Security



This method of wiring the lock ensures that even if the keypad is forcibly removed from the wall the lock cannot operated by manipulation of the wiring.

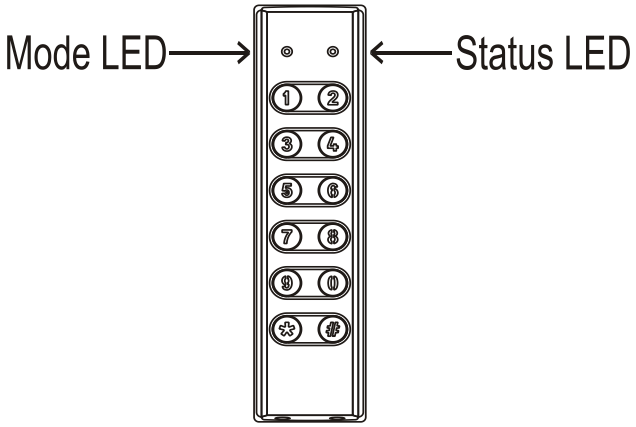
The relay, reset switch and power supply are required to be situated securely inside where they and their wiring cannot be accessed by someone on the outside.

The reset button will need to be pressed after power up and also once any tamper events have been cleared in order to enable the lock to open.

3 OPERATION

3.1 LED INDICATION

There are 2 LEDs on the VST keypads that are used to indicate different conditions. Throughout this manual the left LED will be referred to as the Mode LED and the right as the Status LED.



The symbols used in this manual for the LEDs are:
○ = off, ● = on, ✹ = flashing single colour and ✹✹ = flashing two colours alternately, the colour of the LED will also be stated.

3.1.1 Mode LED

The Mode LED is used to indicate the current mode of the keypad; the various conditions are shown below.

● Green - Operating mode.

● Orange - Operating mode with a relay currently latched on.

● Red - Operating mode with standard user codes locked out.

✹ Red - Alarm condition (Tamper, DOTL or DFO) in operating mode.

✹ Green - Manager Mode.

✹✹ Green Orange - Installer Mode.

The Mode LED will also flash red briefly each time a button is pressed, this option can be disabled if desired (refer to setting 921 in the Installer Programming section on page 18)

3.1.2 Status LED in Operating Mode

In operating mode the Status LED indicates the conditions below.

○ - Neither relay is currently active.

● Green - Lock relay is currently active (door unlocked).

● Red - Auxiliary relay is currently active (door unlocked).

● Orange - Both Lock & Auxiliary relays are currently active.

✹ Orange - Single # key press registered.

✹ Red - Double # key press registered.

What the Status LED indicates in Manager and Installer modes are given in the relevant sections.

3.2 DEFAULT CODES

There are 3 default codes in the VST keypads that can be used for setting up and testing the installation.

The following table gives the default codes based on the code length selected in setting 969 of the installer programming section (refer page 21). The factory default setting for code length is 0 (variable code length from 3 to 8 digits).

Code Length Setting	Default Installer Code	Default Manager & Lock Test Code	Default Auxiliary Lock Test Code
0	9999	1111	2222
3	999	111	222
4	9999	1111	2222
5	99999	11111	22222
6	999999	111111	222222
7	9999999	1111111	2222222
8	99999999	11111111	22222222

The various default codes will automatically be disabled under the following conditions:-

The default Installer code is disabled when a new installer code is programmed.

The default Manager code is disabled when a new Manager code is programmed; it will be enabled again if all programmed manager codes are deleted.

The default Lock and Auxiliary codes are disabled when any new code is programmed; they will be enabled again if all programmed user codes are deleted.

The Default Auxiliary code will also be disabled if the Auxiliary Relay is not set as Lock Control.

3.3 USER CODES

There are 3 levels of users codes available in the keypads to provide different access levels, all of these code levels can be used for opening the door. Each code level is described below.

3.3.1 Managers

Mangers are the highest level codes providing the ability to operate the door(s), perform advanced code functions (refer Advanced Code functions on page 12) and they allow access to the manager mode to add and remove user codes.

3.3.2 Primary Users

Primary users are intermediate level codes and can be used to operate the door(s) and perform advanced code functions (refer Advanced Code functions on page 12).

3.3.3 Standard Users

Standard users are the lowest level codes and can only be used to operate the door(s). These codes may also be locked out by the Auxiliary input and/or the Manager and Primary user codes depending upon options set in the Installer Setting Programming.

3.4 CODE USAGE

User codes can be used to either control the Relays (Door Access) or perform Advanced Code Functions.

3.4.1 Door Access

The most common use of a code is to control a door lock connected to the keypad. To do this simply enter the code on the keypad, the ⓯ button will need to be pressed at the end of the code if the system is set to use variable length codes.

The following examples use the factory default code for the Lock Relay for different code length settings:-

① ① ① ① ⓯ - is set for variable length codes (default).

① ① ① ① ① ① - is set for code length of 6 digits .

3.4.2 Advanced Code Functions

The following sequences access advanced code functions:-

⓯ <manager or primary code> ⓯ <function key>
when using variable length codes

or ⓯ <manager or primary code> <function key>
when using fixed length codes

Where <function key> is one of the following options:-

⓪ - Unlatch both the Lock and Auxiliary Lock relays (reset both back to default state, the Auxiliary relay is reset only when it is set as a second lock control)

① - Latch/Unlatch Lock Relay

② - Latch/Unlatch Auxiliary Lock Relay (only valid when the Auxiliary relay is set as a second lock control)

⑧ - Lockout Standard User Codes

⑨ - Enable Standard User Codes

NOTE: All advanced code functions are disabled by the factory defaults. To enable these functions for Manager or Primary Users please refer to sections 4.16 and 4.18.

Examples: The following examples use the default Management code when the keypad is set for variable length codes.

⓯ ① ① ① ① ⓯ ⑧ - Locks out Standard User codes.

⓯ ① ① ① ① ⓯ ⑨ - Enables Standard User codes.

4 INSTALLER SETTING PROGRAMMING

The factory default installer code is **9999**.

To enter installer mode press # # <installer code> #
(the final # is not required when using fixed length codes)

The keypad will beep 3 times and the Mode LED will alternately flash Green and Orange (☀☀)

To exit installer mode press # # #, the keypad will sound 3 sets of 2 quick beeps.

The keypad will remain in Installer mode for 1 minute from the last key press.

To program a setting use the following sequence:-

* <setting number> <new value> #

The keypad will respond with a Warble on successful programming or with a Long Beep for unsuccessful.

In Installer mode the Status LED indicates the conditions below.

○	- Waiting for the start of a programming or exit sequence.
● Green	- * was pressed as first key, waiting for a setting programming sequence to be completed.
● Red	- # was pressed as first key, waiting for an exit command to be completed.
☀ Red	- Waiting for the Installer Code to be entered to confirm programming of setting 961 or 969.

Each valid <setting number>, and its function, is described on the following pages and a summary is provided in Appendix A on page 29. All setting numbers are 3 digits long and the first digit is always 9.

4.1 Setting 901 – Lock Relay Time

Allowed Values = 0 - 255 Default value = 10

The value for this setting is the time that the Lock relay activates for, in seconds, when a valid code is used or the REX input is activated.

Note that a value of 0 for this setting will cause the Lock relay to be in latching mode, making it alternate between open and closed on each code usage. This will also disable the REX input.

Example: ⑨ ⓪ ① ① ⑤ # sets the lock relay time to 15 seconds.

4.2 Setting 902 – Lock Relay Mode

Allowed Values = 0 - 1 Default value = 0

Set the Lock relay as NO (Normally Open, Fail Secure) or NC (Normally Closed, Fail Safe), 0 = NO, 1 = NC.

4.3 Setting 903 – REX Input Mode

Allowed Values = 0 - 3 Default value = 0

Sets how the REX input responds, 0 = NO momentary,
1 = NC momentary, 2 = NO continuous, 3 = NC continuous.

NO setting activates when REX is connected to 0V.

NC setting activates when REX is disconnected from 0V.

Momentary setting starts the Lock relay timing for the Lock relay when the REX activates, continuing to hold the REX active has no effect and the REX input will not trigger the Lock relay again until it is released then activated again.

Continuous setting activates the Lock relay for the entire time the REX input is active, the Lock relay timing starts when the REX input is released.

4.4 Setting 910 – Auxiliary Mode

Allowed Values = 1 - 12 Default value = 8

This setting determines the function of both the Auxiliary Input and the Auxiliary Relay. Descriptions of the input and relay functions are provided after the summary table below.

Mode	Auxiliary Input Function	Auxiliary Relay Function
1	Lock REX	⑧ Key
2	Lock REX	Direct Shunt
3	Lock REX	Tamper

Mode	Auxiliary Input Function	Auxiliary Relay Function
4	Door Monitor	**D**oor **O**pen **T**oo **L**ong Alarm
5	Door Monitor	**D**oor **F**orced **O**pen Alarm
6	Door Monitor	DOTL and DFO Alarm
7	Door Monitor	Shunt
8	Auxiliary Lock REX	Auxiliary Lock
9	Lockout Standard Users	Auxiliary Lock
10	Lockout Standard Users	⊛ Key
11	Lockout Standard Users	Direct Shunt
12	Lockout Standard Users	Tamper

4.4.1 Auxiliary Input Functions

Lock REX - The Auxiliary input acts as a secondary REX for the Lock relay. This is useful if you want to use two different types of REX trigger sources such as a NO and NC or a Momentary and a Continuous.

Door Monitor - Used to monitor the open and closed status of the door controlled by the Lock relay. In this mode the input needs to be NC (connected to 0V) when the door is closed and open circuit when the door is open.

Auxiliary Lock REX - The Auxiliary input acts as a REX for the Auxiliary relay using *Auxiliary Time 2* in the same way that the REX input does for the Lock relay.

Lockout Standard Users - When the Auxiliary input is active (connected to 0V) all Standard User Codes are locked out. Master & Primary User Codes will still work as normal.

4.4.2 Auxiliary Relay Functions

⊛ *Key* - When the keypad is in operating mode, pressing the ⊛ key will activate the Auxiliary relay for the *Auxiliary Relay Time* (setting 911), Note that pressing the ⊛ key whilst in the middle of entering a code will not activate the auxiliary relay and will invalidate the current code entry.

This function is generally used for a door bell output activator.

Auxiliary Lock - The Auxiliary relay is used to control a second door lock connected to the keypad. It is activated for *Auxiliary Relay Time* by a user code programmed to operate Auxiliary Door (refer to the User Codes section on page 11).

Direct Shunt - The Auxiliary relay activates for *Auxiliary Relay Time* each time a valid code or REX is used to operate the Lock relay.

This function is generally used to bypass (shunt) a door monitor sensor or an alarm sensor covering the door area. Simply wire the Auxiliary relay in parallel with the NC sensor and a valid code usage or REX will shunt the sensor allowing door access without triggering an alarm connected to the sensor.

Shunt - During normal operation when the door is locked, the Auxiliary relay will mimic the status of the door sensor connected to the Auxiliary Input. When a valid code or REX is used the Auxiliary relay will close for the time set in *Auxiliary Relay Time* regardless of the status of the Auxiliary Input.

This function is generally used to bypass (shunt) a door monitor sensor or an alarm sensor covering the door area. Simply wire the NC sensor between Auxiliary Input and 0V and wire the Auxiliary relay to the alarm system in place of the sensor.

***D**oor **O**pen **T**oo **L**ong Alarm* - The Auxiliary relay closes when the door remains open for longer than the time set in *DOTL Time*, the relay will release as soon as the door is closed again. The door sensor needs to be connected to the Auxiliary Input for this function.

***D**oor **F**orced **O**pen Alarm* – When the door is opened without the use of a code or REX the Auxiliary relay will close and remain closed until either *Auxiliary Relay Time* has expired or the door is closed again, whichever is the longer time. The door sensor needs to be connected to the Auxiliary Input for this function.

DOTL and DFO Alarm - This setting provides for both the Door Open Too Long and Door Forced Open alarms to be detected. When the door is opened <u>without</u> the use of a valid code or REX a <u>DFO</u> alarm is detected. If the door is opened when the door is unlocked by a valid code or REX the DOTL alarm comes into effect. The door sensor needs to be connected to the Auxiliary Input for this function. Please refer to the individual descriptions for DOTL and DFO for how they work.

Tamper - The Auxiliary relay will be closed during normal operation and will open upon detection of a tamper event. The relay will close again once the tamper alarm is cleared.

4.5 Setting 911 – Auxiliary Relay Time

Allowed Values = 0 - 255 Default value = 10

The value for this setting is the time, in seconds, that the Auxiliary relay uses for Auxiliary Lock control, ⊛ key (door bell) activation, Door Forced open alarm, Shunt or Direct Shunt.

Important note on 0 value for this setting

If the Auxiliary relay is set as ⊛ key activation, shunt or direct shunt then a 0 value will be converted to 1 second.

If the Auxiliary relay is set as Auxiliary Lock then a 0 value will cause the Auxiliary relay to be in latching mode, making it alternate between open and closed on each auxiliary code usage. The Auxiliary REX input will also be disabled.

4.6 Setting 912 – Auxiliary Lock Relay Mode

Allowed Values = 0 - 1 Default value = 0

This setting only affects the Auxiliary relay if it is set as Auxiliary Lock (Auxiliary Mode = 8 or 9).

Set the Auxiliary Lock relay as NO (Normally Open, Fail Secure) or NC (Normally Closed. Fail Safe), 0 = NO, 1 = NC.

4.7 Setting 913 – Auxiliary REX Input Mode

Allowed Values = 0 - 3 Default value = 0

This setting only affects the Auxiliary input if it is set as Lock REX or Auxiliary Lock REX (Auxiliary Mode = 1, 2, 3 or 8).

Sets how the Auxiliary REX input responds, 0 = NO momentary,
1 = NC momentary, 2 = NO continuous, 3 = NC continuous.

Please refer to the REX Input Mode (setting 903) on page 14 for a description of these REX settings.

4.8 Setting 914 – DOTL Time

Allowed Values = 1 - 255 Default value = 30

When DOTL is enabled (Auxiliary Mode = 4 or 6) the value for this setting is the time, in seconds, that the door can remain open before a DOTL alarm is generated.

4.9 Setting 915 – Auto Relock Enabled

Allowed Values = 0 - 1 Default value = 0

0 = Disabled, 1 = Enabled.

If Auto Relock is enabled and the Auxiliary relay is set as DOTL and/or DFO (Auxiliary Mode = 4, 5 or 6) the VST keypad will relock the door 1 second after it detects the door has been opened via the sensor connected to the Auxiliary Input.

This feature is useful in stopping people following others through the door, as once the door returns to its closed position it will relock no matter how long the unlock time is set for.

4.10 Setting 920 – Backlighting Brightness

Allowed Values = 0 - 6 Default value = 6

There are 7 available options for the brightness of blue LED backlighting of the keys. The options are:-

0 = No Backlighting.
1 = ¼ Brightness.
2 = ½ Brightness.
3 = ¾ Brightness.
4 = Full Brightness.
5 = Backlighting off until a key is pressed then on at full brightness.
6 = ¼ Brightness until a key is pressed then on at full brightness.

4.11 Setting 921 – Key Press Indication

Allowed Values = 0 - 3 Default value = 3

The VST keypad can give a visual and/or audio response to indicate a key has been pressed. The options are:-

0 = No indication.
1 = Beeps when a key is pressed.
2 = Flashes Mode LED ✹ Red when a key is pressed.
3 = Beeps and flashes Mode LED ✹ Red when a key is pressed.

4.12 Setting 922 – Key Time Out

Allowed Values = 5 - 30 Default value = 10

This is the maximum time allowed between key presses to complete a code or programming entry. If subsequent keys are not pressed within this time the current entry will be invalidated.

4.13 Setting 923 – Tamper Sensitivity

Allowed Values = 0 - 3 Default value = 2

The VST keypads are fitted with a sensitive tamper detection device that can detect when the unit has been removed from its mounted position. In some extreme circumstances it may be necessary for the sensitivity of this device to be adjusted. The options are:-

0 = Tamper detection disabled.
1 = Most sensitive tamper detection, may be required when mounted on an extremely dark surface.
2 = Normal sensitivity, suitable for most applications.
3 = Least sensitive tamper detection, may be required when the tamper lens area is exposed to external light sources.

4.14 Setting 931 – Lockout after invalid codes

Allowed Values = 0, 3 - 99 Default value = 0

Entering a value from 3 to 99 sets how many incorrect attempts a user has at entering a code before the keypad locks out all codes for the number of minutes set in Lockout Time setting 932 below.

A value of 0 for this setting disables the lockout and allows infinite code attempts.

4.15 Setting 932 – Lockout Time

Allowed Values = 1 - 10 Default value = 5

The number of minutes to lockout all codes for after the set number of incorrect code attempts has been made.

4.16 Setting 933 – Latching Override enable

Allowed Values = 0, 2 - 3 Default value = 0

Enabling this function allows primary or manager users to indefinitely unlock a door by use of the advanced code functions (refer to page 12). The value entered for this setting determines which users are able to use this advanced code function.

0 = Function disabled.
2 = Primary & Manager users can perform Latching Override.
3 = Only Manager users can perform Latching Override.

4.17 Setting 934 – Latching Override cancelled by code use

Allowed Values = 0 - 3 Default value = 0

This setting is used to determine if the Latching Override function can be cancelled by use of a code or whether the advanced code function is required.

0 = Latching Override must be cancelled by advanced code function.
1 = All users can cancel Latching Override.
2 = Primary & Manager users can cancel Latching Override.
3 = Only Manager users can cancel Latching Override.

If this setting is not 0 and the Lock (or Auxiliary Lock) is latched on, then the use of a user code enabled for this feature will unlatch the relay and start the normal timing for the output.

4.18 Setting 935 – Lockout Standard Users via Advanced Code Function

Allowed Values = 0, 2 - 3 Default value = 0

Enabling this function allows primary or manager users to use the advanced code functions to lockout Standard Users (refer to page 12).

0 = Function disabled.
2 = Primary & Manager users can lockout Standard Users.
3 = Manager users can lockout Standard Users.

NOTE if this function is enabled (set to 2 or 3) Standard Users are always locked out on power up.

4.19 Setting 961 – Code Length

Allowed Values = 0, 3 - 8 Default value = 0

Sets the length (number of digits) to use for the user codes and installer code.

0 = Variable code length from 3 to 8 digits.
3 - 8 = Number of digits for each code.

NOTE programming this setting will erase all existing codes. The new value for this setting needs to be confirmed by entering the **current** installer code then # after the programming sequence, as shown below.

* 961 <new value> # <installer code> #

4.20 Setting 969 – Reset keypad to factory defaults

Allowed Value = 246

Enter 246 into this setting location to reset the keypad back to factory defaults.

NOTE programming this setting will erase all existing codes. The new value for this setting needs to be confirmed by entering the **current** installer code then # after the programming sequence.

* 969 246 # <installer code> #

4.21 Setting 999 – New installer code

The value entered into this setting will become the new installer code and will disable the default installer code.

There can only be 1 installer code so programming of this setting will overwrite any previously programmed installer code.

The installer code cannot be the same as any of the default codes or any user codes.

* 999 <new installer code> #

5 USER CODE PROGRAMMING

User code programming is performed by entering the manager mode.

The factory default manager code is **1111**.

Note that the default manager code will be disabled once a new manager code is programmed.

To enter manager mode press # # <manager code> #
(the final # is not required when using fixed length codes)

The keypad will beep 5 times and the Mode LED will be flashing Green ☀

To exit manager mode press # # #, the keypad will sound 3 sets of 2 quick beeps.

The VST keypad will remain in Manager mode for 1 minute from the last key press.

The keypad will respond with a Warble on successful addition or deletion of a code and with a Long Beep when unsuccessful.

In Manager mode the Status LED indicates the conditions below.

- ○ - Waiting for the start of a programming or exit sequence.
- ● Green - Adding a code, waiting for <user location> or * to be entered.
- ☀ Green - Adding a code, waiting for the new <code> to be entered.
- ☀☀ Green Red - Adding a code (* <user location> already entered) to a user location with an existing code in it. Waiting for new <code> to be entered to overwrite the existing one.
- ● Orange - Adding a code, waiting for the user level digit (1, 2 or 3) or * to be entered.
- ☀ Orange - Adding a code, waiting for the lock output control digit (1, 2 or 3) or # to be entered.
- ● Red - Deleting a code or exiting manager mode, waiting for <user location>, * or # to be entered.
- ☀ Red - Deleting a code by search method (# * already entered), waiting for the existing user code to be entered.
- ☀☀ Green Orange - Bulk adding user codes.

5.1 Adding User Codes

Simplified sequences for adding codes are given in sections 5.1.1, 5.1.2 and Appendix B.

To add a user code use one of the following sequences:-

⊛ <user location> <code> #

When programming a standard user to control the Lock relay

⊛ <user location> <code> ⊛ <user level> #

When programming a user of <user level> to control the Lock relay

⊛ <user location> <code> ⊛ ⊛ <output mode> #

When programming a standard user to control the relay(s) specified by <output mode>

⊛ <user location> <code> ⊛ <user level> ⊛ <output mode> #

When programming a user of <user level> to control the relay(s) specified by <output mode>

<user location> = a location number from 001 to 500 in which to store the user code, alternately a ⊛ can be used for this field and the new user code will be put in the first free location available.

<code> = the new code being added.

<user level> = Sets the level of new code being added, 1 = Standard user, 2 = Primary user, 3 = Manager. If this field is omitted then the code is added as a standard user.

<output mode> = Sets which outputs are being controlled by this code, 1 = Lock Relay, 2 = Auxiliary Lock Relay, 3 = Both Lock & Auxiliary Lock Relays. If this field is omitted then the code operates the Lock Relay.

NOTE if the Auxiliary relay output is not set as a secondary lock controller then all user programmed codes will control the Lock relay regardless of the <output mode> setting.

The Status LED indicates the stage you are at during the adding a code sequence, as shown below:-

⊛ <user location> <code> ⊛ <user level> ⊛ <output mode> #

● Green ☀ Green ● Orange ☀ Orange

(or ☀☀ Green/ Red if the location already has a code in it)

5.1.1 Regular Method to Add a User Code

Add a Standard User Code for Lock Control
⊛ <user location> <code> #

Add a Standard User Code for Auxiliary Lock Control
⊛ <user location> <code> ⊛ ⊛ 2 #

Add a Standard User Code for Lock & Auxiliary Lock Control
⊛ <user location> <code> ⊛ ⊛ 3 #

Add a Primary User Code for Lock Control
⊛ <user location> <code> ⊛ 2 #

Add a Primary User Code for Auxiliary Lock Control
⊛ <user location> <code> ⊛ 2 ⊛ 2 #

Add a Manager Code for Lock Control
⊛ <user location> <code> ⊛ 3 #

Add a Manager Code for Auxiliary Lock Control
⊛ <user location> <code> ⊛ 3 ⊛ 2 #

5.1.2 Search Method to Add a User Code

Add a Standard User Code for Lock Control
⊛ ⊛ <code> #

Add a Standard User Code for Auxiliary Lock Control
⊛ ⊛ <code> ⊛ ⊛ 2 #

Add a Standard User Code for Lock & Auxiliary Lock Control
⊛ ⊛ <code> ⊛ ⊛ 3 #

Add a Primary User Code for Lock Control
⊛ ⊛ <code> ⊛ 2 #

Add a Primary User Code for Auxiliary Lock Control
⊛ ⊛ <code> ⊛ 2 ⊛ 2 #

Add a Manager Code for Lock Control
⊛ ⊛ <code> ⊛ 3 #

Add a Manager Code for Auxiliary Lock Control
⊛ ⊛ <code> ⊛ 3 ⊛ 2 #

5.1.3 Bulk Add User Codes Method

Often when initially setting up a system many user codes need to be added. The bulk add method allows multiple codes to be added to consecutive user locations with the minimum number of key presses.

NOTE: When using bulk add there is no indication as to whether the user location being programmed already contains a code, and as such any existing code will be overwritten with new one. It is therefore recommended that this method only be used on a new installation.

The basic sequence is given below:-

⑧ <user location> ⑪
<code 1> ⑪
<code 2> ⑪
↓
<last code> ⑪

Pressing a ⑧ or ⑪ instead of a starting digit for a code will cancel the bulk add mode and start a new add, delete or exit manager mode sequence.

Bulk add mode is automatically cancelled once a code has been added to user location 500 or if a code is unable to be added due to it being invalid or the same as one already in the system.

The <user level> and/or <output fields> can also be specified when adding the codes using the following method:-

<code> ⑧ <user level> ⑧ <output mode> ⑪

Example

⑧ ① ⓪ ⓪ ⑪ - *start bulk add at user location 100*

① ② ③ ④ ⑪ - *save code 1234 in user location 100*

② ③ ④ ⑤ ⑪ - *save code 2345 in user location 101*

⑨ ⑧ ⑦ ⑥ ⑧ ③ ⑪ - *save manager code 9876 in user location 102*

③ ④ ⑤ ⑥ ⑧ ⑧ ② ⑪ - *save Auxiliary Lock code 3456 in user location 103*

5.2 Deleting User Codes

The sequences for deleting codes together with the Status LED indication are:-

(#) <user location> (#) - to delete a code from a known location.



(#) (*) <code> (#) - to delete a known code from any location.



5.2.1 Deleting All User Codes

To delete **all** programmed user codes (including manager codes) enter:-

(#) (9) (8) (7) (6) (5) (4) (3) (2) (1) (#)

The default manager and test codes will be enabled until new codes are programmed.

6 ENABLE/DISABLE INSTALLER CODE

Once the system has been commissioned and all the installer mode settings are correct, **it is highly recommended that the Installer Code be disabled**.

The reason for this is to ensure that someone who knows the installer code cannot use it to set the relay mode and in effect open the door without using a user code.

Enabling/Disabling the installer code is performed by entering the manager mode.

The factory default manager code is **1111**.

To enter manager mode press # # <manager code> #
(the final # is not required when using fixed length codes)

The keypad will beep 5 times and the Mode LED will be flashing Green ☀

9 8 9 # - Disables the Installer Code

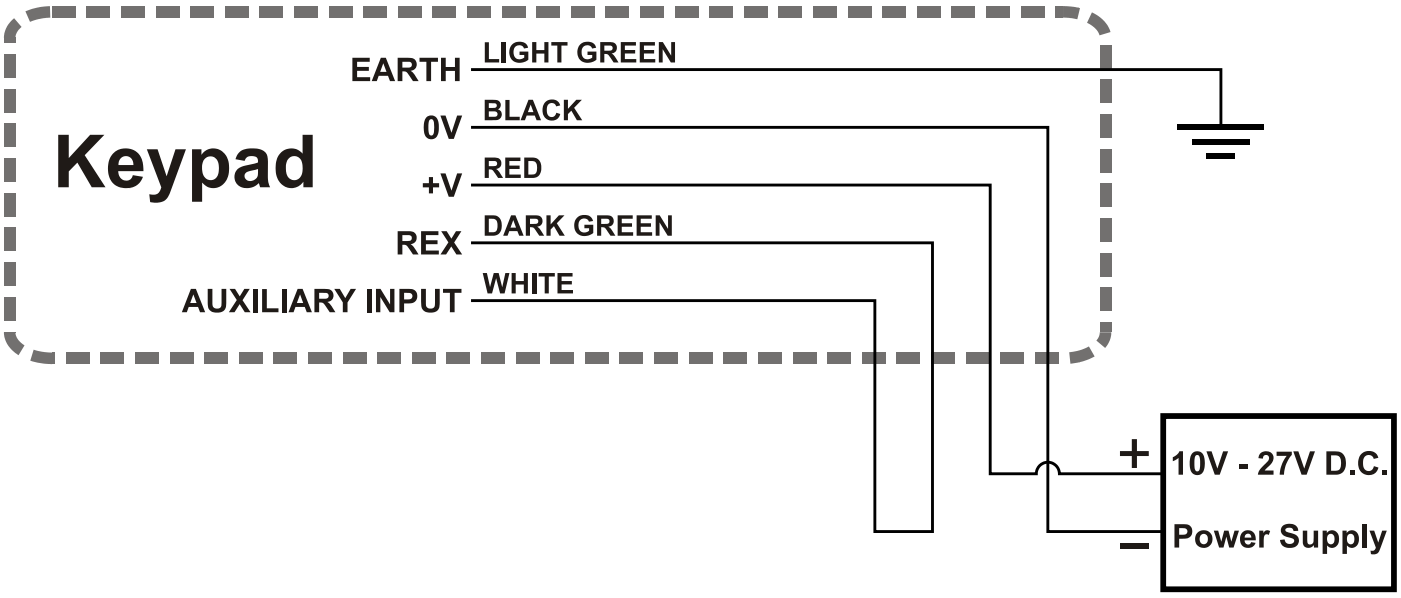
* 9 8 9 # - Enables the Installer Code

To exit manager mode press # # #, the keypad will sound 3 sets of 2 quick beeps.

7 FORGOTTEN INSTALLER OR MANAGER CODE

In the event that the installer or manager code has been forgotten, the default codes can be enabled by performing the following steps:-

1) Remove power from the keypad.
2) Disconnect any connections to the REX (dark green) and Auxiliary Input (white) wires.
3) Connect the REX wire to the Auxiliary Input wire.
4) Power up the keypad.
5) The connection between the REX and Auxiliary Input wires may now be removed.
6) Enter either the Installer or Manager mode using the appropriate default code.



The default installer & manager codes are now enabled allowing you to enter one of these modes within 5 minutes of powering up the keypad.

This method will allow access to installer mode even if the installer code has been disabled via the management mode.

APPENDIX A: INSTALLER SETTING SUMMARY

The factory default installer code is **9999**.

To enter installer mode press # # <installer code> #
(the final # is not required when using fixed length codes)

The keypad will beep 3 times and the Mode LED will alternately flash (☀☀) Green/Orange

Program installer settings using * <setting number> <new value> #

Setting Number	Function	Allowed Values	Default Value
901	Lock Relay Time	0-255	10
902	Lock Relay Mode	0-1	0
903	REX Input Mode	0-3	0
910	Auxiliary Mode	1-12	8
911	Auxiliary Relay Time	0-255	10
912	Auxiliary Lock Relay Mode	0-1	0
913	Auxiliary REX Input Mode	0-3	0
914	DOTL Time	0-255	30
915	Auto Relock Enabled	0-1	0
920	Backlighting Brightness	0-6	6
921	Key Press Indication	0-3	3
922	Key Time Out	5-30	10
923	Tamper Sensitivity	0-3	2
931	Lockout after invalid codes	0, 3-99	0
932	Lockout time	1-10	5
933	Latching override enable	0, 2-3	0
934	Latching override cancelled by code use	0-3	0
935	Lockout of Standard Users via code	0, 2-3	0
961	Code Length (1)	0, 3-8	0
969	Reset keypad to factory defaults (1)	246	-
999	New installer code	-	-

(1) These settings require their new values to be confirmed by entering the current installer code then # after the normal programming sequence. * 961 (or 969) <new value> # <installer code> #

Exit Installer Mode

To exit installer mode press # # #

APPENDIX B: USER CODE PROGRAMMING SUMMARY

The factory default manager code is **1111**.

To enter manager mode press (#) (#) <manager code> (#)
(the final (#) is not required when using fixed length codes)

The keypad will beep 5 times and the Mode LED will be flashing Green ☀

Using Regular Method

Add a Standard User Code for Lock Control
(*) <user location> <code> (#)

Add a Standard User Code for Auxiliary Lock Control
(*) <user location> <code> (*) (*) (2) (#)

Add a Standard User Code for Lock & Auxiliary Lock Control
(*) <user location> <code> (*) (*) (3) (#)

Add a Primary User Code for Lock Control
(*) <user location> <code> (*) (2) (#)

Add a Primary User Code for Auxiliary Lock Control
(*) <user location> <code> (*) (2) (*) (2) (#)

Add a Manager Code for Lock Control
(*) <user location> <code> (*) (3) (#)

Delete a code from a known location
(#) <user location> (#)

Where <user location> is a 3 digit location from 001 to 500

Using Search Method

Add a Standard User Code for Lock Control
(*) (*) <code> (#)

Add a Standard User Code for Auxiliary Lock Control
(*) (*) <code> (*) (*) (2) (#)

Add a Standard User Code for Lock & Auxiliary Lock Control
(*) (*) <code> (*) (*) (3) (#)

Add a Primary User Code for Lock Control
(*) (*) <code> (*) (2) (#)

Add a Primary User Code for Auxiliary Lock Control
⊛ ⊛ <code> ⊛ ② ⊛ ② #

Add a Manager Code for Lock Control
⊛ ⊛ <code> ⊛ ③ #

Delete a code
⊛ <code>

Delete all User Codes

Use # ⑨ ⑧ ⑦ ⑥ ⑤ ④ ③ ② ① # to delete all programmed user codes (including manager codes). The default manager and test codes are enabled until new codes are programmed.

Exit Manager Mode

To exit manager mode press # # #

The keypad will respond with a Warble on a successful addition or deletion of a code and with a Long Beep when unsuccessful.

In the Manager mode the Status LED indicates the conditions below.

○ - Waiting for the start of a programming or exit sequence.

● Green - Adding a code, waiting for <user location> or ⊛ to be entered.

☀ Green - Adding a code, waiting for the new <code> to be entered.

☀☀ Green Red - Adding a code (⊛ <user location> already entered) to a user location with an existing code in it. Waiting for new <code> to be entered to overwrite the existing one.

● Orange - Adding a code, waiting for the user level digit (①, ② or ③) or ⊛ to be entered.

☀ Orange - Adding a code, waiting for the lock output control digit (①, ② or ③) or # to be entered.

● Red - Deleting a code or exiting manager mode, waiting for <user location>, ⊛ or # to be entered.

☀ Red - Deleting a code by search method (# ⊛ already entered), waiting for the existing user code to be entered.

APPENDIX C: QUICK SETUP GUIDE

Set a new Installer code

1. Enter Installer Mode
   # # 9 9 9 9 #
2. Set new installer code
   * 9 9 9 <new installer code> #
3. Now set any other installer options
4. Exit Installer Mode
   # # #

Add a new Manager code and User code

1. Enter Manager Mode
   # # 1 1 1 1 #
2. Add new installer code (disables 1111)
   * * <new manager code> * 3 #
3. Add new user code for lock control
   * * <new user code> #
4. Repeat step 3 for more user codes.
5. Delete a user code for lock control
   # * <existing user code> #
6. Exit Manager Mode
   # # #





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